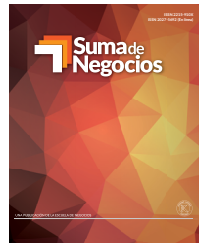
SUMA DE NEGOCIOS



Research paper

Factors influencing intrapreneurship in SMEs in Northwest Mexico

Manuela Alejandra Muniz Molina[1], *Luis Enrique Valdez-Juárez*[2], *Elva Alicia Ramos-Escobar*[3] *and José Alonso Ruiz-Zamora*[4*]

[1] *Bachelor's degree in Administration. Graduate student, Sonora Institute of Technology, Guaymas, Mexico. Email: ale_eh.9@live.com.mx*

[2] *PhD in Business Management. Research professor, Sonora Institute of Technology, Guaymas, Mexico. Email: levaldez@itson.edu.mx*

[3] *PhD in Economic, Administrative, and Legal Sciences. Research Professor, Sonora Institute of Technology, Guaymas, Mexico. Email: aeramos@itson.edu.mx*

[4] *Master's degree in business administration and development. Outreach and Incubation Administrator, Sonora Institute of Technology, Guaymas, Mexico (corresponding author). Email: jose.ruiz@itson.edu.mx*

ARTICLE INFORMATION

Received on: April 28, 2025
Accepted on: December 31, 2025
Online: March 9, 2026

JEL Codes:
A20, C120, D21, M130, 0320

Keywords:
Factors: Business education, financing, physical infrastructure, technological infrastructure, research and development, social norms, public policies, intrapreneurship, SMEs

ABSTRACT

Introduction/Objectives: intrapreneurship has emerged as a key driver for innovation and the consolidation of organisational capacities in small and medium-sized enterprises (SMEs). In this context, this study examines the internal and external determinants that influence the strengthening of intrapreneurship in SMEs in northwestern Mexico, identifying those that enhance or limit their innovative capacity. The objective is to analyse the key variables that condition the evaluation of entrepreneurship within SMEs, in order to identify the key elements that enhance or limit their capacity for organisational innovation.

Methodology: the study adopted a quantitative, causal, explanatory and predictive cross-sectional approach, based on a survey applied to 1,012 SMEs. Likert-type scales and structural equation analysis (PLS-SEM) were used to validate the proposed hypotheses, guaranteeing the robustness of the psychometric properties and the empirical coherence of the model constructs.

Results: it will be confirmed that business education, funding, and social norms have a significant positive impact on intrapreneurship. Conversely, technological infrastructure, low investment in R&D, and restrictive public policies have a negative influence. Physical infrastructure did not show a statistically significant effect.

Conclusions: the results underscore the need to strengthen internal capabilities and reform the external environment in order to enhance intrapreneurship. It is recommended to invest in continuing education, technological advancement, and innovation, while also restructuring public policies to better align with the real needs of SMEs, thereby contributing to their sustainable competitiveness.

Factores que inciden en el intraemprendimiento en pymes del noroeste de México

Palabras clave:
Factores: educación empresarial, financiamiento, infraestructura física, infraestructura tecnológica, investigación y desarrollo, normas sociales, políticas públicas; intraemprendimiento, pyme

RESUMEN

Introducción/Objetivo: el intraemprendimiento ha emergido como un motor clave para la innovación y la consolidación de capacidades organizativas en las pequeñas y medianas empresas (pyme). En ese contexto, este artículo examina los determinantes de carácter interno y externo que influyen en el fortalecimiento del intraemprendimiento en las pyme del noroeste de México, identifica aquellos que potencian o limitan su capacidad innovadora. Tiene como objetivo analizar las variables clave que condicionan la evaluación del emprendimiento en las pyme, a fin de identificar los elementos clave que potencian o limitan su capacidad de innovación organizacional.

Metodología: el estudio adoptó un enfoque cuantitativo, de tipo causal, explicativo y predictivo de corte trasversal, basado en una encuesta aplicada a 1012 pyme. Se utilizaron escalas tipo Likert y análisis de ecuaciones estructurales (PLS-SEM) para validar las hipótesis propuestas, garantizando la solidez de las propiedades psicométricas y la coherencia empírica de los constructos del modelo.

Resultados: se confirmó que la educación empresarial, el financiamiento y las normas sociales tienen un efecto positivo significativo en el intraemprendimiento. Por el contrario, la infraestructura tecnológica, la baja inversión en I+D y las políticas públicas restrictivas influyen de manera negativa. La infraestructura física no mostró un efecto estadísticamente significativo.

Conclusiones: la evidencia empírica pone en manifiesto la importancia de consolidar las capacidades internas y reformar el entorno externo para potenciar el intraemprendimiento. Se recomienda invertir en educación continua, tecnología, innovación, y reestructurar políticas públicas alineadas a las necesidades reales de las pyme, contribuyendo así a su competitividad sostenible.

Introduction

The study of entrepreneurship, and in particular intrapreneurship, has been a constant in the analysis of organisational dynamics and their link with economic and social development (Dino, 2024). From a historical perspective, human beings have demonstrated a natural inclination towards invention, innovation and the transformation of their environment (Chen & Bu, 2024). Practices that, as they evolved, gave rise to contemporary concepts such as organisational entrepreneurship (Mehmood et al., 2019). Intrapreneurship, the ability of employees within an organisation to generate new ideas, processes or products, has become relevant in business contexts that demand continuous innovation as a source of sustainable competitive advantage (Hernández-Perlines et al., 2022; Teece et al., 1997). Various studies have highlighted intrapreneurship as elements that strengthen the organisational performance and adaptability of small and medium-sized enterprises (SMEs) in increasingly complex and dynamic environments (Ametefe et al., 2025; Urbano et al., 2022). Mexican SMEs, a fundamental pillar for economic development (Padilla-Rivera et al., 2024) generate more than 50% of formal employment and about 30% of the Gross Domestic Product (GDP) (National Institute of Statistics and Geography [INEGI], 2018). They are facing multiple obstacles that limit their ability to innovate and develop internally (Mer & Virdi, 2024). Proposing models such as the dynamic capacities of Teece (2007).

Despite the relevance of SMEs in the Mexican business ecosystem, particularly in the Northwest of the country, made up of the states of Baja California, Baja California Sur, Chihuahua, Sinaloa and Sonora (National Institute of Statistics and Geography [INEGI], 2024). This region is characterised by a high participation of Small and Medium-sized Enterprises (SMEs), as well as by a diverse productive structure that includes commercial, service, industrial and agro-industrial activities, which play a strategic role in regional economic development (Lun et al., 2025; Stezano, 2020). There is limited scientific exploration of the internal and external factors that condition the development of intrapreneurship in these economic units (Vela et al., 2023) even though many organisations promote training and process improvement (Divakara & Surangi, 2019). Although intrapreneurship has traditionally been approached from classic approaches linked to innovation and corporate entrepreneurship (Aina & Solikin, 2020; Amo, 2010; Dentchev et al., 2016; Gündoğdu, 2012), their development in SMEs is conditioned by structural, institutional and contextual constraints typical

of emerging economies (Divakara, Semasinghe et al., 2019; Urbano et al., 2024). In this sense, it is of great relevance to contrast the classical theoretical foundations with contemporary findings, in order to understand how these postulates manifest themselves in regional contexts such as northwestern Mexico. Based on the theoretical and empirical elements discussed, the following research questions are formulated, aimed at deepening the understanding of the phenomenon analysed: 1. Do internal factors such as business education, technological infrastructure, Research and Development (R+D) and physical infrastructure contribute positively to the development of intrapreneurship in SMEs? and 2. Do external factors such as social norms, public policies and financing contribute significantly to the development of intrapreneurship in SMEs? With the purpose of examining the factors that most influence entrepreneurial development within SMEs, to identify the key elements that enhance or limit their capacity for organisational innovation. In addition, the following specific objectives emerge: 1. To verify the influence generated by internal factors (business education, technological infrastructure, physical infrastructure and R+D) on intrapreneurship in SMEs and 2. To verify the influence generated by external factors (financing, social norms and public policies) on intrapreneurship in SMEs.

Literature Review and Hypothesis Development

Factors such as business education, technological infrastructure, and social norms can coexist with each other in the organisational context as catalysts for intrapreneurship (Sujatha & Mukherjee, 2023), constituted in accordance with Wolcott II and Lippitz (2009) by: 1. Optimistic model, 2. Facilitator model, 3. Defender model and 4. A production model, characterised not only by internal and external factors (Divakara, Semasinghe et al., 2019), but by adopting different structural and strategic configurations depending on the available resources, the organisational culture and the institutional environment to channel and sustain innovation in SMEs (Abid & Polo, 2025; Widya-Hastuti et al., 2016). The above, strengthening competencies, strategic skills and innovative vision among employees and managers (Orozco et al., 2024). Various studies have identified that entrepreneurship training improves the ability to identify opportunities, manage resources and lead innovation processes within organisations (Fu et al., 2024). Formal and informal education aligned with the development of dynamic capabilities in the business environment, contributes to a greater degree of organisational innovation (Teece, 2016). Access to external financing is decisive for the degree of implementation of intrapreneurial activities (Ambad & Ali, 2024). SMEs with greater financial resources are in a position to invest in innovation, adopt new technologies and develop new products or services (Romero & Martínez-Román, 2024).

Other research argues that poor technological infrastructure represents a significant barrier to intrapreneurial activities (Batista-Canino et al., 2025). Being less likely to innovate internally (Soltanifar et al., 2023). As well as physical infrastructure, being pointed out as a key facilitator of entrepreneurship within companies (Palalić et al., 2023). Reducing operating costs and facilitating the expansion of innovative production processes (Chakuzira et al., 2024). The results of other research affirm that investment in R+D is a factor that can be interpreted twice (Knossalla & Carbon, 2023). In Mexico, SMEs invest little in R+D due to lack of resources, which limits their ability to develop novel products or innovative processes (Romero Alvarez et al., 2025).

Based on the sociocultural environment, findings affirm that societies that value innovation, risk-taking, and autonomy foster an organisational culture prone to intrapreneurship (Moric Milovanovic et al., 2025). Finally, public policies, when they are restrictive or poorly designed, can inhibit intrapreneurial development (Soltanifar et al., 2023). Derived from the contextual and theoretical elements analysed above, the following research hypotheses are established:

H1. The strengthening of business education is associated with greater dynamism in intrapreneurial activities in SMEs.

H2. The availability of external financing significantly influences the development of intrapreneurship initiatives in SMEs.

H3. Limitations in technological infrastructure act as a negative conditioning factor for the development of intrapreneurship in SMEs.

H4. Greater physical infrastructure significantly influences the strengthening of intrapreneurship in SMEs.

H5. The lower the investment in research and development, the lower the level of intrapreneurship in SMEs.

H6. Social and cultural norms favour intrapreneurship in SMEs.

H7. The greater the rules and public policies, the lower the level of intrapreneurship in SMEs.

The hypotheses developed in the research have generated the following theoretical operative model (see Figure 1).

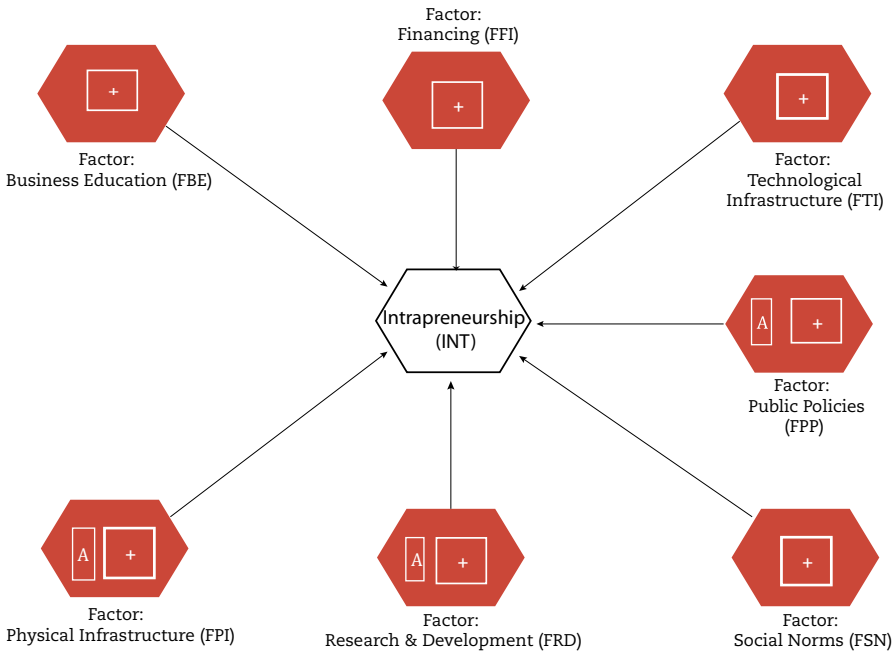


Figure 1. Research operating model

Source: Own elaboration.

Methodology

Data

The data used in this research are of a primary nature as they are obtained through the application of a structured instrument (survey) to small and medium-sized enterprises (SMEs) located in the northwest region of Mexico, specifically in the states of Sonora, Baja California and Sinaloa. The information was collected between February and June 2018, ensuring temporal homogeneity and reducing possible distortions derived from short-term changes in the economic environment.

The target population was made up of 12,307 SMEs belonging mainly to the trade and services sectors. From the population, a minimum sample size of 982 SMEs was determined, considering a confidence level of 95%m with a margin of error of 3% and a probability of occurrence of 50%. The sampling process was simple random probabilistic, ensuring that all units of analysis had an equal probability of being selected. Finally, 1,012 valid questionnaires were obtained, exceeding the minimum size required and strengthening the statistical stability of the estimated model.

The units of analysis corresponded to the owner, general managers or managers of strategic decision-making in SMEs, given their comprehensive knowledge of organisational processes and intrapreneurial practices. As inclusion criteria, formally constituted companies were considered, with at least 1 year of operation and current economic activity. Informal microenterprises and organisations without a defined administrative structure were excluded, with the aim of ensuring conceptual consistency and comparability among the cases analysed.

The data collection instrument consisted of a total of 54 items measured by a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5), in order to examine the information collected and empirically contrast the planned hypotheses, using statistical procedures that allow a more precise measurement of the variables that make up the research model: 1) Intrapreneurship, 2) Internal factors for intrapreneurship (business education factor, research and development factor, physical infrastructure factor, technological infrastructure factor) and 3) External factors for intrapreneurship (financial factor, social norms factor, public policy factor). The scales were adapted from instruments validated in the literature on entrepreneurship and intrapreneurship (Ajzen, 1991; Zahra, 2007) and the reports of the Global Entrepreneurship Monitor (GEM, 2025), guaranteeing content validity and theoretical alignment.

The psychometric quality of the instrument was evaluated by reliability and validity analyses. Internal consistency was verified through Crombach's alpha and composite reliability, obtaining values higher than the recommended thresholds (> 0.70). Congruent validity was confirmed by the extracted mean variance (AVE), while discriminant validity was verified using the Fornell and Larcker criteria and the heterotrait-monotrait ratio (HTMT), in accordance with the methodological guidelines proposed by Henseler (2015) and Hair et al. (2019).

Type, scope and design

The research opts for a quantitative approach, contemplating one-dimensional variables of the reflective type, supported by the numerical measurement of variables and the statistical analysis of causal relationships, which is adequate to contrast hypotheses, seeking to establish patterns of behaviour and test theories (Hair, Black, Babin, et al., 2010). In terms of scope, the study is explanatory and predictive, since it seeks to identify and evaluate the effect of internal and external factors on intrapreneurship in SMEs in northwestern Mexico. The methodological design is non-experimental and cross-sectional, since the data were collected at a single moment in time without deliberate manipulation of the independent variables.

Procedure

The investigation procedure was developed in several stages. In the first phase, an analysis of the scientific literature was carried out in order to delimit the theoretical framework, identify the relevant constructs and formulate the research hypotheses. Subsequently, the measurement instrument was identified and adapted, ensuring its conceptual coherence and adequacy to the context of Mexican SMEs. In the second phase, fieldwork was carried out, applying the questionnaire directly to the owners and/or managers of the selected companies, guaranteeing the understanding of the items and the willingness to participate. Once the information was collected, the database was captured, eliminating incomplete questionnaires or questionnaires with inconsistent response patterns. Finally, the filtered data were coded and prepared for statistical analysis, following a systematic protocol that allows the replicability of the study by other researchers interested in contrasting the proposed model in similar contexts.

Data analysis

The analysis of the data was carried out using the structural equation technique based on partial least squares (PLS-SEM), which is suitable for complex studies and models and latent variables, allowing the simultaneous evaluation of the measurement model and the structural model, as well as estimating the reliability, validity and predictive capacity of the research model. For the estimation of the model, SmartPLS software in its version 3.2.8 was used. The significance of the hypothesised relationships was assessed by bootstrapping with 5,000 subsamples, to evaluate the stability and robustness of the estimated coefficients, obtaining robust standard errors, t-values, and confidence intervals, according to the methodological recommendations for PLS-SEM models. Likewise, adjustment and predictive quality indicators were analysed, such as R^2, f^2, Q^2, SRMR and NFI, as recommended by Hair et al. (2019).

Ethical considerations

The research was carried out respecting the fundamental ethical principles applicable to studies with human participation. All participants were informed about the objectives of the study, the academic nature of the research and the exclusively scientific use of the information provided. Participation was voluntary and anonymous, guaranteeing at all times the confidentiality of the data and the protection of the identity of the companies and informants. The data collected were used solely for research purposes, stored securely and analysed in an aggregated manner, avoiding any possibility of individual identification. Likewise, since we worked with non-sensitive primary information and without experimental intervention, the approval of an institutional ethics committee was not required, in accordance with the regulations applicable to non-experimental organisational studies.

Variable measurement

Intra-Entrepreneurship. From a conceptual and statistical perspective, the variable was operationalised as a first-order construct, under a reflective measurement model in mode A. The scales of measurement for this construct were based on the studies developed by Ajzen (1991), Zampetakis and Moustakis, (2006), Zahra and Wright (2016) and Poole (2018), studies that measure internal entrepreneurship from a psychological and business point of view. Initially, the variable was operationalised through seven items; however, as a result of the reliability and validity analyses, the number of items was refined to four (see Table 1).

Table 1. Internal consistency and convergent validity by construct (first-order reflective variable)

Construct	CF	FC	AC
Intra-Entrepreneurship		**0.839**	**0.745**
Ability to recognise emerging business opportunities.	0.757***		
The organisation participates in strategic planning processes.	0.738***		
Speed to market products and services.	0.767***		
Research, innovation and development of innovations are prioritised.	0.745***		

Source: Own elaboration.

Internal Factors for Intra-Entrepreneurship. The variable was operationalised, from a conceptual and statistical perspective, as a first-order construct, specified by means of a reflective measurement model in mode A. The scales of measurement for this construct were based on the studies developed by Hatala (2005), Zahra (2007) and by the GEM (2018), studies that expose the internal barriers that exist for the development of internal entrepreneurship in organisations. This variable was disaggregated and measured in 1) Business Education Factor (3 questions), 2) Research and Development Factor (4 questions), 3) Physical Infrastructure Factor (3 questions) and 4) Technological Infrastructure Factor (3 questions). Initially, the variable was measured globally through 18 items; however, as a result of the reliability and validity tests, 13 items were preserved (see Table 2).

Table 2. Internal consistency and convergent validity by construct (first-order reflective variable)

Constructs and dimensions Internal Factors for Intrapreneurship	CF	FC	AC
Business Education Factor		0.885	0.804
Technical training favours business creation and growth.	0.890***		
Management training drives business development.	0.827***		
Universities strengthen entrepreneurial skills.	0.826***		
Research and Development Factor		0.928	0.896
SMEs invest resources in new products.	0.835***		
Companies have access to current technologies.	0.906***		
Companies have access to research and technology.	0.897***		
Information, knowledge and new technologies are transferred internally in the SME.	0.853***		
Physical Infrastructure Factor		0.836	0.714
A new or growing company has timely access to basic services.	0.745***		
Companies cover the costs of essential services.	0.741***		
Communication services are available to companies.	0.888***		
Technological Infrastructure Factor		0.846	0.729
New companies have a budget for adopting and upgrading technology.	0.702***		
New companies have current equipment and technologies for the development of their business	0.809***		
Companies have processes based on innovation and technology.	0.895***		

Source: Own elaboration.

Table 3. Internal consistency and convergent validity by construct (first-order reflective variable)

Constructs and dimensions External Factors for Intrapreneurship	CF	FC	AC
Financing Factor		0.851	0.744
There is sufficient support for new and growing companies.	0.925***		
Companies have accessible private financing.	0.864***		
Entrepreneurs have their own capital to start and grow.	0.621***		
Social Norms Factor		0.895	0.852
Social norms promote individual responsibility.	0.714***		
Social and cultural norms stimulate creativity and innovation.	0.804***		
Social and cultural norms favour entrepreneurial risk-taking.	0.837***		
Autonomy and personal initiative are valued.	0.854***		
Individual success is socially recognised.	0.754***		
Public Policy Factor		0.949	0.931
New businesses can complete the administrative and legal formalities in about a week.	0.903***		
The state government prioritises startups.	0.924***		
The federal government boosts new and growing businesses.	0.918***		
Government policy favours start-ups (e.g. in public tendering or procurement).	0.887***		

Source: Own elaboration.

External Factors for Intrapreneurship. In conceptual and statistical terms, the variable s was configured as a first-order construct, using a reflective measurement model in mode A. To develop the scales of measurement for this construct, the studies developed by Hatala (2005) and by Zahra (2007) were consulted, studies that expose the internal barriers that exist for the development of internal entrepreneurship in organisations. This variable was disaggregated and measured in 1) Financing Factor (3 questions), 2) Social Norms Factor (5 questions) and 3) Public Policy Factor (4 questions). The overall measurement of the variable originally included 16 items, which, once the reliability and validity tests were carried out, were adjusted to 12 (see Table 3).

Results

The analysis of the measurement model with reflective variables in mode A included the review of factor loads, composite reliability, internal consistency, and convergent validity. To measure the individual relationship and reliability of each item, a standardised factor load greater than 0.707 is recommended (Carmines & Zeller, 1979; Chin & Dibbern, 2010; Roberts & Priest, 2006). The factor loads estimated in the research presented values ranging from 0.621 to 0.925, showing, in general, levels close to and above the recommended criteria of 0.707. The composite reliability shows values ranging from 0.836 to 0.949, thus fulfiling the requirement that the indicator must be above 0.800 for basic research, as proposed by Nunnally (1978) and Vandenberg and Lance (2000). Cronbach's alpha is considered satisfactory over 0.700 (Hair, Black, & Babin, 2010). The analysis yielded values ranging from 0.729 to 0.931, indicating a high internal consistency of the construct (see Table 4).

The extracted mean variance (AVE) reflects the average of the variance explained by the indicators that make up the construct. In the present study, the AVE values were between 0.565 and 0.763, being close to and above the minimum threshold of 0.500, in accordance with the criteria established by Hair, Black, and Babin (2010). The discriminant validity of the model constructs was verified by analysing the square root of the AVE. To this end, two criteria widely accepted in the literature were expanded: first, the Fornell and Larcker criterion, which establishes that the diagonal values of the root must overcome the correlations between constructor; and second, the HTMT index, whose results showed values below one. Overall, the tests carried out did not show inconsistencies in the model (Tables 5 and 6), allowing us to conclude that the analysed constructs present adequate levels of validity and reliability, both convergent and discriminant.

Table 4. Reliability and validity of constructs

Constructs	Cronbach's alpha	rho_A	Composite reliability	Mean extracted variance (AVE)
Entrepreneurship Factor	0.745	0.747	0.839	0.565
Business Education Factor	0.804	0.807	0.885	0.719
Financing Factor	0.744	0.869	0.851	0.662
Technological Infrastructure Factor	0.729	0.773	0.846	0.649
Physical Infrastructure Factor	0.714	0.793	0.836	0.631
Research and Development Factor	0.896	0.901	0.928	0.763
Social Norms Factor	0.852	0.852	0.895	0.631
Public Policy Factor	0.931	0.987	0.949	0.824

Source: Own elaboration.

Table 5. Discriminant validity of Fornell and Larcker criteria

	FED	EMP	FFI	FTE	FIF	FID	FNS	FPO
FED	0.848							
EMP	0.415	0.752						
FFI	0.208	0.242	0.814					
FTE	0.503	0.468	0.370	0.806				
FIF	0.392	0.366	0.336	0.495	0.794			
FID	0.498	0.485	0.401	0.671	0.528	0.873		
FNS	0.462	0.409	0.310	0.494	0.516	0.519	0.794	
FPO	-0.153	-0.149	0.375	0.067	0.053	-0.036	0.018	0.908

Source: Own elaboration.

Table 6. Discriminant validity of the theoretical model Heterotrait-Monotrait Ratio (HTMT)

	FED	EMP	FFI	The end	FIF	FID	FNS	FPO
FED								
EMP	0.530							
FFI	0.251	0.303						
FTE	0.651	0.619	0.524					
FIF	0.519	0.470	0.466	0.669				
FID	0.587	0.590	0.477	0.818	0.640			
FNS	0.560	0.509	0.382	0.627	0.656	0.595		
FPO	0.171	0.165	0.520	0.129	0.114	0.058	0.052	

Source: Own elaboration.

Table 7. Results of the hypothesis test

Structural relationships (model hypothesis)	Coefficients	Standard deviation	Value *t*	*P* Value	F (2)
H1. FED -> Intra Entrepreneurship	0.112***	0.042	2.688	0.007	0.019
H2. FFI -> Intra-Entrepreneurship	0.092**	0.039	2.366	0.018	0.013
H3. FTE-> Intra-Entrepreneurship	-0.191***	0.042	4.563	0.000	0.032
H4. FIF-> Intra-Entrepreneurship	0.055	0.039	1.405	0.160	0.009
H5. FID-> Intra-Entrepreneurship	-0.164***	0.049	3.330	0.001	0.024
H6. FNS -> Intra-Entrepreneurship	0.124***	0.044	2.840	0.005	0.021
H7. FPO -> Intra-Entrepreneurship	-0.178***	0.028	6.337	0.000	0.039

Note. *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Source: Own elaboration.

Structural model: For the empirical contrast of the hypotheses formulated in the study, the modelling of structural equations based on partial least squares (PLS-SEM) was used, using SmartPLS software version 3.2.8. The use of this technique with the support of this software is appropriate in predictive, exploratory and confirmatory research (Henseler et al., 2016). Table 7 reports the main results of the structural model, including β coefficients, levels of statistical significance (*p*-value), Student's t-statistics, and the standard deviation associated with each hypothesised relationship. To test the hypothesis, the bootstrapping procedure was used with 5,000 subsamples as recommended by Chin (1998).

Table 7 presents the results derived from the estimation of the structural model using the PLS-SEM technique. Based on the bootstrapping procedure used for the validation of the hypotheses, it is observed that the proposed model has a broadly consistent empirical support, since most of the hypothesised relationships are statistically significant. In general terms, H1, H2, H3, H5, H6 and H7 hypotheses obtained empirical support, while the H4 hypothesis did not reach levels of statistical significance. Specifically, the results corresponding to Hypothesis 1 show that the business education factor exerts a positive and significant influence on intrapreneurship in the SMEs analysed, which is reflected in a beta coefficient of 0.112***; H2 indicates that financing has a positive effect, although of a lesser magnitude, on the development of intra-entrepreneurship within SMEs, with a beta value of 0.092**

In relation to the H3 hypothesis, the findings show that technological infrastructure, although theoretically recognised as a key factor for organisational competitiveness, presents in this study a significant negative relationship with intrapreneurship, evidenced by a beta coefficient of –0.191*. Consistently, it was identified that investment in Research and Development (H5) and public policies (H7) also exert negative and statistically significant effects on the intrapreneurial activities of SMEs, with beta values of –0.164* and –0.178*, respectively. Finally, the results associated with the H6 hypothesis confirm that social norms play a relevant role in the promotion of intrapreneurship, showing a positive and significant effect on this construct, represented by a beta coefficient of 0.124***. This finding suggests that favourable sociocultural environments can contribute substantially to the strengthening of intrapreneurial initiatives within organisations.

To evaluate the fit of the proposed model with SEM techniques that are based on covariance, PLS is not yet fully developed and it is only possible to estimate these measures

Table 8. Q Square Predictive Quality

Constructs	SSO	SSE	Q^2 (=1-SSE/SSO)
Intra-Entrepreneurship	4,048.000	3,342.440	**0.174**
Business Education Factor	3,036.000	3,036.000	
Financing Factor	3,036.000	3,036.000	
Technological Infrastructure Factor	3,036.000	3,036.000	
Physical Infrastructure Factor	3,036.000	3,036.000	
Research and Development Factor	4,048.000	4,048.000	
Social Norms Factor	5,060.000	5,060.000	
Public Policy Factor	4,048.000	4,048.000	

Source: Own elaboration.

Table 9. Model Fit and Variance Explained

Indicators	Estimated model	R squared
Damn	0.066	0.331
Chi-square	3,600.412	
NFI	0.787	

Source: Own elaboration.

based on: 1) the value of the trajectory coefficients, 2) the analysis of (R^2) and 3) the values of (F^2) which are significant individual measures to explain the predictive capacity of the structural model (Chin & Dibbern, 2010; Schuberth et al., 2018). Trajectory coefficients around 0.2 are considered economically significant (Ghobakhloo et al., 2011). Among the most relevant coefficients obtained in the research are the values of 0.092**, 0.112***, 0.124***, -0.164***, -0.178*** and -0.191***. The evaluation of the explained variance and the predictive quality of the model, through the coefficient R^2, is based on the following interpretation scales. Values of 0.1, 0.25, and 0.36 are small, medium, and large effects (Wetzels & Odekerken, 2009). The explanatory performance of the model evaluated by the coefficient of determination (R^2) for the dependent variable of intrapreneurship, reaches a value of 0.331, indicating a moderate explanatory power of the model. The value (F^2) measures and provides the size of the effect entered into the model. F^2 values of 0.02, 0.15, and 0.35 indicate weak, medium, or large effect (Leal-Rodríguez et al., 2014). The F^2 analysis shows the results of the key relationships of the model with values of 0.013, 0.019, 0.021, 0.024 and 0.032, values that show weak to medium effect. With this, it is demonstrated that the proposed model has an adequate structural property and an acceptable explanatory level.

The Q^2 (cross-validated redundancy index) statistic test allows determining the degree of predictive relevance of endogenous constructs within the structural model made up of reflective variables. In addition, the blindfolding procedure was used (Hair et al., 2018), to estimate the Q^2 statistic, representing a form of internal cross-validation aimed at assessing the predictive relevance of the model. Our value is 0.174 for intrapreneurship (see Table 8). Values greater than (0) show remarkable predictive quality (Hair, Black, Rabin et al., 2010) This shows the existence of a remarkable explanatory quality of the model.

Table 9 shows the fit of the model and in order to more accurately explain the predictive effect has added two goodness-of-fit tests. When the standardised residual mean square (SRMR) value is in a range (< 0.08-0.1), there is an acceptable fit (Schuberth et al., 2018) and the second test indicates that the NFI value should be greater than 0.700. The results of these tests show an SRMR value of 0.066 and the NFI of 0.787, and this confirms that the proposed model has an acceptable predictive quality and that the empirical results are aligned with theory. In addition, in the appendix section you can find all the descriptive results (mean, standard deviation) of the general data and the variables under study.

Discussion and conclusions

From the integrative perspective, the results of this research allow us to deepen the understanding of intrapreneurship in SMEs in northwestern Mexico, recognising it as a complex organisational phenomenon, influenced by the interaction between internal, external and institutional factors. However, most of the structural relationships are statistically significant ($p < 0.5$). the observed effect sizes ($\beta = 0.092–0.191$), and the coefficient of determination of the model ($R^2 = 0.331$) show a moderate explanatory power,

which is consistent with previous research of Hair, Black, Rabin et al. (2019) and Urbano et al. (2024). In relation to internal factors, entrepreneurship education showed a positive and significant association with intrapreneurship, reinforcing previous evidence highlighting the role of continuous learning, such as management training and the development of entrepreneurial capabilities as catalysts for organisational innovation (Bouchard & Basso, 2011; Klepić, 2021; Teece, 2015) . However, the size of its effect suggests that education, by itself, does not work to trigger sustained intrapreneurial processes, but needs to be complemented with organisational structure, resources, and institutional support.

On the other hand, technological infrastructure and investment in research and development presented significant but negative effects, which reveals a recurring paradox in SMEs with emerging problems. While the classic literature on entrepreneurship and innovation maintains that technological adoption and R&D are pillars of business growth (Drucker, 2014; Hoffman et al., 1998; Martínez-Román & Romero, 2017; Ortega-Argilés & Voigt, 2009), the results suggest that, in the absence of mature organisational capacities and sufficient financial resources, these factors can become sources of pressure rather than enablers of intrapreneurship. These findings are consistent with recent studies that warn that the incorporation of technology without a clear strategy can generate organisational rigidity, cost overruns, and resistance to change in SMEs (Romero Alvarez et al., 2025; Soltanifar et al., 2023). In contrast, the physical infrastructure did not present a statistically significant effect, which suggests that, although access to basic services and equipment is a necessary condition, it does not constitute a differentiating element for the development of intrapreneurship in this context. This result is consistent with research that indicates that physical infrastructure does not act as a direct driver of internal innovation (Palalić et al., 2023).

Regarding external factors, financing presented a positive and significant relationship, although of moderate magnitude, confirming its role as an enabler of intrapreneurship by allowing SMEs to take risks and invest in innovative initiatives (Ambad & Ali, 2024; Romero & Martínez-Román, 2024). However, the limited magnitude of the effect reflects the structural constraints of the financial system in Mexico, particularly for SMEs, where access to credit is often costly, bureaucratic, and conditional. Social and cultural norms emerge as one of the most robust factors of the model, reinforcing psychological and institutional approaches that highlight the influence of the sociocultural environment on entrepreneurial propensity and organisational innovation (Ajzen, 1991; Moric Milovanovic et al., 2025). The social valuation of success, autonomy, creativity and risk-taking seems to constitute a key substrate for the development of intrapreneurship in the SMEs analysed. In contrast, public policies showed a negative and significant effect, evidencing a disconnect between the current regulatory frameworks and the real needs of SMEs. This coincides with previous diagnoses in Latin America, which indicate that overregulation, regulatory instability and the lack of specific programmes for organisational entrepreneurship inhibit competitiveness and business innovation (ECLAC, 2020; Urbano et al., 2024). In the same sense, the findings can be interpreted in the light of the organisational models of intrapreneurship proposed by Wolcott and Lippitz (2009). Evidence suggests that SMEs in northwestern Mexico operate predominantly under opportunistic and facilitating schemes characterised by individual initiatives and partial support, but lacking the structures, resources and institutional alignment necessary to move towards defender or producer models, where intrapreneurship is managed systematically and strategically.

The results of the research allow us to conclude that intrapreneurship in SMEs in northwestern Mexico is a multidimensional and systemic phenomenon, conditioned by the interaction between internal capacities, external factors and formal and informal institutions. From a theoretical perspective, the study contributes to the literature on intrapreneurship and dynamic capabilities by offering empirical evidence in a little-explored regional context, reinforcing the idea that organisational innovation in SMEs does not respond to linear or exclusively technological logic. Methodologically, the use of PLS-SEM proved to be adequate for analysing complex models in emerging economic contexts; however, the cross-sectional nature of the study is recognised as a limitation, which prevents establishing causal inferences. Future work could incorporate longitudinal designs, cross-validations, and multilevel analysis to strengthen the robustness of the findings.

From a practical perspective, the results suggest the need for concrete actions: 1. The design of intrapreneurial training programmes articulated between universities and companies; 2. The promotion of low-cost incremental innovation laboratories for SMEs; 3. The promotion of clusters and collaborative networks that mitigate financial and technological constraints; and 4. The reformulation of policies specifically aimed at strengthening organisational intrapreneurship. Finally, the present study opens future lines of research aimed at analysing the mediating role of leadership, organisational culture and dynamic capacities, as well as to compare the behaviour of intrapreneurship between different regions of Mexico and other Latin American countries, thus contributing to a deeper and contextualised understanding of the phenomenon.

Funding

ITSON - through the Research Strengthening Programme: PROFAPI_2025_076.

Conflict of interest

The authors state that there is no conflict of interest.

Authors' contribution

Manuela Alejandra Muniz Molina: Conceptualisation, bibliography review, research, writing of the original draft, revision and editing; Luis Enrique Valdez-Juárez (Project Director): Conceptualisation, methodology, formal analysis, supervision, writing (proofreading and editing), revision and editing; Elva Alicia Ramos-Escobar: Conceptualisation, research, writing, revision and editing; José Alonso Ruiz-Zamora: Research, data collection, validation, writing (Refereeing correction and editing), revision and editing, supervision of fieldwork.

References

Abid, K., & Polo, F. (2025). Talent development through intrapreneurship: A human-capital approach in French SMEs. *European Journal of Training and Development*. https://doi.org/10.1108/ejtd-11-2024-0162

Aina, Q., & Solikin, I. (2020). Entrepreneurship and intrapreneurship: How supporting corporate performance. *Review of Integrative Business and Economics Research*, *9*, 288-297.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Ambad, S. N. A., & Ali, M. M. (2024). Drivers for intrapreneurship: A systematic literature review and future research agenda. *Innovating From Within*, 14-29.

Ametefe, M. D., Adamu, A. G., Umaru, F. A., & Ametefe, F. G. (2025). Leadership's impact on SME performance: A systematic review of its role in enterprise. *Journal of the International Council for Small Business*, 1-32. https://doi.org/10.1080/26437015.2024.2443764

Amo, B. W. (2010). Corporate entrepreneurship and intrapreneurship related to innovation behaviour among employees. *International Journal of Entrepreneurial Venturing*, *2*(2), 144-158.

Batista-Canino, R. M., Sosa-Cabrera, S., Medina-Brito, P., & Santana-Hernández, L. (2025). scientific progress on entrepreneurship in the circular economy: A scientometric analysis. *Sustainability (Switzerland)*, *17*(2), 1-25. https://doi.org/10.3390/su17020777

Bouchard, V., & Basso, O. (2011). Exploring the links between entrepreneurial orientation and intrapreneurship in SMEs. *Journal of Small Business and Enterprise Development*, *18*(2), 219-231.

Carmines, E. G., & Zeller, R. A. (1979). Reliability and validity assesment: Quantitativr applications in the social sciences. *Sage University, Beverly Hills*, *17*(1), 1-71.

Chakuzira, W., Okoche, J. M. M., & Mkansi, M. (2024). Refining the definition and typologies of entrepreneurship in Africa: A systematic review. *Administrative Sciences*, *14*(8). https://doi.org/10.3390/admsci14080184

Chen, D., & Bu, T. (2024). The threshold effect of political connection on the green innovation of businesses: Evidence from China. *The North American Journal of Economics and Finance*, *74*, 102255. https://doi.org/https://doi.org/10.1016/j.najef.2024.102255

Chin, W. W. (1998). Commentary: Issues and Opinion on Structural Equation Modeling. MIS Quarterly, 22(1), vii–xvi. http://www.jstor.org/stable/249674

Chin, W. W., & Dibbern, J. (2010). An introduction to a permutation based procedure for multi-group pls analysis: Results of tests of differences on simulated data and a cross cultural analysis of the sourcing of information system services between Germany and the USA. *Handbook of Partial Least Squares*, 171-193. https://doi.org/10.1007/978-3-540-32827-8_8

Dentchev, N., Baumgartner, R., Dieleman, H., Jóhannsdóttir, L., Jonker, J., Nyberg, T., Rauter, R., Rosano, M., Snihur, Y., & Tang, X. (2016). Embracing the variety of sustainable business models: Social entrepreneurship, corporate intrapreneurship, creativity, innovation, and other approaches to sustainability challenges. *Journal of Cleaner Production*, *113*, 1-4.

Dino, A. (2024). A literature review and bibliometric analysis on intrapreneurial intensity. *GSB Insight: Journal of Business and Research*, *1*(1), 13-28.

Divakara, S., Semasinghe, D. M., & Surangi, H. (2019). A literature review on intrapreneurial constraints in the development of small and medium scale enterprises. *International Journal of Current Research*, *11*(11), 8540-8547. DOI: https://doi.org/10.24941/ijcr.37296.11.2019

Drucker, P. (2014). *Innovation and entrepreneurship: Practice and principles*.

ECLAC. (2018). *Economic Commission for Latin America and the Caribbean. Progress and evolution of the insertion of women in productive and entrepreneurial activities in South America*. ECLAC.

ECLAC. (2020). *About Microenterprises and SMEs*. ECLAC. https://www.cepal.org/es/temas/pymes/acerca-microempresas-pymes

Entrepreneurship Monitor, G. (2025). GEM 2024/2025 Global Report: Entrepreneurship Reality Check. In *Global Entrepreneurship Monitor*. http://www.witchwoodhouse.com

Fu, C., Indiran, L., Abdul Kohar, U. H., & Wiyata (2024). Entrepreneurship orientation (EO) and innovation: A systematic review. *KnE Social Sciences*, *2024*, 368-398. https://doi.org/10.18502/kss.v9i11.15810

GEM. (2018). *Global Entrepreneurship Monitor. Global Report, Entrepreneurship and Innovation 2017-2018*. GEM.

Ghobakhloo, M., Arias-Aranda, D., & Benitez-Amado, J. (2011). Adoption of e-commerce applications in SMEs. *Industrial Management and Data Systems* (vol. 111, issue 8). https://doi.org/10.1108/02635571111170785

Gündoğdu, M. Ç. (2012). Re-thinking entrepreneurship, intrapreneurship, and innovation: A multi-concept perspective. *Procedia-Social and Behavioral Sciences*, *41*, 296-303.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. (2010). *Multivariate Data Analysis*. Pearson.

Hair, J. F., Black, W. C., & Babin, B. J. (2010). *Multivariate Data Analysis*. Pearson Practice Hall.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review* (vol. 31, issue 1, pp. 2-24). Emerald Group Publishing Ltd. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. (2018). *Advanced issues in partial least squares structural equation modeling*. SAGE Publications.

Hatala, J. P. (2005). Identifying barriers to self-employment: The development and validation of the barriers to entrepreneurship success tool. *Performance Improvement*, *18*(4), 50-70. https://doi.org/10.1111/j.1937-8327.2005.tb00350.x

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, *116*(1), 2-20. https://doi.org/10.1108/IMDS-09-2015-0382

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8

Hernández-Perlines, F., Ariza-Montes, A., & Blanco-González-Tejero, C. (2022). Intrapreneurship research: A comprehensive literature review. *Journal of Business Research*, *153*, 428-444. https://doi.org/https://doi.org/10.1016/j.jbusres.2022.08.015

Hoffman, K., Parejo, M., Bessant, J., & Perren, L. (1998). Small firms, R&D, technology and innovation in the UK: A literature review. *Technovation*, *18*(1), 39-55.

Klepić, I. (2021). Correlation between training and education of human resources and business performance of small and medium enterprises. *Naše Gospodarstvo/Our Economy*, *67*(3), 1-16.

Knossalla, C. E., & Carbon, C. C. (2023). Neither entrepreneurship nor intrapreneurship: A review of how to become an innovative split-off start-up. *Frontiers in Sociology*, *8*(September), 1-15. https://doi.org/10.3389/fsoc.2023.1267706

Leal-Rodriguez, A. L. Roldán, J., Ariza-Montes, J., & Leal-Millán, A. (2014). *From potential absorptive capacity to innovation outcomes in project teams: The conditional mediating role of the realized absorptive capacity in a relational learning context*. https://doi.org/10.1016/j.ijproman.2014.01.005

Lun, Z. E. B., Jiménez, S. O., & López, J. G. F. (2025). Productivity of SMEs in the traditional channel in Northwest Mexico. *Revista San Gregorio*, *1*(61), 1-7.

Martínez-Román, J. A., & Romero, I. (2017). Determinants of innovativeness in SMEs: Disentangling core innovation and technology adoption capabilities. *Review of Managerial Science*, *11*(3), 543-569.

Mehmood, T., Alzoubi, H. M., Alshurideh, M., Al-Gasaymeh, A., & Ahmed, G. (2019). Schumpeterian entrepreneurship theory: Evolution and relevance. *Academy of Entrepreneurship Journal*, *25*(4), 1-10.

Mer, A., & Virdi, A. S. (2024). Decoding the challenges and skill gaps in small- and medium-sized enterprises in emerging economies: A review and research agenda. In A. M. Thake, K. Sood, E. Özen, & S. Grima (eds.), *Contemporary challenges in social science management: Skills gaps and shortages in the labour market* (vol. 112B, pp. 115-134). Emerald Publishing Limited. https://doi.org/10.1108/S1569-37592024000112B007

Moric Milovanovic, B., Cvjetkovic, M., & Masovic, J. (2025). Public sector entrepreneurship: Present state and research avenues for the future. *Administrative Sciences*, *15*(3). https://doi.org/10.3390/admsci15030071

National Institute of Statistics and Geography (INEGI). (2018). *Economic Census, summary of the final results*. INEGI.

National Institute of Statistics and Geography (INEGI). (2024). *Statistical and Geographic Yearbook by State 2024* (p. 373). INEGI. https://www.inegi.org.mx/contenidos/productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/889463921820.pdf

Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill.

Orozco, J., Turro, A., & Urbano, D. (2024). Research on corporate entrepreneurship in developing countries: A review and agenda for future directions. *Entrepreneurship Research Journal*, *14*(4), 1735-1779.

Ortega-Argilés, R., & Voigt, P. (2009). *Business R&D in SMEs* (Working Papers on Corporate R&D and Innovation). IPTS.

Padilla-Rivera, A., Morales Brizard, M., Merveille, N., & Güereca-Hernandez, L. P. (2024). Barriers, Challenges, and Opportunities in the Adoption of the Circular Economy in Mexico: An Analysis through Social Perception. *Recycling*, *9*(5), 71. https://doi.org/10.3390/recycling9050071

Palalić, R., Riđić, O., Jukić, T., Aidoo, A. W., Riđić, G., & Razzak, M. R. (2023). Entrepreneurship ecosystem in Bosnia and Herzegovina: Perspectives and challenges. In V. Ramadani, S. Kjosev, & B. S. Sergi (eds.), *Entrepreneurship development in the Balkans: Perspective from diverse contexts* (pp. 81-93). Emerald Publishing Limited. https://doi.org/10.1108/978-1-83753-454-820231005

Poole, D. L. (2018). Entrepreneurs, entrepreneurship and SMEs in developing economies: How subverting terminology sustains flawed policy. *World Development Perspectives*, *9*, 35-42. https://doi.org/10.1016/J.WDP.2018.04.003

Roberts, P., & Priest, H. (2006). Reliability and validity in research. *Nursing Standard*, *20*(44), 41-46.

Romero Alvarez, Y. P., Salas-Navarro, K., Martínez, L. B., & Zamora-Musa, R. (2025). Financing innovation in SMEs: A systematic review of financing channels. *International Journal of Innovation Science*. https://doi.org/10.1108/IJIS-06-2024-0151

Romero, I., & Martínez-Román, J. A. (2024). Self-employment, innovation, and digital transformation: A review and research agenda. *Research Handbook on Self-Employment and Public Policy*, 378-394.

Schuberth, F., Henseler, J., & Dijkstra, T. K. (2018). Partial least squares path modeling using ordinal categorical indicators. *Quality & Quantity*, *52*(1), 9-35. https://doi.org/10.1007/s11135-016-0401-7

Soltanifar, M., Hughes, M., O'Connor, G., Covin, J. G., & Roijakkers, N. (2023). Unlocking the potential of non-managerial employees in corporate entrepreneurship: A systematic review and research agenda. *International Journal of Entrepreneurial Behaviour and Research*, *29*(11), 206-240. https://doi.org/10.1108/IJEBR-04-2022-0333

Stezano, F. (2020). VII. Diagnosis of micro, small and medium-sized enterprises, policies and development institutions in Mexico. *Thank You for Your Interest in this ECLAC Publication*, 285.

Sujatha, M. S., & Mukherjee, U. (2023). Unleashing intrapreneurship in SMEs: A comprehensive literature review on key catalysts. *International Journal of All Research Education and Scientific Methods (IJARESM)*, *11*(5), 2455-6211. https://www.researchgate.net/publication/372518673

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainabile) enterprise performance. *Strategic Management Journal*, *298*(13), 1319-1350.

Teece, D. J. (2015). *Dynamic capabilities and entrepreneurial management in large organizations: Toward a Theory of the (Entrepreneurial) Firm*. 1-55.

Teece, D. J. (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, *86*, 202-216. https://doi.org/10.1016/J.EUROECOREV.2015.11.006

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Knowledge and Strategy*, *18*(March), 77-116. https://doi.org/10.4337/9781035334995.00014

Urbano, D., Orozco, J., & Turro, A. (2024). The effect of institutions on intrapreneurship: An analysis of developed vs developing countries. *Journal of Small Business Management*, *62*(3), 1107-1147.

Urbano, D., Turro, A., Wright, M., & Zahra, S. (2022). Corporate entrepreneurship: A systematic literature review and future research agenda. *Small Business Economics*, 1-25. https://doi.org/10.1007/s11187-021-00590-6

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Sage Journals*, *3*(1). https://doi.org/10.1177/109442810031002

Vela, E. G., Mercader, V., Qalati, S. A., & Ravina-Ripoll, R. (2023). How does the work climate influence intrapreneurship? Evidence from Mexico. *Middle East Journal of Management*, *10*(3), 277-296. https://doi.org/10.1504/MEJM.2023.130589

Wetzels, M., & Odekerken, G. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration assessing the effect of narrative transportation, portrayed action, and photographic style on the likelihood to comment on posted selfies View proje. *MIS Quarterly*, *33*(1), 177-195. https://doi.org/10.2307/20650284

Widya-Hastuti, A., Talib, N. B. A., Wong, K. Y., & Mardani, A. (2016). The role of intrapreneurship for sustainable innovation through process innovation in small and medium-sized enterprises: A conceptual framework. *International Journal of Economics and Financial Issues*, *6*(3), 83–91.

Wolcott II, R. C., & Lippitz, M. J. (2009). *Grow from within: Mastering corporate entrepreneurship and innovation*. McGraw-Hill Education.

Zahra, S. A., & Wright, M. (2016). Understanding the social role of entrepreneurship. *Journal of Management Studies*, *53*(4), 610-629.

Zahra, S. A. (2007). Contextualizing theory building in entrepreneurship research. *Journal of Business Venturing*, *22*(3), 443-452. https://doi.org/10.1016/J.JBUSVENT.2006.04.007

Zampetakis, L. A., & Moustakis, V. (2006). Linking creativity with entrepreneurial intentions: A structural approach. *International Entrepreneurship and Management Journal*, *2*(3), 413-428. https://doi.org/10.1007/s11365-006-0006-z