Revista científica Sociedad & Tecnología

ISSN: 2773-7349

Fecha de presentación: 18/10/2024, Fecha de aceptación: 26/11/2024, Fecha de publicación: 01/01/2025

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Cita sugerida (APA, séptima edición)

Palomeque-Jaramillo, J., Pérez-Espinoza, M. J., Ferreira-Leite, E., & Uzcátegui-Sánchez, C. (2025). Exploring entrepreneurial orientation in Ecuadorian exporting companies: A PLS-SEM approach. *Revista Sociedad & Tecnología*, 8(1), 1-17. DOI: https://doi.org/10.51247/st.v8i1.454.

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Exploring entrepreneurial orientation in Ecuadorian exporting companies: A PLS-SEM approach.

ABSTRACT

This study investigates the impact of Entrepreneurial Orientation (EO) on the strategic performance of small and medium-sized enterprises (SMEs) in El Oro, Ecuador, focusing on the export sector. Utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM), the research analyzes how five dimensions of EO—innovation, risk-taking, proactiveness, competitive aggressiveness, and autonomy—contribute to the operational effectiveness of SMEs engaged in international markets. The analysis highlights that proactiveness and competitive aggressiveness are particularly influential, underscoring their importance in enhancing the strategic posture of SMEs in volatile export environments. Conversely, autonomy shows a more modest impact, suggesting potential external and internal barriers that might curtail strategic independence. The findings elucidate the critical role of specific EO dimensions in promoting adaptability and aggressive market positioning, essential for success in global markets. The study not only provides insights into the dynamics of EO in the

Ecuadorian context but also offers practical implications for SMEs aiming to refine their entrepreneurial strategies to better navigate the complexities of international trade.

Keywords: entrepreneurial orientation (EO), export performance, small and medium-sized enterprises (SMEs), competitive strategy

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Explorando la orientación emprendedora en empresas exportadoras ecuatorianas: Un enfoque PLS-SEM

RESUMEN

Este estudio investiga el impacto de la Orientación Empresarial (OE) en el desempeño estratégico de las pequeñas y medianas empresas (PYME) de El Oro, Ecuador, centrándose en el sector exportador. Utilizando el Modelo de Ecuaciones Estructurales por Mínimos Cuadrados Parciales (PLS-SEM), la investigación analiza cómo cinco dimensiones de la OE -innovación, asunción de riesgos, proactividad, agresividad competitiva y autonomía- contribuyen a la eficacia operativa de las PYME que participan en mercados internacionales. El análisis destaca que la proactividad y la agresividad competitiva son especialmente influyentes, subrayando su importancia para mejorar la postura estratégica de las PYME en entornos de exportación volátiles. Por el contrario, la autonomía muestra un impacto más modesto, lo que sugiere la existencia de posibles barreras externas e internas que podrían cercenar la independencia estratégica. Las conclusiones dilucidan el papel fundamental de las dimensiones específicas de la OE en la promoción de la adaptabilidad y el posicionamiento agresivo en el mercado, esenciales para el éxito en los mercados mundiales. El estudio no sólo proporciona información sobre la dinámica de la OE en el contexto ecuatoriano, sino que también ofrece implicaciones prácticas para las PYME que pretenden perfeccionar sus estrategias empresariales para navegar mejor por las complejidades del comercio internacional.

Palabras clave: orientación emprendedora, resultados de exportación, pequeñas y medianas empresas (PYME), estrategia competitiva.

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Explorando a orientação empreendedora em empresas exportadoras equatorianas: uma abordagem PLS-SEM

RESUMO

Este estudo investiga o impacto da Orientação Empreendedora (OE) no desempenho estratégico das pequenas e médias empresas (PMEs) em El Oro, Equador, com foco no setor exportador. Utilizando o Modelo de Equações Estruturais de Mínimos Quadrados Parciais (PLS-SEM), a pesquisa analisa como cinco dimensões da OE - inovação, assunção de riscos, proatividade, agressividade competitiva e autonomia - contribuem para a eficácia operacional das PMEs participantes nos mercados internacionais. A análise destaca que a proatividade e a agressividade competitiva são especialmente influentes, sublinhando a sua importância na melhoria da postura estratégica das PME em ambientes de exportação voláteis. Pelo contrário, a autonomia apresenta um impacto mais modesto, sugerindo a existência de possíveis barreiras externas e internas que poderiam restringir a independência estratégica. As descobertas elucidam o papel crítico de dimensões específicas da OE na promoção da adaptabilidade e do posicionamento agressivo de mercado, essencial para o sucesso nos mercados globais. O estudo não só fornece insights sobre a dinâmica da OE no contexto

equatoriano, mas também oferece implicações práticas para as PME que procuram refinar as suas estratégias empresariais para melhor navegar nas complexidades do comércio internacional.

Palavras-chave: orientação empreendedora, resultados de exportação, pequenas e médias empresas (PME), estratégia competitiva.

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INTRODUCTION

Small and medium-sized enterprises (SMEs) play a crucial role in the economic, social, and political development of many countries, including Ecuador (Araque et al., 2022; ECLAC, 2023). These entities are fundamental to sustaining economic growth and have motivated significant business and academic initiatives aimed at reshaping the economic landscape and promoting a robust business structure in the face of challenges posed by the new techno-economic paradigm (Yang, 2023). In particular, the province of El Oro, with its dynamically export-oriented economy (Zhiminaicela et al., 2020), reflects the strategic importance of SMEs in adopting new technologies and transferring knowledge, which are key elements for strengthening the digital and connected economy.

Internationally, nations such as Brazil, Chile, and Colombia have taken the lead and developed strategies and plans focused on economic, political, and social growth to drive these transformations (Berg et al., 2024; Ferraz et al., 2024). These organizational schemes incorporate entrepreneurial strategy as a viable path to enhance a more digital and connected economy, impacting both globally and regionally. However, despite the importance of SME development in the modern economy for social advancement and improving the quality of life, the phenomenon of entrepreneurship in these organizations is still poorly understood (Bonfanti et al., 2024; Hashi & Krasniqi, 2011).

The relevance of SMEs is consistently highlighted in government agendas, especially during periods of economic crises when efforts to foster the creation of new businesses and prevent the disappearance of existing ones are intensified. Unfortunately, in contexts like El Oro, this scenario has resulted in a significant decrease in SMEs and their stagnation over the last decade.

Statistics show a reduction in business dynamism and employment across various sectors, highlighting the instability and challenges these companies face amidst financial crises and changes in international raw material markets. In this sense, the province of El Oro, known for its export vitality, is at a critical juncture where the development of its SMEs crucially depends on the modernization of their production systems, the attraction of talent, and the implementation of new managerial strategies aimed at international expansion.

This context offers a unique opportunity to explore the factors that influence the business strategy of SMEs in El Oro. This work proposes to analyze how Entrepreneurial Orientation (EO) manifests as a fundamental pillar of managerial strategy in exporting SMEs (Hossain et al., 2023; Mahmoud et al., 2023; Ringo et al., 2023). The region is recognized for its dynamism in export activities, highlighting the need to study these influences. Therefore, it is valuable to understand how entrepreneurial attributes contribute to the success and competitiveness of exporting companies in El Oro, especially in a globalized and competitive context, and in a region that significantly depends on export activities.

LITERATURE REVIEW

Entrepreneurial orientation

EO is a multifaceted construct in entrepreneurship research. According to Miller (1983), entrepreneurial firms are characterized by their innovation, market entry, and risk-taking—concepts rooted in the pioneering works of Mintzberg (1973) and Khandwalla (1977). These studies highlight the significance of environmental perceptions, organizational structures, and strategic decisions. Miller posits that firms with high EO aggressively seek growth opportunities.

Ferreras-Méndez et al. (2021) further this notion by describing EO as a driving force for business development and expansion. Building on Miller's work, Covin and Slevin (1991) found that innovation, proactivity, and continual risk-taking are crucial for entrepreneurial organizations. Lumpkin and Dess (1996) introduced autonomy and competitive aggressiveness as additional dimensions of EO. The business environment, including the type of company, market tenure, size, and ownership, also plays a role in the manifestation of EO (Tajeddini et al., 2020). Franco (2020) note that entrepreneurship enables companies to define their role in the process of change to maintain competitiveness.

For export companies, Rwehumbiza & Marinov (2020) identify EO as a key trait for overcoming resource and experience constraints. Dess and Lumpkin (2005) observe that EO is reflected in a company's culture and values, and Pérez-Luno et al. (2011) demonstrate that EO is embedded in strategic planning and decision-making processes. Arzubiaga et al. (2012) and Siddiqui et al. (2024) have contributed to understanding EO as an organizational attribute linked to corporate entrepreneurship, featuring various dimensions and levels of analysis. This body of research underscores that EO is a complex and dynamic phenomenon, essential for adaptability and business success.

Innovativeness

In the academic discourse on EO, innovation has emerged as a foundational pillar, defined by Lumpkin and Dess in 1996 as an organization's propensity to foster and support the generation of ideas, novelties, and creative processes that may culminate in new products, procedures, or services. This dimension, reflecting an entity's capacity to renew and differentiate itself, goes beyond mere idea generation to act as a catalyst for business transformation.

The narrative on innovation within specialized literature highlights essential components such as a commitment to continuous learning and a shared strategic vision across all organizational levels (Arzubiaga et al., 2012; Soomro et al., 2020). This innovative ethos should permeate corporate culture to the extent that the inherent mistakes in developing new products are recognized as part of an evolutionary process, rather than being stigmatized.

The bipartite classification of innovation, differentiates between internal innovations aimed at creating intrinsic value, and external innovations focused on visibility and the commercialization of new inventions. This distinction becomes even more pronounced in family businesses, where familial influence may temper the inclination towards internal innovation and restrict external innovations, with trends that vary over the course of the business's lifespan (Muñoz-Bullón et al., 2020).

Empirical research suggests that the youthfulness and smaller size of family businesses enhance innovation, unlike more established and larger entities (Ferraro & Cristiano, 2021). Furthermore, generational changes can serve as catalysts for innovation, with evidence

suggesting that ownership concentration in a single generation leads to optimal outcomes when combined with high levels of innovation (Nguyen et al., 2021). However, the pursuit of innovation in family businesses embodies a dichotomy between economic efficiency and family social values (Martínez-Alonso et al., 2023). The balance between financial returns and meeting family needs such as employment, identity, and wealth preservation adds complexity to the pursuit of innovation and the management of ensuing uncertainty.

Based on the above, hypothesis 1 is formulated: *EO positively influences innovativeness (IN).*

Proactiveness

Proactivity, as conceptualized by Venkatraman in 1989, involves the strategic anticipation of future needs and the pursuit of unprecedented opportunities, making it a cornerstone of today's competitive landscape. It is characterized by foresight and diligent action in response to potential market demands, with the goal of outperforming competitors and revitalizing organizational processes approaching the end of their life cycle.

Proactivity refers to an organization's attitude of seeking and entering new markets to satisfy unmet needs. A proactive company examines the environment and identifies opportunities that competitors have not yet exploited (Ibarra et al., 2022). Within companies, it evaluates the effort to stay ahead of competitors in developing and launching new processes, products, and services (Miller, 1983; Horz et al., 2022). Proactivity is also defined by the continuous search for new opportunities and involvement in emerging markets and operations (Lumpkin & Dess, 1996; Horz et al., 2022).

Proactivity in EO implies a forward-looking vision and an opportunity-seeking attitude, focusing on introducing new products and services before the competition. It also involves anticipating future needs to drive changes in the business environment (Zaidi & Zaidi, 2021).

Based on the above, hypothesis 2 is formulated: *EO positively influences risk-taking (RT).*

Risk-Taking

Risk-taking constitutes a critical dimension in EO, epitomizing the executive leadership's propensity to make decisions in contexts of high uncertainty with significant potential for failure (Lumpkin & Dess, 1996). Rauch et al. (2009) expand this concept by associating risk-taking with the execution of bold actions, such as the substantial allocation of resources to nascent initiatives or ventures into unexplored markets.

In the specific context of family businesses, there is a notable tendency towards risk aversion, attributed to the inseparability of ownership and control (González et al., 2021). Scholarly literature, including the study by Kathuria et al. (2023), suggests that this caution stems from the concentration of family wealth within the business, where the preservation of heritage for future generations takes precedence over risk-taking.

However, risk-taking is intrinsic to the entrepreneurial condition, outlining a comfort zone within which entrepreneurs navigate their tolerance for uncertainty. The relationship between risk aversion and the propensity for entrepreneurship is such that it can predict an individual's transition from employment to entrepreneurship (Ettis, 2023).

In an analysis of business risk, Pererva et al. (2023) addressed the definition of entrepreneurial risk, its mitigation through economic capital, and explored risk measurement methodologies. His study highlights that, although economic capital serves as a mitigator, it is

not the sole element in managing business risk. Recent research, such as that by Dvorsky et al. (2021), reveals that in Czech SMEs, the perception of financial risk is significantly linked to performance and is considered an integral part of management. This finding aligns with the correlation identified between market orientation and marketing performance in SMEs (Navia et al., 2023).

Wangrow et al. (2022), exploring organizational psychology, investigated how the birth order of chief executive officers influences the assumption of strategic risks. Drawing on evolutionary theory, they conclude that CEOs of an earlier birth order tend to take fewer risks than those born later, a perspective that introduces birth order as a relevant variable in strategic decision-making in businesses.

Based on the above, hypothesis 3 is formulated: *EO positively influences proactiveness (PR).*

Competitive Aggressiveness

A company's competitive aggressiveness relates to its behavior when interacting with other companies within the industry. It involves constant vigilance and active combat against competitors' strategies (including through imitation) to gain a competitive advantage and achieve more effective performance (Chelliah et al., 2023). Miller (1983) and Chelliah et al. (2023) argued that competitive aggressiveness involves outperforming competitors.

Findings by Andrade-Valbuena et al. (2021) support the recommendation that top management of small and medium-sized businesses should encourage the development and implementation of aggressive entrepreneurial strategies. This could result in improvements in profitability and increased revenue, which in turn will enable medium and long-term growth objectives to be achieved.

It should be noted that family businesses tend to adopt less aggressive stances as they mature, primarily to protect their reputation and image. Competitive aggressiveness has also been studied as a mediator in business performance. Recent research in Indonesia has found that competitive aggressiveness positively mediates the relationship between network capability, knowledge creation, innovation, and firm performance, highlighting that while knowledge creation and innovation enhance competitive aggressiveness, network capability itself does not significantly influence this dimension (Panjaitan et al., 2021).

Based on the above, hypothesis 4 is formulated: *EO positively influences competitive aggressiveness (CA).*

Autonomy

Autonomy refers to a person's ability and willingness to take self-directed actions in the search for market opportunities, allowing the organization to make quick and independent decisions to generate new opportunities with innovative products and services (Onikoyi & Fetuga, 2023). Empirical research by Chelliah et al. (2023) confirmed that autonomy has a positive and significant relationship with business performance. At the individual level, autonomy allows managers and other organizational members to make important decisions without the need for external approval (Moe et al., 2021).

In relation to the gender analysis of EO, autonomy is associated with the refusal to depend on parental and family support, an optimistic attitude towards problems, self-sufficiency to face challenges, and the use of one's own resources to start a business project (Vargas et al., 2024).

According to research by Beltramino et al. (2022), the motivations that drive entrepreneurs towards business sustainability are mainly the adoption of decisions with strategic initiatives aimed at weakening competitors, and cautious behavior linked to the development of innovation capabilities and full autonomy. In the same research, the authors reveal that in Argentina and Mexico, the strategic initiatives that contribute most to the sustainability actions of MSMEs are competitive aggressiveness and the assumption of risks. In the case of Ecuador, it is the autonomous attitude and the innovative attitude that stand out the most.

Based on the above, hypothesis 5 is formulated: *EO positively influences autonomy (AT).*

METHODOLOGY

The proposed model includes a latent construct of EO that reflects the observable dimensions of innovativeness (IN), proactiveness (PR), risk-taking (RT), competitive aggressiveness (CA), and autonomy (AU), using specific indicators for its measurement. Data collection took place between August and November 2023 through an online survey targeted at managers of exporting companies in the most populous cities of the El Oro province, specifically Machala, Pasaje, Santa Rosa, and El Guabo, according to 2010 INEC data. From this process, 209 requests were sent, and 108 valid responses were received (51.67%); see the descriptive results of the sample in Table 1.

Table 1.
Descriptive data of the sample

Variable	Category	Quantity	Percentage
Enterprise size	Small	34	31.48
	Medium	62	57.41
	Big	12	11.11
CEO' gender	Male	87	80.56
	Female	21	19.44
Export sector	Banana	83	76.85
	Shrimp	8	7.41
	Mining	4	3.70
	Other	13	12.04
Principal export market	USA	51	47.22
	Russia	12	11.11
	China	5	4.63
	UE	29	26.85
	Other	11	10.19

In accordance with our research hypotheses, to examine the manifestation of the dimensions of EO, structural equation modeling (SEM) was used. This statistical method, which is part of the second-generation multivariate analysis tools, facilitates the simultaneous measurement of associations (Hair et al., 2014). Given the exploratory nature of the research and the non-normal distribution of the data, the Partial Least Squares SEM (PLS-SEM) technique was chosen for this study (Sarstedt et al., 2014).

RESULTS

The application of the PLS-SEM algorithm was conducted using SmartPLS® software, version 4.1.0.2 (Ringle et al., 2024). Within this framework, a Type I reflective model of relationships was designed among the constructs for the 108 observations (see Figure 1) (Hair & Alamer, 2022).

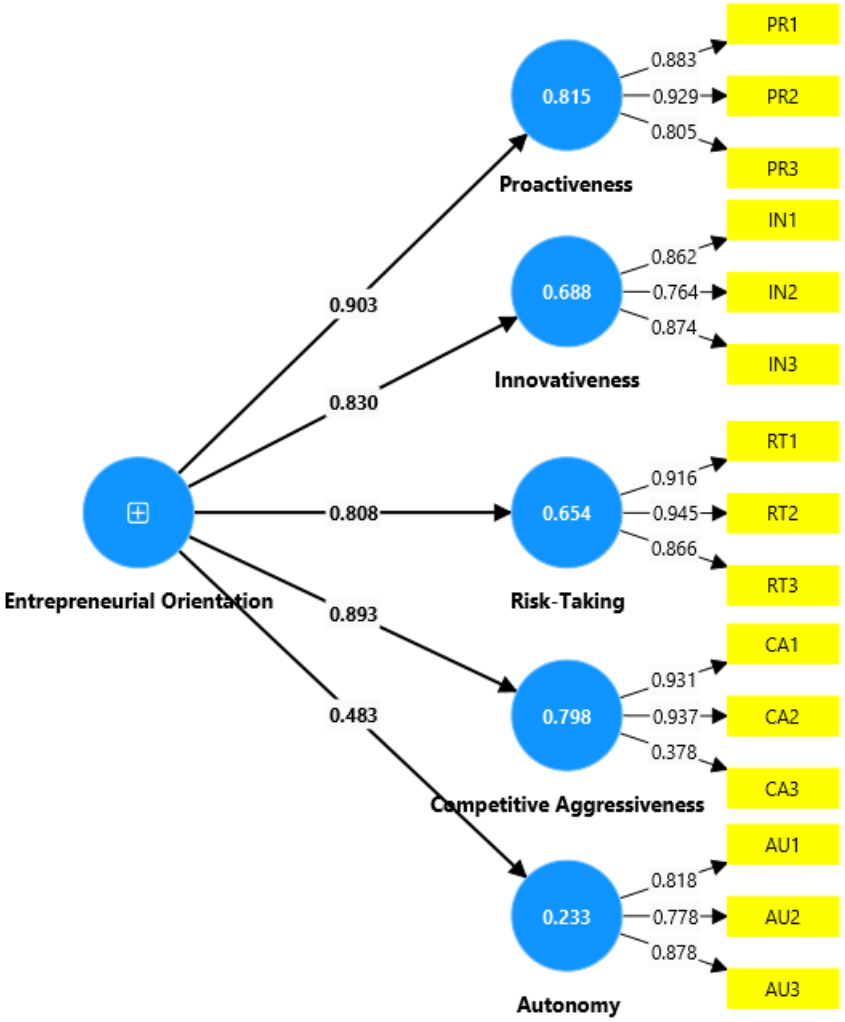

Figure 1. Path Model

In reflective models, the assessment process begins with an examination of the loadings achieved by the indicators. Loadings exceeding 0.700 suggest that the construct accounts for at least 50% of the variance in the indicator. In this specific model, only the CA3 indicator from Competitive Aggressiveness was removed due to its loading of 0.378, which fell below the established cutoff point, whereas the other two indicators retained loadings above 0.700.

The next step in model validation involves analyzing internal consistency reliability, which for SEM PLS is determined through composite reliability. For exploratory studies, thresholds of 0.600 to 0.700 are acceptable, values between 0.700 and 0.950 are considered satisfactory to excellent, and those above 0.950 may indicate redundancy among items. The dimensions of EO in this study achieved composite reliability scores (rho_a) ranging from 0.779 to 0.935, indicating good reliability of the constructs (see Table 2).

The next step involves assessing the convergent validity of the reflective constructs; convergent validity measures the extent to which a construct converges on its indicators and explains the variance of its items. Convergent validity is determined by the Average Variance Extracted (AVE) for all items associated with that construct. In this case, the AVE values are satisfactory and exceed the threshold of 0.50, indicating good convergent validity (see Table 2).

An acceptable AVE is 0.50 or higher, as this indicates that the construct explains at least 50% of the variance of its items. In this regard, the EO constructs in the presented model exhibit an AVE that meets this criterion, showing values ranging from 0.682 to 0.909, which demonstrates convergent validity (see Table 2).

Table 2.
Measurement adjustments of the reflective EO model

Construct	Dimension	Indicator	Loadings	Composite reliability	AVE
EO	Innovativeness	IN1	0.862		
		IN2	0.764	0.778	0.697
		IN2	0.874		
	Proactiveness	PR1	0.883		
		PR2	0.929	0.852	0.763
		PR3	0.805		
	Risk-taking	RT1	0.916		
		RT2	0.945	0.900	0.827
		RT3	0.866		
	Autonomy	AU1	0.818		
		AU2	0.778	0.779	0.682
		AU3	0.878		
	Competitive Aggressiveness	CA1	0.951	0.901	0.909
		CA2	0.955		

After establishing the reliability and convergent validity of the reflective constructs, it is essential to determine their discriminant validity. Discriminant validity assesses how distinct the constructs are from each other within the model. A conservative method for measuring discriminant validity is through the Fornell-Larcker criterion, which compares the square root of the Average Variance Extracted (AVE) for each construct with the correlations among the constructs. If the square root of the AVE for a construct exceeds the correlations with other constructs, in the current model, discriminant validity is established (see Table 3).

Table 3.
Fornell-Larcker criterion for defining discriminant validity of the model

EO Dimensions	EO Dimensions				
	Innovativeness	Proactiveness	Risk-taking	Autonomy	Competitive Aggressiveness
Innovativeness	0.826				
Proactiveness	0.394	0.953			
Risk-taking	0.413	0.603	0.835		
Autonomy	0.409	0.819	0.671	0.874	
Competitive Aggressiveness	0.389	0.775	0.498	0.664	0.909

Following the analysis of reliability and validity of the constructs, we proceed to evaluate the structural model. The criteria to consider are: a) the coefficient of determination (R^2), b) the cross-validated redundancy (Q^2), and c) the path coefficients. R^2 is a measure of the variance explained in each of the dependent constructs and is considered a predictive indicator of the model. According to Chin (1998), an R^2 greater than 0.67 is substantially valuable, between 0.330 and 0.670 offers moderate explanatory value, and between 0.19 and 0.33 represents weak value. The R^2 values in our model for the EO dimensions corresponding to innovativeness, proactiveness, risk-taking, and competitive aggressiveness exceed 0.670, indicating substantial explanatory capacity, while autonomy is slightly below this threshold, displaying moderate explanatory capability (see Table 4).

To assess the predictive relevance of the model, we examine the cross-validated redundancy measure, Q^2. Values greater than zero indicate acceptable predictive value. In this instance, the calculation was conducted using the blindfolding procedure, which showed acceptable predictive values for all dimensions (see Table 4).

Table 4.
Assessment of the structural model

EO Dimensions	R2	R2 ajustado	Q2
Innovativeness	0.688	0.685	0.683
Proactiveness	0.815	0.813	0.821
Risk-taking	0.654	0.65	0.652
Autonomy	0.233	0.226	0.219
Competitive Aggressiveness	0.765	0.762	0.767

Furthermore, the strength and significance of the path coefficients are evaluated through the relationships established in the model. The bootstrapping technique, employing 5000 subsamples, has confirmed that all relationships between the variables are significant. It is pertinent to highlight that, within the model, the dimension of proactiveness has a path coefficient of 0.903 with the EO construct, and the dimension of competitive aggressiveness has a coefficient of 0.874. These values represent the first and second highest among the dimensions, indicating a positive and significant influence on EO (see Table 5).

Table 5.
Structural model evaluation

Hypothesis	A positive relationship was confirmed	Path coefficients	t-value
H1. OE -> innovativeness	Yes	0.830 ***	24.729
H2. OE -> proactiveness	Yes	0.903 ***	30.858
H3. OE -> risk-taking	Yes	0.808 ***	15.964
H4. OE -> autonomy	Yes	0.483 ***	6.324
H5. OE -> competitive aggressiveness	Yes	0.874 ***	21.905

Note. *** p<0.001

DISCUSSION

This study employed the PLS-SEM model to analyze the relationships between various dimensions of EO in exporting SMEs in the province of El Oro, Ecuador, generating insights that confirm and, in some respects, contrast with previous studies. When comparing our findings with the study by Álvarez-Torres (2018), which explored the effects of EO components in the leather-footwear sector in Guanajuato, both significant parallels and instructional divergences are observed. Both studies utilized the SEM-PLS methodology to assess how EO and its components function in different settings, confirming a positive and significant impact of EO on innovativeness, proactiveness, risk-taking, and competitive aggressiveness, which supports the existing literature emphasizing the importance of these dimensions in business success (Rassool et al., 2023).

However, notable differences exist; for example, in our study, autonomy shows a moderate coefficient of determination (R^2) of 0.233, contrasting with the higher value in Álvarez-Torres' study. This variation could be attributed to specific differences in the samples or the contexts of each study, suggesting possible external and internal restrictions that limit strategic independence in businesses in El Oro, likely due to market conditions or a more restrictive business environment.

Additionally, this analysis reveals that proactiveness and competitive aggressiveness are the factors that most significantly influence EO overall. While Álvarez-Torres also highlighted the importance of proactiveness, the depth of competitive aggressiveness was not explored in his research. This finding suggests that the methodologies used and the unique characteristics of each sector could influence these differences.

Furthermore, the work of Rassool et al. (2023) has shown how critical factors of EO can vary considerably across different regions. While in Gothenburg, innovativeness and risk-taking are emphasized, in El Oro, proactiveness plays a dominant role, indicating that EO strategies must be adapted to the specific characteristics of each region and sector. The studies by Maciejewski et al. (2023) reinforce this view, highlighting the relevance of proactiveness and competitive aggressiveness in international markets and underlining the need to adapt the dimensions of EO to the specific context.

Practical Implications and Limitations

The findings provide entrepreneurs and managers with valuable tools to foster innovation, proactiveness, risk-taking, and competitive aggressiveness, and offer researchers a robust model for future inquiries into EO in various settings. SMEs in El Oro could benefit from recalibrating their business strategies to strengthen proactiveness and competitive

aggressiveness, integrating these capabilities into their strategic management to enhance performance in both local and international markets.

The limitations of the study include the sample size and its cross-sectional nature, which prevent establishing definitive causal relationships. Future research should expand to other regions and consider longitudinal studies to delve deeper into the causality of the identified relationships and explore how SMEs can overcome barriers to autonomy to fully leverage their entrepreneurial potential.

This study not only validates the importance of EO for business success in specific contexts but also provides a framework to understand how contextual factors can influence the effectiveness of different EO strategies, emphasizing the importance of recognizing and adapting to local dynamics for business survival and expansion in the global economy.

CONCLUSIONS

In El Oro Province, Ecuador, small and medium-sized export enterprises constitute a critical segment of the local economy, with the banana sector being particularly prominent. This study has uncovered crucial aspects of EO and its influence on these businesses. Through comprehensive analysis involving structural equation modeling, we have identified the forces shaping entrepreneurship in this specific environment.

Firstly, it is noteworthy that proactiveness and competitive aggressiveness are the dimensions of EO with the strongest path coefficients, suggesting that these SMEs are highly focused on anticipating market trends and positioning themselves aggressively against competitors. This orientation is reflected in the solid R^2 values for these dimensions, indicating that EO explains a substantial proportion of the variability in these areas (see Figure 2).

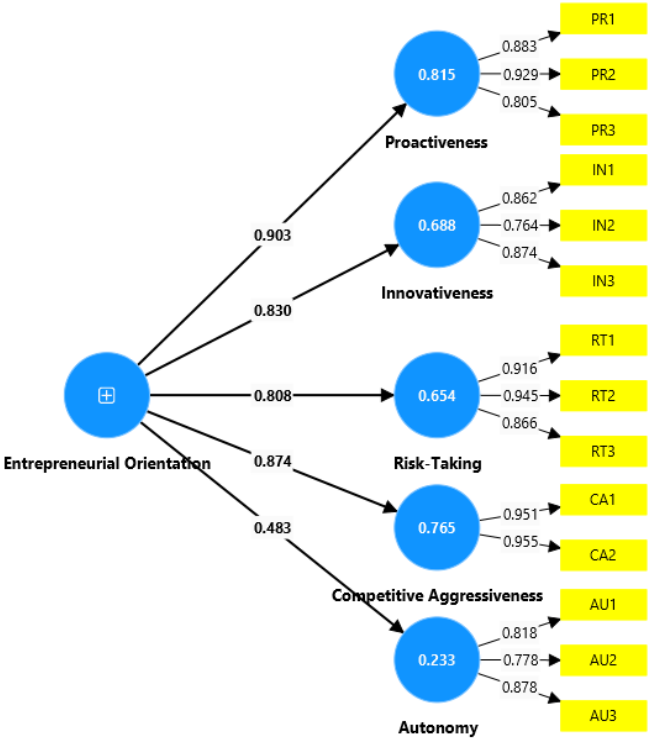

Figure 2. *Path Model Adjusted to the Structural Model*

However, the model also reveals that autonomy, while positively related to EO, has a lower R^2 value, suggesting that SMEs may be experiencing constraints or challenges in exercising strategic independence. This could be due to structural market factors or cultural preferences in the business approach.

The results further demonstrate a positive interaction between EO and the variables of innovativeness, risk-taking, proactiveness, and competitive aggressiveness, all statistically significant, underscoring the importance of these characteristics in consolidating and succeeding in the export markets. These findings are particularly relevant for a province where the predominant size of enterprises is medium and the majority of CEOs are male, pointing to areas where interventions could balance gender inequalities in management.

In observing the discriminant validity among the EO dimensions, we find that innovativeness, while correlated with other dimensions, maintains a distinctive identity, implying that specific strategies to foster innovativeness could be particularly effective.

Therefore, it is advisable for SMEs in El Oro to pursue a dual strategy: on the one hand, they should continue to capitalize on their strengths in innovativeness and risk-taking. On the other hand, it is imperative that these companies proactively develop autonomy and competitive aggressiveness, allowing these attributes to be fully integrated into their business strategy to enhance their competitive position in both local and international markets.

Finally, EO in El Oro Province is a complex and dynamic mosaic of forces that, if managed with care and strategy, can propel SMEs towards a sustainable and prosperous future in the global arena. Companies that recognize and adapt to these dynamics will be better equipped to navigate the challenges of international trade and seize emerging opportunities.

ACKNOWLEDGEMENT

The authors acknowledge the collaboration provided by colleagues from the Universidad Metropolitana, Machala campus.

CO-AUTHORS' CONTRIBUTION

Jean Palomeque-Jaramillo Y Carolina Uzcátegui-Sánchez: Outlining the organization and direction of the article; combining the theoretical framework; methodological guidelines for integrating research results; discussion and conclusions; final draft.

María José Pérez-Espinoza: Retrieval of information from basic research; discussion of the results found and conclusions; revision of the final text.

Emanuel Ferreira-Leite: Review of the article structure; preparation of tables and graphs based on the results found.

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