



Brand Management and Female Entrepreneurship, 2019–2025

Gestión de marca y comportamiento emprendedor femenino desde 2019– 2025

Susana Paola Carrillo Vera*

Received: July 15, 2026

Approved: September 16, 2026

Carrillo, S. (2026) Brand Management and Female Entrepreneurship, 2019–2025. *Espiraless Revista Multidisciplinaria de investigación científica*, 10 (59), 59–

* University of Guayaquil,
Guayaquil, Ecuador
susana.carrillov@ug.edu.ec |
ORCID: 0000-0001-5421-8898

Abstract

This article analyzes the adoption of brand management strategies implemented through the registration of a trade name by women entrepreneurs enrolled in the Simplified Regime for Entrepreneurs and Small Businesses (RIMPE) in the province of Guayas, Ecuador, during the period 2022–2025. Objective: To determine whether there is a statistically significant association between the taxpayer's gender and the adoption of a trade name, and to identify the economic sectors and cantons with the highest concentration of female-owned brands. Methodology: A descriptive-comparative quantitative approach was used on a census sample of 24,958 records from the SRI-Guayas, disaggregated by gender (F, M, O). Frequency analyses, contingency tables, and Pearson's chi-square test were applied. Results: 47.1% of taxpayers are women ($n = 11,747$). Of these, 39.5% have a business name, compared to 32.6% of men, a statistically significant difference ($\chi^2 = 78.4$; $p < 0.001$). The five dominant sectors for women are: personal services (S960907, 13.9%), grocery retail (G471101, 12.4%), restaurants and food services (I561001, 10.0%), clothing (G477111, 5.8%), and hair salons (S960200, 3.9%). Conclusions: Women entrepreneurs in Guayas adopt branding strategies with relatively greater frequency than men, especially in the service and retail sectors. However, more than 60% still operate without a formal brand identity, suggesting a significant gap in the implementation of strategic marketing within the RIMPE ecosystem.

Keywords: brand management, women's entrepreneurship, RIMPE, Ecuador, strategic marketing, Guayas.

Resumen

El presente artículo analiza la adopción de estrategias de gestión de marca operacionalizada mediante el registro de nombre comercial por parte de las mujeres emprendedoras inscritas en el Régimen Simplificado para Emprendedores y Negocios Populares (RIMPE) de la provincia del Guayas, Ecuador, durante el período 2022–2025. **Objetivo:** Determinar si existe asociación estadísticamente significativa entre el género del contribuyente y la adopción de nombre comercial, e identificar los sectores económicos y cantones con mayor intensidad de marca femenina. **Metodología:** Se empleó un enfoque cuantitativo descriptivo-comparativo sobre una muestra censal de 24.958 registros del SRI-Guayas, desagregados por género (F, M, O). Se aplicaron análisis de frecuencias, tablas de contingencia y prueba Chi-cuadrado de Pearson. **Resultados:** El 47,1% de los contribuyentes son mujeres ($n = 11.747$). De estas, el 39,5% posee nombre comercial, frente al 32,6% de los hombres, diferencia estadísticamente significativa ($\chi^2 = 78,4$; $p < 0,001$). Los cinco sectores dominantes para las mujeres son: servicios personales (S960907, 13,9%), comercio minorista de abarrotes (G471101, 12,4%), restaurantes y gastronomía (I561001, 10,0%), prendas de vestir (G477111, 5,8%) y peluquerías (S960200, 3,9%). **Conclusiones:** Las mujeres emprendedoras del Guayas adoptan estrategias de branding con mayor frecuencia relativa que los hombres, especialmente en sectores de servicios y comercio minorista. Sin embargo, más del 60% aún opera sin identidad de marca formal, lo que sugiere una brecha significativa en la implementación de marketing estratégico en el ecosistema RIMPE.

Palabras clave: gestión de marca, emprendimiento femenino, RIMPE, Ecuador, marketing estratégico, Guayas.

Introduction

Women's entrepreneurship has established itself as one of the drivers of economic development in Latin America and the Caribbean. According to the Global Entrepreneurship Monitor (GEM, 2024), cited by Rueda et al. (2024), the region boasts the world's highest Total Early-Stage Entrepreneurship (TEA) rate for women, with an average of 20.45%. Ecuador ranks among the countries with the highest female participation in entrepreneurial activity, with a female TEA of 32.02%, a figure close to the male rate of 34.84% (GEM, 2024/2025, in Rueda et al., 2024).

In this context, brand management constitutes a strategic differentiator of the utmost importance. Recent research on small and medium-sized enterprises (SMEs) indicates that branding is not exclusive to large corporations; on the contrary, it is particularly relevant for startups operating in saturated local markets with limited resources (Fluhrer & Brahm, 2025). Brand identity embodied, among other things, in the trade name serves as a signal of formalization, differentiation, and trust to consumers, generating measurable impacts on the business's financial sustainability (Ugwuoke, 2023).

However, the literature on gender-sensitive entrepreneurial marketing in emerging Latin American economies remains scarce. Ruiz-Martínez, Kuschel, and Pastor (2021) identify five contextual conditions that distinguish Latin American women's entrepreneurship from that in developed economies: high rates of entrepreneurship,

high levels of informality, traditional culture, low innovation, and developing ecosystems. These conditions create a scenario in which the adoption of branding strategies can serve as both an indicator of empowerment and a predictor of business survival.

Loureiro, Billo, and Japutra (2023) systematize the brand's journey from its initial development to its consolidation as a strategic asset, identifying perceived authenticity and narrative coherence as the dimensions with the greatest predictive power regarding consumer loyalty and long-term financial performance. Peter, Geetha, and Vidya Bai (2024) demonstrate that financial inclusion and economic literacy act as catalysts for the performance of women-led businesses, emphasizing that access to management tools including branding multiplies the impact of available resources on business results.

The Simplified Regime for Entrepreneurs and Small Businesses (RIMPE), established in Ecuador through the Organic Law for Economic Development and Fiscal Sustainability (Internal Revenue Service [SRI], 2022) and in effect since January 1, 2022, represents a high-quality administrative data source for analyzing Ecuador's entrepreneurial ecosystem. This regime classifies taxpayers into two categories: Small Businesses (annual gross revenue up to USD 20,000) and Entrepreneurs (between USD 20,001 and USD 300,000), thereby allowing for a characterization of the country's microenterprise and formal entrepreneurship sectors.

The province of Guayas, Ecuador's most populous province with over four million inhabitants and home to the city of Guayaquil, serves as an ideal testing ground for this analysis. As of 2025, the RIMPE-Guayas registry contains 24,958 active taxpayers, of whom 47.1% are women. This percentage, which approaches parity, contrasts with the persistent gap in the use of formal marketing tools and, specifically, in the adoption of trade names as a branding strategy.

This research is part of the project titled "Effects of the Integration of Marketing on the Behavior of Women Entrepreneurs in the Province of Guayas, Ecuador, Regarding the Use of Brand Management Strategies and Their Financial Impact." Its purpose is threefold: (1) to characterize the distribution of RIMPE-Guayas taxpayers by gender, economic sector, and territory; (2) to analyze the association between gender and the adoption of a trade name as a proxy for branding strategy; and (3) to identify the sectors and cantons with the highest concentration of female-led brands, in order to generate empirical evidence to guide public policies supporting women's entrepreneurship in the region.

Women's entrepreneurship in Latin America has a distinct profile. Although the region leads globally in female TEA rates, the literature indicates that a significant proportion of these ventures are driven by necessity rather than opportunity (Ruiz-Martínez et al., 2021). This structural condition is associated with businesses that have low capitalization, little differentiation, and high vulnerability to external economic shocks such as the COVID-19 pandemic.

Recent studies indicate that Latin American women entrepreneurs tend to concentrate in the service, retail, and hospitality sectors areas with low innovation dynamism but high receptivity to local branding strategies (Al-Mamary & Abubakar, 2023, cited in Abdallah et al., 2024). Despite this, structural barriers persist: limited access to credit (only 32% of women in the region have access to venture capital, compared to 38% of men), less diverse networks, and a greater burden of caregiving responsibilities (UNDP, 2025; We-Fi, 2025).

In the specific case of Ecuador, the GEM (2024) acknowledges that the female TEA stands at 32%, but that many of these ventures are subsistence- s and operate under semi-informal conditions. The implementation of RIMPE in 2022 sought precisely to formalize this segment, simultaneously creating the most comprehensive administrative registry available for its systematic study (SRI, 2022).

Brand management in small businesses and startups has garnered increasing academic attention. Baumgarth et al. (2025), in a systematic review of 63 studies published between 2012 and 2023, identify four core dimensions of the branding process in SMEs: brand orientation, brand identity, brand marketing, and brand performance. These authors conclude that branding in SMEs is not a linear process but rather a cyclical and iterative one, in which the entrepreneur's identity forms the core of the brand.

From the perspective of Keller's Customer-Based Brand Equity (CBBE) model, the trade name represents the first cognitive node in the brand-building chain: it establishes identity, facilitates recognition, and acts as an anchor for subsequent brand associations. For micro and small enterprises, adopting a trade name distinct from the owner's personal name constitutes, in this sense, the transition from the stage of informal economic activity to that of a business with its own identity (Ugwuoke, 2023).

In the context of Latin American SMEs, recent research has linked the adoption of branding strategies to improvements in financial performance and business survival. Expósito et al. (2023) found that the entrepreneur's gender moderates the relationship between innovation and business performance, suggesting that women tend to implement differentiation strategies including branding differently than men. For their part, Abdallah et al. (2024) documented that women entrepreneurs in developing contexts who have access to brand management tools report improvements in visibility and sales, although with marked variation depending on the sector of activity.

The intersection of marketing, gender, and entrepreneurship has given rise to a specific theoretical body of work known as women's entrepreneurial marketing. This field recognizes that women entrepreneurs exhibit distinct marketing behaviors, influenced by psychological, cultural, social, and structural factors (Addallah et al., 2024). In particular, the literature indicates that female entrepreneurs tend to prioritize relational marketing strategies building trust, fostering loyalty, and word-of-mouth recommendations over mass advertising, making the trade name and brand identity particularly relevant tools for them.

From the perspective of the Resource-Based View (RBV) theory, the brand constitutes a strategic intangible asset that can compensate for the financial resource constraints

typical of smaller-scale women-led ventures. Adopting a formal business name registered with the tax authority is also a sign of institutional commitment that can facilitate access to credit, participation in value chains, and customer acquisition through digital channels (Fluhrer & Brahm, 2025; We-Fi, 2025).

Materials and Methods

The research adopts a quantitative approach with a descriptive-comparative scope and a non-experimental cross-sectional design. The study uses secondary administrative data from the SRI's official registry corresponding to the RIMPE in the province of Guayas, with data available for the period 2022–2025. This type of design is appropriate for characterizing populations and identifying associations between categorical variables in large datasets (Hernández-Sampieri et al., 2018).

The unit of analysis is the individual taxpayer registered in the RIMPE of the province of Guayas. The database used was the official file "DETALLE_EMPRESAS_RIMPE_GUAYAS-GENERO" obtained from the SRI repository, which contains 24,958 active records. Since the analysis considers all available records, this is a census study, and no probabilistic sampling process was required. The variables analyzed are: RUC number, business name, date of commencement of operations, date of permanent suspension, date of resumption of operations, ISIC code for economic activity, description of economic activity, canton of operation, trade name, and taxpayer's gender.

The study variables were organized as follows:

Table 1. Operationalization of study variables.

Variable	Type	Operationalization	Scale
Gender	Independent / moderator	Category registered in RUC: F (female), M (male), O (other)	Nominal
Adoption of a trade name	Dependent / branding proxy	Presence (1) or absence (0) of a trade name in the RUC	Binary
Economic sector (ISIC)	Control / Descriptive	7-digit code from the International Standard Industrial Classification	Nominal
Operating canton	Control / Descriptive	Second-level political-administrative division in Guayas	Nominal
Year activities began	Control / Descriptive	Year of registration in the RUC (2022–2025 for the current RIMPE)	Discrete

Permanent suspension	Outcome / robustness	Presence (1) or absence (0) of a permanent suspension date	Binary
----------------------	----------------------	--	--------

Data processing was performed using Python 3.11, with the pandas library (version 2.0) for data manipulation and scipy.stats for hypothesis testing. Visualization was performed using Power BI Desktop 2025. To assess the association between gender and the adoption of a trade name, Pearson's chi-square test (χ^2) was used with a significance level of $\alpha = 0.05$, and Cramér's V statistic was additionally calculated to estimate the effect size. The descriptive analysis included frequency distributions, percentages, and contingency tables, disaggregated by economic sector (four-digit ISIC code) and canton of operation.

Results

The RIMPE-Guayas registry contains 24,958 active taxpayers as of the analysis period. The distribution by gender shows a female share of 47.1% ($n = 11,747$), a male share of 51.7% ($n = 12,900$), and other categories accounting for 1.2% ($n = 311$). This level of female participation exceeds the historical Latin American average and approaches parity, confirming the growing trend in female entrepreneurship documented by the GEM (2024).

A temporal analysis reveals sustained growth in female registrations: the number rose from 412 in 2018 to 1,775 in 2023, representing a 330.8% increase over the five-year period. The year 2023 saw the highest number of new female registrations, possibly linked to the consolidation of the RIMPE and the formalization programs implemented by the SRI following the pandemic. In 2024, 1,592 new female registrations were recorded, and in the first months of 2025, 911.

Table 2. Trends in New Female Registrations, RIMPE-Guayas, 2019–2025.

Year	New Female Registrations	Year-over-year change (%)
2019	645	
2020	669	+3.7%
2021	977	+46.0%
2022	1,204	+23.2%
2023	1,775	+47.4%
2024	1,592	–10.3%

2025 (partial)

911

Figure 1 shows the temporal analysis covering 2019 through 2023, with sustained growth in female registrations, a slight decline in 2024, and data for 2025 still pending tabulation.

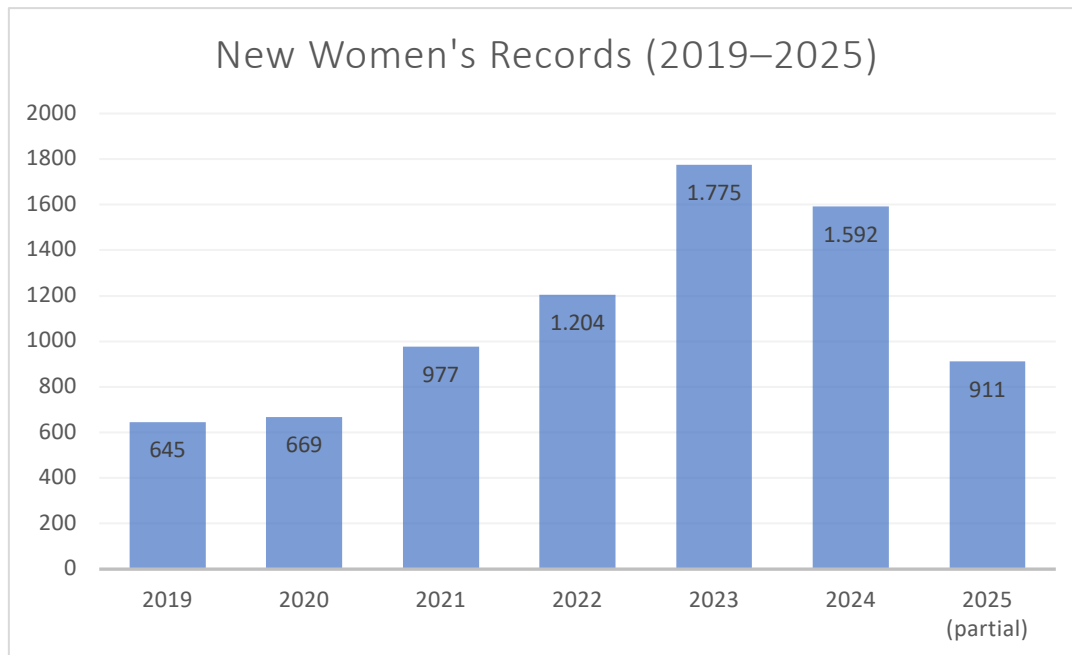


Figure 1. Trends in new female registrations in RIMPE-Guayas, 2019–2025.

The five sectors with the highest concentration of RIMPE female entrepreneurs in Guayas are: (1) Personal and support services (ISIC S9609, $n = 1,629$, 13.9%); (2) Retail trade of goods in stores (ISIC G4711, $n = 1,459$, 12.4%); (3) Restaurants and food services (ISIC I5610, $n = 1,177$, 10.0%); (4) Retail sale of clothing (ISIC G4771, $n = 676$, 5.8%); and (5) Hairdressing and beauty salon services (ISIC S9602, $n = 455$, 3.9%). These five sectors account for 45.9% of all registered women-owned businesses, reflecting a high concentration in local services and retail trade.

This distribution is consistent with what has been documented in the regional literature. Al-Mamary and Abubakar (2023, cited in Abdallah et al., 2024) note that women tend to concentrate in the service, retail, and hospitality sectors precisely the top three sectors identified in this sample. The concentration in local services shapes both the available marketing strategies and the potential scope of branding, which in these sectors operates primarily on a local scale.

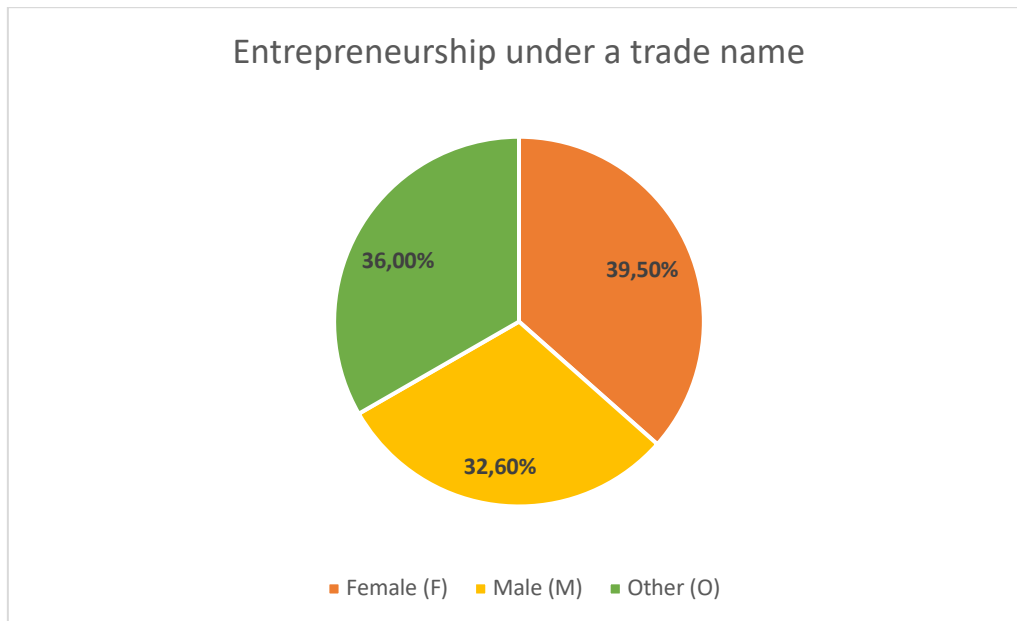
Of the total number of women registered in the RIMPE-Guayas, 4,638 (39.5%) have a trade name or business name registered with the SRI. Among men, this percentage is 32.6% ($n = 4,207$). The difference of 6.9 percentage points in favor of women is statistically significant according to Pearson's chi-square test ($\chi^2 = 78.4$; $df = 1$; $p <$

0.001). The Cramér's V statistic obtained is 0.056, indicating an effect of weak magnitude but robust given the census nature of the data.

Table 3. Adoption of trade names by gender in the RIMPE-Guayas.

Gender	Total records	With trade name	% with trade name
Female (F)	11,747	4,638	39.5%
Male (M)	12,900	4,207	32.6%
Other (O)	311	112	36.0%
Total	24,958	8,957	35.9%

Figure 2 shows the percentage of businesses with a trade name by gender, based on data from the RIMPE in the province of Guayas, Ecuador.



These results are consistent with the literature on branding behavior in women-led SMEs. Expósito et al. (2023) documented that, controlling for sector and size, women-led firms tend to implement differentiation strategies more frequently than those led by men, although they allocate fewer resources to mass advertising. In the RIMPE context, the adoption of a trade name can be interpreted as the visible manifestation of this orientation toward brand differentiation.

However, the most relevant finding from a public policy perspective is that 60.5% of RIMPE-Guayas women entrepreneurs ($n = 7,109$) operate without a registered trade

name. This gap suggests that most women-led businesses in the province still lack the most basic layer of brand identity, which limits their visibility, their potential for differentiation, and their ability to build brand equity over the long term.

The cantons with the highest concentration of RIMPE female entrepreneurs are Naranjal (n = 1,574, 13.4%), El Empalme (n = 1,194, 10.2%), El Triunfo (n = 1,062, 9.0%), Playas (n = 1,032, 8.8%), and San Jacinto de Yaguachi (n = 802, 6.8%). Notably, these five cantons are predominantly rural or semi-rural, suggesting that women's entrepreneurship in Guayas is geographically decentralized, located away from major urban centers.

This distribution has direct implications for the design of marketing strategies: startups in rural cantons face smaller markets with a lower density of formal competitors, which can make local branding particularly effective but also more limited in its potential reach. The adoption of digital marketing channels social media, e-commerce appears to be the most promising way to overcome these geographical limitations.

An analysis of permanent closures reveals that 17.9% of female-led RIMPE-Guayas businesses (n = 2,101) have a recorded date of permanent closure, compared to 18.5% of male-led businesses (n = 2,386). Although this difference is modest, its significance is relevant: women-led businesses exhibit a slightly lower closure rate than men-led ones, suggesting greater relative resilience. This result, while exploratory given the study's design, is consistent with international findings that document the persistence and adaptability of women-led businesses in the face of adverse environments.

The results of this study provide novel empirical evidence on the adoption of branding strategies in the RIMPE ecosystem of Guayas from a gender perspective. The central finding that women entrepreneurs adopt trade names at a significantly higher rate than men (39.5% vs. 32.6%) challenges the prevailing narrative in the literature that associates female entrepreneurship with lower levels of formalization and strategic market orientation.

This difference can be interpreted in light of two complementary theoretical frameworks. From the perspective of signaling theory, women entrepreneurs in competitive local markets may be using a trade name as a signal of professionalism and reliability to their customers, thereby compensating for information asymmetries that particularly affect women-led businesses in markets with gender biases (Expósito et al., 2023). From the resources and capabilities perspective, a brand acts as a strategic intangible asset that allows women-led businesses to differentiate themselves in sectors with high horizontal competition, such as retail and personal services (Fluhrer & Brahm, 2025).

However, the most significant gap is not the one separating women from men in terms of the use of a trade name, but rather the one between branded and unbranded businesses: 60.5% of women and 67.4% of men with RIMPE-Guayas lack a registered trade name. This finding points to a structural limitation in the adoption of strategic marketing within the RIMPE segment as a whole, regardless of gender. The lack of a

trade name does not necessarily imply the absence of branding strategies many businesses build recognition under the owner's name or through informal channels but it does indicate an underutilization of the available formal differentiation tools.

The sectoral concentration of women's entrepreneurship in local services and retail has direct implications for the design of support programs. In these sectors, local branding supported by a trade name, a social media presence, and word-of-mouth recommendations can yield high marginal returns with relatively low investments. This argument is supported by Ruiz-Martínez, Kuschel, and Pastor (2021), who note that Latin American contextual conditions high formalization costs and limited support networks make low-cost, high-local-penetration marketing strategies particularly valuable.

A significant limitation of this study is that a trade name registered with the SRI serves as an imperfect proxy for branding strategy. It is possible that startups without a registered trade name implement sophisticated branding strategies through digital channels not captured by administrative data. Furthermore, the RIMPE database does not include information on revenue, profitability, or consumer purchasing behavior, which prevents establishing a direct causal relationship between the adoption of a trade name and financial performance. These limitations point to the agenda for future research: mixed-methods studies that combine RIMPE administrative data with direct surveys of female entrepreneurs would allow for a more comprehensive understanding of the phenomenon.

Conclusions

This article has analyzed the adoption of business names—as a proxy for brand management strategy—by women entrepreneurs registered in the RIMPE in the province of Guayas, Ecuador, during the 2022–2025 period. Based on a census analysis of 24,958 active taxpayers, the following conclusions are drawn:

First, female participation in the RIMPE-Guayas reaches 47.1%, representing a distribution close to parity that contrasts with historical averages in the region and confirms the dynamism of women's entrepreneurship in Ecuador.

Second, women entrepreneurs adopt trade names at a significantly higher rate than men (39.5% vs. 32.6%; $\chi^2 = 78.4$; $p < 0.001$), suggesting a greater focus on brand differentiation among women in the RIMPE.

Third, 60.5% of female RIMPE-Guayas entrepreneurs lack a formal business name, representing a critical gap in the implementation of basic marketing strategies. This gap is even wider for the male segment (67.4%), indicating that the branding deficit is a structural problem within the RIMPE ecosystem as a whole.

Fourth, women's entrepreneurship is concentrated in five sectors (personal services, food retail, food service, apparel, and hair salons), which together account for 45.9% of the total, and in predominantly rural or semi-rural cantons. This sectoral and territorial distribution shapes a profile of proximity-based and relational marketing, in which the trade name and local branding strategies have high potential for impact.

From a public policy perspective, the results justify the design of specific training programs in marketing and brand management for RIMPE women entrepreneurs, prioritizing the service and retail sectors in the rural and semi-rural cantons of Guayas. The integration of low-cost digital tools—trade name registration, social media presence, and local e-commerce strategies—could catalyze the transition of most of these businesses toward a higher level of formalization and brand differentiation.

Future research should incorporate primary data through direct surveys of RIMPE women entrepreneurs to explore the causal relationship between branding strategies, financial performance, and business survival, thereby complementing the descriptive evidence provided by this study.

References

- Abdallah, A., Al-Mamary, Y. H., & Abubakar, A. (2024). The effect of psychological, market, economic, sociocultural, entrepreneurial orientation, and educational and skills factors on empowering women for new venture creation. *Humanities and Social Sciences Communications*, 11, 1–14. <https://doi.org/10.1057/s41599-025-05265-1>
- Expósito, A., Sabínchis-Llopis, A., & Sanchis-Llopis, J. (2023). Entrepreneur's gender and SME performance: The mediating effect of innovations. *Journal of the Knowledge Economy*, 15(2), 7812–7836. <https://doi.org/10.1007/s13132-023-01555-8>
- Fluhrer, P., Brahm, T. How small businesses build their brands in a digital world: a systematic review. *Rev Manag Sci* (2025). <https://doi.org/10.1007/s11846-025-00931-9>
- Global Entrepreneurship Monitor. (2024). GEM 2024/2025 Global Report: Entrepreneurship and the Twin Transition. GEM. <https://www.gemconsortium.org/report>
- Loureiro, S. M., Bilro, R. G., & Japutra, A. (2023). Overview of the brand journey and opportunities for future studies. *Italian Journal of Marketing*, 2023, 1–32. <https://doi.org/10.1007/s43039-023-00069-0>
- Peter, S., Geetha, E., & Vidya Bai, G. (2024). Unveiling the nexus: Financial inclusion, financial literacy, and financial performance as a catalyst for women-owned enterprises in India. *Cogent Business & Management*, 11(1), 1–22. <https://doi.org/10.1080/26437015.2024.2432385>
- United Nations Development Programme (UNDP). (2025). The Power of Entrepreneurship: Women Transforming the Region with Courage and Vision. UNDP Latin America and the Caribbean. <https://www.undp.org/latin->

america/stories/power-entrepreneurship-women-transforming-region-courage-and-vision

- Ruiz-Martínez, R., Kuschel, K., & Pastor, I. (2021). A contextual approach to women's entrepreneurship in Latin America: Impacting research and public policy. *International Journal of Globalization and Small Business*, 12(1), 83–103. <https://doi.org/10.1504/IJGSB.2021.113835>
- Rueda-Galvis, J.F., Garavito-Hernández, Y., Castro-Castro, M.L., et al. Profile of female entrepreneurship in pre-pandemic Latin America: trends and challenges. *J Innov Entrep* 14, 147 (2025). <https://doi.org/10.1186/s13731-025-00604-7>
- Internal Revenue Service (SRI). (2022). Simplified Tax Regime for Entrepreneurs and Small Businesses (RIMPE). Internal Revenue Service of Ecuador. <https://www.sri.gob.ec/rimpe>
- The Startup VC. (2026). Women's Entrepreneurship in Latin America. The Startup VC. <https://www.thestartupvc.com/startup-news/women-entrepreneurship-in-latin-america/>
- Ugwuoke, J. (2023). Branding Strategies for Owners of Small and Medium-Sized Enterprises. *Walden Dissertations and Doctoral Studies*. 14787. <https://scholarworks.waldenu.edu/dissertations/14787>
- We-Fi. (2025). Supporting Women Entrepreneurs in Developing Countries: What Works? Women Entrepreneurs Finance Initiative. <https://we-fi.org/wp-content/uploads/2025/06/We-Fi-Evidence-Paper-2025.pdf>