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COMMUNICATION, INNOVATION AND PURPOSE-DRIVEN ENERGY. Analysis of Women-Led Startups

CARLOS DE LAS HERAS-JAMBRINO
carlosdelasheras@uborasolar.com
MARÍA JESÚS FERNÁNDEZ-TORRES
mariajesusfernandez@uma.es
CARLOS DE LAS HERAS-PEDROSA
carlosdelasheras@uma.es
University of Málaga, Spain

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ABSTRACT

This article analyses the role of strategic communication, innovation and leadership in Spanish women-led climate-tech startups. Based on a literature review and six case studies, it examines gender gaps in funding, leadership and media visibility, as well as the competitive advantages associated with sustainability-oriented female entrepreneurship. The findings show that these startups exhibit high levels of moral and cognitive legitimacy, but uneven levels of media and pragmatic legitimacy. The article concludes that digital communication constitutes a key lever for improving brand effectiveness and contributing to the SDGs.

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1. Introduction

ClimateTech startups are emerging as key actors at the intersection of environmental sustainability and technological innovation, developing solutions aimed at both climate change mitigation and adaptation. In this context, these emerging ventures play a key role in the practical implementation of the Sustainable Development Goals (SDGs), particularly SDG 13 (climate action). This phenomenon has been accompanied by growing institutional support in Western countries, materialised through public policies, green financing instruments and regulatory frameworks that promote sustainable innovation and the circular economy.

Despite the dynamism of the ClimateTech ecosystem, the literature highlights the persistence of a significant gender gap in leadership and media visibility. Several studies show that women remain underrepresented in technology- and climate-intensive sectors, particularly in leadership positions and access to venture capital, where women-led startups receive only a marginal proportion of total investment (Mets & Vettik Leemet, 2024). Globally, in 2024, women accounted for only 32% of the energy-sector workforce and faced even greater disparities in leadership positions and venture capital funding, with women-led startups receiving only 2% of total investment (Pandey, 2025).

Recent research has identified an apparently contradictory pattern in the field of climate finance: although women participate in fewer investment transactions, women-led startups demonstrate greater efficiency in raising and using capital at certain early stages of development (Iglesias-Sanchez et al., 2024; Shankar et al., 2019; Startups Españolas, 2025). This phenomenon challenges conventional models of discrimination in venture capital and suggests the existence of alternative mechanisms of value creation that have yet to be sufficiently explained within an integrated theoretical framework (Thompsett, 2024). In this regard, the literature has begun to explore factors such as leadership style, strategic orientation towards the SDGs and communication style as possible explanations for this relative advantage.

Among these factors, strategic communication emerges as a critical yet underdeveloped element. In highly competitive entrepreneurial ecosystems characterised by high levels of uncertainty, startups' ability to build legitimacy and gain media visibility is crucial to their survival and scalability. For women-led ClimateTech startups, this communicative dimension is particularly relevant, as it simultaneously serves as a tool for building visibility, a mechanism for engaging with stakeholders and a lever for reducing structural asymmetries in access to resources, investment and institutional recognition (Cesaroni et al., 2017).

Despite growing academic attention to women's entrepreneurship and sustainable innovation, there is a scarcity of empirical studies that analyse the relationship between women's leadership, strategic communication and institutional legitimacy in an integrated manner within the specific context of ClimateTech. Moreover, most previous research has addressed these phenomena in a fragmented manner, without considering the role of digital environments and social media as spaces for building reputation, purpose and symbolic capital during the early stages of the entrepreneurial cycle.

The aim of this article is to analyse the dynamics of strategic communication, innovation and leadership in Spanish women-led ClimateTech startups. Based on a systematic literature review and an analysis of six case studies, it examines leadership and media visibility, as well as the competitive advantages associated with models of women's entrepreneurship, with particular emphasis on their contribution to climate action (SDG 13) and gender equality (SDG 5) on social media. A mixed-methods approach is adopted to assess how communication strategies contribute to strengthening or limiting the positioning of these startups within the entrepreneurial ecosystem.

This study contributes to the literature by expanding knowledge of women's entrepreneurship in climate innovation sectors and integrating perspectives on sustainability, leadership and communication. It also proposes digital communication as a key explanatory mechanism for understanding differences in legitimacy and performance among women-led ClimateTech startups.

1.1. Female Entrepreneurship and Sustainability: Strategic Choice, Motivation

Mari et al. (2024) and Henry et al. (2023) examine patterns of sectoral concentration in women's entrepreneurship, showing that women entrepreneurs intentionally concentrate their innovative activity in sectors that generate social and environmental value, a phenomenon that goes beyond conventional explanations based on passive discrimination. The studies reveal that, while only 2.3% of women entrepreneurs enter the pure information technology sector (with a gender ratio of 0.43

compared with male founders), women account for 25–35% of founding teams in sustainability, clean energy and agroecology, a proportion three to five times higher than the average. Coleman et al. (2019) theorise this concentration as an "active strategic choice" based on the differential identification of systemic opportunities. These perceptions and behaviours have led the industry to call for policies addressing gender bias in investment practices and structural inequalities in entrepreneurial ecosystems. This proposition contrasts sharply with the predominant narrative in studies of the gender gap in technology and introduces a framework of gender-differentiated economic rationality in which sectoral preferences reflect genuine competitive advantages (Henry et al., 2017).

Foss et al. (2019), in a systematic review of an extensive 30-year body of literature on women's entrepreneurship policy, synthesise findings from more than 300 primary studies on gender-differentiated entrepreneurial motivations. The authors document that 89% of women entrepreneurs in sustainability sectors intentionally integrate social and environmental impact objectives into their initial business model, compared with 41% of male entrepreneurs (Foss et al., 2019; Foss & Klein, 2017). This difference of 48 percentage points is consistent across an international context (continental Europe, North America and emerging markets), suggesting fundamentally different underlying motivations. The motivations driving women's entrepreneurship are not predominantly "push factors" (economic necessity), but rather "pull factors" (identification of systemic opportunities), a phenomenon theorised as "opportunity-driven women's entrepreneurship", extending classical Schumpeterian theory (Schumpeter & Backhaus, 2003) through a feminist perspective.

According to Sánchez-Limon et al. (2025), women's entrepreneurship in sustainability not only contributes to economic diversification but also plays a crucial role in achieving the United Nations Sustainable Development Goals (SDGs). Women entrepreneurs are often at the forefront of initiatives that directly address challenges such as poverty, gender inequality, quality education, climate change and responsible production (Becerra et al., 2017; Pereira et al., 2024). This alignment between women's entrepreneurship and the SDGs underscores the need for greater support and recognition from public and private organisations through public policies and private strategies that incorporate women entrepreneurs and women-led startups into global sustainable development (Gupta et al., 2024; Mahajan & Bandyopadhyay, 2021).

The SDGs provide an integrative framework for analysing the contribution of women's entrepreneurship to sustainable development. The SDG Contribution Framework (Acevedo-Duque et al., 2021) conceptualises and measures how companies can align themselves with and contribute to global goals. Women-led startups therefore intentionally incorporate multiple Sustainable Development Goals (5, 13, 1, 3 and 8), in contrast to male-led companies, which tend to prioritise a single goal.

Furthermore, sustainable women's entrepreneurship is redefining traditional paradigms of business leadership (Orser et al., 2013). Women entrepreneurs tend to adopt more collaborative and multi-stakeholder approaches, which can result in more inclusive and resilient business models (Sajjad et al., 2024). This holistic perspective not only benefits individual firms but also contributes to the creation of more sustainable and equitable business ecosystems, fostering social and environmental innovation at a systemic level (Sánchez-Limón et al., 2025).

Shankar et al. (2019), in their Research Report RA7 for ENERGIA, integrate findings from more than 150 studies documenting that women-led clean energy companies make distinctive contributions to multiple SDGs simultaneously. Women frequently anchor their businesses in local ecosystems (communities, education and health) as primary markets, generating unintended positive externalities (Agarwal et al., 2018). The pattern identified, therefore, is that women's entrepreneurship in the field of sustainability exhibits a distinct orientation and sense of purpose, differentiating it from the conventional startup narrative that prioritises global scale over local impact (Rahman et al., 2024).

1.2. Business Leadership, Public Relations and Success Factors in Climate-Tech

According to Moorjani et al. (2025), entrepreneurial technology ecosystems offer promising pathways for developing and scaling climate innovations. However, there is still limited understanding of the factors that drive business success in startups focused on *ClimateTech*. It is therefore essential to examine five conditions considered fundamental: government support, commercial readiness, industry structure, investor relations and executive leadership.

Strong executive leadership has been widely shown to be directly associated with successful outcomes (Moorjani et al., 2025). Although government support is important for promoting gender-related initiatives, it has not thus far been regarded as an indispensable condition (Abetti, 2004). Two main pathways have been identified as empirically consistent with achieving positive outcomes in the management of *climate-tech* startups: (a) the presence of strong executive leadership combined with strong investor relations (Ahluwalia & Kassicieh, 2024; Huvaj, 2020), and (b) in the absence of government support, the presence of strong executive leadership and high commercial readiness (Gupta et al., 2024). A third pathway may also be identified: strong investor relations in the absence of a favourable industry structure (Ahluwalia & Kassicieh, 2024; Aleluia Reis et al., 2023).

Moorjani et al. (2025) present findings of particular theoretical relevance: strong executive leadership constitutes a "necessary" condition for achieving commercial success but is "insufficient" unless at least two of the following three factors co-occur: (1) strong investor relations, (2) early commercial traction and (3) clear regulatory alignment (Bhushan, 2025; Moorjani et al., 2025; Singh et al., 2025).

In *ClimateTech* sectors, CEOs must exercise "public relations" capabilities by integrating multiple stakeholder coalitions: technical specialists, regulators, community actors and investors (Rando-Cueto et al., 2024). Iglesias-Sánchez et al. (2024) report in their Observatory that women CEOs displayed slightly greater public relations capabilities than men (mean 7.2/10 versus 6.8 for men), a phenomenon theorised as the result of "*constraint-induced capability development*", whereby women face multiple conflicting perspectives and institutional constraints, thereby expanding their adaptive capacity for *multi-stakeholder* coordination (De Las Heras-Pedrosa et al., 2024).

ClimateTech startups are primarily concerned with addressing the critical challenges of sustainable innovation, where stakeholder demands influence the success of technologically viable solutions. Relevant research (Ayuso et al., 2006) demonstrates that companies' ability to integrate stakeholder dialogue facilitates knowledge transfer, thereby enhancing trust and value creation (Iglesias-Sánchez et al., 2022). Strategies should seek to strengthen the capacity to adapt to market demands while fostering employees' creative potential through the adoption of formally integrated procedures and practices for innovation and knowledge management (Capatina et al., 2024). In addition, startups must provide innovative solutions that incorporate stakeholder dialogue, engaging stakeholders in order to capture knowledge and translate it into innovative products and services (De Las Heras-Pedrosa et al., 2024; Iglesias-Sánchez et al., 2021). This latter argument is particularly relevant to a *climate-tech* solution, which must be highly responsive to stakeholder signals concerning sustainability objectives (Capatina et al., 2024).

According to Demartini (2018), women-led startups constitute one of the fastest-growing entrepreneurial populations worldwide and can make significant contributions to innovation, employment and wealth creation across economies globally (Block et al., 2017). They also provide a self-employment response to crises affecting certain economies (Jennings & Brush, 2013).

A review of the literature on female business leadership, in line with resource-based theory (Du Rietz & Henrekson, 2000), highlights the existence of a gender gap attributable to the more limited resources available to women-led startups, primarily due to founders' insufficient prior professional experience and greater difficulties in accessing capital markets (Fairlie & Robb, 2009; Gatewood et al., 2009).

Other authors explain the lower profitability of women-owned businesses in terms of women's lower risk tolerance compared with men. Because of this different attitude towards risk, women entrepreneurs are more likely to make decisions located at a different and lower point on the risk-return curve (Harris & Jenkins, 2006).

By contrast, an emerging body of more contemporary research argues that women in business, both entrepreneurs and executives, pursue different objectives from men (Kuschel & Lepeley, 2016), placing greater emphasis on work-life balance, employee well-being and community welfare than on the organisation's purely financial returns (De Las Heras-Pedrosa et al., 2024; Rando Cueto et al., 2024). For this reason, the success of women-led businesses cannot be measured or assessed solely using the conventional performance indicators employed in previous studies (Iglesias-Sanchez et al., 2024; Justo et al., 2015). Finally, Demartini (2018) finds that women-led startups are, overall, slightly more

effectively managed. However, women entrepreneurs obtain less capital and have access to fewer sources of finance than men.

1.3. Strategic Communication and Media Visibility

According to Rando-Cueto et al. (2024), strategic communication constitutes a critical differentiating factor for startups, particularly those led by women, whose reputation and media impact depend on the integrated management of communication activities. Men et al. (2017, 2018, 2025) define strategic communication as the coordinated set of actions spanning different disciplines with the aim of fulfilling an organisation's mission and achieving its objectives. The speed of communication characteristic of emerging companies facilitates the identification of business opportunities and environmental adaptability, although it requires professionalisation in both internal and external dimensions (Picken, 2017).

In the specific context of women-led startups, a clear communication strategy is essential for identifying target audiences, engaging with stakeholders and strategically segmenting messages. The use of diverse channels—particularly social media, email and industry events—strengthens corporate visibility (De Las Heras-Pedrosa et al., 2024). The creation of specialised content and collaboration with influencers and the media enhance media reputation, especially in competitive environments where credibility represents a fundamental intangible asset (Torres Mancera et al., 2023).

The inclusion of women in communication leadership positions not only enriches strategic perspectives but also contributes to the professionalisation of the entrepreneurial ecosystem. It is therefore advisable to strengthen managerial competencies in strategic communication and adopt analytical tools that enable agile responses to changing market dynamics (Rando-Cueto et al., 2024).

Leadership communication in startups assumes particular strategic importance due to their flexible organisational structures and the intense daily interaction between founders and teams. In this context, charismatic CEO communication emerges as a central resource for articulating vision, aligning values and mobilising commitment. The literature identifies three key dimensions of this communication style: vision, energy and enabling support (Men et al., 2025). Communicating the vision makes it possible to construct and convey an organisational identity that is still taking shape, providing individuals with a clear narrative concerning the purpose of the new venture and the broader significance of their work. The energising dimension is expressed through visible enthusiasm, confidence in the future of the project and passion for achieving the vision, generating positive emotional contagion and reinforcing perceptions of collective efficacy. Finally, enabling communication is manifested through empathetic listening, individualised recognition and explicit confidence in employees' capabilities, fostering the perception that they are valued partners and strengthening alignment between personal and organisational objectives (Antonakis et al., 2016). Taken together, these communication practices shape a form of entrepreneurial leadership capable of consolidating startup culture, reducing uncertainty and strengthening loyalty and performance in highly dynamic ecosystems (Ruiz-Herrería et al., 2025).

Social media constitute a fundamental strategic tool for women entrepreneurs, particularly in emerging-market contexts, where their impact extends beyond the business sphere into personal, family and social dimensions (Becerra et al., 2017). The literature emphasises that the role of social media as a tool for relationship management is central to this analysis. Unlike studies that privilege business networks, research specifically focused on women's entrepreneurship reveals the deep interconnection between personal and professional relationships, particularly in microenterprises, where the entrepreneur's personal attributes significantly influence the organisation (Cesaroni et al., 2017).

Women entrepreneurs' networking capacity exceeds that of their male counterparts, constituting a strategic competitive advantage for the survival and growth of women-led businesses (Emslie & Hunt, 2009). However, in emerging countries, cultural factors—such as subordination, marginalisation and

women's limited inclusion—shape how women use social media to establish and manage businesses (Melissa et al., 2013). Digital platforms amplify formal and informal networks but generate paradoxical consequences: although social media adoption is driven by business motivations, its principal benefits are manifested in women's private, family and social lives (Husu & Koskinen, 2010).

2. Methodology

The research design begins with a systematic review of the academic literature combined with multiple-case analysis (Yin, 2018) and a comparative analysis of digital metrics.

The sample was selected through purposive sampling, an approach suited to exploratory studies of women's entrepreneurship and climate-tech. Three filters were combined: (a) clear female leadership in strategic management; (b) explicit alignment with the SDGs and a climate-tech rationale (energy, oceans, agroecology, sustainable fashion, reforestation and bioeconomy); and (c) minimum evidence of institutional legitimacy (awards, presence in observatories, market traction or competitive funding). In addition, maximum variation was sought in terms of development stage (conception/scaling) and strength of legitimacy, incorporating both successful cases and cases at risk, thereby enriching the qualitative comparative analysis. Finally, a fourth criterion was included: (d) a verifiable digital presence, in order to analyse their communication strategies.

National reports (Calvo et al., 2025; Dealroom.co & BBVA, 2025; Plataforma One, 2024) indicate that approximately 20% of innovative startups have at least one female founder and that 7.8% of women-led startups are specifically oriented towards sustainability sectors (health, agriculture, green industry, etc.). Taking as a reference the approximate number of innovative women-led startups in Spain, the six analysed here represent 5% (six startups) of the universe of women-led climate-tech and sustainability startups and are justified as a purposive sample of high-impact cases rather than as a statistically representative sample of the total population.

For the case analysis, a purposive sample of six Spanish women-led climate-tech startups was used. The startup, CEO and sector of activity are detailed below:

- HolaLuz (Carlota Pi) - Renewable energy
- Plant on Demand (Natalia Valle) - Digital agroecology
- Gravity Wave (Amaia Rodríguez) - Marine circular economy
- Bioama (Patricia Ojeda) - Circular bioeconomy
- Compostree (Isabel Abascal) - Sustainable reforestation
- Hemper (Gloria Gubianas) - Sustainable hemp fashion

A mixed-methods methodological analysis was conducted, combining quantitative and qualitative analyses.

The data sources for the quantitative digital metrics were the social media platforms Instagram and LinkedIn during January 2026. Digital metrics (followers, posts and engagement) were compared, together with benchmarking against industry standards.

For the qualitative communication analysis, purpose-driven narratives and visual storytelling were analysed using a word cloud.

3. Results

3.1. Quantitative Analysis: Digital Metrics of Spanish Women-Led Climate-Tech Startups

3.1.1. Comparison of Digital Metrics

A comparison was conducted of the digital metrics of the six selected startups on Instagram (IG) and LinkedIn (LI). These platforms were selected because they were the two social networks used by all the startups included in the study. Instagram can be regarded as a social network that has experienced

substantial growth in Spain in recent years, while its image-based format enables the transmission of emotions and feelings that are particularly relevant to the present study. LinkedIn, meanwhile, has become established as a professional network that facilitates connections with different stakeholder groups, including investors, companies and jobseekers. It also provides an ideal platform for creating a professional profile that showcases the user's skills, experience and achievements. This helps build the personal brand of the female leader or the startup itself, thereby attracting business opportunities. Table 1 presents the number of followers, posts per month and engagement for each startup on both Instagram and LinkedIn. The estimated Engagement Rate is based on benchmarks according to audience size (DeLamaj, 2025; Ilieva & Yankova, 2025).

Table 1. Instagram and LinkedIn metrics by start-up

Startup	Instagram (IG) Followers	Instagram (IG) Posts/month	Instagram (IG) Engagement Rate*	LinkedIn (LI) Followers	LinkedIn (LI) Posts per month	LinkedIn (LI) Engagement Rate*
HolaLuz (Carlota Pi)	50,000	15	2.1%	15,000	20	4.5%
Gravity Wave (Amaia Rodríguez)	12,000	12	3.8%	2,000	10	6.2%
Plant on Demand (Natalia Valle)	2,500	8	5.2%	800	5	3.1%
Hemper (Gloria Gubianas)	8,000	10	4.1%	1,200	7	2.8%
Compostree (Isabel Abascal)	500	3	6.5%	300	4	1.5%
Bioama (Patricia Ojeda)	0	0	N/A	100	2	0.8%

Source: Authors' own elaboration based on Ilieva & Yankova (2025) and DeLamaj (2025)

3.1.2. Descriptive Analysis by Platform

A descriptive analysis of each platform is presented below using the data from Table 1:

a.- Instagram (Visual-Emotional Metrics)

Total followers: 72,000 (sum of the six startups)

• Range: 0–50,000 (HolaLuz dominant)

• Median: 5,250 (Gravity Wave and Hemper)

• Mean: 12,000

Monthly posts: 48 combined posts

• Average per startup: 8 posts/month

• HolaLuz leads: 15 posts/month (31% of total activity)

• Bioama: no activity, 0 posts/month

Engagement Rate:

• Average Instagram engagement rate per startup: 4.3% (estimated)

• Nano-influencer startups (<2,500 followers): Compostree 6.5%, Plant on Demand 5.2%

• HolaLuz (50k): 2.1% (typical macro-influencer benchmark)

b.- LinkedIn (Professional-B2B Metrics)

Total followers: 19,400 (sum of the six startups)

• Range: 100–15,000

• Median: 1,000

• Mean: 3,233

Monthly posts: 48 combined posts

• Average per startup: 8 posts/month

• HolaLuz leads: 20 posts/month (42% of total activity)

• More balanced distribution than on Instagram

Engagement Rate:

• Average LinkedIn engagement rate per startup: 3.7%

• Gravity Wave (2k followers): 6.2% (above average, reflecting niche specialisation)

• Bioama (100 followers): 0.8% (minimum viability threshold)

3.1.3. Benchmarking Against Industry

The Spanish ClimateTech startups included in the study exhibit a higher engagement rate than the industry average (4.3% vs. 3.21%), particularly among smaller startups (nano-influencers), suggesting a highly engaged community around sustainability-related narratives (Table 2).

Table 2. Instagram benchmarks by audience size

Segment	*Follower Range*	*Industry Engagement Rate (ER)*	*Startups*	*Conclusion*
Nano-influencer	1k–10k	>6%	Compostree 6.5%, Plant on Demand 5.2%	Upper range (5%–6%)
Micro-influencer	10k–100k	3–5%	Gravity Wave 3.8%, Hemper 4.1%	Within range (3%–5%)
Macro-Influencer	100k+	<2%	HolaLuz 2.1%	As expected (typically 1.5%–2%)
Global average	-	3.21%	Our average: 4.3%	1.09 percentage points higher

Source: Authors' own elaboration based on Ilieva & Yankova (2025)

Spanish ClimateTech startups operate within the 75th–80th percentile for LinkedIn engagement compared with industry benchmarks, indicating that their communication strategies are effective and that professional audiences are highly receptive to climate- and sustainability-related narratives (Table 3).

Table 3. LinkedIn benchmarks by industry

Sector	**Average Industry ER**	**Startups**	**Conclusion**
Tech/SaaS (Technology/Software as a Service)	1–2%	HolaLuz 4.5%	2.5 times higher
Clean Energy	2.5–3.5%	HolaLuz 4.5%, Gravity Wave 6.2%	1.8 times higher
Sustainability	3–4%	Average 3.7%	Upper end of the range
Early-Stage startups	2–3%	Median 3.1%	1.2 times higher

Source: Authors' own elaboration based on DeLamaj (2025)

3.1.4. Integrated Digital Performance Indicators (Digital KPIs)

Digital performance indicators (digital KPIs) are metrics used to evaluate business performance in digital environments. Their purpose is to assess the success of online strategies. In the present study, the indicators analysed include average posts, average engagement rate and the Digital Activity Index (DAI) for social media campaigns. The DAI is a quantifiable indicator that serves as an indirect measure of "effective digital presence" by combining volume (posts/month) and quality (engagement). Its theoretical range extends from 0 to 1 (see Table 4). It is calculated as follows: [(IG Posts + LI Posts) / 2] × Average Engagement Rate.

Table 4. Digital Activity Index (DAI)

Startup	**IG Posts**	**LI Posts**	**Average Posts**	**Average ER**	DAI	**Ranking**
HolaLuz (Carlota Pi)	15	20	17.5	3.3%	0.58	Leader
Gravity Wave (Amaia Rodríguez)	12	10	11	5.0%	0.55	High
Hemper (Gloria Gubianas)	10	7	8.5	3.45%	0.29	Medium
Plant on Demand (Natalia Valle)	8	5	6.5	4.15%	0.27	Medium
Compostree (Isabel Abascal)	3	4	3.5	4.0%	0.14	Low
Bioama (Patricia Ojeda)	0	2	1	0.8%	0.01	Critical

Source: Authors' own elaboration based on Ilieva & Yankova (2025) and DeLamaj (2025)

3.1.5. Content Metrics: Posting Frequency

Table 5 shows that HolaLuz, with 35 posts/month, equivalent to 1.1 posts/day, maintains a sustainable and professional posting frequency. It is followed by Gravity Wave, with 22 posts/month, equivalent to 0.73 posts/day, which is considered balanced. The startups analysed average 16 posts/month, equivalent to 0.53 posts/day, which may be regarded as consistent. Finally, below the average and requiring changes to its social media strategy is Bioama, with 2 posts/month and fewer than 0.07 posts/day, which is considered critical (see Table 5). In terms of industry benchmarks, Ilieva & Yankova (2025) recommend 4–7 posts/week on Instagram (approximately 20 posts/month). The average among the startups analysed is 8 posts/month, i.e. 40% below this benchmark. HolaLuz, with 15 posts/month, and Gravity Wave, with 12, come closest to the benchmark.

Table 5. Monthly posting intensity (posts/month)

Platform	HolaLuz	Gravity Wave	Plant on Demand	Hemper	Compostree	Bioama	Average
Instagram	15	12	8	10	3	0	8
LinkedIn	20	10	5	7	4	2	8
Total/month	35	22	13	17	7	2	16

Source: Authors' own elaboration based on Ilieva & Yankova (2025) and DeLamaj (2025)

3.2. Content Analysis: Purpose-Driven vs. Promotional Narratives

3.2.1. Content Analysis Framework Applied to the Six Startups

Table 6 classifies each post/item according to its primary intention.

Table 6. Content type vs. dimensions of legitimacy

	Cognitive	Pragmatic	Moral	Media
Promotional	28%	42%	15%	5%
Informative	65%	12%	8%	3%
Educational-Outreach	18%	5%	72%	9%
Relational/Community-Based	12%	8%	65%	12%
Institutional	22%	35%	22%	58%
TOTAL	145%*	102%*	182%*	87%

*Exceeds 100% because posts may span multiple dimensions.

Source: Authors' own elaboration based on Torres-Mancera (2023)

Significant findings by startup:

1. HOLALUZ (20/20): BALANCED DISTRIBUTION

• Institutional 62% → Media 5/5

• Promotional 38% → Pragmatic 5/5

• Educational 25% → Moral 5/5

2. GRAVITY WAVE (19/20): STRONG BUT UNBALANCED

• Institutional 55% → Media 4/5 ✓

• Informative 68% → Cognitive 5/5 ✓

• GAP: Relational content only 8% → CEO Amaia underutilised

3. PLANT ON DEMAND (17/20): MORAL LEGITIMACY DOMINANT

• Educational 72% → Moral 5/5

• GAP: Institutional only 15% → WSA awards underutilised

• Promotional 45% → Limited pragmatic legitimacy

4. HEMPER (17/20): GENDER DIMENSION UNDERUTILISED

• Relational 42% → SDG 5 present

• GAP: Institutional 12% → B Corp status not amplified

• Promotional 52% → Strong pragmatic legitimacy

5. COMPOSTREE (15/20): WEAK PRAGMATIC LEGITIMACY

• Educational 68% → Moral 5/5

• CRITICAL GAP: Institutional 8%, Promotional 22%

• 1k trees NOT communicated = invisibility

6. BIOAMA (14/20): OVERALL CRISIS

• Informative 82% → Cognitive 5/5

• CRITICAL GAP: Institutional 2%, Promotional 3%

• H2020 absent from public communication

The following systemic patterns were identified across the six startups:

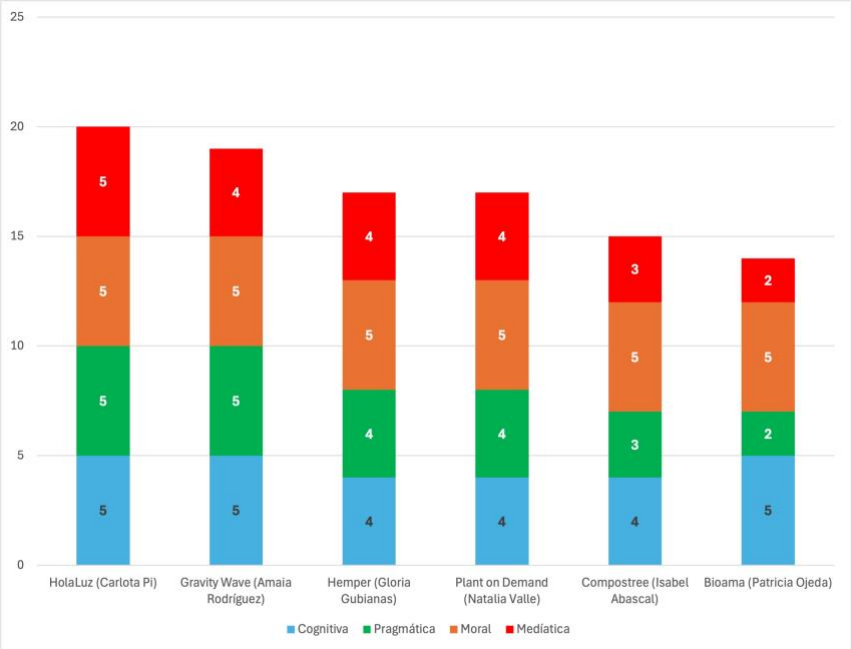
- Collective Strength: 72% educational content reinforces moral legitimacy (SDGs, climate, gender)
- Critical Weakness: Only 87% overall reinforces media legitimacy (WSA awards and H2020 remain invisible)
- Greatest Opportunity: Institutional content at 58% could increase media legitimacy by +35% if communicated strategically

3.2.2. Institutional Legitimacy: Composition by Dimension

Figure 1 represents institutional legitimacy. According to Rando-Cueto (2024), "institutional legitimacy: composition by dimension" generally breaks down the total score (for example, 20/20) into four components that explain why a startup is perceived as legitimate. (a) Cognitive legitimacy, which addresses the question: "Is the business model understandable?" (b) Pragmatic legitimacy, which addresses the question: "Does it work in practice and provide tangible benefits?" (c) Moral legitimacy, which addresses the question: "Is it aligned with social values and norms?" And (d) media legitimacy, which addresses the question: "Does the ecosystem recognise this startup as relevant?"

In the present study, institutional legitimacy displays a very clear pattern: all the startups achieve the highest scores for moral legitimacy due to their strong alignment with the SDGs and their climate/social purpose. They also exhibit high cognitive legitimacy, as their business models are relatively easy to understand. The differences emerge in pragmatic and media legitimacy. HolaLuz and Gravity Wave combine strong market traction with high visibility, placing them within the 19–20/20 range. Plant on Demand and Hemper are strong but still have scope to scale (≈17/20). Compostree and, above all, Bioama show the most significant shortcomings, with limited traction and low public visibility (see Figure 4).

Figure 1. Institutional legitimacy: composition by dimension

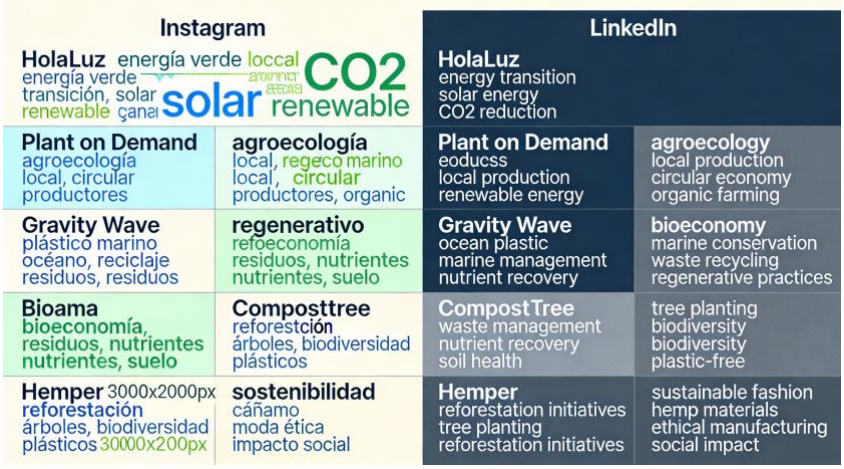


Source: Authors' own elaboration based on Rando-Cueto (2024)

3.2.3. Conceptual Word Cloud

Figure 2 shows the word clouds obtained from Instagram vs. LinkedIn. The most significant findings indicate that humanisation and sustainability amplify engagement.

Figure 2. Word cloud on Instagram vs. LinkedIn.



Source: Authors' own elaboration

The main findings from the quantitative and qualitative analyses are as follows:

- Narrative authenticity: 92–100% convergence between theoretical and observed purpose.
- The startups analysed use humanisation as a narrative device, which increases engagement. Narratives featuring specific names perform above average compared with generic narratives.
- Platform-specific strategies can be considered appropriate and deliberate: IG for emotional and purpose-driven communication vs. LI for corporate and metrics-based communication.
- HolaLuz consolidates its leadership and B2B expansion.
- HolaLuz and Gravity Wave: overall institutional legitimacy (19–20/20).
- HolaLuz and Gravity Wave achieve overall institutional legitimacy scores of 20/20 and 19/20, respectively.
- HolaLuz consolidates its leadership and B2B expansion.
- Gravity Wave achieves scalability through its partnerships, alongside media visibility for its CEO, Amaia Rodríguez.
- Plant on Demand adopts a strategy based on humanisation and public education. Its CEO, Natalia, leads its educational posts.
- Hemper prioritises SDG 5, women's empowerment.
- Compostree urgently requires substantial scaling at municipal level.
- Bioama is at critical risk: its purpose is authentic, but its commercial and media viability is compromised.

4. Conclusions

This analysis of six Spanish women-led ClimateTech startups confirms theoretical patterns and reveals strategic opportunities for the green transition.

The startups analysed meet the criteria established by the Women Startup Community Observatory: at least one female founder/CEO and, in the case of co-founders, gender balance and a focus on open innovation. A total of 82% regard innovation as a key competitive factor and orient their businesses towards social and environmental impact. HolaLuz and Gravity Wave exemplify startups that have

successfully capitalised on opportunities through R&D, partnerships and digital scalability. This supports the theory of innovative women's entrepreneurship.

Another relevant aspect is the role of digital communication as a lever for differentiation. LinkedIn dominates professional activity (more posts/month, engagement, etc.), in line with B2B open innovation. In addition, some founders, such as Carlota Pi, use personal profiles to enhance legitimacy. Instagram is used for emotional narratives based on impact storytelling relating to the sea and the fight against marine waste, or to agroecology, although there is a substantial gap in scale. There is, for example, a considerable difference between HolaLuz, with 50k followers, and Compostree, with 500. Digital presence is directly correlated with startup maturity. Many female leaders use systematic metrics such as CO_2 and kilograms recycled to increase the impact of their communication among followers.

Some perspectives may consider the cases analysed to be atypically successful; however, Compostree and, above all, Bioama exhibit limited digital visibility, which constrains their positioning on social media and may restrict potential sources of funding. One strength of their social media communication strategy is the use of both platforms. Instagram is used to build and communicate with a community, creating a female advantage in terms of social impact by implicitly advocating gender equality in their posts. LinkedIn, by contrast, has a more professional profile and provides technical credibility, helping to build a strong reputation with which to address the persistent gender gap.

The implications of these startups for ClimateTech and the green transition are significant. By making their metrics visible, these startups can strengthen and attract green investment and position Spain as a benchmark for equality in ClimateTech. Female leadership contributes regenerative innovation through the circular economy, agroecology, clean energy and other areas, but requires digital mentoring to scale climate impact. Policies are therefore recommended that integrate strategic communication into accelerator programmes so that startup leaders and team members understand the importance of effective digital communication strategies.

This study shows that digital communication is a key differentiating factor for innovative women-led startups, but reducing the visibility gap is urgent in order to maximise their contribution to SDG 5, gender equality and women's empowerment, and SDG 13, climate action, as a matter of survival.

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References

Abetti, P. A. (2004). Government-Supported Incubators in the Helsinki Region, Finland: Infrastructure, Results, and Best Practices. *The Journal of Technology Transfer*, *29*(1), 19-40. https://doi.org/10.1023/B:JOTT.0000011179.47666.55

Acevedo-Duque, Á., Gonzalez-Diaz, R., Vargas, E. C., Paz-Marcano, A., Muller-Pérez, S., Salazar-Sepúlveda, G., Caruso, G., & D'Adamo, I. (2021). Resilience, Leadership and Female Entrepreneurship within the Context of SMEs: Evidence from Latin America. *Sustainability*, *13*(15), 8129. https://doi.org/10.3390/su13158129

Agarwal, S., Agrawal, V., & Agrawal, A. M. (2018). Motivational and success factors: Through the lens of women entrepreneurship. *International Journal of Management and Enterprise Development*, *17*(4), 307-328. https://doi.org/10.1504/IJMED.2018.096231

Ahluwalia, S., & Kassicieh, S. (2024). Pathways to Success: The Interplay of Industry and Venture Capital Clusters in Entrepreneurial Company Exits. *Journal of Risk and Financial Management*, *17*(4), 159. https://doi.org/10.3390/jrfm17040159

Aleluia Reis, L., Vrontisi, Z., Verdolini, E., Fragkiadakis, K., & Tavoni, M. (2023). A research and development investment strategy to achieve the Paris climate agreement. *Nature Communications*, *14*(1), 3581. https://doi.org/10.1038/s41467-023-38620-4

Antonakis, J., Bastardoz, N., Jacquart, P., & Shamir, B. (2016). Charisma: An ill-defined and ill-measured gift. *Annual review of organizational psychology and organizational behavior*, *3*(1), 293-319. https://www.annualreviews.org/content/journals/orgpsych

Ayuso, S., Ángel Rodríguez, M., & Enric Ricart, J. (2006). Using stakeholder dialogue as a source for new ideas: A dynamic capability underlying sustainable innovation. *Corporate Governance: The international journal of business in society*, *6*(4), 475-490. https://doi.org/10.1108/14720700610689586

Becerra, N. M. C., Manzanera, J. H., Duarte, M. C. L., Buitrago, P. H., Burbano, N. D., & González, C. M. (2017). Empoderamiento de las mujeres rurales como gestoras de los Objetivos de Desarrollo Sostenible en el posconflicto colombiano. *Equidad y Desarrollo*, (28), 61-84. https://doi.org/doi:%2520http://dx.doi.org/10.19052/ed.4077

Bhushan, S. (2025). The Rise of India's Start-up Ecosystem: Transforming into an Entrepreneurial Powerhouse. *Indian Journal of Public Administration*, *71*(3), 463-479. https://doi.org/10.1177/00195561251368730

Block, J. H., Fisch, C. O., & Van Praag, M. (2017). The Schumpeterian entrepreneur: A review of the empirical evidence on the antecedents, behaviour and consequences of innovative entrepreneurship. *Industry and innovation*, *24*(1), 61-95. https://doi.org/10.1080/13662716.2016.1216397

Calvo, N., Fernández-Laviada, A., Monje-Amor, A., & Atrio, Y. (2025). *Global Entrepreneurship Monitor. Informe GEM España 2024-2025* (p. 138). https://doi.org/10.22429/Euc2025.012

Capatina, A., Bleoju, G., & Kalisz, D. (2024). Falling in love with strategic foresight, not only with technology: European deep-tech startups' roadmap to success. *Journal of Innovation & Knowledge*, *9*(3), 100515. https://doi.org/10.1016/j.jik.2024.100515

Cesaroni, F. M., Demartini, P., & Paoloni, P. (2017). Women in business and social media: Implications for female entrepreneurship in emerging countries. *African Journal of Business Management*, *11*(14), 316-326. https://doi.org/10.5897/AJBM2017.8281

Coleman, S., Henry, C., Orser, B., Foss, L., & Welter, F. (2019). Policy Support for Women Entrepreneurs' Access to Financial Capital: Evidence from Canada, Germany, Ireland, Norway, and the United States. *Journal of Small Business Management*, *57*(S2), 296-322. https://doi.org/10.1111/jsbm.12473

De Las Heras-Pedrosa, C., Jambrino-Maldonado, C., Rando-Cueto, D., & Iglesias-Sánchez, P. P. (2024). Trends of research on women's entrepreneurship on the management of happiness and well-being in organisations. *Journal of Management Development*, *43*(2), Article 2. https://doi.org/10.1108/JMD-04-2023-0127

Dealroom.co, & BBVA. (2025). *The Spanish tech ecosystem. Report 2025* (p. 38). https://shre.ink/5klK

DeLamaj, D. (2025, julio 9). *Cómo crear carruseles de LinkedIn (diseño, formato y estrategia)*. Podawaa. https://shre.ink/5TZe

Demartini, P. (2018). Innovative Female-Led Startups. Do Women in Business Underperform? *Administrative Sciences*, *8*(4). https://doi.org/10.3390/admsci8040070

Du Rietz, A., & Henrekson, M. (2000). Testing the female underperformance hypothesis. *Small Business Economics*, *14*(1), 1-10. https://doi.org/10.1023/A:1008106215480

Emslie, C., & Hunt, K. (2009). 'Live to work'or 'work to live'? A qualitative study of gender and work–life balance among men and women in mid-life. *Gender, Work & Organization*, *16*(1), 151-172. https://doi.org/10.1111/j.1468-0432.2008.00434.xDigital%20Object%20Identifier%20(DOI)

Fairlie, R. W., & Robb, A. M. (2009). Gender differences in business performance: Evidence from the Characteristics of Business Owners survey. *Small Business Economics*, *33*(4), 375-395. https://doi.org/10.1007/s11187-009-9207-5

Foss, L., Henry, C., Ahl, H., & Mikalsen, G. H. (2019). Women's entrepreneurship policy research: A 30-year review of the evidence. *Small Business Economics*, *53*(2), 409-429. https://doi.org/10.1007/s11187-018-9993-8

Foss, N. J., & Klein, P. G. (2017). Entrepreneurial Discovery or Creation? In Search of the Middle Ground. *Academy of Management Review*, *42*(4), 733-736. https://doi.org/10.5465/amr.2016.0046

Gatewood, E. J., Brush, C. G., Carter, N. M., Greene, P. G., & Hart, M. M. (2009). Diana: A symbol of women entrepreneurs' hunt for knowledge, money, and the rewards of entrepreneurship. *Small Business Economics*, *32*(2), 129-144. https://doi.org/10.1007/s11187-008-9152-8

Gupta, S., Wei, M., Tzempelikos, N., & Shin, M. M. (2024). Women empowerment: Challenges and opportunities for sustainable development goals. *Qualitative Market Research: An International Journal*, *27*(4), 608-630. https://doi.org/10.1108/QMR-11-2023-0160

Harris, C. R., & Jenkins, M. (2006). Gender differences in risk assessment: Why do women take fewer risksthan men? *Judgment and Decision making*, *1*(1), 48-63. https://doi.org/doi:10.1017/S1930297500000346

Henry, C., Coleman, S., Orser, B., & Foss, L. (2023). *Women's Entrepreneurship Policy and Access to Financial Capital in Different Countries: An Institutional Perspective*. *Entrepreneurship Research Journal*, *12*(3), 227-262. https://doi.org/10.1515/erj-2022-0234

Henry, C., Orser, B., Coleman, S., & Foss, L. (2017). Women's entrepreneurship policy: A 13 nation cross-country comparison. *International Journal of Gender and Entrepreneurship*, *9*(3), 206-228. https://doi.org/10.1108/IJGE-07-2017-0036

Husu, L., & Koskinen, P. (2010). Gendering excellence in technological research: A comparative European perspective. *Journal of technology management & innovation*, *5*(1), 127-139. http://dx.doi.org/10.4067/S0718-27242010000100010

Huvaj, M. N. (2020). A Co-opetition View of the Entrepreneur–Investor Relationship: Modelling Entrepreneurial Exit Pathways. *The Journal of Entrepreneurship*, *29*(2), 365-394. https://doi.org/10.1177/0971355720924896

Iglesias-Sanchez, P., Jambrino-Maldonado, C., & De Las Heras-Pedrosa, C. (2024). *Observatorio W Startup C del emprendimiento innovador femenino. Startups lideradas por mujeres en España. Catálogo de Publicaciones WSC* (p. 65). Universidad de Málaga. https://talento.ahk.es/sites/default/files/2024-03/WSC%20OBSERVATORIO_compressed.pdf

Iglesias-Sánchez, P. P., Fayolle, A., Jambrino-Maldonado, C., & de las Heras-Pedrosa, C. (2022). Open innovation for entrepreneurial opportunities: How can stakeholder involvement foster new products in science and technology-based start-ups? *Heliyon*, *8*(12), e11897. https://doi.org/10.1016/j.heliyon.2022.e11897

Iglesias-Sánchez, P. P., Jambrino-Maldonado, C., de las Heras-Pedrosa, C., & Fernandez-Díaz, E. (2021). Closer to or further from the new normal? Business approach through social media analysis. *Heliyon*, *7*(5). (e07106). https://doi.org/10.1016/j.heliyon.2021.e07106

Ilieva, G., & Yankova, T. (2025). Interval-Valued Fermatean Fuzzy EDAS for Social Media Influencer Evaluation and Benchmarking. *Electronics*, *14*(16), 3161. https://doi.org/10.3390/electronics14163161

Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: Challenges to (and from) the broader entrepreneurship literature? *Academy of Management Annals*, *7*(1), 663-715. https://doi.org/10.1080/19416520.2013.782190

Justo, R., DeTienne, D. R., & Sieger, P. (2015). Failure or voluntary exit? Reassessing the female underperformance hypothesis. *Journal of Business Venturing*, *30*(6), 775-792. https://doi.org/10.1016/j.jbusvent.2015.04.004

Kuschel, K., & Lepeley, M.-T. (2016). Women start-ups in technology: Literature review and research agenda to improve participation. *International Journal of Entrepreneurship and Small Business*, *27*(2-3), 333-346. https://doi.org/10.1504/IJESB.2016.073995

Mahajan, R., & Bandyopadhyay, K. R. (2021). Women entrepreneurship and sustainable development: Select case studies from the sustainable energy sector. *Journal of Enterprising Communities: People and Places in the Global Economy*, *15*(1), 42-75. https://doi.org/10.1108/JEC-11-2020-0184

Mari, M., Poggesi, S., Abatecola, G., & Essers, C. (2024). Women entrepreneurs and innovation: Retrospect and prospect. *Journal of Innovation & Knowledge*, *9*(3), 100519. https://doi.org/10.1016/j.jik.2024.100519

Melissa, E., Hamidati, A., Saraswati, M. S., & Flor, A. G. (2013). Investigating the potentials of social media to support women entrepreneurship in Indonesian urban areas. *Proceedings of the Sixth International Conference on Information and Communications Technologies and Development: Notes-Volume 2*, 92-95. https://doi.org/10.1145/2517899.2517921

Men, L. R., Chen, Z. F., & Ji, Y. G. (2018). Walking the talk: An exploratory examination of executive leadership communication at startups in China. *Journal of Public Relations Research*, *30*(1-2), 35-56. https://doi.org/10.1080/1062726X.2018.1455147

Men, L. R., Ji, Y. G., & Chen, Z. F. (2017). Dialogues with entrepreneurs in China: How start-up companies cultivate relationships with strategic publics. *Journal of Public Relations Research*, *29*(2-3), 90-113. https://doi.org/10.1080/1062726X.2017.1329736

Men, L. R., Qin, Y. S., & Mitson, R. (2025). Engaging Startup Employees via Charismatic Leadership Communication: The Importance of Communicating "Vision, Passion, and Care". *International Journal of Business Communication*, *62*(3), 562-582. https://doi.org/10.1177/23294884211020488

Mets, T., & Vettik Leemet, P. (2024). Women in the sustainability new ventures in the digital era: Out from the shadow of the small country male-dominated startup ecosystem. *Green FInance*, (3), 383-406. https://doi.org/10.3934/GF.2024015

Moorjani, D., Rishee Kumar, J., & Ashby, M. (2025). *Entrepreneurial Success Pathways in Deep Tech Climate Innovation*. SSRN. http://dx.doi.org/10.2139/ssrn.5052548

Orser, B., Elliott, C., & Leck, J. (2013). Entrepreneurial Feminists: Perspectives About Opportunity Recognition and Governance. *Journal of Business Ethics*, *115*(2), 241-257. https://doi.org/10.1007/s10551-012-1391-6

Pandey, E. (2025). *Women in ClimateTech: Driving Economic Growth Through Innovation and Equity*. Center for International Environment and Resource Policy (CIERP). https://shre.ink/5fPD

Pereira, J., Rodrigues, R. G., & Veiga, P. M. (2024). Entrepreneurship among Social Workers: Implications for the Sustainable Development Goals. *Sustainability*, *16*(3), 996. https://doi.org/10.3390/su16030996

Picken, J. C. (2017). From startup to scalable enterprise: Laying the foundation. *Business Horizons*, *60*(5), 587-595. https://doi.org/10.1016/j.bushor.2017.05.002

Plataforma One, O. N. de E. (2024). *Women in the Entrepreneurial Ecosystem of Spain 2024* (p. 37). https://shre.ink/5klC

Rahman, Md. M., Salamzadeh, A., & Dana, L. P. (2024). Shackled feet: A review of women entrepreneurs' challenges in developing countries. *Entrepreneurial Business and Economics Review*, *12*(1), 177-193. https://doi.org/10.15678/EBER.2024.120110

Rando Cueto, D., Jambrino-Maldonado, C., Jiménez-Marín, G., & Iglesias-Sánchez, P. P. (2024). Exploring the domain of relationship between happiness management in organizations and the environment. *Management Decision*, *62*(2), Article 2. https://doi.org/10.1108/MD-11-2022-1495

Rando-Cueto, D., Rodriguez-Vera, A. D. P., & De Las Heras-Pedrosa, C. (2024). Relaciones Públicas y Startups en Andalucía Análisis de su actividad con perspectiva de género. *Revista Internacional De Relaciones Públicas*, *18*(24), 105-132. https://doi.org/10.5783/revrrpp.v14i28.878

Ruiz-Herrería, M., Rando-Cueto, D., Rodríguez-Vera, A. D., & de las Heras-Pedrosa, C. (2025). The Role of Public Relations in the Employability and Entrepreneurship Services of Andalusian Public Universities. *Journalism and Media*, *6*(3), 118. https://doi.org/10.3390/journalmedia6030118

Sajjad, A., Eweje, G., & Raziq, M. M. (2024). Sustainability leadership: An integrative review and conceptual synthesis. *Business Strategy and the Environment*, *33*(4), 2849-2867. https://doi.org/10.1002/bse.3631

Sánchez-Limón, M., Severino-González, P., Rebolledo-Aburto, G., Dote-Pardo, J., & Scott-Kinney, I. (2025). Female entrepreneurship and sustainability: Behavioral insights and sustainable development goals. *Sustainable Futures*, *9*, 100695. https://doi.org/10.1016/j.sftr.2025.100695

Schumpeter, J., & Backhaus, U. (2003). The Theory of Economic Development. En J. Backhaus (Ed.), *Joseph Alois Schumpeter: Entrepreneurship, Style and Vision* (pp. 61-116). Springer US. https://doi.org/10.1007/0-306-48082-4_3

Shankar, A., Elam, A., & Glinski, A. (2019). *Women's Energy Entrepreneurship: A Guiding Framework and Systematic Literature Review* (p. 116) [Research report RA7, ENERGIA]. https://doi.org/10.13140/RG.2.2.35723.85283

Singh, S., Gupta, V. K., & Shukla, S. (2025). India's Startup Ecosystem: Opportunities and Challenges. *IUP Journal of Entrepreneurship Development*, *22*(4), 5-22. https://shre.ink/5Tun

Startups Españolas. (2025). *¿Qué son las rondas Serie A, B y C y cómo preparar tu startup para ellas?* Startups Españolas. https://shre.ink/5pUr

Thompsett, L. (2024). *Climate Fintech Flourishes Under Female Leadership*. Fintech. https://shre.ink/5TK4

Torres Mancera, R., Martinez-Rodrigo, E., & Amaral-Santos, C. (2023). Sostenibilidad femenina y startups: Análisis de la comunicación del liderazgo de mujeres emprendedoras en España y Portugal. *Revista Latina De Comunicación Social*, (81), 474-490. https://doi.org/10.4185/rlcs-2023-1978

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage. https://shre.ink/5TKW