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# Catalyzing Women in STEM Entrepreneurship

## Ecosystem Gaps and Pathways for Support in Central America and Ecuador

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Inter-American Development Bank  
IDB Lab

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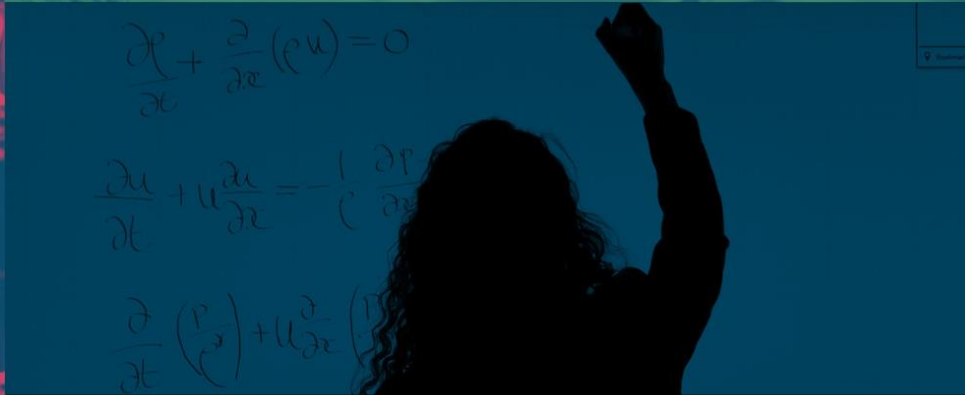
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Central America and Ecuador

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## LIST OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Full Form</b>
<b>AFI</b>	Alliance for Financial Inclusion
<b>AGCCI</b>	African Girls Can Code Initiative
<b>CAMEG</b>	Cámara de Mujeres Empresarias y Emprendedoras de Guatemala (Chamber of Women Entrepreneurs and Businesswomen of Guatemala)
<b>CET</b>	Chicas en Tecnología (Girls in Technology)
<b>CNR</b>	Centro Nacional de Registros (National Registry Center ) - El Salvador
<b>EIT</b>	European Institute of Innovation and Technology
<b>EIF</b>	European Investment Fund
<b>EY</b>	Ernst & Young
<b>FAO</b>	Food and Agriculture Organization
<b>FILAC</b>	Fondo para el Desarrollo de los Pueblos Indígenas de América Latina y el Caribe (Fund for the Development of Indigenous Peoples of Latin America and the Caribbean)
<b>GBV</b>	Gender-Based Violence
<b>GEM</b>	Global Entrepreneurship Monitor
<b>GDP</b>	Gross Domestic Product
<b>ICT</b>	Information and Communication Technologies
<b>IDB</b>	Inter-American Development Bank
<b>IDB Lab</b>	Inter-American Development Bank Innovation arm
<b>INEC</b>	Instituto Nacional de Estadística y Censos (National Institute of Statistics and Censuses) - Ecuador
<b>IP</b>	Intellectual Property
<b>ITU</b>	International Telecommunication Union
<b>LAC</b>	Latin America and the Caribbean
<b>NGO</b>	Non-Governmental Organization
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>OISS</b>	Organización Iberoamericana de Seguridad Social (Ibero-American Social Security Organization)
<b>R&amp;D</b>	Research and Development
<b>S.A.S.</b>	Sociedad por Acciones Simplificadas (Simplified Joint-Stock Company)
<b>SCVS</b>	Superintendencia de Compañías, Valores y Seguros (Superintendency of Companies, Securities, and Insurance) - Ecuador
<b>SDG</b>	Sustainable Development Goal

<b>SRI</b>	Servicio de Rentas Internas (Internal Revenue Service) - Ecuador
<b>STEM</b>	Science, Technology, Engineering, and Mathematics
<b>TEA</b>	Total Early-Stage Entrepreneurial Activity
<b>TFR</b>	Total Fertility Rate
<b>UCR</b>	Universidad de Costa Rica (University of Costa Rica)
<b>UN</b>	United Nations
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNICEF</b>	United Nations International Children's Emergency Fund
<b>UN Women</b>	United Nations Entity for Gender Equality and the Empowerment of Women
<b>WBL</b>	Women, Business and the Law
<b>WEF</b>	World Economic Forum
<b>We-Fi</b>	Women Entrepreneurs Finance Initiative
<b>WIPO</b>	World Intellectual Property Organization
<b>WISE</b>	Women in STEM Entrepreneurship Latin America
<b>WBL</b>	Women, Business and the Law





# EXECUTIVE SUMMARY

**Women's participation in STEM entrepreneurship** is gaining **momentum** across Central America and Ecuador, yet **systemic barriers** continue to limit its transformative potential. This technical note synthesizes cross-country evidence from **Costa Rica, Ecuador, El Salvador, Guatemala, and Honduras**, combining findings from secondary sources, qualitative interviews with key ecosystem actors, and lessons learned from the design and implementation of the WE3A- Supporting Women Entrepreneurs in STEM Areas project managed by the Inter-American Development Bank's Innovation arm (IDB Lab). The findings underscore both the current ecosystem of women-led innovation and the persistence of structural bottlenecks that hinder equitable participation in high-value STEM ecosystems.

Across the region, **national policies and laws** increasingly recognize women's economic empowerment as a driver of sustainable growth, but **implementation gaps persist**. All five countries have established **strategies to promote entrepreneurship and innovation**, and **gender considerations are gradually being integrated** within these agendas. Costa Rica and Ecuador stand out in this regard for introducing comprehensive, institutionalized approaches that combine targeted financing, capacity-building, and inclusive entrepreneurship support. Other countries in the region rely on smaller-scale initiatives and more fragmented delivery mechanisms, but growing policy attention is common to all five countries under analysis. Across contexts, however, **weak coordination, limited institutional capacity, and policy discontinuity** hinder the translation of commitments into tangible results for women entrepreneurs.

Cross-country data reveal **uneven progress** across **education, employment, finance, and digital access**, which are critical enablers of women's participation in STEM entrepreneurship. While female tertiary enrollment is relatively high across the region (over 60% in Costa Rica and Ecuador), **women's representation in STEM disciplines remains low**, particularly in El Salvador, Guatemala, and Honduras. Youth **exclusion from work and study (NEET)** is widespread, especially in Honduras (43.7%), and constrains the transition from education to entrepreneurship. **Financial inclusion gaps** remain striking, with women's bank account ownership lagging behind men's by over 15% in Costa Rica, El Salvador, and Honduras, and women's access to venture or seed capital for innovation remaining scarce. **Digital divides** reinforce these disparities, with rural women facing significantly higher barriers to internet access, affordability, and cybersecurity.

Figure 1: Comparative Overview of Structural Barriers for Women in STEM

	Costa Rica	Ecuador	El Salvador	Guatemala	Honduras
 <b>Participation of Women in Higher Education</b> Percentage of Women Studying STEM Fields	<b>Education and Skills Pipeline</b>				
	Reflects women's representation in tertiary education and their participation in STEM disciplines, signaling the strength of the talent pipeline for innovation-driven sectors.				
	60.5 %	66.8%	37.2%	30.5%	29.4%
<b>Employment and Economic Environment</b>					
Illustrates women's transition from education to economic activity and the economic environment's conduciveness to entrepreneurship and employment.					
 <b>Women NEET (Ages 15-24)</b>	23.7%	26.3%	30.8%	38.4%	43.7%
<b>Legal System &amp; Property Right Score (0-10)</b>	6.76	4.51	4.43	4.61	4.00
<b>Regulation Score (0-10)</b>	6.98	5.76	6.25	7.07	6.45
 <b>Female Account Ownership (% of Women Ages 15+)</b> Gender Gap in Account Ownership (Percentage Points)	<b>Financial Inclusion</b>				
	Captures gender disparities in access to formal financial services, crucial for business growth, savings, and investment among women entrepreneurs.				
	61.1%	58%	29.2%	34.4%	28.9%
-15.3	-12.6	-15.6	-5.6	-19.7	
 <b>Internet Connectivity (Urban vs. Rural / Female vs. Male)</b> Internet Affordability (% of GNI) Cybersecurity Index (Out of 100)	<b>Digital Connectivity and Infrastructure</b>				
	Evaluates women's ability to access and afford reliable internet connections and operate in a secure digital environment - key enablers of participation in STEM and digital economies.				
	85% Urban vs. 76% Rural	81% Urban vs. 55% Rural	64% Urban vs. 40% Rural	N/A	55% Urban vs. 20% Rural
	86% Female vs. 85% Male	73% Female vs. 72% Male	52% Female vs. 57% Male	49% Female vs. 53% Male	41% Female vs. 38% Male
<1%	2.14%	2.93%	2.96%	10.46%	
64	26	13	13	2	

**Economic and investment patterns** also shape differentiated opportunities for women-led STEM ventures across the region. **Costa Rica's diversified economy** and **strong FDI inflows** have generated mature innovation clusters in life sciences, Information and Communication Technologies (ICT), and green technologies, expanding the demand for women-led suppliers. **Ecuador's growing tech and education ecosystems** offer emerging potential, though political and energy instability have constrained investor confidence. **El Salvador** and **Guatemala** exhibit **increasing entrepreneurial dynamism** but remain hindered by **informality, limited access to capital, and weak innovation** linkages. **Honduras** faces the **most acute structural barriers**, including **fragile infrastructure, limited digital reach**, and a **narrow pipeline of women in technical education**, although new entrepreneurship and inclusion policies represent a step forward.

**Access to finance** remains **the most pervasive bottleneck for women in STEM**. Women-led startups consistently report **challenges in securing early-stage capital** due to **limited collateral, investor bias**, and a **mismatch** between existing financial products and the intangible nature of STEM ventures. Few banks or funds offer tailored instruments for innovation-led enterprises, and angel and venture networks remain concentrated in metropolitan areas. Gender-lens investment facilities and blended finance models are necessary but lacking, ultimately preventing women founders from converting technical capabilities into scalable business growth. The interviewed stakeholders across the ecosystem emphasized the **importance of transparent selection and investment criteria** to reduce bias and ensure equal access to capital for women innovators.

Strengthening women's participation in STEM entrepreneurship requires **closing the structural gap** between **policy ambition** and **lived experience** through **sustained, coordinated action**. Ecosystem actors should move beyond isolated interventions to **align resources**, strengthen **institutional capacity**, and ensure **consistent policy execution**. Priority measures could include **expanding access to finance**, embedding STEM and entrepreneurship pathways **across education systems**, scaling **childcare** and **flexible work arrangements**, and **elevating women's role models to inspire participation**. Equally critical is the design and implementation of a **collection and reporting system for sex-disaggregated data** to monitor progress and inform evidence-based policymaking.



# 1

## **WOMEN IN STEM ENTREPRENEURSHIP: THE UNTAPPED POTENTIAL**

Across Central America and Ecuador<sup>1</sup>, women’s entrepreneurial dynamics are reshaping local economies, but their potential in science, technology, engineering, and mathematics (STEM)<sup>2</sup> remains largely untapped. Women’s entrepreneurship rates in the region are among the highest in the world, reaching nearly one in three adults in countries such as Ecuador and Guatemala (GEM, 2024a; GEM, 2025). At the same time, firm-level data demonstrate that while more than half of all registered firms in most countries have female representation in ownership, female representation as top managers is significantly lower, ranging from 18.5% in Guatemala to 28.0% in Honduras (World Bank, Gender Data Portal<sup>3</sup>). Importantly, existing national and international data sources do not collect specific sex-disaggregated data on the representation of women-led enterprises<sup>4</sup> in STEM fields. This lack of reliable data presents one of the most significant limitations for analyzing the ecosystem of women’s entrepreneurship in STEM across Central America and Ecuador, and is a priority area of intervention for ecosystem strengthening.

**Limitations of Available Data:** This Technical Note draws on data that were available at the time of its publication. No official data exist across Costa Rica, Ecuador, El Salvador, Guatemala, and Honduras that disaggregate firm activity by sector (e.g., STEM classification) and gender of ownership. Most national enterprise surveys and business registries use industrial classification systems that do not include “STEM” as a sectoral classification and do not cross-tabulate by owner’s gender. Gender-disaggregated firm surveys (e.g., World Bank Enterprise Survey) do not define STEM as a category. Available proxies, such as the share of firms in ICT, professional, scientific, and technical services, or high-tech manufacturing, cover only partial aspects of the STEM economy. Moreover, informal enterprises are rarely coded by detailed activity. Furthermore, for some indicators, the most recent available data are from the pre-COVID-19 period. Therefore, the potential impact of the pandemic should be taken into consideration. While care was taken to use the best available sources, the results should be viewed with the understanding that future or more comprehensive data may provide additional insights.

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<sup>1</sup> Within the scope of this Technical Note, the ecosystem analysis is focused on five countries including Guatemala, Ecuador, El Salvador, Costa Rica and Honduras. The listed countries were selected for the implementation of WE3A – Supporting Women Entrepreneurs in STEM Areas project targeting early women entrepreneurs and more established women businesses in STEM. This Technical Note sheds a light on the ecosystem constraints and barriers that could potentially affect the selection of the relevant profile of beneficiaries and effectiveness of initiatives, and provides lessons learned for future programming.

<sup>2</sup> For the purposes of this analysis, STEM encompasses: information technology (e.g., software development, data systems, cybersecurity); engineering (chemical, industrial, mechanical, aerospace, and related fields); environmentally sustainable or climate-smart technologies (renewable energy, green materials, sustainable agriculture); data science and artificial intelligence; digital technologies (blockchain, human–computer interaction, digital media); applied sciences (biotechnology, nanotechnology, forensic science); and natural sciences (biology, physics, chemistry, among others).

<sup>3</sup> Most recent year available for “Firms with female top manager (% of firms)”: Guatemala (2017) and Honduras (2016).

<sup>4</sup> Within the context of this Technical Note, the We-Fi definitions of women-led and women-owned enterprises are used to define the women-led and women-owned startups and firms. We-Fi definitions of 1) women owned enterprise: women own a majority stake of business (>50%) or women fully own enterprise or sole proprietors; 2) women-led enterprises: woman Chief Executive with signatory authority, all-female executive team, majority women on the Board of Directors (>50%), or chair and majority women on the Board of Directors.

## 1.1. WOMEN ENTREPRENEURSHIP LANDSCAPE

Women's entrepreneurship in Central America and Ecuador, while numerically significant, remains **concentrated in low-productivity activities**. In Guatemala, women **cluster in retail trade, personal and food services, and low-capital manufacturing** sectors with low entry barriers but constrained scalability (GEM, 2024b). In Honduras, most operate in **small-scale commerce and own-account activities**, and in Ecuador, many rural women engage in **agri-related microenterprises** with limited prospects for capital deepening (Naranjo & Collahuazo, 2011; OECD / OISS, 2024). In El Salvador, entrepreneurship centers on **consumer services and informal trade** (GEM, 2024a). Reflecting a **comparatively more developed business and innovation ecosystem**, in Costa Rica, women are more active in professional and business services and are often connected to export markets. This configuration suggests a predominantly **opportunity-driven profile** relative to neighboring countries (GEM, 2024a). Nevertheless, the overall pattern across the region points to predominantly **necessity-based entrepreneurship** in response to economic vulnerability, rather than innovation-driven opportunities.

Moreover, **high levels of informality** and **low survival rates among women-led firms** continue to constrain their economic potential. Informality remains a defining feature of employment and entrepreneurship across the region, with female informal employment rates exceeding 80% in Guatemala (86%) and Honduras (81%), and remaining high across Ecuador (71%), El Salvador (69%), and Costa Rica (38%), compared to an average of 50.7% for the Latin America and the Caribbean (LAC) region<sup>5</sup> (ILO / ILOSTAT, 2023). In addition, the **survival rates of women-led firms are lower** than those of their male counterparts. Women's **Total Early-Stage Entrepreneurial Activity (TEA)**<sup>6</sup> is relatively high in countries such as Ecuador (32%) and Guatemala (28.8%), approaching parity with men (34.8% and 36.6% respectively), but their share among **Established Business Ownership (EBO)**<sup>7</sup> declines sharply, to 12.9% in Ecuador and 9.8% in Guatemala, compared with 13.7% and 18.8% for men, respectively (GEM, 2024a, GEM, 2025). While attrition is substantial for both women- and men-led ventures, the steeper decline among women indicates systematically lower survival and growth, often associated with low access to finance and networks.

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<sup>5</sup> i.e., with an exception of Costa Rica, the informal female employment has been higher than regional average in LAC of 57.9%.

<sup>6</sup> i.e., which includes businesses operating for up to 42 months

<sup>7</sup> i.e., businesses operating for more than 42 months

## 1.2. WOMEN IN STEM IN CENTRAL AMERICA AND ECUADOR

The available empirical evidence suggests that **women’s participation in STEM entrepreneurship remains dismal**. According to a survey of 163 Central American women-led startups carried out by the Inter-American Development Bank’s Innovation arm (IDB Lab)<sup>8</sup>, only about **one in four startups had a STEM component** (We-Fi, 2025). Complementary evidence from the Global Entrepreneurship Monitor (GEM), one of the few sources providing sectoral proxies for some countries, indicates that in Ecuador and Guatemala, women’s presence in ICT ventures remains below 1%. In Ecuador, for instance, women’s participation in ICT entrepreneurship is estimated at under 0.1%, compared to 0.6% of men, while in Guatemala the figures stand at 0.2% and 1.1%, respectively (GEM, 2024a; GEM, 2025). For Costa Rica<sup>9</sup>, El Salvador, and Honduras, no comparable or even indicative data could be identified, underscoring the scarcity of a systematic measurement of women’s participation in STEM entrepreneurship across the region. The limited available data illustrate **the magnitude of the gender gap in innovation-oriented sectors**. The result is a persistent paradox: women drive entrepreneurship in numbers but remain largely underrepresented in capital- and innovation-intensive fields that shape the future of the digital economy.

The STEM pipeline begins with a pronounced gender imbalance. Across Central America and Ecuador, women represent only **between 23% and 38% of all STEM graduates** in tertiary education, indicating persistent gender imbalances in the skills pipeline that feeds innovation sectors. Within this range, Honduras (37.8%) and Guatemala (34.7%) register the highest female representation, whereas El Salvador (23.1%) records the lowest. The disparity is even more pronounced in ICT programs, with women making up **only 20-27% of ICT graduates** in Costa Rica, Guatemala, El Salvador, and Honduras, and around **37%** in Ecuador, where participation is relatively higher (World Bank, Gender Data Portal<sup>10</sup>). These educational gaps continue to narrow women’s points of entry into the fields that underpin technological innovation and STEM-oriented entrepreneurship, with **implications for talent availability, firm creation, and the broader competitiveness of the region**.

Women’s progression **from STEM education into professional and entrepreneurial trajectories** remains **low**. A well-documented “leaky

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<sup>8</sup> i.e., the innovation and venture capital arm of the Inter-American Development Bank Group

<sup>9</sup> In Costa Rica, a University of Costa Rica (UCR) article (2024) has cited that 23% of STEM companies are led by women, but the piece does not reference a primary statistical source or dataset. As such, this value cannot be independently validated and should be interpreted with caution.

<sup>10</sup> Most recent year available for each country for “Female share of graduates in Information and Communication Technologies programmes, tertiary (%)”: Costa Rica (2018), Ecuador (2016), El Salvador (2018), and Guatemala (2015).

**pipeline” effect**, whereby women complete STEM degrees but subsequently exit related career paths, reflects structural constraints that impede the translation of educational gains into labor-market inclusion. Salient among these constraints are the **unequal distribution of unpaid domestic and care responsibilities** and the consequences of early life events, including **adolescent pregnancy**. Across the region, women devote between 19% and 22% of their day to unpaid care work, while comparatively high adolescent fertility rates (i.e., 82 births per 1,000 girls in Honduras and 68 in Guatemala) lead to early school dropout and limit future access to tertiary education or professional training (World Bank, Gender Data Portal<sup>11</sup>). These patterns are reinforced by youth exclusion, with female NEET (not in employment, education, or training) rates reaching 44% in Honduras and 38% in Guatemala, signaling that **large shares of young women remain disconnected** from both study and work (World Bank, World Development Indicators<sup>12</sup>). **Safety concerns and gender-based violence** compound these constraints. Critically, these pressures coincide with the very ages when women’s careers and ventures typically take shape, thereby constraining the region’s capacity to leverage its female talent in innovation-driven growth fully.

### 1.3. COUNTRY SNAPSHOTS: UNEVEN PATHS TOWARD INCLUSION

**Costa Rica** stands out as an **advanced and diversified** economy, underpinned by **substantial human capital**, a **dynamic high-tech export base**, and **robust governance**. However, women represent **32.2% of all STEM graduates** and **20.3% of ICT graduates**, signaling a persistent skills imbalance in fields driving innovation (World Bank, Gender Data Portal<sup>13</sup>). Firm-level data show that 11.3% of firms are majority female-owned, and **53% report female participation in ownership** (WEF, 2025; World Bank, Gender Data Portal, 2023). Women’s entrepreneurship is less necessity-driven compared to other Central American countries. The country’s deep integration into global value chains and the rapid growth of advanced manufacturing create significant potential for women-led STEM startups as service and technology suppliers (Procomer, 2025).

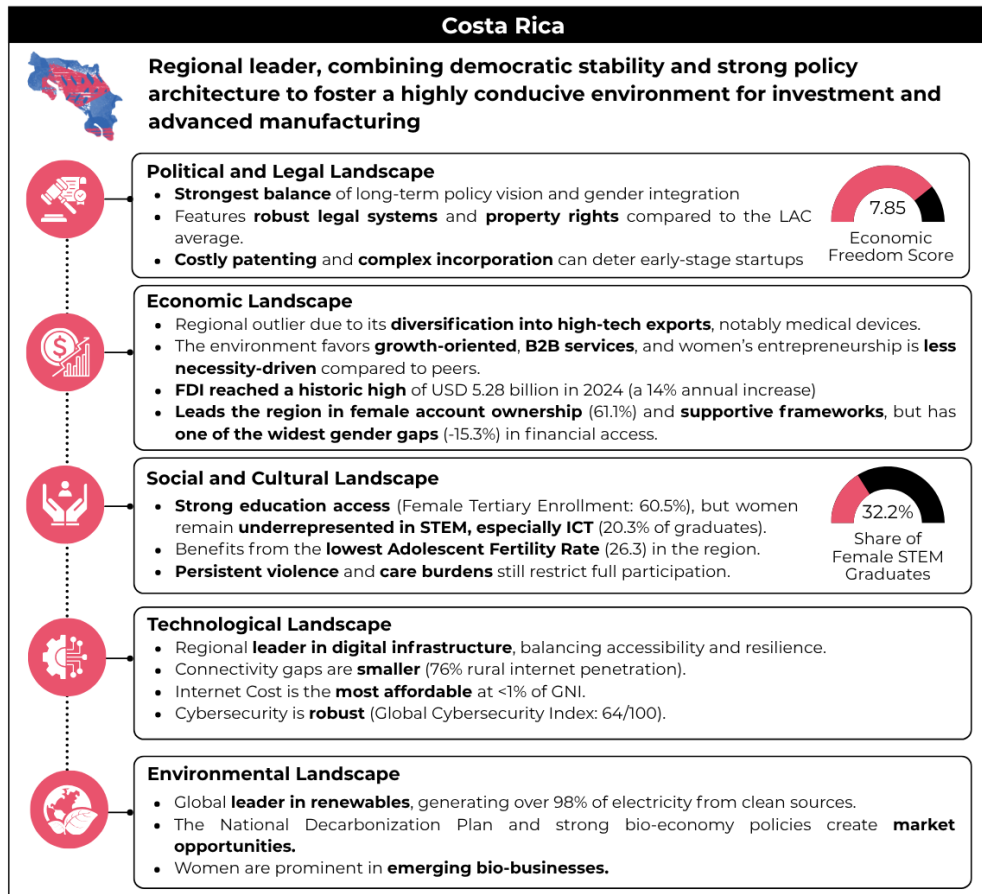
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<sup>11</sup> Most recent year available for each country for: (i) “Proportion of time spent on unpaid domestic and care work (% of 24 hour day)” – Costa Rica, Ecuador, El Salvador, Guatemala (2017), and Honduras (2023); (ii) “Adolescent fertility rate (births per 1,000 women ages 15-19)” – Guatemala and Honduras (2023).

<sup>12</sup> Most recent year available for each country for “Share of youth not in education, employment or training, female (% of female youth population)”: Guatemala (2023) and Honduras (2024).

<sup>13</sup> Most recent year available for: “Share of graduates by field, female (%)” (2023) and “Female share of graduates in Information and Communication Technologies programmes, tertiary (%)” (2018).

Figure 2: Costa Rica Country Profile

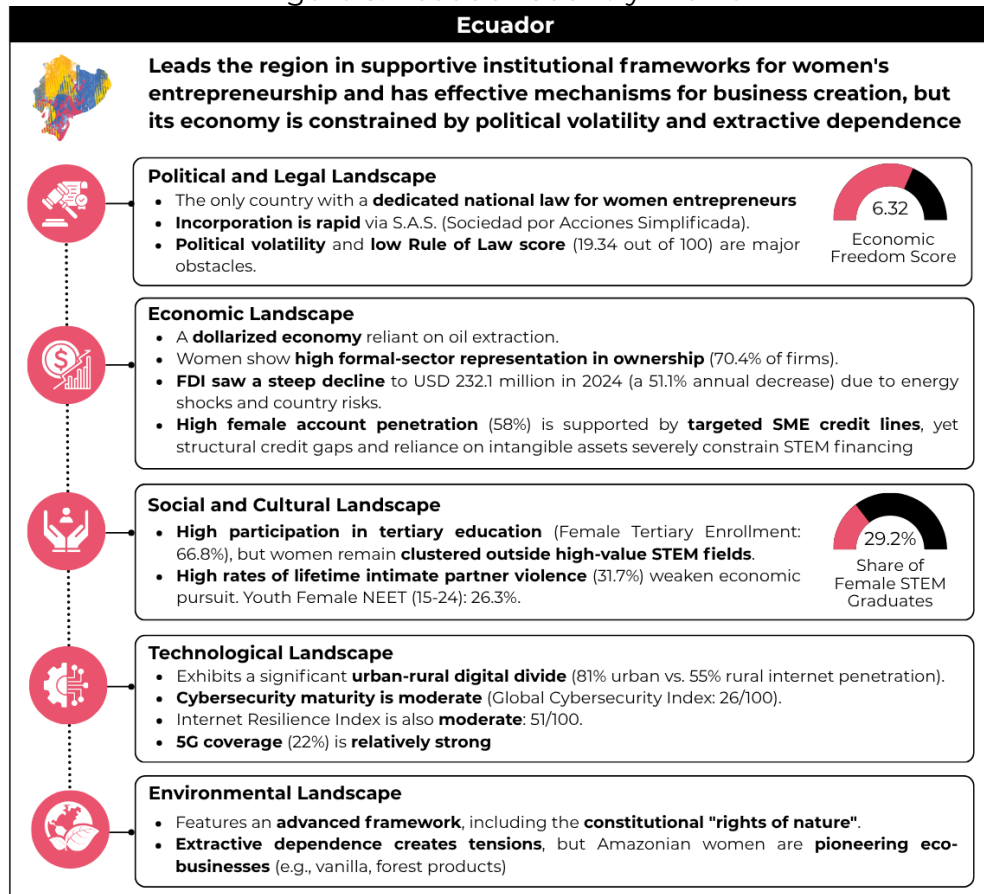


Source of data: World Bank: Gender Portal, “Women, Business and the Law”, and World Development Indicators. Fraser Institute, Economic Freedom Rank, 2023

**Ecuador** combines **one of the highest rates of female entrepreneurship in Latin America** with **low female representation in STEM**. Women account for **29.2% of all STEM graduates**, while 20.3% of firms have female majority ownership, and **70.4% report women’s participation in ownership** (WEF, 2025; World Bank, Gender Data Portal<sup>14</sup>). The female TEA rate (32%) is nearly on par with men (34.8%), but the drop to 12.9% in established businesses highlights relatively weak survival and growth among women-led firms (GEM, 2025). The entrepreneurial landscape remains dominated by commerce and services, although emerging digital and innovation hubs, such as Épico (Guayaquil) and IMPAQTO Labs (Quito), are opening new pathways for women in STEM entrepreneurship in the country’s evolving entrepreneurial ecosystem (INEC, 2025).

<sup>14</sup> Most recent year available for: (i) “Share of graduates by field, female (%)” (2023); (ii) “Firms with female top manager (% of firms)” (2024).

Figure 3: Ecuador Country Profile

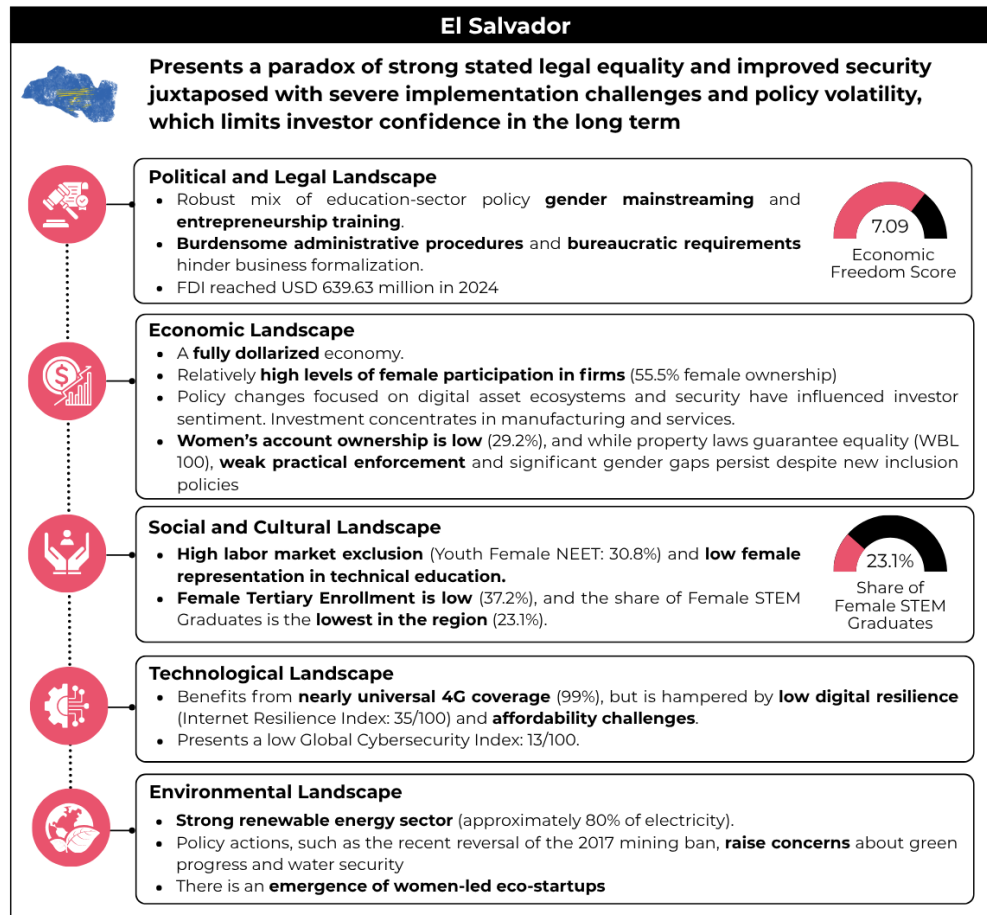


Source of data: World Bank: Gender Portal, "Women, Business and the Law", and World Development Indicators. Fraser Institute, Economic Freedom Rank, 2023

In **El Salvador**, women own a substantial share of businesses, accounting for **23.8% of firms with female majority ownership** and **55.5% with female participation in ownership** (WEF, 2025; World Bank, Gender Data Portal, 2023). Yet, women represent only **23.1% of STEM graduates** and **26.2% of ICT graduates**, one of the lowest levels in the sub-region (World Bank, Gender Data Portal<sup>15</sup>). Entrepreneurial activity among women (TEA ≈ 19%) is slightly higher than that of men (~18%), but **fewer women advance to the established-business stage** (~12% vs ~14%), suggesting obstacles to firm consolidation (GEM, 2015). The **digital economy's expansion**, supported by improving connectivity and growing fintech and ICT sectors, creates **opportunities for women entrepreneurs**, though policy translation and access to finance remain critical implementation challenges.

<sup>15</sup> Most recent year available for: (i) "Share of graduates by field, female (%)" (2023); (ii) "Female share of graduates in Information and Communication Technologies programmes, tertiary (%)" (2018).

Figure 4: El Salvador Country Profile



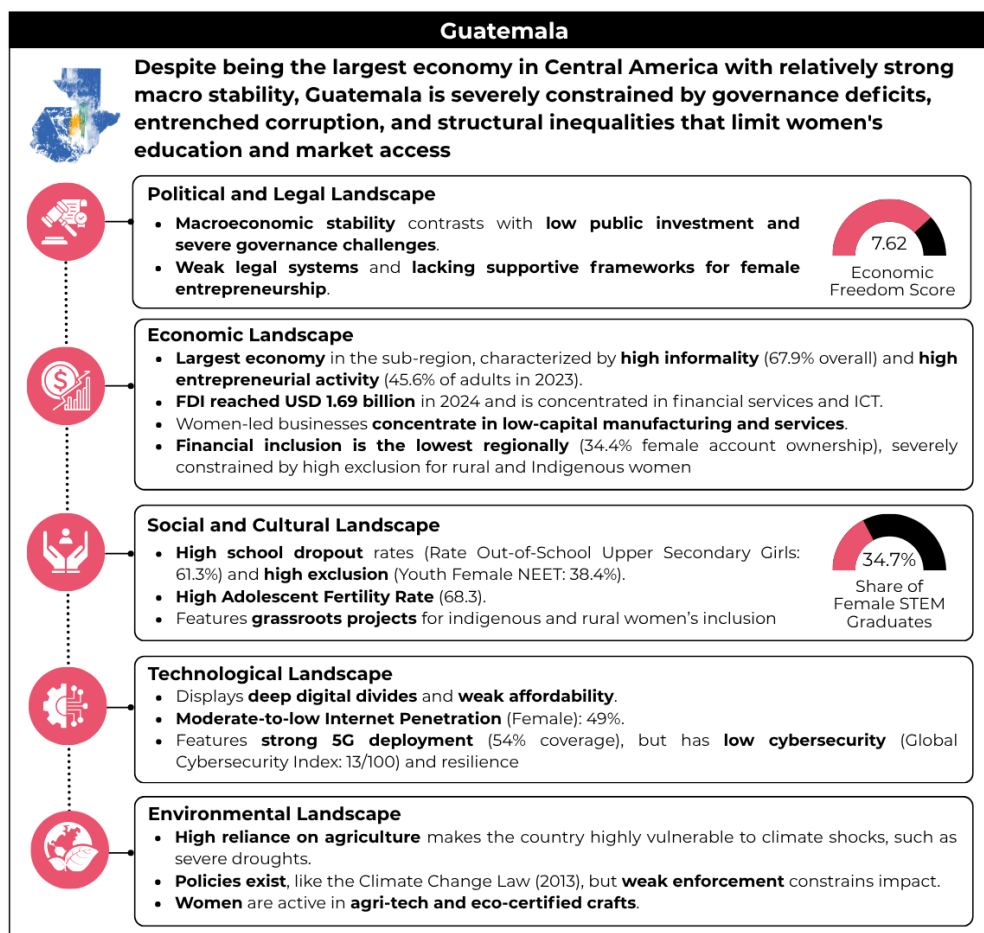
Source of data: World Bank: Gender Portal, “Women, Business and the Law”, and World Development Indicators. Fraser Institute, Economic Freedom Rank, 2023

**Guatemala** is characterized by a **strong entrepreneurial culture but limited technological specialization**. Women account for **34.7% of STEM graduates** and **21.1% of ICT graduates** – a higher proportion than many regional peers in STEM. However, the country has one of the region’s lowest rates of female enrollment in tertiary education overall (30.5%) (World Bank, Gender Data Portal<sup>16</sup>). Only **18.4% of firms are majority female-owned**, and **31.5% include women among owners** (WEF, 2025; World Bank, Gender Data Portal, 2017). Female TEA (28.8%) is lower but relatively close to that of men (36.2%). Yet, **only 9.8% of women entrepreneurs operate established firms**, compared with 16.8% of men, indicating lower survival rates (GEM, 2024a). A growing number of ecosystem actors play an important role in supporting entrepreneurship,

<sup>16</sup> Most recent year available for: (i) “Share of graduates by field, female (%)” (2015); (ii) “Female share of graduates in Information and Communication Technologies programmes, tertiary (%)” (2015); (iii) “School enrollment, tertiary, female (% gross)” (2023).

but women founders continue to face limited access to capital and innovation infrastructure.

Figure 5: Guatemala Country Profile



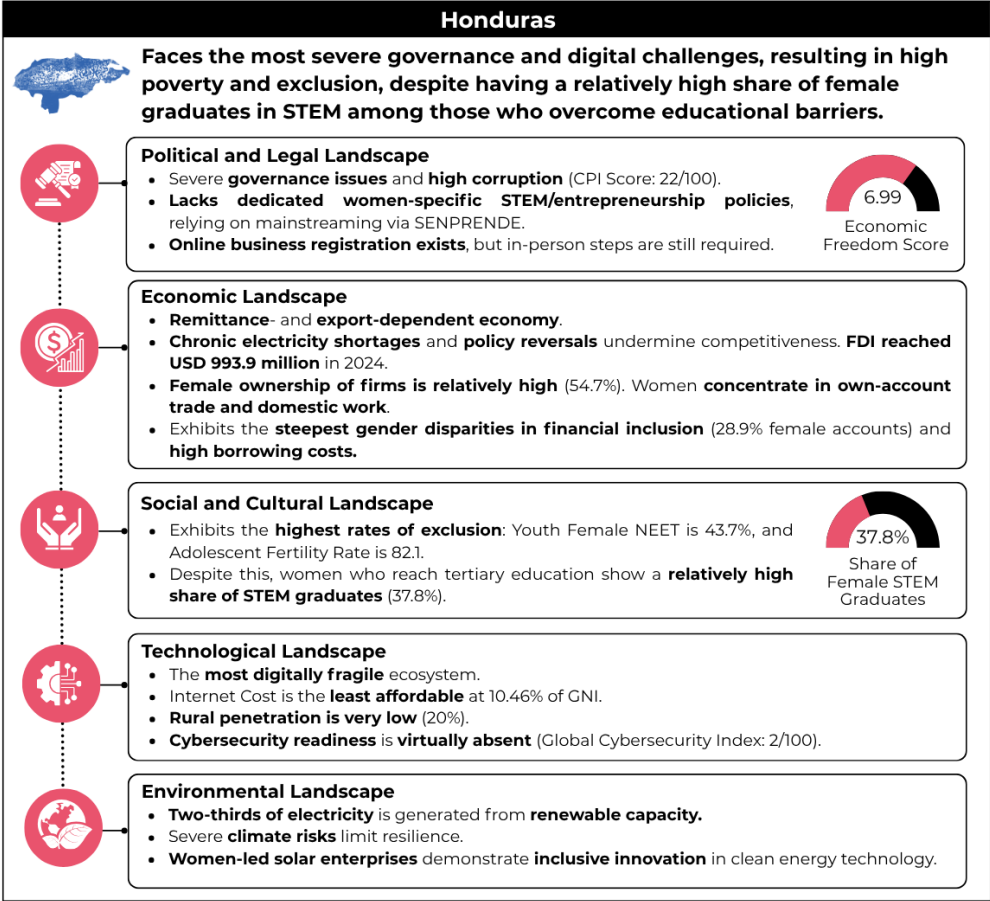
Source of data: World Bank: Gender Portal, "Women, Business and the Law", and World Development Indicators. Fraser Institute, Economic Freedom Rank, 2023

**Honduras** has a **high entrepreneurial spirit amid structural fragility**. Women constitute **37.8% of all STEM graduates** and **27.1% of ICT graduates**, the highest STEM share in the group, but with limited translation into entrepreneurship (World Bank, Gender Data Portal<sup>17</sup>). **26.5% of firms are majority female-owned**, and **54.7% report women's participation in ownership**, yet informality remains persistent (WEF, 2025; World Bank, Gender Data Portal, 2016). Women's entrepreneurial activity centers on retail and personal services, often micro-scale and necessity-driven. The innovation system ranks low in regional indices, with Gross Domestic Expenditure in Research and Development near 0.06 percent of GDP, compared with an

<sup>17</sup> Most recent year available for: (i) "Share of graduates by field, female (%)" (2019); (ii) "Female share of graduates in Information and Communication Technologies programmes, tertiary (%)" (2018); (iii) "School enrollment, tertiary, female (% gross)" (2019).

OECD average of 2.7 percent, which constrains opportunities for tech startups (OECD, Data Portal, 2023; World Bank, World Development Indicators, 2019).

Figure 6: Honduras Country Profile



Source of data: World Bank: Gender Portal, “Women, Business and the Law”, and World Development Indicators. Fraser Institute, Economic Freedom Rank, 2023

Taken together, these country profiles reveal a region rich in entrepreneurial energy but still **constrained by structural gaps** that prevent women from fully **realizing their potential** in STEM-driven innovation. The region’s entrepreneurial ecosystem is evolving rapidly, driven by accelerated digital transformation and the **growing significance of innovation-driven domains**, such as green technologies, which are reshaping opportunities for startups. Governments across Central America and Ecuador have introduced policies to foster women’s participation in entrepreneurship and STEM. However, the challenge now lies in **translating these commitments into practical, sustained outcomes**. As innovation ecosystems mature, the critical need is for stronger linkages between education, finance, and entrepreneurship networks, so that women with technical skills can convert their expertise into scalable businesses. Harnessing this momentum could make the region’s growth not only more innovative but also more inclusive, where women are active creators of technological solutions.

## 1.4. OVERVIEW OF THE TECHNICAL NOTE

This Technical Note, developed under the WE3A – Supporting Women Entrepreneurs in STEM Areas project, examines the **ecosystem setting shaping women’s participation in STEM-driven entrepreneurship** across Costa Rica, Ecuador, El Salvador, Guatemala, and Honduras. It synthesizes insights from cross-country ecosystem reviews, interviews with investors and ecosystem actors within the region, including women in STEM entrepreneurship<sup>18</sup>, an online survey of project beneficiaries<sup>19</sup>, and lessons from the project’s implementation. The analysis identifies the core frictions that impede entry, scale-up, and business continuity, and profiles the institutions and networks with the most significant leverage to enhance inclusivity and performance. Drawing on the project’s experience and applicable global insights, the Technical Note presents a sequenced set of actionable recommendations to enhance the connection between education, skills, finance, and entrepreneurial support. The objective is to transform evidence into practical guidance for policymakers, development partners, and the private sector, enabling women-led innovation to translate from potential into sustained results.

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<sup>18</sup> In total 28 in-depth interviews were conducted with a diverse group of ecosystem actors, including incubators and accelerators, investors, multilateral development professionals, mentors, and women entrepreneurs themselves. Further details are provided in the Annex Section of the Technical Note.

<sup>19</sup> The online survey targeted beneficiaries of *Startup Weekend* and *Founder Catalyst* programs of WE3A- Supporting Women Entrepreneurs in STEM Areas Project. In total, 70 completed responses from Startup Weekend (23% completion rate) and 22 completed responses from Founder Catalyst beneficiaries (46% completion rate) were received. Further details are provided in the Annex Section of the Technical Note.

# 2

**WHY DO WOMEN  
STEMPRENEURS  
STRUGGLE TO THRIVE?**



Women across Central America and Ecuador face a stacked set of constraints that compound over time, from education to venture creation and growth. Despite rising female tertiary enrollment, women remain a minority in engineering and ICT, limiting the pool of potential founders with relevant skills and networks. Legal and administrative burdens discourage formalization and depress intellectual-property generation; finance is poorly matched to innovation, with collateral-centric lending, thin early-stage capital, and investor bias; digital divides and sparse innovation infrastructure outside cities impede product development and market access; and cultural constraints, time poverty from unpaid care, safety risks, and limited visibility, reduce engagement in high-value ecosystems. Policy frameworks have expanded, but implementation and coordination gaps blunt impact. Across the five countries, barriers stack and interact: a narrow STEM pipeline, biased finance, thin networks, care and safety constraints, and institutional deficits create a leaky pathway in which many women start, but few scale STEM ventures. Addressing this requires system orchestration, aligning education, finance, infrastructure, support services, and norms, so they operate in concert and translate technical capability into durable, scalable opportunities for women-led STEM ventures.

## 2.1. STRUCTURAL CHALLENGES: FROM THE SKILLS PIPELINE TO FIRM GROWTH

### A pipeline that narrows at each step

While **women's participation in higher education has expanded across Central America and Ecuador**, with female tertiary enrollment reaching 76% in Ecuador and 60% in Costa Rica, their **representation in STEM fields remains disproportionately low** (World Bank, World Development Indicators<sup>20</sup>). For example, women rarely account for more than one-third of ICT graduates, with the female share in Costa Rica at only 20.3% (World Bank, Gender Data Portal, 2018). This imbalance **limits the pool of women with the skills and networks to lead innovation-driven ventures**. The transition from STEM study to entrepreneurship is particularly fragile, as unequal access to quality education and training, high dropout rates, and youth exclusion limit progression into scientific or entrepreneurial careers. The result is a **leaky skills pipeline**, where many women acquire foundational knowledge, but few translate it into business creation or leadership within STEM ecosystems. Table 1 provides a comparative overview of these dynamics across the five countries.

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<sup>20</sup> Most recent year available for each country for "School enrollment, tertiary, female (% gross)": Costa Rica (2019) and Ecuador (2023).

Table 1: Comparative Overview of Gender Gaps in Education, STEM, and Labor Market Inclusion<sup>21</sup>

Country / Indicator	Expected Years of Schooling (Gender Gap <sup>22</sup> )	Female Out-of-School Rate	Female Tertiary Education Enrollment (%)	Female STEM Graduates, Tertiary (%)	Female ICT Graduates, Tertiary (%)	Female NEET rate (ages 15-24) (%)	Key Observation
<b>Ecuador</b>	1	19.1%	66.8%	29.2%	36.8%	26.3%	Women are well represented in higher education overall, but remain <b>clustered outside STEM</b> , limiting their potential entry into innovation-driven entrepreneurship.
<b>Guatemala</b>	0.3	61.3%	30.5%	34.7%	21.1%	38.4%	<b>High dropout rates</b> and <b>low tertiary enrollment</b> , especially among rural and indigenous women, sharply constrain the STEM pipeline despite moderate STEM graduation shares.
<b>Costa Rica</b>	1.1	5.1%	60.5%	32.2%	20.3%	23.7%	Strong education access and gender policies exist, but women remain <b>underrepresented in STEM and ICT</b> , limiting their translation into entrepreneurial ventures.
<b>Honduras</b>	0.9	53.8%	29.6%	37.8%	27.1%	43.6%	Despite relatively high female STEM graduation shares, <b>severe dropout</b> and the <b>highest NEET rate in the region</b> reduce women's ability to leverage STEM education for entrepreneurship.
<b>El Salvador</b>	0.8	34.8%	37.2%	23.1%	26.2%	30.8%	Women's participation in engineering and ICT is slowly increasing, but overall <b>representation in STEM remains low</b> and <b>labor market exclusion</b> limits opportunities.

<sup>21</sup> Data from the World Bank's Gender Data Portal (for the most recent year available for the corresponding country and indicator).

<sup>22</sup> Gender gap is estimated as difference in % between female and male

## Legal and administrative frictions.

Despite notable progress in recent years, with reforms that simplify the formalization of businesses, such as the S.A.S. regime in Ecuador<sup>23</sup>, Mi Empresa en Línea in Honduras<sup>24</sup>, and CreaEmpresa in El Salvador<sup>25</sup>, the **overall regulatory environment for entrepreneurship remains complex, fragmented, and costly** to navigate. Business registration continues to require cumbersome administrative procedures, often involving multiple notarial requirements, in-person signatures, and interactions with several agencies. Interviewed ecosystem actors report fragmented policy enforcement, which leaves gaps in areas such as taxation, labor regulation, and intellectual property (IP) protection, discouraging the formalization of businesses.

Global rankings **on legal systems, property rights, and regulatory quality** reflect the bureaucratic complexity observed across the countries studied. With the exception of Costa Rica, the 2023 scores reveal **relatively weak protection of property rights**, limited contract enforcement, low integrity of legal systems, insufficient judicial independence, and significant constraints on women's economic participation and property rights. The scores for legal systems and property rights range from 4.00 in Honduras to 4.61 in Guatemala (on a scale of 0 to 10), both well below the LAC regional average of 5.38. Costa Rica represents a notable outlier with the highest score in the region at 6.76. Regarding regulatory frameworks, Ecuador (5.76) and El Salvador (6.25) fall below the LAC regional average of 6.34, indicating **comparatively more burdensome administrative procedures and heavier bureaucratic requirements** that contribute to higher costs and delays in business formalization (Fraser Institute, Economic Freedom Rank, 2023).

These existing impediments in legal and regulatory systems **disproportionately affect women founders**, who often balance business responsibilities with unpaid care work, and therefore face greater time constraints in engaging with bureaucratic processes<sup>26</sup>. The challenges are further exacerbated by the **limited availability of legal advisory and business development services** tailored to early-stage women STEM entrepreneurs, leaving many unaware of tax incentives, IP protections, or simplified startup procedures. These challenges contribute to persistently **high levels of informality** across the region. While **legal reforms have opened the door to greater formality**, the **implementation gap** continues to deter women-led

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<sup>23</sup> The reform allows rapid, fully online company incorporation with no minimum capital. It was launched in 2020 (Gobierno del Ecuador, 2020).

<sup>24</sup> Launched in 2018 (Gobierno de Honduras, 2018).

<sup>25</sup> The reform consolidates steps and eliminates high capital thresholds. It was launched in 2024 (Gobierno de El Salvador, 2024)

<sup>26</sup> For instance, women in Costa Rica devote approximately 22% of their day to unpaid domestic and care work, and women in El Salvador devote 20% of their day to this work (World Bank, Gender Data Portal, 2017).

STEM ventures from fully entering and benefiting from the formal entrepreneurial ecosystem. As reported by interviewed ecosystem actors, slow procedures, limited outreach, and lack of tailored guidance reduce the incentives for business formalization.

One of the key weaknesses in the legal and regulatory framework for women-led STEM enterprises includes **fragmented, costly, and ineffective IP protection**. Across the region, **IP systems are perceived as slow, costly, and complex**, discouraging many women entrepreneurs in IP-heavy sectors, such as STEM, from pursuing patents or formal protections for their innovations. Interviewed ecosystem actors highlighted that the time and cost associated with patent registration can deter entrepreneurs from investing in R&D-heavy ventures. Similarly, **rules governing IP ownership** in universities and research centers **are often unclear**, leading to uncertainty when spin-offs or joint ventures involve public institutions. Stakeholders described anecdotal cases in which women innovators lost authorship or ownership disputes with universities, illustrating how institutional power asymmetries can disadvantage women despite formal legal protections.

**Costa Rica** offers the **most robust and internationally aligned** IP framework<sup>27</sup>, but lengthy and costly patenting procedures, as well as power asymmetries with academic institutions, remain significant barriers. **Ecuador's COESCCI regime**<sup>28</sup>, known as the "*Ingenios*" Code, provides **strong protections** but was also described by local stakeholders as outdated, overly complex, and restrictive to university-industry collaboration, limiting investment in women-led ventures. **El Salvador's 2024 reform** to its Intellectual Property Law<sup>29</sup> **strengthens patent protection and supports technology transfer**, but enforcement gaps persist. **Guatemala's system, anchored in its Industrial Property Law**<sup>30</sup>, offers basic protections amid exceptionally low patenting activity and insufficient mechanisms to safeguard Indigenous women's IP

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<sup>27</sup> This includes the Law on Copyright and Related Rights, the Law on Patents, Industrial Designs and Utility Models, and the Law on Enforcement Procedures for Intellectual Property Rights; all of these are accessible through Costa Rica's online Juridic Information System at [https://pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm\\_libre.aspx](https://pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_libre.aspx)

<sup>28</sup> Gobierno del Ecuador. 2016. *Código Orgánico de la Economía Social de los Conocimientos, Creatividad e Innovación (COESCCI)*. Suplemento del Registro Oficial N° 899. Quito: Registro Oficial. <https://www.gobiernoelectronico.gob.ec/wp-content/uploads/2018/10/Codigo-Organico-de-la-Economia-Social-de-los-Conocimientos-Creatividad-e-Innovacion.pdf>

<sup>29</sup> Asamblea Legislativa de la República de El Salvador. 2024. *Ley de Propiedad Intelectual. Decreto N.º 66*. San Salvador: Diario Oficial. <https://secretariageneral.unasa.edu.sv/legislacionnacional/Ley%20de%20propiedad%20Intelectual%20-agosto%202024.pdf>

<sup>30</sup> Congreso de la República de Guatemala. 2000. *Ley de Propiedad Industrial. Decreto Número 57-2000*. Guatemala: Diario Oficial. <https://portal.rpi.gob.gt/wp-content/uploads/2025/01/LEY-DE-PROPIEDAD-INDUSTRIAL-CON-SUS-REFORMAS-Y-SU-REGLAMENTO-07012025.pdf>

rights. **Honduras has comprehensive legislation**<sup>31</sup>, but continues to face institutional and enforcement challenges.

Generally, existing IP laws were perceived as having weak enforcement across the region, which reduces the perceived value of registering IP and weakens innovation incentives. For women entrepreneurs, especially those in STEM fields, this environment makes it **challenging to pursue patents as a strategic asset**, shifting the emphasis toward alternative strategies such as trade secrets, rapid market entry, and selective IP protection for core inventions in larger foreign markets. This is likely to influence the **low rates of patent applications** in the region (which range from 0.2 per million inhabitants in Guatemala to 2.3 in Ecuador, compared to, for instance, 7.6 in Mexico) and the **limited R&D investment across the region** (WIPO, Statistics Data Center, 2023). **Table 2** offers an overview of the legal and regulatory environments for entrepreneurship in each country.

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<sup>31</sup> Congreso Nacional de Honduras. 1999. *Ley de Propiedad Industrial*. Decreto N.º 12-99-E. Tegucigalpa: Diario Oficial La Gaceta. [https://honduras.eregulations.org/media/LEY%20DE%20PROPIEDAD%20INDUSTRIAL%20\(actualizada-07\).pdf](https://honduras.eregulations.org/media/LEY%20DE%20PROPIEDAD%20INDUSTRIAL%20(actualizada-07).pdf)  
Congreso Nacional de Honduras. 2013. *LEY PARA LA PROMOCIÓN Y FOMENTO DEL DESARROLLO CIENTÍFICO, TECNOLÓGICO Y LA INNOVACIÓN*. Decreto No. 276-2013. Publicada en La Gaceta No. 33,356, 15 de febrero del 2014. Tegucigalpa: Diario Oficial La Gaceta. [https://www.tsc.gob.hn/web/leyes/Ley\\_promo\\_fomento\\_desa\\_cient\\_2014.pdf](https://www.tsc.gob.hn/web/leyes/Ley_promo_fomento_desa_cient_2014.pdf)

Table 2: Comparative Overview of Legal and Regulatory Environment for Entrepreneurship

COUNTRY	ECONOMIC FREEDOM SCORE 2023 (FRASER INSTITUTE)	ONLINE SIMPLE COMPANY FORMATION?	CORPORATE TAX RATE	EXISTING IP LEGAL FRAMEWORK	KEY IMPLICATIONS FOR ENTREPRENEURSHIP
<b>Costa Rica</b>	<ul style="list-style-type: none"> <li>Legal System and Property Right (with gender adjustment): 6.76</li> <li>Regulation: 6.98</li> </ul> <b>Overall Score &amp; Rank: 7.85 (14)</b>	<b>Partial</b> – some e-filing, but not fully one-stop; notary still required	<b>30%</b> ( <b>progressive lower rates for SMEs under ~\$200k</b> )	<b>Yes</b> – Laws 6683 (Copyright), 6867 (Patents & Designs), 8039 (Enforcement)	Strong credit environment and tax simplicity support entrepreneurship, but <b>costly patenting and complex incorporation</b> can deter startups, especially in STEM-heavy sectors.
<b>Ecuador</b>	<ul style="list-style-type: none"> <li>Legal System and Property Right (with gender adjustment): 4.51</li> <li>Regulation: 5.76</li> </ul> <b>Overall Score &amp; Rank: 6.32 (100)</b>	<b>Yes</b> – S.A.S., fully online, no notary, no minimum capital	<b>25%</b> (up to 28–30% with surcharges; <b>simplified 2%–2.5% regime for small firms</b> )	<b>Yes</b> – Código Ingenios (COESCCI) governs patents, copyrights, trade secrets; SENADI enforces	S.A.S. reform enables fast/cheap registration, but <b>weak credit environment</b> and <b>moderate tax/admin burdens</b> remain. <b>Investor protections are weak</b> . IP law is comprehensive, but considered <b>outdated</b> .
<b>El Salvador</b>	<ul style="list-style-type: none"> <li>Legal System and Property Right (with gender adjustment): 4.43</li> <li>Regulation: 6.25</li> </ul> <b>Overall Score &amp; Rank: 7.09 (58)</b>	<b>Yes</b> – CreaEmpresa portal consolidates tax ID, SS, registry; <b>notary still required</b>	<b>30% (25% if income &lt; \$150k)</b>	<b>Yes</b> – new 2025 Intellectual Property Law (DL 66) unifies IP regimes, expands to digital, creates IP Institute	Simplified procedures and online tools support entrepreneurs, but <b>notary costs</b> persist. New IP law modernizes protections, fostering STEM innovation, though <b>investor protections remain weak</b> .
<b>Guatemala</b>	<ul style="list-style-type: none"> <li>Legal System and Property Right (with gender adjustment): 4.61</li> <li>Regulation: 7.07</li> </ul> <b>Overall Score &amp; Rank: 7.62 (28)</b>	<b>Partial</b> – MiNegocio one-stop in capital city; otherwise still notary-heavy	<b>25%</b> (optional simplified 5–7% on gross income)	<b>Yes</b> – Industrial Property Law (Decree 57-2000); protects patents, utility models, trade secrets	Strong credit and simplified tax regimes benefit startups, but very <b>weak contract enforcement</b> and <b>high informality</b> undermine predictability. IP law is comprehensive but <b>underutilized</b> .
<b>Honduras</b>	<ul style="list-style-type: none"> <li>Legal System and Property Right (with gender adjustment): 4</li> <li>Regulation: 6.45</li> </ul> <b>Overall Score &amp; Rank: 6.99 (64)</b>	<b>Yes</b> – Mi Empresa en Línea; in-person steps still required	<b>25% + 5% surtax</b> (above HNL 1m profits)	<b>Yes</b> – Industrial Property Law (Decree 12-99), with patent, design, utility model, trade secret protections	New digital incorporation tools are promising, but <b>taxes remain heavy</b> and <b>compliance complex</b> . IP law is in place, but <b>enforcement challenges</b> and <b>weak investor protections</b> discourage risk-taking.

## Finance that doesn't fit innovation.

Access to finance is a critical determinant of women's ability to grow and sustain businesses. In Guatemala, El Salvador, Ecuador, Honduras, and Costa Rica, women entrepreneurs face **structural and institutional barriers that limit their participation in financial markets**. Although women's entrepreneurship is widespread, it is often under-financed (Pavlova and Gvetadze, 2023). Recent data demonstrate **low levels of financial inclusion in the region**. Women's account ownership remains low, ranging from 29.2% in El Salvador and 34.4% in Guatemala to 58% in Ecuador and 61.1% in Costa Rica, with gender gaps still pronounced in all cases: between 5.6 and 19.7 percentage points in favor of men (World Bank, Gender Data Portal, 2024). This disparity is particularly acute in Honduras, which shows the steepest gap, with only 28.9% of women holding accounts and a negative account ownership gap of 19.7% compared to men (World Bank, Gender Data Portal, 2024).

These constraints are further exacerbated by limited access to collateralizable assets, such as land or property, as women are **historically less likely to own titled, immovable property**, typically required for loans (IFC, 2024). Even though Guatemala, Honduras, El Salvador, Ecuador, and Costa Rica have legal frameworks that formally guarantee equal property ownership rights<sup>32</sup>, the supportive frameworks to operationalize these rights are weak, with the World Bank's "Women, Business and the Law (WBL) supportive frameworks score for asset ownership ranging between 0 and 33.3<sup>33</sup> (out of 100) across all five countries (World Bank, Women, Business and the Law, 2024).

Industries with low tangibility of assets, such as STEM, exhibit **even larger gender disparities in access to finance** (Avenancio-Leon and Shen, 2021). Debt markets typically demand collateral that is tangible and liquid. Lenders often discount or disregard intangible assets due to uncertainties surrounding valuation, enforceability, and resale in the event of default (Loumioti, 2012). In this regard, interviewed ecosystem actors highlight that the financial system remains **unsuited to the realities of early-stage and innovation-driven ventures**, particularly those led by women. Financial institutions typically favor **firms that can provide hard information**, such as long operating histories and steady cash flows, conditions that startups developing technology-based or service-oriented models often struggle to meet (Abdulsaleh & Worthington, 2024; Harvard Kennedy School, 2020). As a result, women founders in STEM

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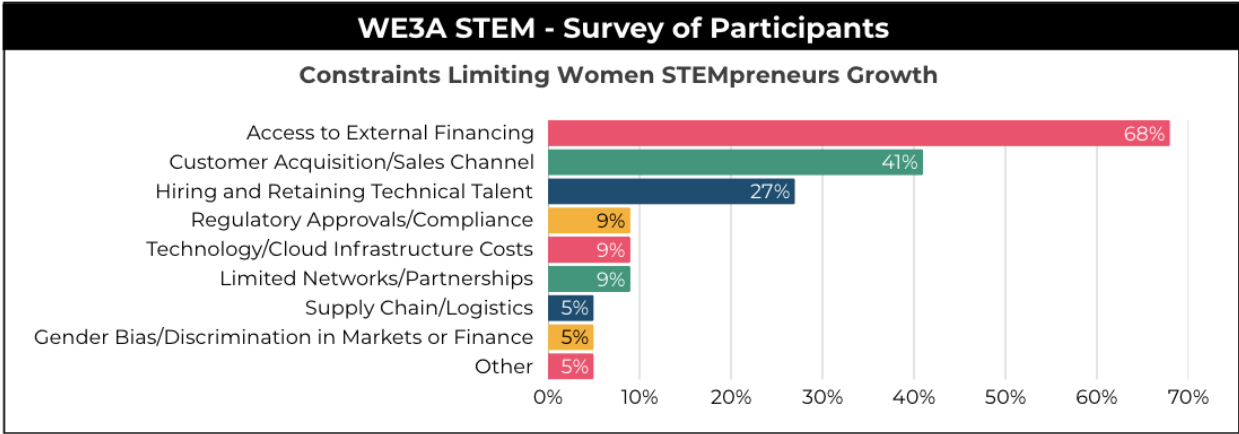
<sup>32</sup> i.e., all countries score 100 out of 100 in the World Bank's "Women, Business and the Law" (WBL) legal frameworks score for asset ownership

<sup>33</sup> In the World Bank's WBL framework, legal frameworks refer to the written laws and regulations that establish women's rights de jure (for example, equal pay or non-discrimination laws), whereas supportive frameworks encompass the policies, programs, and institutions that ensure those laws are implemented de facto, such as enforcement agencies, dedicated budgets, or training programs for women entrepreneurs.

fields face an immediate structural disadvantage in loan eligibility, given that their business assets are frequently intellectual property, digital tools, or prototypes (Women’s World Banking, 2022).

The quantitative insights gathered from beneficiaries of the WE3A - Supporting Women Entrepreneurs in STEM Areas Project<sup>34</sup> further reinforce that limited access to finance continues to limit business growth for women founders in STEM. Across the five countries, **seven out of ten surveyed women entrepreneurs in STEM face financing constraints that limit their ability to scale** (see Figure 7 below). Without instruments that bridge the existing gaps, such as gender-lens investment funds, guarantee mechanisms, and early-stage venture grants, women-led STEM enterprises struggle to grow beyond the prototype stage, regardless of technical potential or market demand.

Figure 7: Perception of Surveyed WE3A Project Beneficiaries \_ Key Constraints Limiting Venture Growth



**Bias in key decision points.**

Beyond structural constraints, women also face **systematic bias** in how investors and financial institutions evaluate them and their ventures. Qualitative interviews with ecosystem actors reveal that **women’s business pitches tend to elicit more prevention-oriented questions** focusing on potential risks, debt, or family responsibilities. At the same time, male entrepreneurs receive promotion-oriented questions about opportunities and growth. This framing emphasizes the persistence of gender-based bias, with women often **perceived as less ambitious or less capable of managing scale**.

<sup>34</sup> The online survey targeted beneficiaries of *Startup Weekend* and *Founder Catalyst* programs of WE3A- Supporting Women Entrepreneurs in STEM Areas Project. In total, 70 completed responses from Startup Weekend (23% completion rate) and 22 completed responses from Founder Catalyst beneficiaries (46% completion rate) were received. Further details are provided in the Annex Section of the Technical Note.

Globally, research confirms that women entrepreneurs frequently face **skepticism from investors**, who tend to **perceive their ventures as less legitimate** compared to those led by men, although, paradoxically, women generally are more reliable borrowers and demonstrate higher loan repayment rates than men (CGAP, 2024; Minniti & Lévesque, 2011; Jennings & Brush, 2013).

Interviewed stakeholders in the region **echoed these patterns**. Credit officers were reported to **apply stricter collateral requirements for women or request guarantors**, even when women presented sound repayment records. Several interviewees described experiences of **being offered smaller loan amounts or shorter maturities** than men with comparable profiles. Venture capital and angel investment, though expanding slowly in Costa Rica and Ecuador, remain **highly concentrated in urban hubs**, and **women account for only a small fraction of investees**. These biases, whether explicit or unconscious, can significantly exacerbate existing structural barriers and result in smaller funding rounds, longer approval times, and reduced access to growth capital. Ultimately, the **overestimation of risk in women's ventures** perpetuates their exclusion from growth capital and contributes to **their under-financing**, often prompting women entrepreneurs to self-finance and under-invest, which can particularly constrain sectors like STEM, where the minimum efficient scale and upfront capital needs are high.

### **Digital and innovation infrastructure gaps.**

While connectivity has improved significantly over the past decade, **wide disparities in internet penetration persist** across and within countries, especially between capital cities and rural areas, where many potential women entrepreneurs live. For example, internet penetration in Honduras is 55% in urban areas but drops sharply to 20% in rural areas (ISOC, Pulse Platform, 2019). In Ecuador, internet usage is 81% in urban areas versus 55% in rural areas (ISOC, Pulse Platform, 2023). **Internet affordability** remains a significant challenge, constraining access for marginalized and rural populations. While Costa Rica has the most accessible market with costs representing less than 1% of GNI per capita, the costs in Ecuador, Guatemala, and El Salvador are slightly above the international affordability threshold of 2% (ISOC, Pulse Platform, 2024). The disparities in internet penetration are **most severe in Honduras**, where internet **costs exceed 10% of GNI per capita**, effectively pricing out much of the population (ISOC, Pulse Platform, 2024). **Table 3** provides an overview of the digital infrastructure and corresponding gaps across the five countries.

The limited affordability of digital devices further **restricts access to technology and the internet**, particularly in **rural areas** where many rely on shared or entry-level smartphones with limited functionality (ITU, 2023; Velasco & Cevallos, 2024). For rural households in Guatemala and Honduras, **the cost**

**of devices** alone can be equivalent to more than 20% of their monthly income (ITU, 2023). The qualitative evidence collected from ecosystem stakeholders suggests that women **often lack personal ownership of technological devices**, depending on male household members for permission to use them, which can highly limit access to online resources and opportunities. The lack of reliable digital and innovation infrastructure, thus, has the potential to amplify **other structural inequalities** by confining women STEM entrepreneurs to local markets, limiting exposure to regional or international clients, and reducing their visibility within entrepreneurial networks (AFI and FILAC, 2024). Such constraints **directly affect women founders in STEM**, who often rely on home-based workspaces and digital tools to develop or market their ventures, and for whom limited connectivity and device functionality can translate into lost working hours, unreliable client communication, and restricted participation in e-commerce and virtual acceleration or mentoring programs.

The **lack of reliable and secure digital infrastructure** compounds the challenge of limited internet connectivity. Across the region, interviewed women entrepreneurs (and aspiring entrepreneurs) report particular challenges finding **safe, affordable, and well-equipped facilities for prototyping or product testing**. Furthermore, weak cybersecurity frameworks can **discourage businesses and individuals** from adopting digital tools or online payment systems, for instance, which are essential for STEM ventures to operate, sell, and collaborate safely in digital environments. Honduras scores just 2 out of 100 on the Global Cybersecurity Index<sup>35</sup> (i.e., virtually no readiness), and El Salvador and Guatemala score only 13 out of 100, eroding trust in digital systems. **Innovation infrastructure gaps** further aggravate this digital divide. In Ecuador, outside major cities such as San José, Quito, and San Salvador, access to co-working spaces, laboratories, and fab labs remains scarce, forcing women STEM professionals to often depend on institutional labs or academic facilities for specialized hardware and prototyping, rather than independent private labs (Gómez & Rojas, 2021).

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<sup>35</sup> The Global Cybersecurity Index, developed by the International Telecommunication Union (ITU), measures countries' commitment to cybersecurity across five dimensions (legal, technical, organizational, capacity development, and cooperation) on a scale from 0 to 100, where higher scores indicate stronger national cybersecurity readiness.

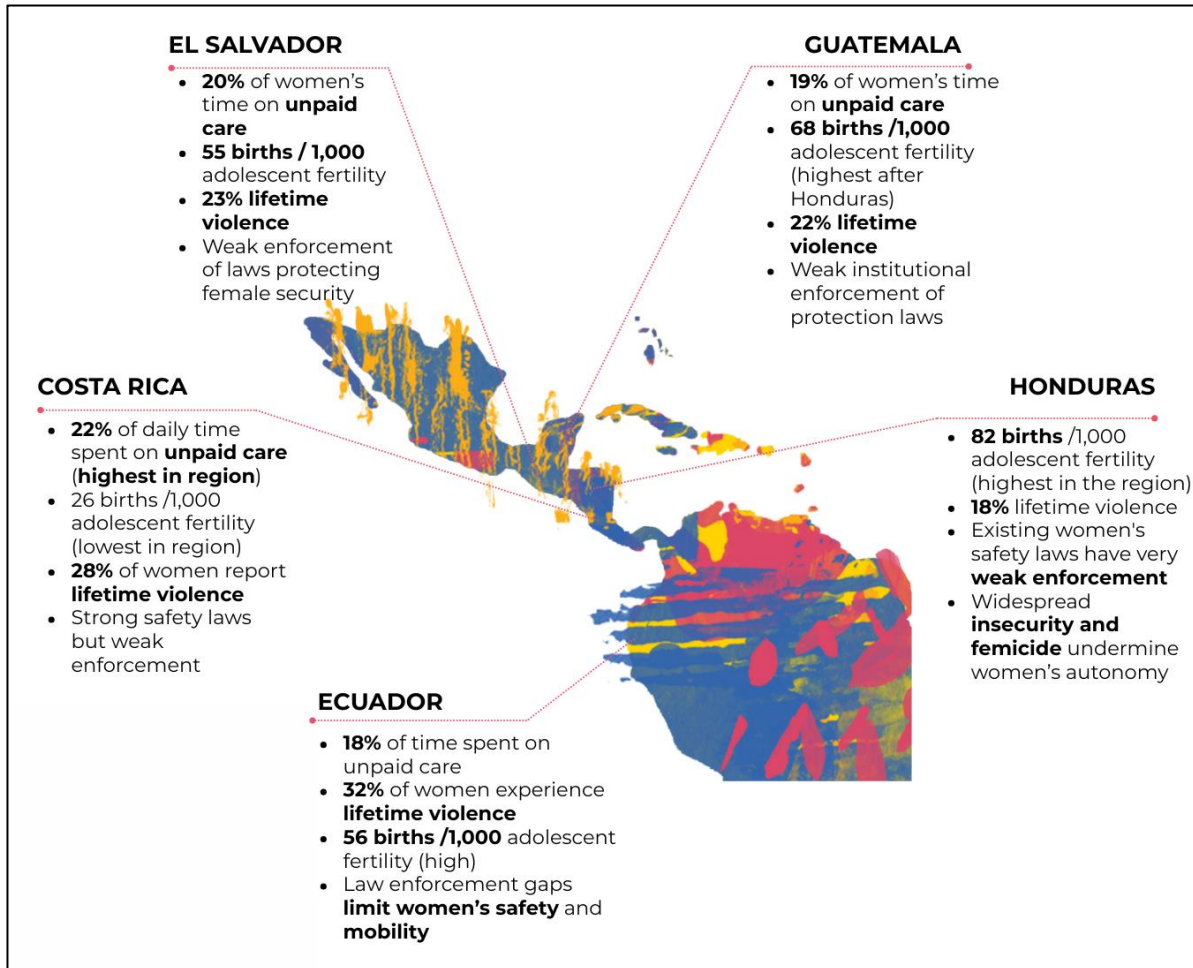
Table 3: Comparative Overview of Digital Infrastructure and Ecosystem Resilience

Country / Indicator <sup>36</sup>	Internet Penetration	Average Internet Cost	Mobile Coverage	Global Cybersecurity Index (out of 100)	Internet Resilience Index (out of 100)	Key Takeaway
<b>Ecuador</b>	81% Urban vs. 55% Rural	2.14%	90% (4G)	26	51	<b>Ecuador</b> shows progress in resilience and inclusion but lags in cybersecurity maturity, making its ecosystem vulnerable despite relatively high penetration.
	73% Female vs. 72% Male		22% (5G)			
<b>Guatemala</b>	-	2.96%	90% (4G)	13	39	<b>Guatemala</b> demonstrates an advanced 5G deployment but weak affordability and cybersecurity, raising questions about whether infrastructure benefits will be equitably realized.
	49% Female vs. 53 % Male		54% (5G)			
<b>Costa Rica</b>	85% Urban vs. 76% Rural	<1% of GNI	98% (4G)	64	57	<b>Costa Rica</b> emerges as the regional leader, balancing affordability, equitable access, and institutional preparedness, though its limited 5G rollout may constrain competitiveness in the near future.
	86% Female vs. 85% Male		10% (5G)			
<b>Honduras</b>	55% Urban vs. 20% Rural	10.46%	88% (4G)	2	40	<b>Honduras</b> faces the most severe digital challenges, low rural penetration, high costs, minimal 5G coverage, and near-absent cybersecurity capacity, making it the most digitally fragile of the five.
	41% Female vs. 38% Male		<1% (5G)			
<b>El Salvador</b>	64% Urban vs. 40% Rural	2.93%	99% (4G)	13	35	<b>El Salvador</b> has nearly universal 4G but is hampered by low resilience, affordability challenges, and poor cybersecurity governance.
	52% Female vs. 57% Male		<1% (5G)			

<sup>36</sup> Data from the ISOC Pulse Platform (for the most recent year available for the corresponding country and indicator)

## 2.2. CULTURAL AND SOCIAL BARRIERS: NORMS, TIME, SAFETY, AND VISIBILITY

Figure 8: Social and Cultural Context for Women in STEM: Central America and Ecuador



### Norms that constrain time and mobility.

Across Central America and Ecuador, **deeply rooted social and cultural norms** continue to shape **women's time use, professional trajectories, and access to entrepreneurship opportunities**. The expectation that women carry primary responsibility for household and caregiving tasks often limits the time and flexibility required to pursue studies or develop new ventures, especially in demanding fields, such as STEM. In Guatemala, for instance, women dedicate about 19% of their day to unpaid domestic and care work, compared with 3% for men, one of the widest gaps in the region (World Bank, Gender Data Portal, 2017). Similar disparities are also reported in Costa Rica, where women devote

approximately 22.1% of their day to these activities, and in El Salvador (20.2%), where women’s unpaid work hours exceed those of men by more than double (World Bank, Gender Data Portal, 2017).

The issue is compounded in countries with **high adolescent fertility rates** that reinforce exclusion. Notably, the adolescent fertility rate in Honduras stands at 82.1 births per 1,000 women aged 15–19, and in Guatemala it is recorded at 68.3 births, with both values being well-above the regional average in LAC of 51.2 (World Bank, Gender Data Portal, 2023). Early pregnancy and childbirth lead to school dropout among young females, limiting professional training and ultimately **reducing women’s participation in high-value economic activities**. These gaps significantly reduce the pool of future female STEM founders, as women frequently exit education or career ladders before acquiring the experience or networks needed to transition into entrepreneurship.

**“Time poverty”** is exacerbated by a lack of **legal and supportive systems for childcare** across the region, which ultimately restricts participation in entrepreneurship accelerators, networking events, and training opportunities that often take place after working hours or require travel, as confirmed by interviewed women entrepreneurs (World Bank, Women, Business and the Law, 2024). The interviewed female STEM founders frequently mentioned that many pitch events, workshops, or mentoring sessions take place in the evening, a time when their caregiving responsibilities make attendance impossible.

### **Safety and violence.**

**Gender-based violence (GBV)** and **insecurity** further restrict women’s mobility and participation in entrepreneurial ecosystems. Despite **generally robust legal frameworks** that prohibit domestic and GBV across all five countries, **enforcement gaps remain substantial**. According to the World Bank’s WBL indicators assessing safety-related legal frameworks in place, Costa Rica, El Salvador, and Honduras achieve the highest scores (100.0), having enacted legislation covering domestic violence, femicide, sexual harassment, and child marriage. Ecuador scores 75.0 in the legal frameworks, and Guatemala scores 50.0 (World Bank, Women, Business, and Law, 2024).

Despite the existing legal frameworks, widespread GBV in the region reflects the **weakness of enforcement mechanisms** and the **limited functionality**. Across the five countries, Honduras had one of the highest femicide rates in 2023, reaching 7.2 femicides per 100,000 women (Statista Research Department, 2024). Moreover, about 6.6% of women in Ecuador and 6.8% in Honduras reported experiencing physical or sexual violence in the past year, slightly below the regional average of 6.9% (World Bank, Gender Data Portal,

2018). The experience of **violence over a lifetime** is even more widespread, affecting 31.7% of ever-partnered women in Ecuador and nearly a quarter of women in Guatemala, Costa Rica, and El Salvador, which is in line with the LAC average of 25.9% (World Bank, Gender Data Portal, 2018).

The overall **safety concerns** in public spaces also significantly undermine fundamental day-to-day factors, such as mobility, networking, and the ability to work outside of regular hours, all of which early-stage ventures often require. Interviews with ecosystem actors across countries echoed this concern, citing security risks and a lack of safe transportation as **the main deterrents to women entrepreneurs engaging in late-night activities or events**, especially in peripheral areas. These risks are compounded by broader crime and gang-related violence, which restrict women's willingness to operate or expand businesses beyond safer urban zones.

### Thin networks, few sponsors, and scarce role models.

Access to influential networks remains uneven and heavily gendered in the region. Even in countries with relatively dense entrepreneurship ecosystems, such as Costa Rica and Ecuador, women still **occupy a peripheral role** in high-value investor and innovation circles. Such limited exposure reduces women's opportunities to gain funding or visibility.

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*“Sometimes it's hard to find mentorship: people who really understand how to bring highly technical products to market. That network of mentors with deep STEM expertise simply isn't accessible at all.”*

*Interviewed Stakeholder (Costa Rica)*

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The qualitative evidence gathered from female entrepreneurs in STEM reveals that invitations to key events and networking opportunities are frequently circulated informally, making them less accessible to newcomers and those outside capital cities. Mentorship opportunities are available in most countries, but they are unevenly accessible and rarely tailored to STEM-specific challenges. Many programs focus on general business skills rather than the technical or commercialization aspects needed in STEM-based entrepreneurship. The **lack of visible role models in STEM** further reinforces a cycle of low representation and existing stereotypes about who leads in science and technology. Interviewees repeatedly highlighted that **few women occupy leadership positions in innovation-driven firms or investment networks**, reducing opportunities for aspiring entrepreneurs to learn from or connect with them.

## 2.3. MARKET AND INSTITUTIONAL GAPS: THE IMPLEMENTATION DEFICIT

### Policies exist, but impact lags.

**Policy frameworks and national strategies** aimed at promoting gender equality, entrepreneurship, and innovation have been introduced across all five countries, with varying scopes and levels of commitment. **Costa Rica and Ecuador** stand out for **comprehensive national policies** in which gender equality in entrepreneurship and STEM is an explicit organizing principle, supported by specific instruments. For instance, Costa Rica's National Policy for Equality in Science, Technology, Telecommunications and Innovation (2018–2027), through its FOMUJER Women's Entrepreneurship Fund, and Ecuador's Organic Law to Boost the Economy of Women Entrepreneurs of Ecuador (2025), establish preferential credit lines, tax incentives, and public procurement preferences for women-led ventures (Gobierno del Ecuador, 2023; MIDEPLAN, 2020). **El Salvador and Guatemala** have developed **substantial programmatic initiatives**, ranging from public procurement mechanisms to women-focused accelerators and entrepreneurship "windows".

Despite significant government efforts, **the implementation** is often **fragmented and concentrated in urban areas**. In Guatemala, the Gender Equality Action Plan by IPEG<sup>37</sup> introduces the Women's Seal (*Sello Mujer*) to guarantee preferential access to public procurement (IPEG, 2024). Honduras, by contrast, lacks a dedicated women-in-STEM framework and instead relies on gender mainstreaming within broader equality and entrepreneurship programs, resulting in less tailored support for women innovators. **Table 4** below summarizes the principal political, legal, and educational frameworks for innovation, STEM, and entrepreneurship, as well as existing women-specific frameworks/laws across the five countries, providing a comparative perspective on national-level efforts and strategies.

Furthermore, **translating these policies into tangible outcomes** for women entrepreneurs in **STEM remains challenging**. Qualitative evidence from interviews with ecosystem actors suggests that the limited enactment of policies stems from insufficient implementation capacity and the absence of sustained policy continuity. Furthermore, policies and laws are often unevenly enforced due to limited resources and weak coordination among agencies, ultimately **failing to translate into lived equality**. Ecosystem actors also

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<sup>37</sup> IPEG (*Igualdad de Participación en Empleo y Emprendimiento*) is a public-private initiative launched by Guatemala's Ministry of Economy and supported by the IDB Group, the World Economic Forum and AFD. It seeks to reduce gender gaps in the labor market and entrepreneurship by strengthening women's employability, business competitiveness, rural inclusion, and public/private investment in gender-inclusive opportunities.

emphasized that **insufficient awareness** among women entrepreneurs and aspiring founders of **existing legal instruments and support programs** contributes to the persistent underutilization of these mechanisms. These implementation and awareness gaps result in an ecosystem where women are formally recognized in strategy documents but still face barriers to accessing finance, markets, and innovation infrastructure.

Table 4: Comparative Overview of Political, Legal, and Education Frameworks for Innovation, STEM, and Entrepreneurship

Country	National Policy Frameworks / Laws (Innovation, STEM, Entrepreneurship)	Women-Specific Frameworks / Laws	Education & Skills Policies / Programs (STEM & Entrepreneurship)	Key Insights
<b>Costa Rica</b>	<ul style="list-style-type: none"> <li>National Policy on a Knowledge-Based Society and Economy (to 2050)</li> <li>National Science, Technology, and Innovation Plan 2022–2027</li> <li>National Entrepreneurship Policy 2030 (PNE 2030)</li> <li>Seeds of Entrepreneurship (2025)</li> </ul>	<ul style="list-style-type: none"> <li>National Policy for Equality between Women and Men in Education, Employment, and Access to the Benefits of Science, Technology, Telecommunications, and Innovation (PICTTI) 2018–2027</li> <li>PNE 2030 – includes Women Entrepreneurs Program and FOMJER Fund</li> </ul>	<ul style="list-style-type: none"> <li>National STEAM Strategy integrated in curriculum – embeds gender perspective</li> <li>Public–academic partnerships expanding STEM access</li> <li>Several non-governmental initiatives targeted at girls and women in STEM and entrepreneurship</li> </ul>	Strongest <b>balance of long-term policy vision and gender integration</b> , with both systemic reforms (STEAM strategy) and vibrant NGO/tech sector support closing gaps.
<b>Ecuador</b>	<ul style="list-style-type: none"> <li>Organic Law on Entrepreneurship and Innovation (2020)</li> <li>National Plan for the Social Economy of Knowledge, Creativity, Innovation, and Ancestral Wisdom (National Plan ESCCISA, to 2030)</li> </ul>	<ul style="list-style-type: none"> <li>Organic Law to Promote the Economy of Women Entrepreneurs of Ecuador (2025)</li> </ul>	<ul style="list-style-type: none"> <li>STEM Coalition Ecuador (2018)</li> <li>InnoLabs in universities</li> <li>Higher education authority promoting gender equity in STEM</li> <li>National Plan ESCCISA emphasizes gender parity in STEM higher education</li> <li>Several non-governmental initiatives targeted at girls and women in STEM and entrepreneurship</li> </ul>	Only country with a <b>dedicated national law for women entrepreneurs (2025)</b> ; complemented by targeted STEM initiatives, though implementation still emerging.
<b>El Salvador</b>	<ul style="list-style-type: none"> <li>National Policy on Innovation, Science, and Technology</li> <li>National Entrepreneurship Policy (2014)</li> <li>Law for the Promotion, Protection, and Development of MSMEs</li> </ul>	<ul style="list-style-type: none"> <li>Women’s Entrepreneurship Program (CONAMYPE)</li> <li>National Policy on Shared Responsibility for Care Work</li> <li>National Financial Inclusion Policy – embeds gender perspective</li> </ul>	<ul style="list-style-type: none"> <li>Education Sector Plan 2022–2030 with gender mainstreaming (supported by GPE Girls’ Education Accelerator)</li> <li>Vocational training on entrepreneurship via “Women City Centers” and ISDEMU</li> <li>Several non-governmental initiatives targeted at girls and women in STEM and entrepreneurship</li> </ul>	Robust mix of <b>education-sector gender mainstreaming and entrepreneurship training</b> ; challenge lies in <b>fragmented implementation and urban concentration</b> .

<b>Guatemala</b>	<ul style="list-style-type: none"> <li>• National Policy for Scientific and Technological Development 2015–2032</li> <li>• Guatemala Entrepreneurship Policy 2015–2030</li> <li>• Entrepreneurship Strengthening Law (2018)</li> </ul>	<ul style="list-style-type: none"> <li>• IPEG Action Plan 2024–2028 (includes Women’s Business Accelerator, Rural Women’s Accelerator, and Women’s Seal certification)</li> <li>• Strategy for the Inclusion of Women and Indigenous Peoples in Science, Technology, and Innovation 2022–2027</li> </ul>	<ul style="list-style-type: none"> <li>• Guatemala Entrepreneurship Policy promotes entrepreneurship education</li> <li>• UNESCO-Malala Centers for indigenous girls</li> <li>• Scholarships, science fairs, coding workshops</li> <li>• Several non-governmental initiatives targeted at girls and women in STEM and entrepreneurship</li> </ul>	<p>Mix of <b>targeted gender policies and grassroots education projects</b>; standout for <b>rural/indigenous inclusion</b>, but <b>lacks systemic nationwide STEM or entrepreneurship gender frameworks</b>.</p>
<b>Honduras</b>	<ul style="list-style-type: none"> <li>• Law on Support to MSMEs</li> <li>• Law for the Promotion and Advancement of Scientific, Technological, and Innovation Development (2014)</li> <li>• Creation of the National Service for Entrepreneurship and Small Businesses (SENPRENDE, 2019)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>No dedicated women-specific STEM/entrepreneurship policy</b></li> <li>• Gender mainstreaming via Second Plan for Gender Equality and Equity of Honduras 2010–2022 and National Financial Inclusion Plan</li> </ul>	<ul style="list-style-type: none"> <li>• National School Program “Learn for Education” (nationwide, 2022)</li> <li>• STEM for Powerful Girls (with UNICEF, Save the Children)</li> <li>• CABEL’s CIPOT@S: Studying STEM scholarships</li> <li>• Honduras STEM Foundation (robotics/coding)</li> <li>• Several non-governmental initiatives targeted at girls and women in STEM and entrepreneurship</li> </ul>	<p><b>Lacks women-specific laws</b>; progress relies heavily on mainstreaming and donor-backed projects. Strong push on entrepreneurship in schools, but systemic STEM gender approach lacking.</p>

## Institutional coordination remains a bottleneck.

The **institutional ecosystem** for entrepreneurship and innovation across the region is described as **densely populated but poorly synchronized**. Numerous institutions, including public agencies, universities, business incubators, accelerators, and donor-funded programs, operate simultaneously, often pursuing similar goals but with limited coordination and information sharing. This lack of synergies **prevents the creation of seamless pathways for women innovators** to transition from training to product development, incubation, financing, and market access. Based on the feedback of interviewed ecosystem actors, these coordination challenges are especially evident in Honduras and El Salvador, where innovation support programs tend to be concentrated in capital cities, leaving regional or rural areas with minimal coverage. In Ecuador and Costa Rica, stronger coordination platforms and national innovation councils have improved alignment to some extent. Nevertheless, a disconnect between national-level policymaking and the practical needs of early-stage women founders still persists, reducing the effectiveness of developmental efforts.

## Lack of Sustainability and “Gender-washing” risks.

A recurring theme in interviews with ecosystem actors was the concern that some institutional or corporate initiatives **employ gender branding without incorporating substantive, gender-responsive practices**. Stakeholders described programs that highlight gender inclusion

in communication materials but do not allocate budgets for targeted training, childcare support, or mentorship specifically for women entrepreneurs. Others mentioned that gender components are often added to projects late in the design process, in some cases due to **donor funding requirements, without precise mechanisms in place** to monitor or sustain results. This “surface-level inclusion” was cited as a factor that dilutes impact and undermines trust among women participants who perceive such initiatives as symbolic rather than transformative. Effective gender integration requires dedicated resources, technical expertise, and clear accountability mechanisms, elements that remain unevenly applied across the ecosystem.

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*“These projects often build strong capacities within the participants, but the missing piece is sustainability. Once the program ends, those participants are left with the tools but not the resources or models to keep it going.”*

*Interviewed Stakeholder (Regional)*

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# 3

**PATHWAYS TO  
PROGRESS: BUILDING  
THE FOUNDATIONS  
OF AN INCLUSIVE  
STEM  
ENTREPRENEURSHIP  
ECOSYSTEM**

Creating an environment where women can thrive as STEM entrepreneurs requires action across multiple fronts. Across Central America and Ecuador, many of the building blocks for ecosystem development are already in place, ranging from innovation policies and incubator networks to financial inclusion initiatives and academic programs that support women in STEM. However, these efforts remain fragmented and poorly connected, limiting their overall effectiveness. Institutions tend to operate in isolation, with overlapping mandates and limited coordination or information sharing, which reduces the effectiveness of promising programs in translating into sustained pipelines of support for women founders in STEM. The absence of integrated pathways from education and research through to finance, acceleration, and market access leads to lost momentum and duplication of effort. Strengthening the ecosystem, therefore, means transitioning from isolated interventions to coordinated systems, where each actor's contribution builds upon and reinforces the others, enabling women innovators to progress from learning and experimentation to investment and growth.

### 3.1. GOVERNMENT: TRANSLATING COMMITMENT INTO SUSTAINED INCLUSION

Across the five countries, governments have made **clear policy commitments to gender equality, entrepreneurship, and digital transformation**. However, transforming these frameworks into coordinated, adequately funded, and long-term programs that reach women innovators at every stage, from early education to market expansion, remains a challenge. Potential pathways governments can take to operationalize these commitments and strengthen women's participation in STEM entrepreneurship are presented below.

#### Public programs, incentives, and procurement.

- While a number of policies and instruments were introduced across the countries to facilitate business registration, tax simplification, and SME support, **there is a gap in policy support focusing specifically on women in STEM<sup>38</sup>**. Embedding **gender-responsive criteria in innovation grants, supplier programs, and public procurement processes** could significantly expand opportunities for women-led firms in STEM. For instance, this could include setting a specific threshold for **public innovation funds or government contracts** to be allocated to

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<sup>38</sup> Measures have been introduced to streamline business formalization, such as Ecuador's Sociedad por Acciones Simplificada (S.A.S.), which allows rapid online incorporation with no minimum capital, and Honduras's Mi Empresa en Línea for online registration. However, the policy architecture often lacks explicit gender-responsive strategies for STEM entrepreneurship. For example, Honduras relies on general policy mainstreaming and lacks dedicated women-specific legislation in the areas of STEM, entrepreneurship, or innovation.

women-led or women-owned STEM ventures. Such measures would not only encourage greater participation of women in STEM entrepreneurship but also send a strong signal of governmental commitment to inclusion. In parallel, **awareness programs on legal and regulatory support** to women founders should be implemented in cooperation with local authorities, line ministries, and non-governmental organizations. This would ensure that women entrepreneurs, particularly those operating outside major innovation hubs, are informed about existing incentives and support mechanisms, as limited awareness remains a key barrier to their effective uptake.

- International experience highlights the impact of targeted government programs: an example is **Start-Up Chile's S Factory** program, which offers equity-free seed funding and mentoring to help women founders develop and validate tech businesses. Another example is **India's Vigyan Jyoti**, which provides science camps, exam coaching, and mentorship to increase girls' participation in STEM from high school onward. Both initiatives show that combining financial support with hands-on training and exposure to role models can significantly boost women's entry and success in STEM fields. Table 5, in the annex, provides further details and lessons learned from these programs.

### Infrastructure and connectivity.

- Reliable digital infrastructure and connectivity are crucial to entrepreneurship, particularly in STEM fields. Despite notable progress, significant **gaps in urban-rural connectivity persist**<sup>39</sup>, affecting both access to information and the ability to run businesses with a digital and/or online component (ISOC, Pulse Platform, 2023). Public investment in **affordable broadband** and **shared innovation infrastructure** is therefore central to inclusion. Establishing **innovation hubs** and **municipal "digital houses"**, safe, shared spaces with internet access, prototyping tools, and training, could **enable women to test and market their products more effectively**. These facilities also foster peer learning and visibility for women innovators who are otherwise isolated from national networks.

### Care and safety systems.

- **Lack of childcare support and safety concerns** are consistently cited as barriers preventing women from attending entrepreneurship programs, especially when sessions take place after working hours. Governments

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<sup>39</sup> In some countries, the rural-urban divide in internet penetration reaches almost 20%.

can address these issues through **coordinated, locally grounded solutions** that combine innovation and partnerships. This could include integrating childcare services directly into municipal training centers or incubators, partnering with community-based organizations to deliver mobile or temporary childcare during program cycles, and offering stipends or vouchers to help participants cover childcare costs. Local authorities can also collaborate with transport cooperatives and women's associations to enhance **safe mobility**, for example, by offering subsidized evening transportation or establishing designated safe routes near training facilities. Addressing these practical constraints is essential to ensure that women can not only enter but also remain active in STEM ecosystems, participating in them consistently and safely.

### Education and skills alignment.

- Public education systems shape the future pipeline of women innovators. The Ministries of Education and Science are **well-positioned to strengthen STEM exposure for girls** and **update curricula to emphasize digital and technical skills**. Vocational training and university programs should be inclusive and designed to equip women with the competencies required in emerging industries. Comprehensive awareness campaigns, particularly in rural areas, can engage parents, teachers, and communities to showcase women's achievements in STEM, normalize girls' interest in technical fields, and build a new generation of role models. Initiatives that bring female professionals into classrooms as mentors or provide scholarships for girls in engineering and technology can help challenge stereotypes and widen participation from an early age.

### Policy coordination and accountability.

- Establishing **inter-ministerial platforms** would help to bring together stakeholders of the **economy, education, ICT, and women's affairs** to coordinate entrepreneurship and innovation initiatives. An important step for effective monitoring is the establishment of a robust statistical framework to collect **sex-disaggregated data** at sufficient granularity regarding women's participation in STEM entrepreneurship. Once such systems are in place, regular **monitoring of sex-disaggregated indicators**, including women's participation in innovation programs and access to finance, would allow decision-makers to **track progress and adjust interventions over time**. Institutionalizing such coordination helps move from isolated pilot projects to a sustained, system-level approach.

## 3.2. FINANCIAL SECTOR REGULATORS AND FINANCIAL INSTITUTIONS: BRIDGING THE GENDER FINANCE GAP

**Access to finance** continues to pose a **critical challenge for women in STEM entrepreneurship**. Financial systems in the region largely operate through traditional collateral-based models that **do not accommodate the risk profile** or **asset structure** of innovation-driven ventures. As a result, women founders who often lack fixed assets or established credit histories face **systemic barriers** to obtaining formal financing. Interviews with ecosystem actors reveal that existing credit programs for women frequently target microenterprises or consumption loans, leaving high-potential, growth-oriented STEM ventures underserved. Even when initial support is available through small prototype or seed grants, **access to larger and more specialized funding remains limited**. This financing gap restricts business growth, technological advancement, and market expansion, forcing many women-led startups to **depend on informal or short-term funding sources**. These findings point to the need for targeted financial instruments and policies designed to bridge this financing gap to enable women-led STEM ventures to transition from early-stage innovation to sustainable growth. The potential pathways below identify practical measures that financial actors can adopt to make financial systems more inclusive and innovation-responsive.

### **Inclusive finance policies.**

- Central Banks and other financial sector regulators are crucial in promoting financial inclusion in the sector. Comprehensive **sex-disaggregated data** enable regulators to identify gender gaps in access to credit, monitor progress over time, and assess the impact of financial inclusion policies. Such mandates should apply across all financial service providers, including commercial banks, microfinance institutions, and fintech entities, **with standardized reporting formats** to ensure comparability and data quality. Central banks and supervisory authorities should also establish mechanisms for **periodic publication and analysis of these data** to promote transparency and accountability within the financial system.
- In parallel, regulators could introduce incentive frameworks that encourage financial institutions to **adopt gender action plans** aligned with national financial inclusion strategies. These plans should include concrete, time-bound performance targets within credit portfolios, explicitly linked to lending for women-owned and women-led businesses across diverse sectors, including high-value and innovation-driven industries. Supervisory agencies could **monitor compliance** through annual reporting requirements, while offering technical

assistance and recognition programs for institutions demonstrating measurable progress.

- Beyond banking supervision, public development banks should systematically **integrate gender criteria** into the design, allocation, and monitoring of their SME credit lines and guarantee schemes to ensure that financing instruments effectively reach women entrepreneurs. This integration should go beyond nominal gender targets to include **measurable indicators** such as the proportion of funds disbursed to women-owned or women-led enterprises, the sectoral distribution of beneficiaries, and performance outcomes. Applying **gender-responsive risk assessment methodologies** that account for non-traditional forms of collateral and business potential can help improve women's eligibility for financing. In addition, dedicated **credit windows and guarantee facilities** should be established to expand access for women-led businesses in high-value and emerging sectors such as technology, renewable energy, and advanced services. Complementary measures, including technical assistance, mentoring, and investment-readiness programs, are also essential to strengthen the pipeline of bankable women-led projects.

### Tailored Financial Products.

- Across the region, most of the available women-focused loan products remain concentrated in the microcredit segment, which are not designed to meet the capital requirements of startups requiring investment in R&D, specialized equipment, or digital infrastructure. To close this gap, financial systems should adopt **more sophisticated instruments** that reflect the financing needs of innovation-driven enterprises. Expanding **guarantee mechanisms, blended-finance structures, and co-investment funds** can help mitigate perceived risks and attract private capital to women-led ventures. For instance, guarantee schemes underwritten by public institutions or development banks can reduce collateral requirements, enabling women founders to access working capital, technology adoption loans, or innovation financing that would otherwise remain inaccessible.
- Incorporating **movable collateral frameworks** into lending products can further enhance access to finance for women entrepreneurs who may lack ownership of fixed assets such as land or property. Accepting machinery, equipment, inventory, intellectual property, or accounts receivable as eligible collateral would allow financial institutions to better align credit evaluation with the realities of women-led enterprises in technology and innovation sectors. Public development banks and regulators can play a crucial role by standardizing valuation

methodologies, improving collateral registries, and providing training to lenders on risk assessment for movable assets.

- **Blended-finance models** that combine concessional and commercial capital can create more favorable lending terms while ensuring financial sustainability. Integrating **flexible repayment schedules, longer tenors, and grace periods** is equally important to accommodate the irregular cash flows typical of early-stage ventures. Finally, building **stronger linkages** between accelerators, incubators, and financial institutions can help develop a visible pipeline of investment-ready women entrepreneurs. Such coordination ensures that women founders with scalable business models and proven technical capacity are connected to investors and able to progress from seed to growth-stage financing.

### Investment and venture capital ecosystems.

- Venture capital ecosystems in Central America and Ecuador remain highly concentrated in urban centers, dominated by male networks, and exhibit **limited representation of women** among fund managers, limited partners, and angel investors. This structural imbalance reinforces gender disparities in access to growth capital. Global evidence shows that female-founded startups receive significantly smaller and fewer venture capital investments than those founded by men (EIT, 2024; WEF, 2024). Supporting the **establishment of women-led and gender-lens investment** funds could help channel capital toward underrepresented founders while demonstrating the financial viability of inclusive investing. Public agencies could facilitate co-financing and risk-sharing arrangements with multilateral partners to attract private investors to gender-focused funds, while introducing targeted tax incentives or first-loss guarantees for investors who allocate capital to women-led or inclusive ventures.
- Building **regional angel investor networks** that intentionally recruit, train, and mentor women investors can diversify decision-making power and expand the pool of gender-sensitive capital. Such initiatives should be complemented by capacity-building programs for fund managers and accelerators on gender-responsive investment practices, including bias reduction in screening and due diligence processes. By embedding gender considerations throughout the venture financing value chain, from fund design to investment selection, the region can create a more equitable and dynamic innovation ecosystem that fully harnesses the potential of women-led enterprises.
- Existing global and regional initiatives provide insights into best practices and lessons learned that can be scaled. An example is **IFC's**

**She Wins**, which provides accelerator programs for women-led startups and trains venture funds in gender-lens investing, helping to address financing bias and expand access to capital for women in STEM. **WeXchange** connects women STEM entrepreneurs to investors through pitch competitions and mentorship, building investor pipelines and increasing visibility. Table 5, in the annex, provides further information on the impact and lessons learned from these initiatives.

### Capacity building and financial literacy.

- Women founders consistently highlight the need for **tailored investment-readiness support** that reflects the specific realities of STEM entrepreneurship. Current gaps include a limited understanding of IP valuation, weak capacity to develop financial models suited to R&D-intensive or technology-based business models, and insufficient preparation for engaging with investors. Addressing these challenges requires targeted interventions that build both technical and financial competencies. Financial institutions, regulators, and development partners can integrate specialized modules on IP valuation, technology commercialization, and venture financing into accelerator curricula or deliver them as pre-investment training programs.
- Furthermore, enhancing **women's financial literacy** through structured learning materials, mentorship, and one-on-one coaching can strengthen their ability to manage cash flow, understand risk-return dynamics, and engage effectively in investment negotiations. Improved financial capability not only increases founders' confidence in dealing with investors and lenders but also contributes to the development of stronger credit histories, thereby improving their overall bankability. Coordinated efforts among accelerators, financial intermediaries, and public agencies can ensure that these programs are widely accessible, particularly to women entrepreneurs outside major innovation hubs, fostering a more inclusive and resilient STEM entrepreneurship ecosystem.

### 3.3. PRIVATE SECTOR ENGAGING CORPORATION AND INVESTORS AS ECOSYSTEM BUILDERS

Large firms, investors, and business associations hold **considerable influence over market access, innovation networks, and the visibility of women entrepreneurs**. Their role extends beyond financing as they shape the very markets in which women-led STEM ventures operate. The private sector, therefore, represents a critical bridge between policy intent and tangible market opportunity. The following pathways outline how private-sector actors

can strengthen their contribution to a more inclusive innovation ecosystem by fostering equitable partnerships, supply chains, and investment practices.

### Corporate partnerships and supply chains.

- **Corporate procurement** is a powerful, often underutilized lever for advancing gender inclusion in innovation ecosystems. Integrating women-led technology ventures into corporate supplier networks and open-innovation programs can provide them with critical market-entry points, enabling products and services to be tested, refined, and commercialized under real market conditions. Such linkages not only create stable demand and long-term contracting opportunities but also expose women founders to industry standards, procurement processes, and quality assurance mechanisms that enhance their competitiveness. To capitalize on these opportunities, corporations can adopt **supplier diversity strategies** that establish measurable targets for engaging with women-owned and women-led businesses in technology and innovation value chains. Governments and development partners can further support these efforts through **incentive schemes, matchmaking platforms, and public-private partnerships** that connect women innovators with corporate buyers. Participation in open-innovation challenges and co-development projects can also provide mentorship, technical validation, and visibility, positioning women-led ventures as credible partners in corporate procurement ecosystems.

### Angel and venture-capital engagement.

- By supporting the **creation of women-led and gender-lens investment groups**, which are emerging in several countries<sup>40</sup>, private sector actors and business associations can contribute to diversifying investment decision-making and expanding access to capital for women founders. Such initiatives strengthen the presence of women in investment ecosystems and help address structural biases that limit funding for women-led ventures. Companies and business associations can further advance inclusion by **co-investing in innovation challenges and startup competitions** that prioritize women-led solutions to industry needs. Global examples such as Microsoft's Imagine Cup, which mobilizes corporate funding and mentorship for early-stage innovators, and Cartier's Women's Initiative, which provides financial awards and business coaching to women entrepreneurs worldwide, illustrate how large corporations can effectively promote entrepreneurship through

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<sup>40</sup> See, for instance, UN Women (2021) where emerging examples in European markets are discussed.

challenge-based and co-financing models (Cartier Women’s Initiative, 2025; Microsoft, 2025). These mechanisms provide women entrepreneurs with market validation, visibility, and early traction, while simultaneously reducing perceived investment risks and encouraging greater private sector engagement in inclusive innovation.

### Partnerships, accelerators, and innovation hubs.

- The private sector manages many of the region’s incubators and accelerators. When **entrepreneurship programs collaborate with universities, research institutions, and development partners**, they are particularly well-positioned to expand women’s participation in high-growth and innovation-driven sectors. Such collaborations can align training and mentorship activities with evolving industry demands, ensuring that women entrepreneurs gain both technical and managerial skills relevant to emerging markets. Programs that incorporate **business-to-business mentorship models**, pairing women founders with senior executives or managers from established firms, can also play a pivotal role in building confidence, facilitating strategic partnerships, and fostering technology transfer.
- Partnerships between the **private sector and educational institutions** further demonstrate the potential for long-term impact. Initiatives such as Microsoft’s DigiGirlz program, which exposes young women to technology careers and digital skills, illustrate how targeted interventions can strengthen the future pipeline of female innovators (IICA, 2024). Scaling similar initiatives across the region would help bridge the gap between education, entrepreneurship, and corporate ecosystems, enabling more women to transition from learning environments into technology-driven value chains. By fostering these cross-sector linkages, both public and private actors can contribute to a more inclusive and competitive innovation landscape.

## 3.4. ACADEMIA: CONNECTING LEARNING, RESEARCH, AND ENTREPRENEURSHIP

Universities, polytechnics, and technical institutes are at the frontline of **building the future pipeline of women innovators**. They not only prepare students with scientific and technical skills but also shape mindsets about who can lead in technology and entrepreneurship. Across Central America and Ecuador, higher-education institutions have taken steps to integrate entrepreneurship and innovation into STEM training, and strengthening these connections can ensure that women’s scientific talent feeds directly into national innovation systems. The pathways below illustrate how academic

institutions can strengthen their role in connecting education, research, and commercialization to create more robust bridges between women’s scientific training and entrepreneurial opportunities.

### Curriculum reform and exposure.

- Several universities in the region have begun integrating innovation and entrepreneurship components into STEM programs<sup>41</sup>, reflecting growing recognition that technical competence alone is insufficient to ensure employability or entrepreneurial readiness. However, as previously discussed, women’s participation in STEM fields remains uneven, particularly in engineering, information technology, and applied sciences. **Expanding experiential learning opportunities**, such as hackathons, applied research projects, and university-based incubators, can help women students gain early exposure to innovation processes, problem-solving, and business development.
- Embedding **entrepreneurship within the core STEM curriculum** is equally important for cultivating an entrepreneurial mindset and demonstrating the commercial and societal value of scientific research. **Faculty-led mentorship, industry collaboration, and alumni engagement** can further reinforce these pathways by providing women students with role models, networks, and guidance to translate ideas into viable ventures. Strengthening these academic-industry linkages will not only enhance women’s readiness to enter innovation-driven sectors but also ensure a more inclusive and sustainable talent pipeline for the region’s growing technology ecosystem.
- University and school-based programs such as **WISE Latin America** (training and mentoring for women in STEM), **Chicas en Tecnología** (coding and entrepreneurship clubs for girls), and **Girl Powered** (robotics and coding for schoolgirls) are examples of how that embedding hands-on STEM learning, mentorship, and real-world problem solving into education can significantly boost girls’ and women’s confidence and participation in innovation. More details on program features, outcomes, and lessons learned are available in Table 5 in the annex.

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<sup>41</sup> Examples include the WISE Latin America Program at Universidad de Costa Rica (UCR) and Universidad San Francisco de Quito (USFQ) in Ecuador. Other examples include the Programa Mujeres en Ciencia e Ingeniería at Universidad Don Bosco (UDB) in El Salvador, Guatemala’s Universidad del Valle de Guatemala (UVG) running Mujeres en Ingeniería workshops that include business model creation, and UNITEC in Honduras leading the Cipotas in Tech mentorship program.

## Inclusive learning environments.

- Academic institutions can improve retention and success rates for women in STEM by **addressing practical and social barriers that discourage continued participation in technical fields**. Evidence across the five countries underscored that women often struggle with rigid class schedules, lack of available childcare services, and safety concerns during late classes or travel, especially outside major cities. Creating safer, more flexible, and supportive learning environments, through adjusted timetables, accessible campus transportation, well-lit facilities, and dedicated study spaces for women, can increase persistence in higher education in general and consequently in STEM courses as well. Partnerships between **universities and NGOs** that provide mentoring, peer support, and leadership training for female students are also promising models. When combined with early career guidance, such initiatives have the potential to help bridge the gap between academic training and participation in high-value sectors.

## Research commercialization and knowledge transfer.

- The path from laboratory to market remains underdeveloped across most universities in the region. Lengthy and costly intellectual property procedures, limited awareness of patenting processes, and unclear ownership rules for research outputs discourage female researchers from pursuing commercialization. **Creating/strengthening technology-transfer offices and clarifying IP regulations** can make it easier for scientists to spin out ventures, license technologies, or collaborate with industry partners. Universities could also establish **seed-funding programs** or **innovation vouchers** to support prototypes developed by women researchers, linking them to national innovation funds or private investors. These mechanisms would not only promote research-to-market transitions but also raise the visibility of female scientists as entrepreneurs, ultimately creating role models for future generations.

## Collaboration with the private sector and government.

- Academic institutions are natural conveners between public programs and industry. Establishing **structured partnerships with corporations and government agencies** can align research agendas with market demand while opening new opportunities for women-led innovation. For example, partnerships with ICT companies through programs like Microsoft's DigiGirlz, as well as with regional initiatives such as WE3A Startup Weekends, demonstrate how collaboration can integrate training, mentoring, and exposure to high-growth sectors. Scaling these

alliances could amplify their impact and help create a steady pipeline of technically skilled, entrepreneurially minded women graduates.

### 3.5. CIVIL SOCIETY AND NGOS: ADVOCACY, VISIBILITY, AND COMMUNITY SUPPORT

Civil-society organizations and NGOs serve as the **connective tissue between policy design and community realities**, ensuring that national commitments to inclusion translate into tangible support for women on the ground. These organizations play an essential role in advocacy, capacity building, and peer support, helping women overcome social and geographic barriers that limit access to innovation ecosystems. The following pathways outline how civil-society organizations can amplify women's voices, expand access to networks and resources, and help localize inclusion efforts across diverse communities.

#### Advocacy and awareness.

- Women's business associations, non-profit organizations, and community networks have played an increasingly pivotal role in raising the visibility of women entrepreneurs in STEM and advocating for gender accountability within public policies and programs. Their active participation has contributed to shaping more inclusive policy agendas, yet their potential remains underutilized in formal decision-making processes. Strengthening the **institutional capacity and policy engagement** of these organizations is therefore essential to ensure that gender perspectives are systematically integrated into entrepreneurship, innovation, and digital-skills initiatives across the region.
- To achieve this, governments and development partners can establish **structured consultation mechanisms** that include women's associations and networks in policy design, monitoring, and evaluation. Formal representation on advisory boards, innovation councils, and funding committees would provide these organizations with a consistent platform to advocate for gender-responsive measures and to ensure that programs align with the needs and realities of women entrepreneurs. Providing **targeted funding and technical assistance** can also enhance their ability to collect gender-disaggregated data, conduct policy research, and engage in evidence-based advocacy.
- Furthermore, partnerships between **women's business networks and universities, technology parks, or incubators** can expand mentorship opportunities and create knowledge exchange platforms that connect women entrepreneurs with STEM professionals, investors, and industry

leaders. These collaborations can strengthen innovation ecosystems by ensuring that women’s voices inform both the design and implementation of entrepreneurship and digital transformation strategies. By institutionalizing their role within policy and programmatic frameworks, women’s business associations and community networks can serve as critical intermediaries—bridging grassroots entrepreneurship with national innovation systems and helping to ensure that inclusion is embedded at every level of economic development.

- NGO-led initiatives such as **Technovation Girls** (global tech-entrepreneurship competition) and **Chicas en Tecnología** (regional coding and entrepreneurship programs) demonstrate the power of girl-centered, flexible, and community-driven approaches to expand access, build confidence, and foster peer networks in STEM. Table 5, in the annex, provides a summary of program models and outcomes.

### Peer networks and mentoring.

- Programs led by chambers of commerce, women’s associations, and international NGOs demonstrate the **power of peer learning and mentorship**<sup>42</sup>. By creating safe and inclusive spaces for knowledge exchange, women’s business associations, non-profits, and community networks play a vital role in strengthening women’s self-confidence, business capabilities, and persistence in entrepreneurship. These platforms foster peer learning and mutual support, allowing women to share experiences, navigate challenges collectively, and build the social capital essential for business growth. Access to relatable role models and mentors, particularly women with expertise in STEM and innovation-intensive sectors, has proven to have a strong motivational effect. Exposure to such mentors not only enhances technical and managerial learning but also reinforces women’s belief in their capacity to succeed in traditionally male-dominated fields.

### Grass-roots training and inclusion.

- NGOs working with rural, Indigenous, and low-income women have expanded access to digital and technical training in communities often

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<sup>42</sup> Examples include the “Programa Mujer Empresaria” offered by the Costa Rican Chamber of Commerce, the Cámara de Mujeres Empresarias y Emprendedoras de Guatemala (CAMEG) acting as an advocacy and training hub, Voces Vitales delivering mentorship and leadership training across the region, and the Grameen Foundation’s “Conectadas” initiative expanding financial inclusion and business training for women in Guatemala.

overlooked<sup>43</sup>. Initiatives focusing on agri-innovation, renewable energy, and digital literacy help women apply STEM-related skills to productive activities, **bridging traditional livelihoods with emerging market opportunities**. These interventions not only strengthen inclusion but also create localized examples of women-led innovation that inspire others to follow.

### 3.6. SYNERGIES AND COMPLEMENTARITIES ACROSS ACTORS

Across Central America and Ecuador, the challenge is often **not the absence of initiatives but their lack of connection**. Government strategies, financial-inclusion programs, incubators, academic initiatives, well-established key actors<sup>44</sup> and advocacy efforts already exist and often share similar goals, but they tend to **operate independently**, with a lack of coordination and information exchange. This fragmentation **limits efficiency and weakens the cumulative impact** of relevant programs. Stakeholders repeatedly emphasized that a collaborative ecosystem approach, one that links institutions, harmonizes resources, and shares accountability, would **unlock far greater results**.

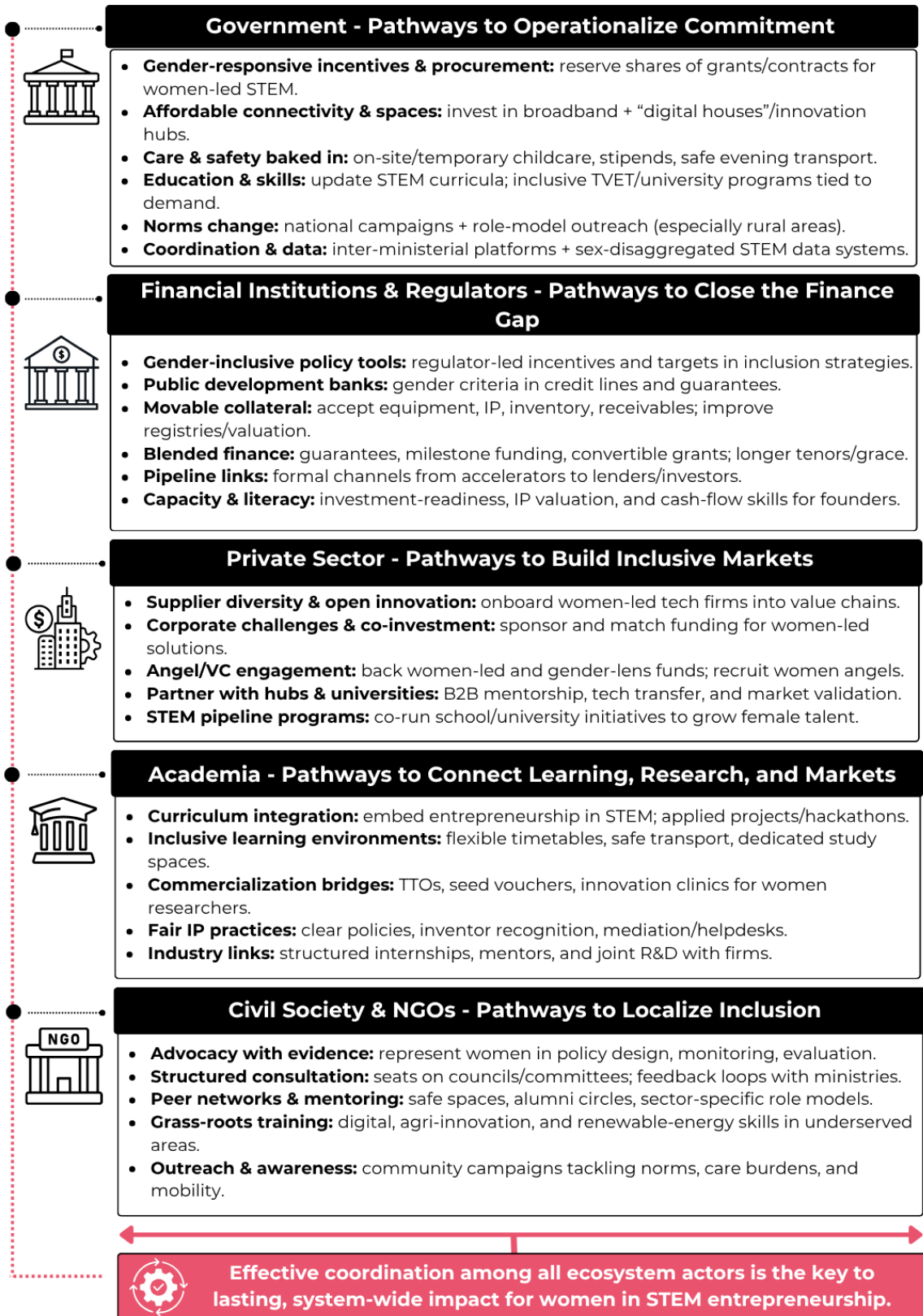
Building a truly inclusive innovation ecosystem requires **stronger coordination among the diverse actors** engaged in education, finance, and entrepreneurship. Establishing joint platforms that align these initiatives around shared objectives can help prevent duplication and ensure that women innovators benefit from the full range of available resources. Multi-stakeholder mechanisms such as **public-private working groups, national gender and innovation councils, or formal partnerships** linking universities, financial institutions, and development programs can serve as effective vehicles for coordination. These platforms provide the strategic alignment necessary to transform fragmented efforts into a coherent system that supports women's participation throughout the innovation value chain.

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<sup>43</sup> Examples include the UNESCO-Malala Centers in Guatemala providing Indigenous young women with job skills, the Grameen Foundation's "Conectadas" initiative leveraging mobile technology for business training in Guatemala, Warmi STEM promoting STEM careers among Indigenous girls in Ecuador, and the EU/Christian Aid-backed "Breaking the Barriers" training that taught 120 rural women in Honduras to install solar panels and launch solar businesses.

<sup>44</sup> A mapping exercise of the key ecosystem actors across Central America and Ecuador is presented in Table 6 of the annex.

Figure 9: Pathways to Progress: Stakeholder Groups



A critical foundation for such coordination lies in the **development of shared data and learning systems**. Institutions across the region often collect gender-related data in isolation, if at all, which makes it difficult to evaluate impact or identify persistent gaps. Creating integrated data systems to track women's participation, performance, and outcomes across programs would enable evidence-based policymaking and resource allocation. **Transparent and comparable metrics** are essential to translate gender equality commitments into measurable progress, helping ensure accountability among both public and private actors.

Equally important are **co-funding and scaling models** that leverage the comparative strengths of governments, private firms, and development partners. Pooling resources through co-financing arrangements can expand proven entrepreneurship programs for women in STEM beyond their initial pilots and into sustainable national or regional initiatives. These models encourage joint ownership of results, foster collaboration across institutions, and reduce dependence on short-term donor funding cycles, thereby promoting long-term stability and impact.

**Regional knowledge exchange** also plays a vital role in strengthening women's participation in innovation. Ecosystem actors across Central America and Ecuador face similar structural constraints, making peer learning and cross-border cooperation both relevant and efficient. Facilitating regional dialogue through **networks of innovation hubs, accelerators, and women-in-tech associations** can accelerate the transfer of good practices, foster collective problem-solving, and promote regional integration of the STEM entrepreneurship landscape.

Development partners and multilateral institutions are uniquely positioned to act as **connectors and conveners within this ecosystem**. Their regional presence allows them to bridge national efforts, align stakeholders around common standards, and disseminate lessons from successful pilot programs. Through blended finance mechanisms, technical assistance, and policy dialogue, they can support governments and financial institutions in testing innovative financing tools and measuring their impact consistently. Their cross-sectoral reach makes them essential catalysts for achieving regional alignment, coherence, and sustainability.

Among the most impactful examples of development partner engagement in the region are the **WE3A - Supporting Women Entrepreneurs in STEM Areas** project and the **WeXchange** platform. Both initiatives illustrate how multilateral institutions can catalyze ecosystem development, bridge gaps in access, and foster regional knowledge exchange:

- The **WE3A - Supporting Women Entrepreneurs in STEM Areas** project, coordinated by IDB Lab with support from We-Fi and implemented by Techstars, was designed to **increase women's participation and visibility in STEM entrepreneurship** across Central America and Ecuador. The initiative employed a hybrid delivery model, **combining in-person entrepreneurship activation events** with **virtual acceleration cohorts**. The program provided structured activation and acceleration support, including masterclasses, mentoring, and pitch-preparation training, and was complemented by a robust diagnostic component that mapped ecosystem actors and identified structural barriers to women's participation. Notably, WE3A's experience highlighted the importance of adapting program design to the maturity of local ecosystems, as well as the need for sustained post-program support to maintain momentum and foster long-term business growth. The project's regional scope and emphasis on stakeholder coordination demonstrated how development partners can strengthen connections among entrepreneurs, mentors, investors, and support organizations, generating actionable insights for policy and practice.
- **WeXchange**, similarly established by IDB Lab with support from We-Fi, has evolved into the largest regional platform dedicated to connecting women entrepreneurs in STEM with mentors, investors, and peers. Operating through **entrepreneurship competitions, forums, and networking events**, WeXchange pairs visibility campaigns with investor engagement, helping build a stronger pipeline of women-led STEM ventures while fostering a supportive community that extends beyond individual programs. The initiative's alumnae network offers ongoing mentoring and investor introductions, which has proven critical in supporting women founders as they scale their ventures. WeXchange's regional reach and sustained engagement exemplify how development partners can drive systemic change by facilitating access to capital, expanding networks, and promoting best practices across borders.

An **inclusive STEM entrepreneurship ecosystem** across Central America and Ecuador **can be woven from the threads that already exist**. Each actor, government, financial institutions, private companies, academia, and civil society, holds a crucial piece of the puzzle. The task is to connect those pieces through coordination, shared accountability, and sustained investment. Multilateral organizations and development partners are uniquely positioned to facilitate this connection at the regional level, serving as neutral conveners, co-funders, and knowledge brokers. By linking national initiatives, harmonizing data standards, and promoting collaborative learning, they help ensure that inclusion efforts extend beyond country borders and feed into a stronger regional ecosystem.



# 4

## **THE WAY FORWARD: RECOMMENDATIONS FOR STRONGER STEM ECOSYSTEMS IN CENTRAL AMERICA**

# BRIDGING THE GAPS: LESSONS AND PATHWAYS FOR WOMEN IN STEM ENTREPRENEURSHIP

A summary of key ecosystem gaps, lessons learned, and strategic pathways to advance women's participation in STEM entrepreneurship across Central America and Ecuador.

## EXISTING GAPS

## LESSONS LEARNED

## RECOMMENDATION

## STAKEHOLDER GROUP

1

- No **consistent, sex-disaggregated** STEM entrepreneurship data.
- **Informality** largely invisible in official statistics.
- Policymakers/investors lack **visibility on pipeline, survival, scaling**.



- Support programs cannot **tailor interventions** to firm **maturity, sector, or region** without data.
- The absence of shared metrics **limits coordination and accountability** across ecosystem actors.



- Build a **regional data system** with harmonized STEM-gender indicators.
- Launch a **public dashboard** and **data portal** to track progress and guide policy.



- Development Partners
- National Statistical Offices
- Ministries of Economy / Science

2

- Social norms portray **STEM as masculine**.
- Women face **care burdens, gender-based violence** and **unsafe mobility**.
- Low visibility of **female role models** in STEM.



- **Urban bias** and **inflexible schedules** exclude many women from support-programs.
- **Flexible** formats improve participation.
- **Family** and **community engagement** shifts norms.



- Run **awareness campaigns** showcasing women innovators.
- Ensure **childcare, flexible hours, and safe venues**.
- Promote **role models** and **mentorship**



- Governments
- Local Authorities
- NGOs
- Private Sector

3

- Financing models rely on **collateral** and **short repayment terms**.
- Women-led STEM startups **lack tangible assets** and are **seen as high-risk**.
- Credit lines for women remain **focused on microenterprises**, not innovation.



- Lack of **patient capital** prevents women founders from **scaling R&D-intensive ventures**.
- **Early-stage grants** and **post-prototyping financing** are critical for continuity.
- **Movable collateral** and **guarantee mechanisms** improve credit access.



- Create **blended-finance facilities** and **credit guarantees** tailored to innovation.
- Adopt **movable collateral frameworks** recognizing IP, machinery, or receivables as security.
- Provide **training for lenders** on assessing risk in women-led STEM businesses.



- Development Banks
- Financial Regulators
- Private Investors

4

- Women founders receive **smaller investments** and face **stricter scrutiny**, despite better repayment scores.
- Investor networks are **male-dominated** and concentrated in **urban hubs**.



- **Investor bias** skews decisions and limits access to capital.
- **Gender-lens metrics** improve transparency.
- **Visibility initiatives** and **investor training** enhance legitimacy of women-led ventures.



- Embed **gender-lens standards** in due diligence and fund eligibility criteria.
- Offer **bias-awareness training** to investors.
- Build **women investor networks** to diversify decision-making.



- Development Partners
- Venture Funds
- Angel Networks

# BRIDGING THE GAPS: LESSONS AND PATHWAYS FOR WOMEN IN STEM ENTREPRENEURSHIP

A summary of key ecosystem gaps, lessons learned, and strategic pathways to advance women's participation in STEM entrepreneurship across Central America and Ecuador.

## EXISTING GAPS

## LESSONS LEARNED

## RECOMMENDATION

## STAKEHOLDER GROUP

5

- **Fragmented** and overlapping initiatives.
- **Weak coordination** between public institutions, academia, and the private sector.
- Lack of **shared indicators** or **accountability mechanisms**.



- **Coordination platforms** improve information exchange and resource alignment.
- **Shared gender targets** strengthen accountability and learning.
- Development partners act effectively as conveners.



- Establish **coordination platforms**.
- Define **joint targets** and **shared indicators**.
- Publish **regular progress reports** to enhance transparency and peer learning.



- Governments
- Development Partners
- Private Sector

6

- Many programs focus **only on soft skills**, overlooking systemic barriers.
- Few initiatives include **follow-up or investor connections** after training.
- Limited **attention to IP, finance, and commercialization** skills.



- **Comprehensive, hybrid** programs like WE3A strengthen **confidence** and **networks**.
- **Continuous follow-up** and **alumni support** improve long-term sustainability.
- Addressing **gender bias and structural barriers** leads to more equitable outcomes.



- Integrate **bias-awareness** and **structural inequality** modules into training.
- Embed **post-program support, alumni networks, and investor linkages**.
- Include **technical modules** on **IP valuation, finance, and commercialization**.



- Accelerators
- Incubators
- NGOs
- Development Partners

7

- Few **pathways** link **academic research** to **entrepreneurship**.
- Women's participation in STEM remains **uneven**.
- IP systems are **slow, unclear, and costly**; disputes discourage commercialization.



- Embedding **entrepreneurship in STEM curricula** builds early exposure.
- **Clear IP rules** encourage women to commercialize.
- **University-industry partnerships** expand opportunities for women innovators.



- Integrate **entrepreneurship tracks** into programs.
- Create **IP help-desks** and **transparent policies** to protect women researchers.
- **Strengthen links** between universities, accelerators, and industry partners.



- Universities
- Innovation Agencies
- Development Partners

8

- Women are **underrepresented** in **high-growth green and digital sectors**.
- Limited access to **climate and innovation finance**.
- Gender inclusion is **rarely integrated into sustainability policies**.



- Women-led ventures in **renewable energy and agri-tech** show **high potential**.
- **Technical and financial support** fuels participation.
- Integrating **gender into green economy strategies** multiplies impact.



- Direct **green finance** to women-led STEM ventures.
- Embed **gender-lens criteria** into sustainability funds and procurement.
- Support **training and market linkages** for women in green, bio, and digital sectors.



- Governments
- Development Partners
- Private Investors

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# ANNEX 1: INSIGHTS FROM GLOBAL AND REGIONAL INITIATIVES

Table 5: Key STEM Entrepreneurship & Education Initiatives for Women and Girls

Program / Initiative	Country / Region	Implementing Agency / Partners	Main Features & Focus Areas	Notable Achievements / Results	Key Lessons Learned / Success Factors	Pitfalls / Challenges Identified
<b>WE3A – Supporting Women Entrepreneurs in STEM Areas</b>	Central America & Ecuador	We-Fi, IDB Lab, Techstars,	Regional project promoting women-led STEM startups through <b>accelerators, mentorship, and ecosystem assessments.</b>	Increased <b>visibility</b> of women STEM founders; tested <b>hybrid acceleration models</b> improving access for rural women.	<b>Holistic</b> ecosystem approach combining mentorship, digital tools, and community networks; hybrid model effective for inclusion.	Gaps in <b>follow-up financing</b> and pipeline <b>continuity</b> between ideation and scaling stages.
<b>WeXchange (IDB Lab)</b>	Latin America & Caribbean (Regional)	IDB Lab, We-Fi, IDB Invest	Regional platform <b>connecting women STEM entrepreneurs to investors</b> via pitch competitions, mentorship, and forums.	Engaged 1,000+ women entrepreneurs; launched Central America chapter; created <b>investor pipelines</b> and <b>visibility.</b>	<b>Networking</b> and <b>mentorship</b> critical; <b>investor engagement</b> expands women's access to finance.	Risk of <b>concentration</b> in major hubs; sustainability depends on continuous donor and investor engagement.
<b>WISE (Women in STEM Entrepreneurship) Latin America</b>	Latin America (Argentina, Colombia, Ecuador, Peru, etc.)	IDB Lab, universities, regional networks	Combines university-based <b>training, mentorship, and innovation</b> project incubation for women in STEM.	2,600+ graduates; 300+ mentored projects; national innovation contests reaching 858 female entrepreneurs.	Academia–private sector <b>partnerships</b> strengthen talent pipelines; strong <b>mentorship</b> and applied learning improve results.	Limited <b>scaling</b> and <b>continuity</b> ; most activities depend on external funding cycles.
<b>The S Factory (Start-Up Chile)</b>	Chile (Global applicants)	CORFO (Gov. of Chile)	<b>Pre-acceleration</b> program for early-stage women-led startups offering <b>equity-free seed funding</b> and <b>mentorship.</b>	<b>30% higher survival rate</b> among female-founded startups; several have scaled globally.	<b>Early-stage funding</b> plus <b>mentorship</b> builds resilience and long-term growth; <b>equity-free grants</b> reduce entry barriers.	<b>Short</b> program duration; limited <b>post-acceleration linkage</b> to investors.

<b>She Loves Tech</b>	Global (including Latin America)	She Loves Tech Foundation, partners, investors	World's largest platform for women-led tech startups; annual <b>global pitch competition</b> and <b>bootcamps</b> .	13,000+ startups accelerated; <b>&gt;\$500M raised</b> by alumni; 70+ countries involved.	<b>Visibility, investor matchmaking</b> , and <b>global alumni networks</b> drive funding access and role-model visibility.	Risk of focusing more on <b>competition</b> and <b>visibility</b> than long-term capacity or local follow-up.
<b>IFC – She Wins Initiatives</b>	Various Regions (Africa, Arabia)	International Finance Corporation (IFC)	<b>Accelerators</b> and <b>venture capital training</b> for women-led startups and funds adopting gender-lens investing.	Strengthened <b>gender-lens investing</b> practices in venture funds; <b>improved investor awareness</b> of gender bias.	Tackling <b>financing bias</b> through investor training, not just founder coaching, is crucial.	Requires <b>sustained investor engagement</b> ; venture pipeline for women still <b>narrow</b> .
<b>Girl Powered</b>	Colombia (Antioquia)	Fundación Global Arte, Ciencia y Tecnología + Girl Powered movement	100-hour girls-only robotics/coding; social innovation; personal development; robotics tournaments; annual <b>Girl Powered Fest</b> with role models.	45+ schools; ~315 girls; <b>higher motivation</b> to stay in school; increased <b>confidence</b> ; <b>Girl stereotypes challenged</b> via competition exposure.	<b>Girls-only spaces</b> boost participation where mixed clubs were male-dominated; <b>engaging families early</b> builds support; local <b>problem-solving projects</b> raise relevance.	Limited rural internet access; mitigated with offline kits and low-connectivity digital platform; initial parental resistance due to stereotypes.
<b>Chicas en Tecnología (CET)</b>	LAC	CET (non-profit) + schools, provincial education ministries, tech firms	<b>CET Clubs</b> (14 sessions, school / community); app prototyping with social impact; <b>PUMM</b> hackathon camps; strong alumnae network (workshops, internships, conference).	2017–2019: 80+ clubs in 14 provinces; ~1,500 girls; 92 app prototypes; PUMM: 190 girls, 64 prototypes; 1,900+ total participants; <b>75%</b> report <b>confidence gains</b> influencing STEM study choices.	Partnerships with schools / ministries <b>enable scale</b> ; <b>industry mentors</b> enrich discussions; e-learning platform ensures <b>continuity</b> ; systematic <b>pre/post data guides improvements</b> .	Reliance on external funding for scale; ensuring long-term tracking of education / career outcomes.
<b>Technovation Girls</b>	Global (strong in LAC, Africa, Asia)	Technovation (non-profit) + global mentors/chapters	Annual girls' tech-entrepreneurship program: teams build apps/AI solutions to local SDG problems; ~100+ hours curriculum; mentor-led, competition format.	370,000+ youth reached in 100+ countries; <b>76%</b> alumnae pursue STEM degrees; <b>60%</b> work in STEM; multiple LAC teams win global awards.	<b>Real-world problem solving</b> + entrepreneurship motivates participation; <b>structured yet flexible model</b> scales via local ambassadors; <b>mentorship</b> builds skills and self-efficacy.	Ensuring equitable access to devices / connectivity; sustaining post-program pathways from prototypes to further study or ventures.

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**Vigyan Jyoti**

India  
(nationwide  
rollout)

Dept. of Science & Technology (Gov. of India) + IITs/national labs  
Targeted support for high-school girls (Class 9–12): science camps, industry visits, exam coaching, mentorship by women scientists; parental workshops.

Rolled out in ~200+ districts (toward 550 target); 100+ girls per site annually; early signs of higher applications to engineering colleges.

**Early intervention** plus **mentorship and parental engagement** shifts mindsets; state / central coordination enables **large-scale reach.**

Need for more local women mentors; ensuring support beyond school into university; monitoring final entry into STEM careers.

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## ANNEX 2: KEY ECOSYSTEM ACTORS

Table 6: Key Ecosystem Actors in Central America and Ecuador

Actor	Category	Brief Description / Role
<b>Multiple Countries (Regional or Global)</b>		
<b>Women Entrepreneurs Finance Initiative (We-Fi)</b>	Multilateral	A global program (co-led by the IDB, World Bank, IFC, AfDB and CDB) that provides funding, technical assistance, and ecosystem support to women entrepreneurs.
<b>Inter-American Development Bank (IDB)</b>	Multilateral	The IDB is a key regional multilateral institution that works at the intersection of public policy, finance, and capacity building. It supports women entrepreneurs via investment, technical assistance, and ecosystem development. The IDB, through its main body and other agencies (IDB Lab and IDB Invest) implements programs to improve access to finance, markets, skills, and networks for women-led businesses in sectors with STEM/innovation linkages. It is a key implementing partner of We-Fi. Examples of programs implemented relevant to Women STEMpreneurship include: WE3A, WeXchange, WISE Latin America, as well as STEM-specific funding windows and flagship forums and events (i.e., IDB Lab Forum).
<b>International Finance Cooperation (IFC)</b>	Multilateral	IFC is a major player in financing private sector development and investing in women-led enterprises. In LAC, it provides both investment and advisory services aimed at closing gender gaps in business, improving women's access to finance and supporting women-owned and women-led SMEs. IFC also works on "gender bonds," gender-oriented credit lines, and programs to integrate women into value chains.
<b>GIZ (Germany's development cooperation agency)</b>	Multilateral	GIZ supports technical cooperation, capacity building, institutional strengthening, and inclusive development programs. It is active in projects combining women entrepreneurship, digital inclusion, green / sustainable business, and gender-sensitive policy support.
<b>SDC (Swiss Agency for Development and Cooperation)</b>	Multilateral	The Swiss development agency has supported programs in Latin America to promote social entrepreneurship, and it also funds private sector engagement tools (e.g. via SCBF—Swiss Capacity Building Facility) aimed at improving financial inclusion for low-income groups, with a target share of women beneficiaries
<b>European Union</b>	Multilateral	Under its Global Gateway strategy, the EU promotes women's economic empowerment, including access to finance, digital inclusion, and business innovation support for female entrepreneurs in emerging economies
<b>UN Women</b>	Multilateral	Works on gender equality across multiple domains, including promoting women's participation in STEM fields, analyzing structural barriers, and supporting policy dialogues and programs targeting women in science and technology. A country-specific example of UN Women's interventions is the "Tech-Camp" in El Salvador, providing women with programming skills,
<b>International Trade Centre (ITC)</b>	Multilateral	Through its SheTrades initiative, ITC supports women entrepreneurs to access markets, trade networks, training, and digital tools, often in partnership with regional institutions.
<b>Voces Vitales</b>	NGO / Non-profit	A global non-profit organization focused on women's leadership, economic empowerment, political participation, and human rights. Through national chapters (e.g. Voces Vitales Costa Rica, El Salvador, Honduras) it delivers mentorship, capacity building, advocacy, and programs to empower women leaders and entrepreneurs.
<b>Fondo Centroamericano de Mujeres (FCAM)</b>	NGO / Non-profit	A Central American feminist fund that supports grassroots women's organizations, including those with economic empowerment, social justice, and women's rights agendas.
<b>ProMujer</b>	NGO / Non-profit	A social enterprise that supports women through integrated services: financial inclusion, health, training, and entrepreneurship. It works across several Latin American countries.
<b>Kirchner Fellowship</b>	Fellowship	The Kirchner Fellowship is a program that trains new impact investors in underserved regions (e.g. launched in Mexico) to allocate capital to early-stage companies.
<b>Grameen Foundation</b>	Foundation	Works to empower women entrepreneurs via mobile financial services, business training, and digital inclusion. It launched "Conectadas" in Guatemala, and has expanded into several Central American countries

<b>Laboratoria</b>	Academia / Education & Research	Delivers coding / tech bootcamps for women, building women's capacity in software development, UX, and related digital roles. It plays a significant role in bridging the gender gap in tech across the region.
<b>British Council</b>	Academia / Education & Research	In the domain of women and STEM, the British Council has supported scholarships, collaborative programs, and gender-STEM policy dialogues across LAC.
<b>Techstars</b>	Incubators / Accelerators / Hubs	A well-known global accelerator and venture capital firm. It runs accelerator programs in many countries, provides early-stage funding, mentorship, and network access.
<b>VC Lab of Founder Institute</b>	Incubators / Accelerators / Hubs	A global venture capital accelerator program under the Founder Institute umbrella, helping emerging fund managers raise capital, structure funds, and launch VC operations
<b>Echo Enterprises Fund</b>	Finance & Capital	An impact investing fund that supports nature-based, community, and sustainable enterprises across Latin America, especially Mesoamerica, Amazon, and Andean zone. It emphasizes gender-inclusive and women-led businesses.
<b>Pomona Impact</b>	Finance & Capital	An investment / social enterprise fund that invests in growth-stage social enterprises across Central America, Mexico, Colombia, and Ecuador.
<b>Family Offices</b>	Finance & Capital	Family offices were repeatedly cited in KIIs as having significant potential to catalyze entrepreneurial ecosystems by providing risk capital and long-term investment. However, they often lack structured mechanisms for engaging with local startups and tend to invest abroad rather than in local ventures, limiting their contribution to women-led and STEM entrepreneurship.
<b>Large Technology Companies</b>	Private Sector	KIIs highlighted that large multinational tech companies (e.g., Google, Microsoft, Meta, Samsung, Salesforce, Intel, IBM, Amazon, Uber) play a pivotal role in shaping entrepreneurial and STEM ecosystems through training programs, digital infrastructure, mentorship, cloud and software credits, and corporate innovation partnerships.
<b>COSTA RICA</b>		
<b>Impact Hub San José</b>	Incubators / Accelerators / Hubs	A local node of the global Impact Hub network that provides coworking space, incubation programming, events, and network support for social-impact and innovation-oriented entrepreneurs in San José. They have a program tailored specifically at women entrepreneurs in STEM called "Constelar".
<b>ParqueTec</b>	Incubators / Accelerators / Hubs	One of Costa Rica's leading business incubators and innovation parks. It provides incubation, acceleration, mentoring, and access to networks for startups in technology, services, and high-growth sectors.
<b>Yo Emprendedor Costa Rica</b>	NGO / Non-profit	A nonprofit / social enterprise promoting entrepreneurship through training, mentorship, and ecosystem-building; supports projects in STEM, inclusive entrepreneurship, and connects entrepreneurs with networks. Operates in Costa Rica and broader Central America.
<b>Fundación Omar Dengo</b>	NGO / Non-profit	A long-standing educational foundation that implements projects in educational innovation, digital inclusion, learning technologies and supports development of entrepreneurial learning from an early age.
<b>Junior Achievement</b>	NGO / Non-profit	NGO focused on youth development, entrepreneurship education, financial literacy, and employability programs in schools.
<b>Ministerio de Ciencia, Innovación, Tecnología y Telecomunicaciones (MICITT)</b>	Public Sector	Leads national science, technology, innovation, and telecom policy; co-leads gender-responsive STEM policy (PICTTI).
<b>Ministerio de Economía, Industria y Comercio (MEIC)</b>	Public Sector	Drives entrepreneurship policy (PNE 2030) and new strategy Semillas de Empresariedad; partners with INAMU on Programa Mujeres Empresarias and aligns public instruments for MSME growth.
<b>Ministerio de Educación Pública (MEP)</b>	Public Sector	The national ministry responsible for government-run primary, secondary, and diversified education; also designs curricula, implements educational policy, and plays a role in educational-entrepreneurial linkages. Integrates National STEAM Education Strategy and entrepreneurship methodologies into curricula; reinforces STEM/entrepreneurship pipelines from school level.

<b>INAMU (Instituto Nacional de la Mujer)</b>	Public Sector	Government agency mandated to promote gender equality, protect women's rights, and coordinate/implement public policy around women's empowerment (e.g., FOMUJER financing instrument; support to women-led MSMEs with MEIC).
<b>AED (Alianza Empresarial para el Desarrollo)</b>	Association / Chamber of Commerce	A non-profit business alliance that advocates for sustainable business practices, promotes integration of sustainability into corporate strategy, and pushes for responsible private-sector development. Noted for focusing in supporting women-led SMEs through its "Fondo Mujeres Empresarias".
<b>Cámara de Comercio de Costa Rica</b>	Association / Chamber of Commerce	The national Chamber of Commerce, which represents the private sector in trade and business advocacy, supports regulatory dialogue, networking, and business support services. Has a women-focused initiative: "Programa Mujer Empresaria".
<b>Cámara de Exportadores</b>	Association / Chamber of Commerce	The Costa Rican Chamber of Exporters (CADEXCO) is a nonprofit trade association that groups firms producing goods & services for export, works on export promotion, market access, advocacy and trade facilitation. It promotes an yearly initiative for women exporters, called "Foro Mujer".
<b>Promotora Costarricense de Investigación e Innovación</b>	Association / Chamber of Commerce	A Costa Rican organization focused on promoting research, development, and innovation through projects, alliances, and applied science. It aims to strengthen links between academia, private sector, and government.
<b>Promotora de Comercio Exterior (PROCOMER)</b>	Association / Chamber of Commerce	Costa Rica's export and investment promotion agency. It supports export development, attracts foreign direct investment, administers export regimes, and operates the Ventanilla Única de Inversión (VUI). Promotes a gender focus on gender equality.
<b>Universidad de Costa Rica (UCR)</b>	Academia / Education & Research	The largest public university in Costa Rica, with a strong tradition in research and innovation. Through its Directorate for Promotion of Innovation and Linkages for Development (DIPROVID), UCR implements the WISE Latin America Program, which provides women entrepreneurs in STEM with training, mentorship, visibility, and access to finance.
<b>CeNAT (Centro Nacional de Alta Tecnología)</b>	Academia / Education & Research	A public science and technology center that coordinates national R&D infrastructure. It supports applied research, innovation, and capacity building in areas such as biotechnology, energy, and environmental technologies.
<b>Auge (Agencia Universitaria de Gestión de Emprendimiento)</b>	Academia / Education & Research	The entrepreneurial and innovation agency at the University of Costa Rica (UCR). It provides incubation, mentoring, innovation support, and is tied to the Sistema de Banca para el Desarrollo (SBD) as one of its operator agencies.
<b>Banco Nacional Costa Rica</b>	Finance & Capital	One of Costa Rica's major state / public banks, with a strong focus on SMEs - plays a role in financing and credit provision for SMEs, and was mentioned in KII as a leader in programs for women.
<b>Caricaco Venturas</b>	Finance & Capital	An impact catalyst / venture fund that invests in startups in Costa Rica and broader Central America, combining capital + strategic support, with a foundation / philanthropic arm to support ecosystems. Currently aiming to strengthen their support to women entrepreneurs.
<b>ATTA Impact Capital</b>	Finance & Capital	An impact investment fund based in Costa Rica that channels capital to early-stage ventures with social and environmental impact in Costa Rica and Latin America. It seeks to generate measurable impact alongside financial returns in the region.
<b>Ecuador</b>		
<b>Épico</b>	Incubators / Accelerators / Hubs	A public innovation and entrepreneurship center based in Guayaquil. It supports startups and SMEs with incubation, acceleration, capacity-building, and partnerships to strengthen the local ecosystem.
<b>Cosmos</b>	Incubators / Accelerators / Hubs	An incubator / startup support program affiliated with UDLA (Universidad de las Américas) in Ecuador. Cosmos provides mentoring, incubation services, network connections, and events to foster local innovation and entrepreneurship.
<b>Impaqto Ecuador</b>	Incubators / Accelerators / Hubs	A multi-facet entrepreneurship hub that began as a coworking and support space, now operating programs, labs, consulting, and impact investment. It positions itself as a B-Corp and plays a central role in climate-sensitive, gender-inclusive innovation in Ecuador and Latin America.
<b>AEI (Alianza para Emprendimiento e Innovación)</b>	Network	A network of public, private, and academic actors aiming to strengthen entrepreneurship and innovation in Ecuador. It offers programs under stages like "Cree / Crea / Crece" to support ventures.

<b>Consejo Nacional para el Emprendimiento y la Innovación (CONEIN)</b>	Public Sector	National council created by the 2020 Entrepreneurship & Innovation Law to coordinate public-private actions and align academia-industry-government for entrepreneurship/innovation.
<b>Secretaría de Educación Superior, Ciencia, Tecnología e Innovación (SENESCYT)</b>	Public Sector	Leads higher education, science, and innovation policy; implements Plan ESCCISA and gender-parity measures in STEM; runs scholarship and capacity programs for women entrepreneurs.
<b>Ministerio de Educación</b>	Public Sector	Mandated to integrate entrepreneurship/innovation training into curricula under the 2020 law; supports STEM pathways for girls and young women.
<b>Conquito</b>	Public Sector	A municipal agency of Quito that supports entrepreneurship, innovation, training, projects, and grants (capital semilla). It provides incubation, courses, and local economic development support.
<b>Escuela Politécnica Nacional</b>	Academia / Education & Research	A public technical / engineering university in Quito well known for science, research, and technological training. It hosts research centers, laboratories, and sometimes innovation / tech transfer functions.
<b>USFQ (Universidad San Francisco)</b>	Academia / Education & Research	A major private university based in Quito, active in research, academic innovation, startup support, technology transfer, and ecosystem linkage. USFQ implements the WISE (Women in STEM Entrepreneurship) Program, which supports women-led ventures through training, mentoring, visibility, and connections to finance and networks.
<b>UTPL (Loja)</b>	Academia / Education & Research	A private technical university in Loja, known for engineering, technology programs, and highly involved in local innovation support, student entrepreneurship, and regional development.
<b>Buentrip</b>	Finance & Capital	A venture capital / early-stage investment firm based in Quito that invests in technology startups across Latin America.
<b>Latimparto</b>	Finance & Capital	A regional impact investment / gender-lens investing organization. It supports organizations investing in women and drives research and alliances around impact and sustainability.
<b>ThoughtWorks</b>	Private Sector	ThoughtWorks is a global software consultancy and digital transformation firm. It is reported to have an approach toward women in STEM, having worked with Escuela Politécnica Nacional in Ecuador.
<b>CAF (Corporación Andina de Fomento)</b>	Finance & Capital	A regional development bank that provides financing, technical assistance, and policy support for infrastructure, social and economic development, and innovation across Andean countries (including Ecuador).
<b>El Salvador</b>		
<b>Impact Hub San Salvador</b>	Incubators / Accelerators / Hubs	Local hub of the global Impact Hub network, offering coworking, incubation, network support, and events for social / innovation entrepreneurs.
<b>SNBX (Sandbox)</b>	Incubators / Accelerators / Hubs	SNBX is the first innovation hub in El Salvador, created by Agrisal, offering services to support entrepreneurs, corporates, and innovation processes.
<b>FUSALMO El Salvador</b>	NGO / Non-profit	A nonprofit organization linked to the Salesian community. It offers educational, cultural, and sports programs for children and youth, including robotics and STEM education initiatives that foster skills relevant to innovation and entrepreneurship.
<b>Sistema Nacional de Innovación, Ciencia y Tecnología (SNICT)</b>	Public Sector	National coordination system under the innovation policy to align institutions, reduce duplication, and execute science/technology programs.
<b>CONAMYPE (Comisión Nacional de la Micro y Pequeña Empresa)</b>	Public Sector	Government entity responsible for policies and programs to support micro and small enterprises. It provides training, financing support, innovation centers, and linkages for entrepreneurs, with a focus on inclusivity and local development. Coordinates the entrepreneurship policy and Programa de Empresariedad Femenina; operates CDEMYPE centers; anchors gender-equitable MSME support in law.
<b>Ministerio de Educación (MINED)</b>	Public Sector	Education sector lead; mainstreams gender equity and skills development across schooling; links to entrepreneurship/vocational modules.

<b>Ministerio de Economía</b>	Public Sector	The national ministry responsible for formulating and implementing economic, trade, and investment policy. It promotes business competitiveness, regulates markets, fosters innovation and investment, and supports SMEs.
<b>Instituto Salvadoreño para el Desarrollo de la Mujer (ISDEMU)</b>	Public Sector	Leads women's equality policies (e.g., Política de Corresponsabilidad de los Cuidados); aligns with entrepreneurship and inclusion measures that benefit women.
<b>Cámara Salvadoreña de Tecnologías de la Información y Comunicación (CasaTIC)</b>	Association / Chamber of Commerce	CasaTIC is the national ICT chamber, promoting digital economy and innovation. It runs initiatives like Desafío WorkerTech, a program to strengthen startups that create digital solutions for workers, promoting entrepreneurship and tech adoption.
<b>Cámara de Comercio e Industria de El Salvador (CAMARASAL)</b>	Association / Chamber of Commerce	The Salvadoran Chamber of Commerce and Industry, one of the country's most influential private sector associations. It promotes entrepreneurship, business competitiveness, and organizes events such as the "Congreso Mujer y Liderazgo."
<b>Universidad Don Bosco</b>	Academia / Education & Research	A private university offering undergraduate and graduate programs including engineering, technology, social sciences, and supports research, innovation, and outreach programs. UDB promotes women in STEM through initiatives such as Science Girl Camp, which introduces high-school girls to engineering through hands-on workshops in robotics, renewable energy, and computing, and the "Programa Mujeres en Ciencia e Ingeniería" (WISE), which supports female students in STEM careers by improving retention, academic performance, leadership, and mentorship opportunities.
<b>InnoGen Capital</b>	Finance & Capital	A venture capital firm based in San Salvador that invests in early-stage tech startups across Latin America. In 2024 it launched a "Delta Fund I" (~USD 10 million) to support startups in El Salvador, Guatemala, and Honduras.
<b>Banco Central de Reserva (BCR)</b>	Finance & Capital	Leads the National Financial Inclusion Policy with women and MSMEs as priority groups; guides tailored credit and financial services.
<b>Guatemala</b>		
<b>Impact Hub Guatemala</b>	Incubators / Accelerators / Hubs	Local hub of the global Impact Hub network, offering coworking, incubation, network support, and events for social / innovation entrepreneurs. Promotes the "Emprende Mujer" Program
<b>Alterna</b>	Incubators / Accelerators / Hubs	A social innovation / entrepreneurship platform founded in 2010 in Quetzaltenango (Xela). It works to develop social entrepreneurs, design impact models, and catalyze inclusive innovation in Guatemala
<b>Secretaría Nacional de Ciencia y Tecnología (SENACYT)</b>	Public Sector	Leads national science/technology policy (2015–2032) and inclusion strategy for women and Indigenous peoples in CTI; funds/coordinates R&D and STEM pipelines.
<b>Ministerio de Economía (MINECO)</b>	Public Sector	Oversees Guatemala Emprende policy; simplifies registration and establishes entrepreneurship centers; addresses financing/training gaps for entrepreneurs.
<b>Secretaría Presidencial de la Mujer (SEPREM)</b>	Public Sector	Presidential secretariat for women; earlier policy (2008–2023) mandated equal access to technical/scientific training and preferential credit for women.
<b>CAMEG (Camara de Mujeres Empresarias y Emprendedoras de Guatemala)</b>	Association / Chamber of Commerce	Business chamber dedicated to promoting entrepreneurship and innovation in Guatemala. It organizes events, training, and advocacy to strengthen the entrepreneurial ecosystem.
<b>Universidad del Valle de Guatemala (UVG)</b>	Academia / Education & Research	A leading private university in Guatemala with strong STEM programs and innovation focus. Through initiatives like "Mujeres en Ingeniería", now in its 8th edition, UVG inspires and trains young women to pursue engineering careers, offering hands-on workshops across disciplines such as computing, AI, hydraulics, and business model creation.
<b>Universidad de San Carlos, Guatemala</b>	Academia / Education & Research	The country's major public university (and the oldest). It plays multiple roles: education, research, training talent, hosting innovation and linkages with industry and policy, and contributing to the human capital base.
<b>Honduras</b>		
<b>Impact Hub Teguciglapa</b>	Incubators / Accelerators / Hubs	Local hub of the global Impact Hub network, offering coworking, incubation, network support, and events for social / innovation entrepreneurs. Supported the Emprende Rocket and Digital Hub 504 programs.

<b>CreaLab</b>	Incubators / Accelerators / Hubs	An innovation and entrepreneurship hub that provides mentoring, training, and project development support. It serves as a creative space for young entrepreneurs to test ideas and build capacity.
<b>Honduras Digital Challenge</b>	Incubators / Accelerators / Hubs	A national innovation and entrepreneurship competition supported by private and public partners. It identifies and accelerates startups through training, mentorship, networking, and exposure to investors.
<b>ACEN (Asociación de Emprendedores de Honduras)</b>	NGO / Non-profit / Network	A nonprofit network of entrepreneurs in Honduras, aiming to promote, support, and advocate for entrepreneurial activity across the country.
<b>Fundación Terra</b>	NGO	An NGO focusing on development, education, entrepreneurship, social infrastructure, and environment. It operates programs that support entrepreneurial training, digital skills, seed funding, and school-based entrepreneurship, among other initiatives, across Honduras and Central America.
<b>Fundación Bueso Arias (Laboratorio Bueso Arias)</b>	NGO / Foundation	Through its Beca Abraham y Aurora Bueso, the foundation awards full scholarships for women to pursue STEM degrees at UTH (Universidad Tecnológica de Honduras).
<b>SENPRENDE (Servicio Nacional de Emprendimientos)</b>	Public Sector	SENPRENDE is a national entity in Honduras that provides support to entrepreneurs and small businesses: assistance, formalization, linkages to finance, and market access. Supports MSMEs with formalization, BDS, seed capital (Emprende Inclusivo), and community innovation centers.
<b>Secretaría de Desarrollo Económico</b>	Public Sector	The government entity responsible for economic development policy, investment promotion, trade, and support to enterprises. It is a central public actor in shaping the business and innovation environment.
<b>Secretaría de Educación</b>	Public Sector	Runs Aprender para Empezar (national school entrepreneurship program) and co-implements STEM-for-girls initiatives with partners.
<b>FEDECAMARA (Federación de Cámaras de Comercio e Industrias de Honduras)</b>	Association / Chamber of Commerce	The federation of Chambers of Commerce in Honduras; acts as a coordinating body among chambers, contributes to business advocacy, supports private sector development, and engages in business environment dialogue.
<b>Cámara de Comercio de San Pedro Sula, de Cortés</b>	Chamber of Commerce	A regional chamber of commerce representing the business sector in Cortés / San Pedro Sula. It plays an important role in local business networking, advocacy, training, and collaborations with innovation or SME support programs.
<b>Honduras STEM Foundation</b>	Academia / Education & Research	A foundation that promotes STEM education, innovation, and competitions (especially robotics) to build interest and capacity in science, technology, engineering, and mathematics.
<b>UNITEC (Universidad Tecnológica Centroamericana)</b>	Academia / Education & Research	A private university offering engineering, business, and tech-related programs. It hosts a Hub de Emprendimiento and led the Tech4Dev program (2020–2023) to strengthen the innovation ecosystem. UNITEC also partnered with BCIE on Cipotas in Tech, a mentorship and training program that connects young women with female tech professionals to inspire STEM careers. In addition, through collaboration with BAC Credomatic, it supports Mujeres BAC, a mentorship initiative for women entrepreneurs and professionals that provides guidance, skills development, and networking opportunities.
<b>Sunshine School</b>	Academia / Education & Research	A bilingual / international school in Tegucigalpa, providing K-12 education with strong academic standards. It is known for strong promotion of STEM.
<b>AHIBA (Asociación Hondureña de Instituciones Bancarias)</b>	Finance & Capital	The association that groups the commercial banks in Honduras. It represents their interests, promotes banking sector development, supports financial inclusion, and acts as a dialogue interface with public and private sectors.
<b>Banco Atlántida</b>	Finance & Capital	One of the leading commercial banks in Honduras. It plays a role in credit provision, financial services, and potentially SME / entrepreneurship finance. It supports the Honduras Digital Challenge.
<b>Superintendencia de Insolvencia y Reemprendimiento</b>	Finance & Capital	Leads the National Strategy for Financial Inclusion (2025–2030) with women as a priority target group; promotes alternative credit and TA for women micro-entrepreneurs.



# ANNEX 3: IMPACT/COST MATRIX OF RECOMMENDATIONS

Table 7: Impact/Cost Matrix of Effective Strategies

Category	Specific Activity	Key Impact	Cost Level	Stakeholder Group	Timeline
<b>Data &amp; Evidence</b>	<ul style="list-style-type: none"> <li>Establish a <b>regional gender-STEM entrepreneurship data system</b>, harmonizing indicators and linking national registries, accelerators, and innovation programs.</li> <li>Develop a <b>regional dashboard</b> to track participation, financing, and business outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Enables <b>evidence-based policymaking</b></li> <li>Improves <b>coordination and accountability</b></li> <li>Provides <b>baseline</b> for <b>monitoring progress</b> on gender inclusion</li> </ul>	Moderate (high initial setup, low maintenance)	Development partners, national statistical offices, ministries of economy/science	<b>Medium term</b> (12–24 months)
<b>Social Norms &amp; Inclusion</b>	<ul style="list-style-type: none"> <li>Implement <b>awareness and visibility campaigns</b> (media, schools, hackathons) showcasing women innovators</li> <li>Integrate <b>female role models</b> into education;</li> <li><b>Embed childcare and safety mechanisms</b> into entrepreneurship programs.</li> </ul>	<ul style="list-style-type: none"> <li>Challenges gender <b>stereotypes</b></li> <li>Increases <b>visibility</b> of women in STEM</li> <li><b>Reduces dropout</b> linked to care and safety constraints</li> <li>Expands <b>participation</b></li> </ul>	Moderate	Governments, local authorities, NGOs, private sector	<b>Short to medium term</b> (6–18 months)
<b>Access to Finance</b>	<ul style="list-style-type: none"> <li>Design <b>gender-responsive blended finance facilities</b> (guarantees, convertible grants, milestone-based funds)</li> <li>Adopt <b>movable collateral frameworks</b> accepting IP, equipment, and receivables as security</li> </ul>	<ul style="list-style-type: none"> <li>Expands <b>access to patient capital</b></li> <li>Aligns credit systems with innovation realities</li> <li>Enables <b>scaling</b> of women-led STEM ventures.</li> </ul>	High (requires blended resources)	Development banks, regulators, private investors	<b>Medium to long term</b> (18–36 months)
<b>Investor Practices</b>	<ul style="list-style-type: none"> <li>Promote <b>gender-lens investing standards</b> and bias-awareness training for funds and angel networks</li> <li>Require gender metrics in investment due diligence</li> </ul>	<ul style="list-style-type: none"> <li>Reduces investor <b>bias</b></li> <li><b>Diversifies</b> decision-making</li> <li>Fosters <b>equitable capital</b> allocation</li> </ul>	Moderate	Development partners, venture funds, angel networks	<b>Medium term</b> (12–24 months)

	<ul style="list-style-type: none"> <li>Support creation of <b>women investor networks</b></li> </ul>	<ul style="list-style-type: none"> <li>Improves <b>investment efficiency</b></li> </ul>			
<b>Ecosystem Coordination</b>	<ul style="list-style-type: none"> <li>Establish <b>national and regional coordination platforms</b> (public-private) with clear gender targets, monitoring frameworks, and published scorecards.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces <b>fragmentation</b></li> <li>Aligns policy and funding</li> <li>Increases <b>accountability</b> and <b>transparency</b> across ecosystem</li> </ul>	Low to Moderate	Governments, development partners, private sector	<b>Short to medium term</b> (6–18 months)
<b>Program Design &amp; Capacity Building</b>	<ul style="list-style-type: none"> <li>Redesign <b>entrepreneurship programs</b> to address structural barriers and include bias-awareness content</li> <li>Establish <b>alumni and post-acceleration networks</b> linked to investors</li> </ul>	<ul style="list-style-type: none"> <li>Improves <b>retention</b> and <b>sustainability</b></li> <li>Strengthens women's <b>investment readiness</b></li> <li>Builds <b>confidence</b> and long-term <b>growth pathways</b>.</li> </ul>	Moderate	Accelerators, incubators, NGOs, development partners	<b>Short to medium term</b> (6–18 months)
<b>Universities &amp; Research</b>	<ul style="list-style-type: none"> <li>Introduce <b>entrepreneurship and commercialization tracks</b> in STEM curricula</li> <li>Create <b>IP support helpdesks</b> and harmonize university IP policies for transparency and fairness</li> </ul>	<ul style="list-style-type: none"> <li>Expands STEM-to-market <b>pipeline</b></li> <li>Protects women innovators' <b>IP rights</b></li> <li>Promotes research <b>commercialization</b>.</li> </ul>	Moderate	Universities, innovation agencies, development partners	<b>Medium term</b> (12–24 months)
<b>Strategic Sectors (Green, Bio, Digital)</b>	<ul style="list-style-type: none"> <li>Integrate <b>gender inclusion targets</b> into green and digital economy programs;</li> <li>Fund <b>women-led projects</b> in renewables, agri-tech, and bioeconomy;</li> <li>Apply <b>gender-lens procurement</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Positions women at <b>forefront of emerging industries</b></li> <li>Accelerates inclusive climate-smart <b>innovation</b> and market <b>diversification</b>.</li> </ul>	High (sectoral investment)	Governments, development partners, private investors	<b>Medium to long term</b> (18–36 months)

## ANNEX 4: KEY INFORMANT INTERVIEWS WITH ECOSYSTEM ACTORS

Key Informant Interviews (KIIs) were conducted with a diverse group of ecosystem actors within the region, including incubators and accelerators, investors, multilateral development professionals, mentors, and women entrepreneurs themselves. The integration of these sources ensures that the analysis captures both structural dynamics and the lived realities of women navigating STEM entrepreneurship.

Table 8: Key Informant Interview Engagement Summary

Country	Stakeholder Category	No.
<b>Costa Rica / Central America &amp; Southern Mexico</b>	Impact Investment Organization	1
<b>Costa Rica</b>	Impact Catalyst	1
<b>Costa Rica</b>	Impact Hub	1
<b>Costa Rica</b>	IDB Lab	1
<b>El Salvador</b>	IDB Lab	1
<b>Honduras</b>	IDB Lab	1
<b>Ecuador</b>	E-commerce platform supporting women entrepreneurs	1
<b>Ecuador</b>	Social enterprise / coworking and innovation hub + Impact Fund	1
<b>El Salvador</b>	Regional venture capital fund	1
<b>Guatemala</b>	Social entrepreneurship platform	1
<b>Ecuador</b>	Ecosystem network for entrepreneurship	1
<b>Costa Rica</b>	Organization promoting entrepreneurship	1
<b>El Salvador</b>	Innovation Center	1
<b>Honduras</b>	Private Initiative for Labor Market Development	1
<b>Honduras</b>	Non-Profit Accelerator for Tech Star-Ups	1
<b>Costa Rica</b>	Founder's Catalyst	2
<b>Ecuador</b>	Founder's Catalyst	1
<b>El Salvador</b>	Founder's Catalyst	2
<b>Guatemala</b>	Founder's Catalyst	1
<b>Honduras</b>	Founder's Catalyst	1
<b>Costa Rica</b>	Startup Weekend	2
<b>Honduras</b>	Startup Weekend	1
<b>Ecuador</b>	Startup Weekend	2
<b>Guatemala</b>	Startup Weekend	1
<b>Total</b>		<b>28</b>

# ANNEX 5: ONLINE SURVEY OF PROJECT BENEFICIARIES

## Survey of Startup Weekend Beneficiaries (Activate)

The survey was designed to capture the **experiences of women** who participated in **Startup Weekend events** across the five countries (i.e., Costa Rica, El Salvador, Guatemala, Honduras, Ecuador). The instrument included screening questions to confirm eligibility, as well as sections on personal and business profiles, participation in the event, satisfaction with content and organization, perceived outcomes, and post-event support. Questions also addressed barriers to participation (e.g., time constraints, transportation, caregiving responsibilities, technical skills, or language) and the support provided during participation. Furthermore, the survey aimed to gather insights into their perceptions on **persisting barriers in the STEM ecosystem** that constrain women’s involvement in the sector.

The survey was disseminated to **327 beneficiaries** across the five countries. This included all beneficiaries of the Start-up Weekend, who did not fall within the randomly selected beneficiaries for the in-depth interviews. Therefore, a voluntary sampling approach was followed. The survey was implemented using a Computer-Assisted Web-Interviewing (CAWI) system on the World Bank’s Survey Solutions platform. Table 9 summarizes dissemination and response figures by country. A total of **70 valid responses were received**, representing a completion rate of 23%. These survey results provide evidence on the immediate and short-term outcomes of the incubation activities, complementing insights from KIIs and program documentation.

Table 9: Overview of Startup Weekend Survey Distribution and Completion

Country & City	Event Dates	Invitations Sent	Undelivered Emails	Valid Responses	Completion Rate (%)
<b>Costa Rica (San José)</b>	19-21 April 2024	39	3	7	19%
<b>Honduras (Tegucigalpa)</b>	24-26 May 2024	59	3	12	21%
<b>Ecuador (Quito)</b>	7-9 June 2024	68	5	14	22%
<b>Guatemala (Guatemala City)</b>	15-17 Nov 2024	44	2	11	26%
<b>El Salvador (San Salvador)</b>	15-17 Nov 2024	66	1	20	31%
<b>Honduras (San Pedro Sula)</b>	28 Feb-2 Mar 2025	51	2	6	12%
<b>Total</b>	-	<b>327</b>	<b>16</b>	<b>70</b>	<b>23%</b>

## Survey of Founder Catalyst Beneficiaries

The survey targeted women **founders in STEM** who participated in the **Founder Catalyst program**. The survey instrument covered participation in program components (masterclasses, mentoring sessions via MentorDeck, pitch coaching, peer groups, and showcase events), satisfaction with the delivery and content, and the adequacy of program adaptations to the constraints faced by women entrepreneurs. Additional modules of the survey explored learning and capability gains (such as customer discovery, product-market fit, fundraising readiness, and leadership skills), outputs achieved during the program (pitch decks, Minimum Viable Product (MVPs), financial models), and post-program business outcomes (new clients, market entry, revenue growth, or investment offers).

The survey also captured broader gender and sustainability dimensions of the acceleration experience. Respondents were asked whether their companies served women clients or beneficiaries, what **constraints most limited their growth** (e.g., access to finance, talent acquisition, regulation, and technological infrastructure), and how likely they were to sustain the program's results over time. Comparative questions on prior exposure to other entrepreneurship initiatives were included to assess *Founder Catalyst's* unique value relative to similar programs.

In total, the online survey was disseminated to **52 beneficiaries** from the two *Founder Catalyst* cohorts. This included all beneficiaries of the *Founder Catalyst* component, who did not fall within the randomly selected group of beneficiaries for in-depth interviews. Therefore, a voluntary sampling approach was followed. The survey was implemented using a Computer-Assisted Web-Interviewing (CAWI) system on the World Bank's Survey Solutions platform. Table 10 below summarizes dissemination and response figures by cohort. A total of **22 valid responses** were received, representing a completion rate of 46%. These survey results provide evidence on the effectiveness of the acceleration component, complementing KIIs and program documentation.

Table 10: Overview of Founder Catalyst Survey Distribution and Completion

<b>Cohort &amp; Dates</b>	<b>Invitations Sent</b>	<b>Undelivered Emails</b>	<b>Valid Responses</b>	<b>Completion Rate (%)</b>
<b>Cohort 1 (Jul-Oct 2024)</b>	25	3	11	50%
<b>Cohort 2 (Mar-May 2025)</b>	27	1	11	42%
<b>Total</b>	<b>52</b>	<b>4</b>	<b>22</b>	<b>46%</b>

