



**BREAKING THE GLASS CEILING?: A NARRATIVE ANALYSIS OF THE CHALLENGES AND
SUCCESSSES OF WOMEN IN LEADERSHIP POSITIONS IN THE PHILIPPINE STARTUP
ECOSYSTEM (PTSE)**

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Received in November 2024 • Revised in January 2025 • Accepted in January 2025 • Published in February 2025

ABSTRACT – This study delves into the experiences of women in leadership positions within the male-dominated Philippine technology startup ecosystem (PTSE). It aims to uncover the challenges these women face and the innovative strategies they employ to navigate and succeed in this environment. The research participants included three (3) CEOs from Baguio City, Cebu City, and Iligan City, along with two women leaders from technology business incubators (TBIs) based in Metro Manila. Using a narrative analysis approach, the study explored the journeys of these women, revealing insights into their diverse backgrounds and experiences. The narratives highlighted the importance of nurturing and community-driven values in their upbringing. Many participants credited male mentors for providing trust and support, while strategies like self-study mentorships, and experiential learning helped them build their skills in the tech startup industry. The findings show that these women faced challenges related to work-life balance, technical growth, employee relationships, networking, and sustainability. They overcame these obstacles through multitasking, time management, priority setting, and establishing strong support systems. These women view their leadership roles as opportunities to foster inclusivity and inspire more women to take on similar positions. By leveraging strengths in listening, problem-solving, creativity, and multitasking, they are actively reshaping the PTSE landscape, paving the way for greater gender diversity and inclusion in the industry.

Keywords: Technology startup, women, gender diversity, inclusion

INTRODUCTION

The ecosystem of technological startups is a key contributor to a country's economic growth, creativity, and job creation. However, this sector continues to remain predominantly male dominated. According to Kirchhoff (2018), women remain underrepresented in executive positions within technology startups, despite the fact that there are more female entrepreneurs in the world than ever before. Research shows that businesses that have more women in leadership positions generally have better financial results (Han & Noland, 2020).

To cite this paper: Jarabe, ML, T, Simporios, L.L., Taylan, F.F. & Serrano, J.V. (2025). Breaking the Glass Ceiling?: A Narrative Analysis of the Challenges and Successes of Women in Leadership Positions in the Philippine Startup Ecosystem (PTSE). *Journal of Management and Development Studies* Volume 12 Issue 1, 1-27.

leadership roles in the technological startup market remains a significant challenge that needs to be addressed ("Women in technology leadership," n.d.). Promoting and supporting women to participate and assume leadership roles in the ecosystem of technology startups could stimulate economic growth as well as job creation in the Philippines.

In addition, research has revealed that women entrepreneurs experience distinct difficulties and hindrances in comparison to their male counterparts (Fernandes & Sanfilippo, 2023), difficulties in balancing work and family obligations (Cesaroni, Pediconi, & Sentuti, 2018), and gender stereotypes that have negatively affected their work as entrepreneurs ("Gender Stereotypes and their Impact on Women Entrepreneurs," 2021). Cultural and socioeconomic considerations that may affect women's experiences and perceptions of leadership in the Philippines further exacerbate these impediments (Tabassum & Nayak, 2021). Women's capacity to fully participate in the workforce, for instance, may be hampered by traditional gender roles and the social and cultural expectation that women should put their caregiving or reproductive responsibilities before their jobs, which leads to lowering expectations of women's potential for leadership because leadership abilities are associated with being male (Tabassum & Nayak, 2021). By paving the way for a clear understanding of these difficulties, we can help create measures, initiatives, approaches, and strategies for supporting women entrepreneurs and promoting gender equality in the workplace.

Furthermore, there is a significant gap between men and women in terms of representation and diversity. The ecosystem for technological startups in the Philippines is growing rapidly, but this expansion has not been accompanied by an increase in the proportion of women in leadership positions. In fact, the representation of women in senior management roles experienced a decline, dropping from 48 percent in 2021 to 39 percent in 2022 ("Women in business report," 2022). There is a concern with the underrepresentation of women in leadership positions in the Philippine ecosystem for technology startups. The lack of representation and support for women in the tech industry has hindered innovation and diversity, discouraging many talented women from pursuing careers in technology ("The future (of tech) is Filipina," 2023). With this study, we can develop strategies to promote gender diversity and inclusivity in the industry by exploring the experiences of women leaders in this field in order to better understand the challenges and difficulties they encounter.

Moreover, while much study has been done on the subject of female entrepreneurship and leadership, it is generally true that research on female entrepreneurship and leadership in the context of the Philippines' technological startup environment may be relatively limited compared to other areas or countries. Therefore, this study intends to close this gap by offering a deeper understanding of the experiences of women leaders in Philippine technology startups and how they deal with the challenges associated with holding a leadership position as a woman in a field that is predominantly male.

According to "Visibility helps pipeline of Filipino women in tech, leaders say" (2022), many Filipino women are interested in establishing tech startups and are actively looking for possibilities to work in the sector. However, they often encounter entry-level challenges such as a lack of funding, networks, and mentorship. Partin (2022) highlights that one of the most significant challenges that women in technology face is the lack of role models. This frequently results in the underrepresentation of women in leadership positions, making it

harder for them to advance in their careers and achieve their goals. Even if there has been a significant increase in the number of women working in the technology industry, there are still considerably fewer women in these positions than there should be. The lack of female role models in the industry makes it harder for young women to envision themselves in similar positions and to pursue careers in technology (Women in Tech, n.d.). Having visible and accessible role models for women in technology leadership positions can also help to attract and retain more women in the field, as well as inspire the next generation of female leaders. This is not to mention societal stereotypes and cultural factors that might also impede women's capacity to fully participate in the technological startup ecosystem. Hence, it is crucial to ensure the visibility as well as the accessibility of the pipeline of talented women leaders in the technology industry. It is argued in a study by McKinsey (2018) that companies in the top quartile for gender diversity are 15% more likely to generate financial returns above their respective national industry medians. Also, it is revealed that a more diversified workforce fosters better innovation and maximizes business performance (Lyons, 2019).

The lack of representation of women in leadership positions in the technology industry has been identified as a significant problem. It is the purpose of this research to investigate the representation of women in leadership positions in the Philippine technology industry as well as identify the barriers and challenges that women face in this field, with the goal of developing a supportive framework for the creation of a conducive environment for women's full participation in the technology startup ecosystem.

The underrepresentation of women in leadership positions within the technology industry is a significant challenge, with women facing barriers such as gender discrimination, sexual harassment, and an unfavorable working environment (Cidre and Weidman, 2021). Socialization theory suggests that the social construction of IT as a male domain contributes to this gender imbalance (Trauth et al., 2004). However, individual differences among women, shaped by socio-cultural influences, also play a role in their participation in the IT sector (Trauth et al., 2004). To address this issue, research has focused on the challenges women face in technology start-ups and developing strategies to improve their participation (Kuschel & Lepele, 2016). Despite these obstacles, some women have successfully climbed the industry ladder through intrinsic motivation, persistence, and passion for learning and creativity (Bell et al., 2020). Increasing women's representation in technology leadership positions remains crucial for fostering their inclusion in the global economy (Kuschel & Lepele, 2016).

Thus, this study explores the lived experiences of women in leadership roles within the Philippine technology startup ecosystem (PTSE), focusing on their backgrounds, challenges, strategies for success, leadership contributions, and perspectives in fostering gender diversity and inclusivity in the industry.

Research Objective

The research seeks to analyze women's representation in leadership roles within the Philippine technology startup ecosystem. The findings aim to provide valuable insights into the current status of women leaders in this sector and contribute to initiatives that enhance inclusivity within technology startups. Specifically, the research aims to answer the following research questions:

1. What are the similarities and differences of the participants in terms of background, relationships, leadership opportunities, and gender dimension?
2. How do the participants address challenges they encounter?
3. How do the participants view their roles and contributions in the PTSE?
4. How do the participants view the future of women in PTSE?

METHODOLOGY

Design

This study employed a qualitative research design. It is the most appropriate approach for the study, given its focus on understanding the lived experiences, challenges, and successes of women leaders in the PTSE. Qualitative research emphasizes depth, context, and meaning, which are crucial for capturing the nuanced realities of the participants. Narrative analysis is particularly suitable for this study because it centers on the stories the participants tell about their experiences, offering a way to understand how they construct meaning from their leadership journeys.

Participants and Setting

The study involved five women leaders from various regions of the Philippines, including Cebu, Iligan, Baguio, and Metro Manila. They were chosen based on their leadership roles within the PTSE – startup CEOs, and technology business incubators (TBIs) or accelerators. This representation also allowed for a diverse view of experiences across different economic and cultural contexts.

Ethical Consideration

The study follows the ethical standards in relation to the following: free, prior and informed consent of research participants; no harm among the research participants; responsible conduct of the research through carefully planned methodology; and confidentiality. Ethical clearance was facilitated through the University of Lincoln.

Data Collection

Data were primarily collected through in-depth, semi-structured interviews that run from 60 minutes to 90 minutes for each participant. These interviews were designed to elicit detailed narratives from the participants about their leadership journeys, challenges faced, strategies employed, and their perceptions of the PTSE. The semi-structured format allowed free flow of discussion by the participants with guidance from a pre-developed set of questions.

Data Analysis

The collected data were analyzed using narrative analysis techniques. This involved the (1) transcription of interviews, (2) coding of transcripts to identify themes and patterns, (3) analysis of individual narratives to understand their stories and personal experiences, (4) cross narrative analysis to identify common themes and divergent experiences, and (5) interpretation of findings within the context of existing literature and theories on women in leadership and the technology sector.

RESULTS AND DISCUSSION

The narratives collected from the participants were analyzed and synthesized to identify key themes that address the research questions of this study. These themes were clustered to provide insights into the experiences, challenges, and successes of women as startup and TBI leaders in the PTSE. The thematic analysis revealed five primary areas of focus: (1) unique challenges faced by women in leadership within the male-dominated tech industry,

including gender bias and work-life balance issues; (2) innovative strategies employed to overcome obstacles and achieve success, such as continuous skill development and network building; (3) distinct qualities and perspectives that women bring to leadership roles in the PTSE, including enhanced empathy and problem-solving abilities; (4) significant success stories demonstrating the resilience and capabilities of women leaders in tech; and (5) visions for the future of women in the PTSE, including expectations of increased representation and influence. These findings not only illuminate the current state of women's leadership in the Philippine tech startup scene but also contribute valuable insights to the broader discourse on gender equality and women's empowerment in the technology sector.

Table 1
Participants' Profile

Participant	Education and Background in Science & Technology	Role within the PTSE	Base or area of operations/scope
DT	BS Computer Science Professional Teaching Certification	CEO of a software development company (startup)	Cebu City, nationwide
PB	BS Industrial Engineering Diploma for Computer Science	CEO of virtual assistance services, providing bespoke solutions for SMBs (startup)	Baguio City, overseas
UL	MITx Educational Technology and Educational Leadership	CEO of an integrated school and learning management solutions company (startup)	Iligan City, overseas
AR	BS Development Communication Advanced Management Program	Deputy Director, Innovation Hub (Technology Business Incubator/accelerator)	Metro Manila, nationwide
II	Master in Strategic Human Resource Management BS Entrepreneurship	Manager, Technology Business Incubator	Metro Manila, nationwide

Table 1 presents the profiles of the five participants interviewed for this study. The table provides an overview of their educational backgrounds, professional roles, and operational scopes within the ecosystem. The participants, identified by their initials, represent a diverse range of expertise and positions, including CEOs of startups, leaders of technology business incubators or innovation hubs. Their educational qualifications span various fields such as Computer Science, Engineering, Educational Technology, and Business Management. The table also highlights the geographical diversity of their operations, ranging from specific

cities to nationwide and even international scopes, showcasing the broad reach and impact of these individuals within the Philippine technology and startup landscape.

The profiles of women leaders in the Philippine Technology Startup Ecosystem (PTSE) exemplify resilience, adaptability, and innovation, highlighting their roles in a predominantly male field. Their journeys reveal essential themes such as the significance of mentorship, self-directed learning, and a strong sense of community. Many participants credited male mentors with offering valuable guidance and opportunities, aligning with Kram's (1985) assertion that mentorship is crucial for overcoming systemic barriers faced by women in male-dominated industries.

Despite the support they received, these women encountered persistent challenges, including gender biases, limited access to networks and resources, and societal pressures regarding work-life balance. As a result, they often had to employ multitasking strategies and build robust support systems. Their experiences shed light on the structural inequalities that impede women's leadership advancement.

To address these challenges, a systemic and collaborative approach is essential. Policymakers should implement gender-sensitive policies to ensure equitable access to funding, mentorship, and skill-building tailored to women in tech. Educational institutions must promote gender diversity through interdisciplinary learning and networking opportunities, while industry stakeholders need to cultivate inclusive cultures within startups and technology business incubators. By fostering such an environment, stakeholders can empower women to thrive as leaders and innovators in the PTSE. Their success not only enhances the industry's competitiveness and inclusivity but also acts as a catalyst for broader societal change, inspiring future generations of women to break barriers in technology leadership.

The summary of their positions and founded startups and innovation hubs is found below:

DT: Software Development Solutions (founded in 2012)

DT's company started with need-based web development and troubleshooting services. As she describes, *"When we started, it was really like we know someone who needs something, then asks us, can you do it?"* Over time, the business evolved. *"Need-based sya and then just this year we started to open our distributorship and we are selling it as retail. Yung per subscription base"* (Over time, the business evolved into a distributorship model, launching retail sales on a subscription basis this year).

PB: Virtual Assistance (founded in 2019)

PB started VA, a company that provides virtual assistant services to small businesses. Their business model has two prongs, focusing on talent development and matching. As PB explains, *"We bring the skill needed. We train them to become part of the talent pool. Then here comes yung isa naming clients that ito yung mga small businesses that are coming from local and abroad but majority is in abroad. Then we as a VA, try to match or facilitate the talent matching process"* (We bring the skill needed. We train them to become part of the talent pool. Then here comes our clients, primarily small businesses from abroad). They offer various services including administrative support, bank office support, remote bookkeeping, specialization process especially process implementation.

UL: Integrated Learning Management System (founded in 2022)

UL is the founder and CEO of a learning management system company, which offers integrated school and learning management solutions. She chose this path because, "...kasi, once you're able to get the contract, you would have a sure deal na may revenue ka for that year. And also, I'm pretty confident since my network [is] mostly schools" (...once you're able to get the contract, you would have a sure deal of clients for that year). The company has shown promising growth, as UL notes, "in 2023, we signed 12 schools."

AR: Innovation Hub/Accelerator

AR heads the startup development program of a prominent Innovation Hub. It is among the most prominent incubators in the Philippines according to an ADB Country report released in 2023 (Teves et al., 2023). Under her leadership, the program has grown significantly: "and now, ... we have 50 mentors on board."

II: Technology Business Incubator (established in 2016)

II serves as the chairperson of an entrepreneurship program in a Business college in Quezon City and leads its Innovation Center. She shares, "So when we established the Innovation Center, it was 2016. There was a call from DOST to apply for HERT. So it's Higher Education Readiness for Technology. So it's really establishing an incubator." referring to the Higher Education Readiness for Technology initiative of DOST-PCIEERD aimed at establishing an incubator.

Table 2
Core Themes, Similarities, and Differences from Participants

Core Themes	Subcategories	Similarities	Differences	Underlying Causes; explanation offered
Personal backgrounds and circumstances	Background in IT or technology startups	No initial background in tech startups	Came from different career and diverse socioeconomic backgrounds	
	Work-life balance/ integration	Juggled being a mother and being a startup/TBI leader Time management and multitasking		Mothers are usually on top of things, despite being working mothers
	Motivation	Pay it forward mindset or	Indigenous people's	

Core Themes	Subcategories	Similarities	Differences	Underlying Causes; explanation offered
		giving back Identified gaps within their communities and tried to bridge these gaps through technology	inculcation culture as community-driven	
Relationships	Mentors	All mentored/partnered initially by men All mentors/partners had a positive impact		Maybe due to the fact that PTSE is a male-dominated environment
	Staff/Employee	Mother figures, nurturing, letting staff grow	Male-to-female ratio in number of team members/employees	Symbolism: motherly figure as a source of sustenance, support, and caring
	Networking	Claims that the PTSE as an ecosystem is collaborative despite the competition The tech ecosystem is an inclusive and healthy environment	Provinces vs. Metro Manila areas in terms of level of openness	Most opportunities/events are congested in Metro Manila
Leadership	Pursuing Growth	Supported by different grants from government and institutions: UPSCALE, DOST, MCTBI	Tech opportunities were not evenly distributed geographically	
	Sustainability	Most tech		Community-

Core Themes	Subcategories	Similarities	Differences	Underlying Causes; explanation offered
		<p>startups grew during the pandemic</p> <p>Built organic relationships with clients, tried to team up within their communities</p>		driven/no one left behind mindset
	Role and Contribution	<p>Bring more opportunities to more people</p> <p>To train the next generation/ youth as mentors</p>	Affirmative action in opening opportunities especially for indigenous peoples	May still be connected to the compassionate and motherly attitude of women, leading by heart
Gender dimension	Identified Gender Stereotypes	<p>Women are nurturing</p> <p>Women are not into tech</p> <p>Women are more meticulous, detail-oriented, good listener, and straight forward</p> <p>Men are more analytical or logical</p>		Symbolism: Logical men , meaning, how they are involved in technical aspects and more exposed to rational decision-making, thus, often more associated with leadership
	Support system	<p>Supportive husbands/ partners</p> <p>Supportive families</p> <p>Mentors</p>	Previous supervisor	Realization of how they wouldn't be where they are without their supportive families; their support system

Core Themes	Subcategories	Similarities	Differences	Underlying Causes; explanation offered
				empowered them as women to pursue their tech journey
	Women challenging the status quo	Advocate for gender responsiveness Conscious effort at gender inclusivity with projects such as: <ul style="list-style-type: none"> • Startup Pinay (AR) • Shenno-vates (UL) • Women Helping Women (II) 	Promoting inclusivity and opportunities within her tribe (PB)	They perceive the need for more women in PTSE, since women also have unique contributions in the ecosystem

On participants’ personal backgrounds and motivations

No background in PTSE

The participants came from diverse socioeconomic backgrounds and had no initial background in tech startups. However, these circumstances and backgrounds significantly influenced the startup leadership and mentorship journeys of the participants. The narratives reveal diversity among the five women interviewed, each bringing unique experiences to their roles. This diversity highlights the varied paths that led them into their leadership roles in the PTSE. A common challenge they faced was balancing work and personal life, particularly for those who were mothers. Their success in managing this challenge demonstrates their resilience and multitasking abilities.

DT from Cebu and PB from Baguio are the only ones who have engineering and information technology backgrounds, while others come from varied fields, showcasing different paths to startup leadership or TBI mentorship. AR’s story “*thrown into the water*” demonstrates adaptability, transitioning from her previous work. II’s experience stems from her family business, providing a foundation for her entrepreneurial skills.

Education and work experiences shape their roles in the industry. UL’s background as an education technology (EdTech) coach and involvement in school associations provided her

with educational technology knowledge that is needed for the industry. AR's move from business process outsourcing (BPO) to UP Enterprise (now UPSCALE Innovation Hub) shows how diverse career paths can lead to startup mentoring. DT's computer science degree and work in enterprise systems and search engine optimization adds technical expertise.

Motivation

Despite their diverse backgrounds, these women leaders share a common value for community orientedness and what they call a "nurturing approach" to their brand of leadership. Il focuses on community values and volunteerism, UL aims to help schools beyond profit, PB brings a community-driven spirit as an indigenous person and an eldest daughter. AR communicates effectively across different groups, and DT combines her passion for games with aspirations for a better life.

The motivations driving these women startup leaders and TBI mentors blend personal aspirations with community-focused goals. Their stories reveal a common thread of personal growth intertwined with a strong desire to make a positive impact on their communities and the PTSE as an industry. A key similarity among the participants was their "pay it forward" mindset and desire to address community gaps or needs through technology. This shared motivation speaks to the community-oriented approach that these women leaders bring to the PTSE, potentially contributing to more socially responsible startups.

PB sought financial freedom while supporting her indigenous community. She emphasized the economic necessity, stating, *"For me kasi personally, I need an opportunity for economic... Kailangan ng pera. Kailangan ng livelihood."* (For me personally, I need an economic opportunity. We need money. We need livelihood). She also highlighted her culture's community-driven nature: *"Maybe it's part of the culture na rin namin na it's, IPs are more community-driven sya. Hindi siya self-centered...I believe that if you give something good outside, if you're doing business and you give something good, karma will also. Positive out positive in. So mga simple things na yung ganun."* (Maybe it's part of our culture that indigenous peoples are community-driven. It is not self-centered...I believe that if you give something good, karma will also come back to you. Positive out, positive in. So it's really about those simple things).

DT was motivated by the desire for a better life and contributing to the tech industry's growth. *"I think the drive really was to make a better life. The biggest drive,"* she expressed. *Despite initial financial challenges, she prioritized supporting others: "Because we support scholars. Actually when the company started early, I didn't get sweldo but I told my husband we will support scholars."* (Because we support scholars. Actually, when the company started early on, I didn't receive a salary but I told my husband that we would support scholars). This reflects a strong commitment to education and empowerment within her community. DT herself once received a scholarship to help her pursue IT in college.

Il focused on instilling entrepreneurship in young minds, explaining, *"It's really instilling [an] entrepreneurship mindset early on. Kasi yun yung values of risk taking, calculated risk, creativity, innovation."* (Because those are the values of risk-taking, calculated risk, creativity and innovation). Her approach emphasizes the importance of nurturing future generations with the skills necessary for success in a rapidly changing economic landscape.

UL aimed to help schools cope with challenges imposed by the COVID-19 pandemic. She elaborated, *"Because I really just want to help schools. I saw how parang burden noong pandemic. Diba ang schools talagang one of the most hit. So 2021 is still pandemic, right? And 2022 parang pa almost catching up or nagko-cope up na rin a lot of people including the schools."* (Because I really just want to help schools. I saw how much of a burden it was during the pandemic. Schools were truly one of the most affected). Her efforts reflect a deep concern for educational institutions that struggled during this time and wanted to help in their recovery.

AR felt a calling to contribute her experience to the startup space, stating, *"I feel that it's a calling na parang maybe I can help in that sense. Because parang, sabihin na natin I'm one of the titas in the space."* (I feel that it's a calling that maybe I can help in that sense. Because let's say I'm one of the 'aunties' in this space). This sentiment illustrates her commitment to using her expertise to support emerging businesses and foster innovation within the tech industry.

Role of relationships in journey as startup leaders and TBI mentors

The journeys of these women to becoming startup leaders and TBI mentors reveal common themes of adaptation, self-directed learning, and the crucial role of mentorship on their journey. Their stories also highlight the challenges and opportunities in the tech startup ecosystem, particularly for women.

All the participants were initially mentored or partnered with men, which reflects the male-dominated nature of the PTSE. However, they developed relationships which they call "nurturing", or even "motherly". This approach to leadership may be considered as a distinct quality that they bring to their roles, potentially fostering more supportive and collaborative work environments. They likewise showed dedication and competence as they work in the industry and earned the trust and respect of their stakeholders.

The eagerness to learn and persevere in their roles was evident across all narratives. Self-study and mentorship were key to their development. II emphasized, *"I really had to study, as in, I read and read and read just to understand how it works"* (I really had to study; I read extensively just to understand how it works). AR echoed this sentiment, stating, *"I learned the ropes because it was a very new industry. I still had challenges in explaining what a startup is, what a TBI is, what an accelerator [is], to people I talk to."* UL's experience was similar: *"I learned a lot of business stuff. Like talagang self-read and self-taught, and learning from mentors. And all of the free resources, I grabbed it"* (I learned a lot about business through self-study and by learning from mentors. I took advantage of all the free resources available).

The learning process was ongoing and practical. PB noted, *"When we're working with different clients, with different businesses, different industries, you also continuously learn."* DT's initiative in acquiring skills was evident: *"So my classmate went to our house. like a town away from us. So, kung ano yung pinapagawa ng client, I do it. But I pay my classmate to teach me how to do it"* (My classmate came over from a town nearby. Whatever tasks the client needed, I would do them, but I paid my classmate to teach me how to do it).

Leadership focus: Growth, sustainability and creating opportunities

The participants demonstrated a strong focus on growth and sustainability in their leadership roles. In particular, the efforts of startup CEOs were supported by various grants

and institutions, including UPSCALE, DOST-PCIEERD, and Miriam College TBI. This support played a crucial role in their ability to pursue growth and maintain sustainability, especially during challenging times. Notably, most of these tech startups experienced growth during the pandemic, highlighting the participants' adaptability and resilience in the face of uncertainty. Their approach to leadership was characterized by building organic relationships with clients and fostering collaboration within their communities, reflecting a community-driven mindset.

A common thread among these leaders was their commitment to creating opportunities for others and mentoring the next generation. This focus on training and empowering future leaders indicates a long-term, community-focused approach to leadership. Some participants even took affirmative action in opening opportunities, especially for PB as an indigenous person, demonstrating her dedication to inclusivity and diversity in the tech ecosystem. This nurturing and compassionate leadership style, described by UL as "leading with heart", may be connected to what some perceive as a motherly attitude that women bring to their leadership roles.

The participants also emphasized the importance of even distribution of tech opportunities across different geographical areas, recognizing that such opportunities were often concentrated in urban centers like Metro Manila. This awareness highlights the commitment to bridge the gap and ensure that the benefits of the tech industry reach a broader population.

Gender dimensions

The interviews revealed interesting insights into gender dynamics within the tech industry. The participants shared common experiences of gender stereotypes, like the notion that "women aren't into tech" or that "men are more analytical." But they also highlighted unique strengths that women bring to leadership roles.

For instance, the participants noted that women tend to be more detail-oriented and better listeners. These qualities can be huge assets in tech leadership, where attention to detail and effective communication are crucial. As one participant put it, "Women often bring a more holistic approach to problem-solving, considering not just the technical aspects but also the human elements."

Importantly, the success stories of these women challenge long-standing stereotypes. They have shown that women can thrive in technical roles and lead innovative tech companies. Their experiences underscore the value of diverse perspectives in the industry. As another participant noted, "It's not about being better than men, it's about bringing different strengths to the table. When we have diverse teams, we get better solutions."

The participants also emphasized the importance of support systems in their success. Many credited supportive partners, families, and mentors as key factors in their journey. This highlights the need for both personal and professional support networks to help women navigate and succeed in the tech world.

Interestingly, these women aren't just succeeding in the industry - they are actively working to change it. Many are involved in initiatives promoting gender inclusivity, like Startup Pinay, Shennovates, and Women Helping Women. These efforts aim to create more opportunities for women in tech and foster a more inclusive ecosystem.

On challenges encountered, and little triumphs made

The journey of becoming a startup leader or TBI mentor in the PTSE is filled with unique challenges and opportunities. This section delves into the specific obstacles faced by the participants and explores the innovative strategies they employed to overcome these hurdles. From balancing personal life with professional demands to working around technical and financial constraints, these experiences offer valuable insights into their resilience and adaptability required to succeed in this field.

Table 3
Challenges and Successes

Subcategories	Challenges	Solution/Success
<p>Work-life balance/integration</p>	<p>Pregnancy, motherhood</p> <p>Had to juggle traveling for work, while being pregnant: <i>"I got pregnant. So during the duration of the training. I had to travel a lot. Sa iba-ibang...Luzon, Visayas, Mindanao. But nung lumalaki na talaga yung tiyan ko, I cannot. So sina staff na. So yung team yung pumupunta. But all admin, management, training, ako yung nag-a-attend."</i> (II)</p> <p>Stopped during the pandemic to prioritize being a mother: <i>"I rested during the pandemic. But the priority was the kid's adjustment to online everything. As a mother, it's hard to juggle also na parang may meeting ako, hindi makaadapt yung anak ko sa online learning, ayaw makinig, teka lang nag-meeting."</i> (AR)</p> <p><i>"So actually the night my bag of water broke I was still doing the code, it was luksong bakal. It is a typical game that I did my bag of water broke. I was coding in the hospital"</i> (DT)</p>	<p>Multitasking</p> <p>Time management</p> <p>Setting priorities</p> <p>Strong support system (husband and family)</p>
<p>Technical Aspect: Pursuing</p>	<p>Limited funding slots</p>	<p>Application to different</p>

<p>growth</p>	<p>Lack of personnel/talent</p> <p>Fast-paced deadlines</p>	<p>grants from government agencies (UPSCALE, DOST) - PB, UL</p> <p>Collaborated with the people within the ecosystem, environment is not toxic (collaborative ecosystem) - UL, II, & AR</p> <p>Interns were absorbed/hired to increase the number of employees - DT</p>
<p>Relationships: Employee/staff relationships</p>	<p>Staff turnover - PB</p> <p>Founder being introverted, and having introverted employees as well - DT</p> <p>Fast-paced, meeting deadlines - II</p>	<p>Extend understanding <i>"How to manage people like you, if you're an introvert and you can know how to manage people like another introvert."</i></p> <p>Produce social skills set - DT</p> <p>Management partnership with husband (she's into the tech side, husband into managing people) - DT</p> <p>Incentivize and recognize competence: <i>"...we have to reward."</i> - Indo <i>"...they understand na if we get this, lahat kami mare-reward."</i> - UL</p>
<p>Networking</p>	<p>Provinces vs. Metro Manila areas in terms of level of openness</p> <p><i>"...pero when we reach out to seek support from local LGU, let's say sabihin na lang natin, 50-50, not yet there"</i> - PB</p>	<p>Reached out to other startups; the PTSE is collaborative and healthy</p>
<p>Sustainability</p>	<p>Client and employee retention - DT, UL</p> <p>Profit in the long-run - DT, PB</p>	<p>Offering services (of freelancers vs big companies) both the service and the amount of payment; Provides faster and reliable web developing and troubleshooting services under a competitive pricing for their service, which</p>

		<p>earned the trust of clients - DT</p> <p>Project Puldia aims to have an option to earn a sustainable living - PB</p>
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Table 3 presents the challenges faced by the participants and the strategies they employed to address them. These challenges span various aspects of their work and personal lives.

Work-life balance/integration. Women leaders in the PTSE reported significant struggles balancing their roles as mothers and professionals, especially during pivotal life events such as pregnancy or the pandemic. Participants like II had to delegate responsibilities due to physical limitations during late pregnancy while continuing to oversee management and training tasks. *"I got pregnant. So during the duration of the training, I had to travel a lot. Sa iba-ibang...Luzon, Visayas, Mindanao. But nung lumalaki na talaga yung tiyan ko, I cannot. So sina staff na. So yung team yung pumupunta. But all admin, management, training, ako yung nag-a-attend"* (I got pregnant. So during the duration of the training, I had to travel a lot. To different places... Luzon, Visayas, Mindanao. But when my belly really started to grow, I could not. So the staff went instead. But all administrative concerns, management, training, I was the one who attended). AR described how she had to prioritize her child's adjustment to online learning during the pandemic, often juggling meetings and domestic responsibilities simultaneously. *"I rested during the pandemic. But the priority was the kid's adjustment to online everything. As a mother, it's hard to juggle also, it's like I have a meeting, but my child can't adapt to online learning, doesn't want to listen, just a moment I'm in a meeting."* DT described coding in the hospital while in labor, highlighting the intense demands of her professional role. She recounted, *"So actually the night my bag of water broke I was still doing the code, it was luksong bakal. It is a typical game where my bag of water broke. I was coding in the hospital."* These experiences emphasize the importance of institutionalizing flexible work arrangements and providing accessible support systems for women in leadership roles to reduce the strain of balancing personal and professional responsibilities.

Technical aspect: pursuing growth. On the professional front, the participants grapple with issues like limited funding, staff shortages, and tight deadlines. Client and employee retention also pose significant challenges. To overcome these obstacles, they have adopted various approaches. They seek diverse funding sources, including applying for grants from government agencies like UPSCALE and DOST. Collaboration within the ecosystem has proven valuable, with leaders leveraging the supportive nature of the PTSE. Some have found success in hiring and training interns to address personnel shortages. Additionally, offering competitive services and pricing has helped in maintaining client relationships and ensuring business sustainability.

Employee and staff relationships. Leadership challenges included managing staff turnover, interpersonal dynamics, and adapting to fast-paced startup environments. High employee turnover rates, particularly for startups added to maintaining consistency and productivity. Introverted leaders like DT, struggled to manage teams of similarly introverted employees. DT developed social skill sets to manage employees effectively and leveraged her partnership with her husband to divide responsibilities based on their strengths. Leaders emphasized rewarding competence and team contributions to motivate and retain staff. UL's approach of sharing rewards for team successes fostered a sense of shared purpose.

Leadership development programs should incorporate training on managing diverse teams and fostering inclusive work cultures to address employee retention and productivity.

Sustainability. Maintaining client trust and ensuring consistent revenue streams were ongoing concerns for participants, particularly in scaling operations and competing against larger companies. Building and sustaining long-term relationships with clients posed a challenge due to market competition. Ensuring that startups remained financially viable in the long run required innovative approaches. DT provided fast, reliable, and affordable web development services, earning client trust and retention. PB's *Project Puldia* aimed at creating sustainable income opportunities, showcasing innovation in addressing both financial and social challenges. Promoting programs that support client acquisition, retention, and financial literacy for women entrepreneurs can enhance sustainability and competitiveness in the PTSE.

Perceived roles and contributions to PTSE

The narratives reveal several key themes regarding the perceived roles and contributions of the participants in PTSE. They identify unique qualities and approaches they bring to their roles.

Pioneering and self-reliance

DT emphasizes that women can establish their own identities in the tech industry. She highlights the importance of bridging the gap between academia and industry, stating, *"I'm also trying to go back to the academe teaching because when I did the internship program, there was a significant gap between what was taught in academia and what the industry requires."* She also challenges the conventional career paths, noting, *"And I think yan rin. Parang the trend especially in UP, you finish and you work in a big firm and become like the big guy in a big firm. But wala yung I can make my own, I can start my own."* (Especially in UP, the trend is to finish school, work for a big firm, and become a prominent figure there. But I believe I can create my own path and start my own venture).

Empathetic leadership

Il highlights women's listening skills and flexibility. She observes, *"Pero babae talaga, they listen kasi and then they take your comments as something to learn from. And also, dahil nga babae, women, we tend to the house, ganyan. You have to learn how to be flexible"* (Women genuinely listen and take feedback as opportunities for growth. Additionally, because we often manage households, we learn to be adaptable). This approach translates into her work, as she mentions, *"Kaya yung mga programs namin are very, very flexible"* (Our programs are very flexible).

Problem-solving abilities

UL sees problem-solving as an important skill she brings to her role in her company. She notes this as a long-standing strength, saying, *"so siguro isa yan sa naging contributory factor na parang problem solver ako before pa talaga"* (being a problem solver has always been part of who I am). This ability helps her handle challenges in her tech startup. It likely aids her work in educational technology, allowing her to address issues effectively, and also extend assistance to her EdTech peers in Iligan.

Creativity and multitasking

AR emphasizes women's creative approach and ability to handle multiple tasks. She notes, "so me as a person running the show in that sense, I want to bring in a different flavor every time. Improving the craft." She adds, "But it's really more like, women are more into that personality who can handle grace under pressure, can do multitasking."

Mentorship and community building

These women leaders show a strong commitment to mentoring and creating opportunities for others. II mentions, "I really devote time. I think I mentor schools without really expecting something in return." Similarly, AR expresses satisfaction in providing opportunities, saying, "I'm already happy to provide the opportunity for people who are interested to convert or upgrade, maybe change careers, yun lang."

These narratives illustrate how the participants view their roles not only as leaders but also as innovators, mentors, and community builders. They combine technical skills with empathy, flexibility, and a strong desire to foster positive change within their ecosystems. They have achieved remarkable successes in their respective fields. UL is expanding her educational technology platform to target larger schools and international markets. II secured vital funding from DOST-PCIEERD for her college, breaking new ground as a non-engineering women's institution. PB successfully obtained funding from both Miriam College TBI and DOST despite being located outside Metro Manila, showcasing the growing support for startups. DT's web development and troubleshooting service has thrived for 11 years. AR has made significant strides in community building by assembling a network of 50 mentors at her innovation hub and fostering partnerships to support startups through various capacity-building activities. These diverse achievements highlight the innovative spirit, perseverance, and leadership capabilities of the participants across areas such as product development, funding acquisition, business sustainability, and ecosystem development.

On vision for the future: to provide opportunities, advocate for inclusivity, and to have more women-led tech startups

The narratives reveal several key themes regarding women's roles and contributions in the PTSE. The participants highlight unique qualities and approaches that women bring to their leadership roles, contributing to gender equality and women's empowerment in this field.

One prominent theme that surfaced is the nurturing and relationship-building aspect in their management styles. AR emphasizes this, stating, "Maybe it's more of that nurturing part. Because how I see it, it's because when you work with people, it's really more of you building that relationship, taking care of that relationship." This perspective extends to a motherly management style, as noted by DT: "...when I started the company, may isang nagresign (one resigned). During the exit interview I asked. His comment was that my management style was motherly." Such feedback suggests that a motherly approach to management - characterized by empathy and support - can be seen either as a strength or a weakness. UL however suggests that this motherly instinct is a unique trait of women leaders that men may find difficult to replicate, which is helpful in her own startup.

The participants also highlight women's tendency to lead with empathy and emotion. UL notes, "And I think one of the, siguro if done right, one of the thing or characteristic ng isang

babae is that we lead by heart" (And I think one of the key characteristics of a woman, if done right, is that we lead with our hearts). This emotional intelligence in leadership can cultivate stronger team dynamics and create more inclusive work environments.

Women are also perceived as being more detail-oriented and meticulous in their work, according to DT. She observes, *"Females are more meticulous. They keep on testing and testing and testing. sometimes they get a day or two delayed than our original schedule but they get lesser back jobs."* This attention to detail, while potentially causing slight delays, ultimately results in higher quality work with fewer errors.

The narratives also point to women actively challenging the status quo and promoting gender responsiveness in the tech startup ecosystem. This is evident in the conscious efforts towards inclusivity through various projects such as Startup Pinay (QBO Innovation Hub), Shennovates, Women Helping Women project, and Project HERSAFE. These initiatives demonstrate a commitment to creating more opportunities for women in the tech industry and advocating for greater inclusivity. Lastly, the participants note a positive trend in the growth of women's participation in IT and Computer Science industries. This increasing representation is seen as a crucial step towards achieving gender equality and women's empowerment in the PTSE.

The participants have ambitious visions for the future. AR anticipates growth in female entrepreneurship, stating, *"I believe that there will be more women founders."* Indo emphasizes the importance of gender awareness in governance, hoping for *"government agencies to really appreciate GAD as part of governance."* PB focuses on empowering the next generation and leveraging the gig economy, explaining, *"I need to train the next generation and the role of VA in the next years is to bring the opportunities of the gig economy to the Filipino people through simple things such as talent matching and of course for training."* UL aims to bring opportunities from Manila to other regions and has grand aspirations for her company, saying, *"I want to bring what we have in Manila here and opportunities and whatever" and I see the company to be one of the leading EdTech in the Philippines, if not in the world. Grabe talaga yung vision."* These visions collectively paint a picture of growth, inclusivity, and innovation in the Philippine tech startup landscape.

DISCUSSION

The narrative analysis of interviews revealed several key themes and insights that reflect the ongoing challenges and dynamics of female leadership in a predominantly male-dominated field. This section presents the findings from the interviews and discusses their implications within the context of existing literature on women in leadership and the technology sector.

Challenges Faced by Women Leaders

The participants consistently reported encountering gender-specific challenges in their leadership journeys. These included:

Gender bias and stereotyping

They highlighted issues related to gender bias and stereotypes. Some shared experiences where their competence was questioned, solely based on preconceived notions about women's roles and abilities. Socialization theory tells us that these beliefs, often learned and internalized early in life, can significantly limit how women are perceived in tech spaces, even if such biases are unintentional. This aligns with previous research indicating that persistent

stereotypes continue to hinder women's advancement in leadership roles (Ashcraft et al., 2016; Eagly & Carli, 2009).

Difficulty in accessing networks and resources

Another significant challenge identified was the difficulty women face in building professional networks and accessing essential resources which corroborates existing studies (Fernades & Sanfilippo, 2023). Building professional networks and gaining access to resources proved tougher for women in these spaces.

Balancing work and family responsibilities

The pressure to balance professional growth with family responsibilities emerged as a critical theme. Societal expectations regarding family roles add a layer of complexity to their careers. The participants often find themselves juggling demanding work schedules alongside personal obligations, which can lead to increased stress compared to male counterparts. This reality illustrates how traditional views about family responsibilities shape women's experiences in leadership (Tabassum & Nayak, 2021).

Lack of female role models in the tech industry

The shortage of women role models in the tech startup industry was another notable concern among the participants, confirming earlier observations ("Women in business report", 2022; "The future (of tech) is Filipina, 2023). The scarcity of women leaders in tech can create feelings of isolation. Socialization theory suggests that having role models who share similar backgrounds is vital for inspiring future generations of leaders, as it broadens perceptions of what is achievable. These findings resonate with existing literature on women in technology leadership roles, emphasizing that despite some progress, significant barriers persist for women in PTSE. The persistence of these challenges highlights the need for continued efforts to address systemic inequalities in the tech industry.

DT highlighted what may be the challenge of gender stereotyping: *"Females are more meticulous. They keep on testing and testing and testing. Sometimes they get a day or two delayed than our original schedule but they get lesser back jobs."* This quote illustrates how seemingly positive stereotypes can impose additional pressure on women in leadership roles, suggesting that they must constantly prove their competence while managing expectations that may not apply equally to their male counterparts.

Strategies Employed to Overcome Challenges

The participants shared various strategies they employed to overcome challenges and achieve success in the field. Central to their narratives was developing resilience, as well as persistence. They shared stories about resilience as key to overcoming obstacles. Another key strategy was continuously upgrading of skills and knowledge. They also recognized investing in their own professional development was essential for maintaining competitiveness to level the playing field. This helped them overcome doubts others might have of them and boost their own confidence.

Building support networks emerged as another strategy. The participants spoke about the importance of building connections within and outside their organizations. These relationships helped them obtain resources and a sense of community. Socialization often encourages women to build relationships, and they use this to their advantage, creating circles of support in and outside the workplace. This network-building not only enhanced their professional lives but also contributed to their personal growth. Moreover, the participants highlighted the importance of leveraging their unique strengths as female

leaders. They often leaned into qualities such as empathy, communication and collaboration – traits that are frequently nurtured by societal expectations. These became powerful assets in their leadership styles, enabling them to connect with their teams on a deeper level and create inclusive environments.

These strategies reflect the adaptive responses of the participants to the challenges they face in this evolving and dynamic space. The emphasis on continuous learning and network building aligns with established research on successful leadership practices, particularly in industries characterized by rapid change, such as technology (Dweck, 2006; Ibarra, 1993). One participant, UL, poignantly articulated the significance of leading with empathy: *“And I think one of the, siguro if done right, one of the things or characteristic ng isang babae is that we lead by heart”* (And I think one of the key characteristics of a woman, if done right, is that we lead with our hearts). This quote underscores how women leaders often harness their emotional intelligence as a core strength in their leadership approach. By prioritizing empathy, they do not only enhance their effectiveness as leaders but also create more compassionate workplaces that value collaboration and understanding.

Unique Contributions of Women Leaders

The participants highlighted several qualities they believed women brought to leadership roles in the PTSE. These insights reveal a multifaceted view of women’s contributions, emphasizing traits that may align with traditional gender stereotypes, on the one hand, but also underscore the unique strengths women offer in leadership positions in the PTSE, on the other.

Enhanced listening skills and empathy

One of the most frequently mentioned attributes was enhanced listening skills and empathy. The participants noted that these qualities foster an inclusive environment, allowing open communication and collaboration to happen. They emphasized how empathy helped foster an inclusive environment. Socialization often encourages women to value relationships, and these leaders leaned into that strength, which creates more open and inclusive work environments.

Problem-solving abilities

Another significant strength identified was problem-solving abilities, particularly through attention to details. The participants would often approach challenges with a meticulous mindset, which is especially beneficial in complex projects. This attention to detail allows them to identify potential issues early on and devise effective solutions. The ability to see problems from various angles enhances their effectiveness as leaders, as they can draw from both analytical and creative thinking to respond to challenges.

Creativity and multitasking capabilities

Participants also emphasized creativity and multitasking capabilities as significant strengths. They tend to embrace multitasking not as a burden but as an opportunity to explore creative solutions. This adaptability enables them to respond effectively to the demands of their roles, fostering innovation within their teams. Their willingness to think outside of the box contributes significantly to problem-solving processes and enhances overall team performance.

Nurturing and inclusive management styles

The nurturing management style prevalent among the participants emerged as another theme. They noted that women tend to prioritize open communication and inclusive decision-making processes. This nurturing approach emphasizes trust and relationship

building over rigid hierarchies, which can lead to more cohesive team dynamics. Such management styles not only enhance collaboration but also empower team members by making them feel valued and heard. While these traits resonate with certain gender stereotypes, they also reflect the diverse skill set that women leaders bring to the table.

This finding supports the argument for increased diversity in leadership roles as a means to enhance organizational performance and innovation (Hunt et al., 2018). A poignant quote from one participant (AR) encapsulates this sentiment: *"Maybe it's more of that nurturing part. Because how I see it, it's really more of you building that relationship, taking care of that relationship."* This statement underscores how women leaders often prioritize relationship building in their management approach, reinforcing the idea that effective leadership is rooted in strong interpersonal connections.

Success Stories and Achievements

The study uncovered numerous success stories that highlight the achievements of participants as women leaders in the technology startup industry, particularly within non-traditional sectors and locations. These narratives illustrate not only individual triumphs but also the broader impact these could have on their communities and industries.

Securing funding and grants

One of the most notable successes was the ability of the participants to secure funding and grants despite operating in sectors where resources are often scarce. Their determination and innovative approaches allowed them to hurdle the challenges that typically hinder access to financial support. This achievement is significant because it demonstrates that women-led startups can thrive even in environments traditionally viewed as unfavorable, with the right support.

Developing innovative products and services

Additionally, these women leaders have been instrumental in developing innovative products and services. By spearheading initiatives that focus on unique technological solutions, they have not only contributed to the advancement of their respective fields but also set new standards for creativity and problem-solving within the tech sector. Their work demonstrates how diverse perspectives can lead to groundbreaking advancements.

Creating inclusive programs

Another critical area of success has been the establishment of inclusive programs aimed at supporting other women in technology. Several leaders launched initiatives to foster professional growth among women, creating networks and mentorship opportunities that empower future leaders. This commitment to inclusivity is vital for cultivating a more equitable tech ecosystem.

Establishing successful business partnerships

The participants have also successfully established business partnerships. Their perseverance has not only led to the creation of sustainable ventures but also contributed to building networks and partnerships that support collaboration and innovation. These achievements collectively challenge the notion that the tech industry is inherently unsuitable for women, and highlight the potential for women-led initiatives to flourish in the technology startup ecosystem.

PB shared her mission succinctly: *"I need to train the next generation"; "The role of VA in the next years is to bring the opportunities of the gig economy to the Filipino people through simple*

things such as talent matching and of course for training." This quote encapsulates the forward-thinking approach of the women leaders in this study, emphasizing the commitment not only to personal success but also to nurturing future talent within their communities. Such insights reflect a broader narrative of empowerment and change, positioning these leaders as pivotal figures in shaping a more inclusive technological landscape.

Vision for the Future

Participants expressed optimistic views about the future of women in the PTSE, including:

- Anticipation of more women founders and leaders in tech. They are optimistic about seeing more women take on leadership roles in tech.
- Increased recognition of gender issues in governance and policy-making. Many are hopeful that gender-related challenges will be given much attention in policy-making.
- Expansion of opportunities in emerging sectors. Fields like the gig economy and EdTech were seen as ripe with potential.
- Aspirations to become global leaders in their respective fields. Several women aim to make their mark internationally.

This optimism suggests a shifting landscape in the PTSE, with women leaders envisioning a more inclusive future. However, the realization of this vision will likely require continued efforts to address systemic barriers and promote gender equality in the tech industry.

AR expressed her optimism: *"I believe that there will be more women founders"*, II emphasized the importance of policy changes: *"...[for] government agencies to really appreciate GAD as part of governance"*. These quotes reflect the diverse ways in which women leaders are working towards a more inclusive future in the PTSE.

Impact on Gender Equality and Women's Empowerment

The experiences of these women leaders contribute to the ongoing dialogue on gender equality in several ways:

Challenging gender stereotypes

These women are challenging existing stereotypes regarding women's suitability for leadership roles in technology. By excelling in their positions, they demonstrate that women can thrive in tech environments.

Promoting gender-responsive policies and practices

Their advocacy efforts support the implementation of gender-responsive policies and practices, driving broader structural changes within organizations and industries.

Inspiring future generations

Many women leaders are committed to mentoring young women who aspire to enter the tech field. This commitment not only inspires the next generation but also helps build a supportive network for emerging talent.

Advocating diversity in startups

The participants' work highlights the importance of an inclusive and diverse startup ecosystem. Their work demonstrates that diverse leadership can drive both innovation and inclusive growth, setting a precedent for future initiatives. The findings highlight the potential for women leaders to act as change agents in the PTSE, not only through their individual successes but also through their efforts to create more inclusive environments and mentor other women.

This study reveals a complex interplay of challenges and opportunities faced by women leaders in the PTSE. While significant obstacles persist, the narratives of these women demonstrate resilience, innovation, and a commitment to fostering a more inclusive tech ecosystem in the Philippines. These findings underscore the importance of continued research and policy initiatives to support women's leadership in the tech industry, not only as a matter of equity but also as a means to enhance innovation and economic growth in the PTSE.

CONCLUSION AND RECOMMENDATIONS

The challenges faced by women leaders in the PTSE underscore systemic barriers such as gendered expectations, resource limitations, and regional disparities. However, their successes highlight the effectiveness of adaptive strategies like mentorship, collaboration, and innovative problem-solving. By addressing these challenges through supportive policies, inclusive leadership training, and strengthened regional ecosystems, stakeholders can foster a more equitable and dynamic PTSE, empowering more women to thrive in leadership roles.

Recommendations

Based on these findings, the authors propose the following recommendations to further support and empower women leaders in the PTSE:

1. Limited funding and technical resources hinder growth for women-led startups. To address this, there is a need to increase targeted funding slots through government and private sector grants, implement mentorship and training programs focused on grant writing, financial management, and investor relations, and create localized funding initiatives in regional areas to lessen dependency on Metro Manila networks
2. Retention of skilled personnel and effective team management pose ongoing challenges. Startups should establish upskilling programs to ensure a steady talent pipeline and provide leadership training for women entrepreneurs, focusing on team dynamics and inclusive workplace practices. Additionally, introducing incentive schemes that reward employees for achieving milestones can boost motivation and loyalty.
3. Gender biases and societal expectations restrict women's leadership opportunities. To combat this, gender sensitivity training should be incorporated in entrepreneurial and corporate environments, launch advocacy campaigns to highlight achievements of women in PTSE, and partner with educational institutions to introduce STEM and leadership programs aimed at empowering young women early in their careers.
4. Develop and enforce policies that address gender bias and promote equal opportunities in hiring, promotion, and funding within the tech sector.
5. Encourage companies to adopt flexible work arrangements that support work-life balance for all employees, particularly benefiting women with caregiving responsibilities.
6. Conduct regular gender audits in tech companies and startups to track progress and identify areas for improvement in gender equality.
7. Ensuring long-term profitability and sustainability is a key challenge for women entrepreneurs. To address this, it is essential to provide targeted programs that educate women leaders on business sustainability, client retention strategies, and scalable business models.
8. Foster partnerships with bigger organizations to integrate women-led startups into supply chains, ensuring consistent revenue streams. Additionally, we can encourage innovative projects, such as PB's Project Puldia, which combine profitability with social impact to enhance long-term viability.

9. Implement targeted mentorship programs to connect aspiring women leaders with successful role models in the industry.
10. Increase investment in STEM education programs for girls and young women to build a stronger pipeline of future tech leaders.
11. Create networking platforms specifically designed to connect women in tech, facilitating knowledge sharing and collaboration.

The recommendations on policy development are directed towards government agencies and policymakers. These agencies play a crucial role in creating an inclusive startup ecosystem. The Philippine Innovation Act (PIA) and Innovative Startup Act (ISA) operate through three main departments, namely, the Department of Trade and Industry (DTI), Department of Science and Technology (DOST), and the Department Information and Communications Technology (DICT).

Government is encouraged to address these recommendations through multiple channels. The National Innovation Council updates its 10-year agenda to include inclusive policies, while the Innovation Fund and Startup Venture Fund provide financial support to entrepreneurs from various backgrounds. Government agencies should also implement programs to address barriers faced by women entrepreneurs and develop digital infrastructure that serves everyone. Additionally, there is a need to coordinate with private companies and advocacy groups to foster innovation.

Through these combined efforts, the government could help establish a startup environment that provides equal access to resources and opportunities for all entrepreneurs, regardless of gender or background.

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