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Women, Technology, and Skills Development in the Global South

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1. Introduction

The rapid advancement of technology and the transition toward digital economies have reshaped labour markets worldwide, creating new opportunities while exacerbating existing inequalities. Developing countries across Latin America and the Caribbean (LAC), Southeast Asia, South Asia, the Middle East and North Africa (MENA), and Sub-Saharan Africa (SSA) face unique and interconnected challenges in adapting to these shifts. This policy brief examines the intersections of gender (specifically pertaining to women and girls), technology, and skilling systems across these diverse regions, highlighting the structural barriers that hinder women's equitable participation in emerging digital economies and proposing actionable solutions to bridge these gaps.

Across the regions, women remain underrepresented in high-growth, high-wage sectors like information and communication technology (ICT) and science, technology, engineering, and mathematics (STEM). Deeply entrenched societal norms, limited access to education and infrastructure, and caregiving responsibilities disproportionately impact women's ability to access skilling programs and employment opportunities. Moreover, the digital divide—manifest in uneven internet penetration, affordability issues, and insufficient digital literacy—compounds these disparities, especially in rural and underserved areas.

Despite these challenges, innovative programs and policy frameworks offer valuable insights into fostering inclusion and resilience. Gender-sensitive reforms in technical and vocational education and training (TVET), targeted digital skills initiatives, and effective public-private collaborations highlight the potential for better inclusion of women and girls to drive economic growth. This brief synthesizes the lessons learned from such efforts to propose a unified, regionally adaptive strategy for enhancing women's participation in the labour force.

Drawing on both secondary and primary research, this brief integrates qualitative narratives and quantitative analyses to provide a comprehensive understanding of the gendered pathways to digital inclusion. Semi-structured interviews, focus group discussions, and data triangulation methodologies were used to uncover the systemic barriers that women face while also identifying potential solutions. By bridging regional nuances with shared challenges, this policy brief presents a roadmap for helping create more equitable labour markets that not only prepare for technological transformation but also harness the productive potential of women that constitute half the global labor force.

The policy brief is structured as follows - the next section details the methodological approaches followed by different regional partners looking at their geographical zones.

Section 3 deals with insights into labour market trends, the technology and skilling landscape, and the policy environment especially as it pertains to women, culminating in the final section on a set of forward-looking recommendations. By addressing these critical dimensions, this brief aims to guide policymakers, educators, and stakeholders toward building a future-ready workforce that drives sustainable and inclusive development across the Global South.

2. Methodologies

The methodology used to inform policies across the five regions—Latin America, Southeast Asia, South Asia, MENA, and Sub-Saharan Africa—reflects a combination of exploratory-descriptive approaches tailored to the unique economic, social, and gendered contexts of each region. Each study sought to uncover the intersection between gender, digital literacy, and skill development systems, with particular attention to barriers women face in accessing opportunities in emerging digital economies. While the overarching framework remained similar, the studies employed distinct combinations of primary and secondary research methods, with nuanced variations reflecting the specific needs and contexts of each region.

At the core of the methodologies is secondary research, which served as a foundational layer for all four regional analyses. Researchers extensively reviewed national and international datasets from credible sources such as the International Labour Organization (ILO), World Bank, and regional economic reports. This provided insights into labour market trends, the state of digital adoption, and gendered participation patterns in education and employment. Policy documents and strategies related to Technical and Vocational Education and Training (TVET), digital skills, and AI adoption were mapped and analyzed to assess their gender responsiveness and alignment with emerging economic needs. Notably, this mapping exercise highlighted disparities in the representation of women across high-demand digital sectors and their participation in education systems supporting these industries.

The studies in Latin America, Southeast Asia, South Asia and MENA extended beyond secondary research, integrating qualitative primary research to deepen the understanding of gendered experiences and challenges. In Latin America, semi-structured interviews were conducted with government officials and field experts in Argentina, Chile, and Colombia—three countries with varying TVET systems. This qualitative engagement allowed researchers to capture diverse perspectives on policy implementation and gender-specific challenges

in IT-oriented training programs. Similarly, in Southeast Asia, primary research took a broader lens, including in-depth interviews and focus group discussions with 30 female workers and eight key informants across Thailand, Vietnam, and Cambodia. The sampling in this region was carefully designed to encompass a range of occupational backgrounds, from low-skilled white-collar roles to positions requiring advanced digital expertise, ensuring a heterogenous representation of women's experiences.

The MENA study focused on three case study countries—UAE, Jordan, and Egypt—selected through a systematic process that ranked nations on gender equality, ICT development, and digital economy indicators. Here, semi-structured interviews were conducted with education and technology policymakers, allowing the study to explore the gendered nuances of national digital strategies. The research examined not only the digital skills landscape but also how gender sensitivity was integrated into existing policies and programs. Importantly, this approach revealed disparities in access to technology and highlighted strategies aimed at empowering women within MENA's evolving digital economy.

In South Asia, the study adopts a mixed-methods approach, combining secondary research and qualitative primary data collection. The region's low female labour force participation, high levels of informal employment, and pervasive digital divide provide a challenging backdrop. A qualitative lens shed light on systemic barriers, such as gender-normative roles and demand-side constraints that prevent women from accessing or advancing in labour markets, even when they possess relevant skills. A deep dive into India's labour market and skills training architecture—given its economic prominence—offers additional layers of analysis.

The Sub-Saharan Africa brief adopted a two-pronged approach that combined economic trend analysis with qualitative skills mapping across 12 countries, representing the East, West, Southern, and Northern regions of Africa. While primary data collection was limited, the analysis focused on understanding the readiness of TVET ecosystems to respond to technological changes, particularly AI-driven transformations. Special emphasis was placed on women's access to TVET education, their roles as instructors, and their employability within key economic sectors. This study uniquely highlighted the role of public-private partnerships and reforms required to bridge gender gaps in digital skills development.

Across all four studies, careful attention was given to the regional diversity and socioeconomic realities influencing women's access to and participation in skill development systems. Researchers employed purposive sampling to identify key informants and participants who could provide relevant insights, such as policymakers,

industry leaders, educators, and women engaged in various occupational roles. The interviews and focus group discussions adopted a semi-structured format, allowing for flexibility and depth, while ensuring that core research questions were addressed. Additionally, triangulating primary data with secondary sources added rigor to the findings, ensuring a robust and nuanced analysis.

While the studies share a common commitment to understanding gendered pathways to digital inclusion, the scope and depth of primary research varied. Southeast Asia researchers placed a stronger emphasis on capturing women's lived experiences through focus groups and interviews, whereas South Asia, MENA and Latin America based researchers adopted a more policy-oriented lens, engaging directly with stakeholders to assess gender responsiveness in existing strategies. Sub-Saharan Africa, by contrast, centered its inquiry on economic and skills trend analysis, providing a regional view of technological readiness and digital divides. Thus, by bridging quantitative labour market trends with qualitative narratives, the briefs provide a comprehensive understanding of the gendered challenges and opportunities emerging in digital economies worldwide.

3. Key Findings

3.1 Labour Market Trend Analysis

Labour markets across Latin America and the Caribbean (LAC), Southeast Asia, the Middle East and North Africa (MENA), Sub-Saharan Africa (SSA), and South Asia present a complex landscape influenced by gender disparities, economic structures, and the significant transformations driven by technological advancements. These regional dynamics highlight both shared challenges and distinct opportunities to cultivate more equitable labour market participation. In this section, we explore these themes across all the five regions.

3.1.1 Gender Disparities in Participation and Employment Distribution

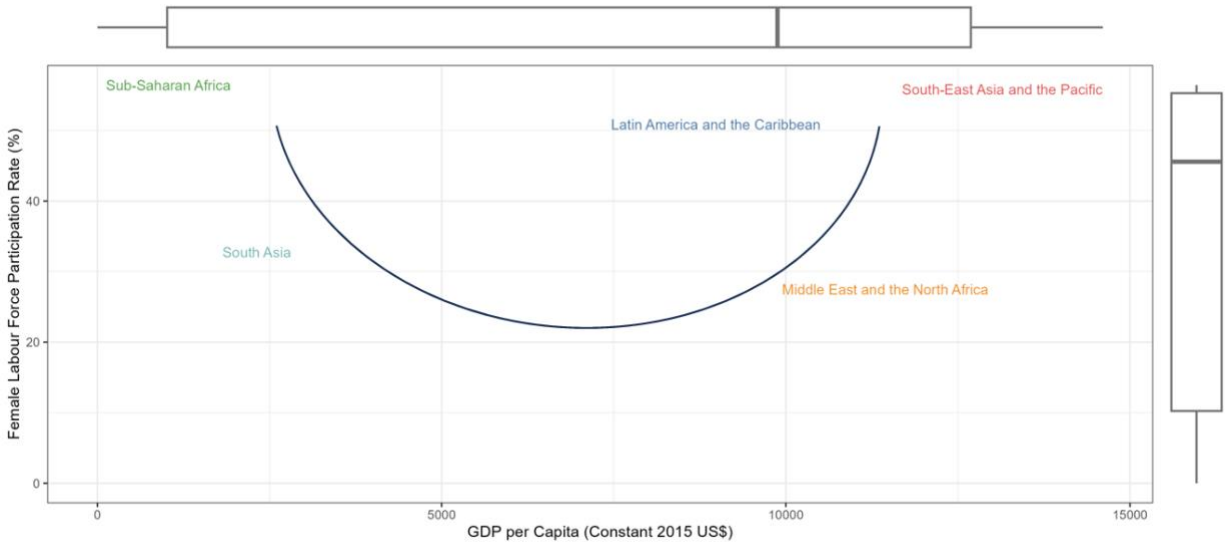
Gender disparities in labour force participation are a defining feature across all regions. In LAC, only 49% of working-age women participate in the labour force compared to 73% of men. This 24-percentage-point gap is indicative of deeply entrenched societal norms and systemic barriers, such as disproportionate caregiving responsibilities and restricted access to employment opportunities. Similarly, MENA records one of the lowest female labour force participation rates globally, at just 21%. This stark underrepresentation is compounded by an alarming 35% unemployment rate among young female graduates,

highlighting the barriers women face in entering and sustaining careers, particularly in rural areas where access to markets and social services is limited.

In SSA, while the labour force participation rate (LFPR) is relatively high at 63.1%, this regional average conceals substantial disparities. Northern Africa reports the lowest LFPR in the region at 45.7%, while Eastern Africa achieves a much higher 77.3%. Despite higher participation overall, SSA's employment landscape is dominated by the informal sector, with agriculture accounting for over half of total employment (50.7% in 2019). Women's employment in agriculture varies significantly, with Rwanda showing the highest proportion (88%) and South Africa the lowest (6.16%).

Southeast Asia displays a distinct gendered distribution of employment. Nearly 60% of women in the region work in the services sector, in stark contrast to men, who are more concentrated in industry and agriculture. In Thailand, systemic barriers to upward mobility are evident, with men occupying 61% of all managerial roles, reflecting pervasive structural inequalities. South Asia exhibits similarly low female labour force participation, with rates as low as 17% in Afghanistan. Women in the region are concentrated in agriculture and informal work. For example, over 75% of female employment in Nepal is in agriculture, while women in India largely remain within the informal economy, limiting their economic mobility and opportunities for higher-income roles.

Figure 1: U-shaped FLFPR in global south



Source - ILO WESO 2024
Note - The values are averages for the period 2012-2022

As Figure 1 shows, FLFPR trends show that there is a U-shaped curve associated with the regions of the global south. Low per capita GDP implies a greater need for labour force

participation by women, whereas higher GDP per capita could mean a greater opportunity cost associated with not being employed. South Asia and MENA are characterized by low FLFPR due to the entrenched gender norms in society as well as a skills gap.

3.1.2 Technological Transformation and Occupational Shifts

The integration of AI and automation is profoundly altering labour market dynamics across all regions, amplifying skill-based inequities and disproportionately affecting women. In LAC, women dominate occupations in clerical work and sales, both of which are increasingly at risk of automation. This trend is also reflected in Southeast Asia, where low-skilled white-collar roles, often filled by women, face significant displacement risks. Conversely, men in both regions are better positioned to benefit from advancements in technology, as they dominate high-growth sectors such as ICT and engineering.

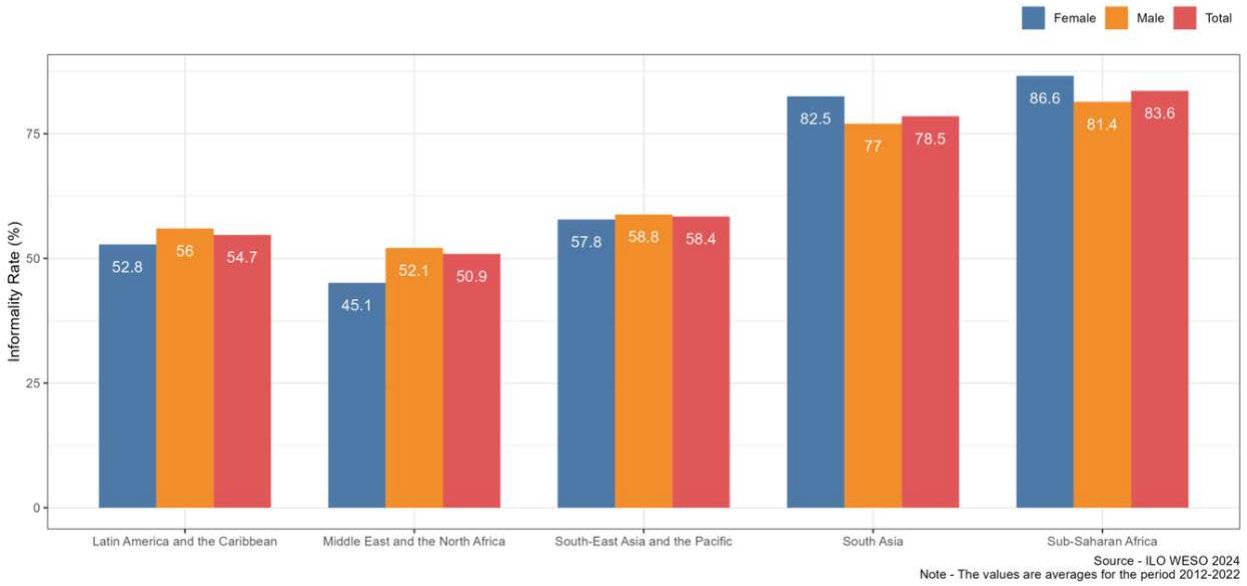
In SSA, technological advancements in mobile technology and internet access are reshaping labour markets. Between 2005 and 2019, Ghana and Côte d'Ivoire saw an impressive 41.3 percent and 35.8 percent increase respectively in internet users. However, limited access to digital infrastructure—with internet penetration across the region at just 30%—and a skills mismatch present significant challenges. Similarly, MENA's digital economy accounts for only 4% of GDP, far below the global average of 22%. This reflects the region's untapped potential, as large, well-educated youth populations remain underutilized due to barriers to labour market entry and skill gaps.

South Asia, despite its youthful workforce, faces similar challenges. AI and automation threaten middle-skill jobs, particularly in clerical and repetitive tasks. Where women are in formal jobs, they tend to be situated in these occupations and task profiles. The lack of digital literacy and specialized training compounds the region's inability to adapt to these changes. Across these regions, the need to reskill and upskill workers is urgent to mitigate displacement and harness the opportunities presented by technological progress.

A critical challenge shared across regions is the underrepresentation of women in high-growth, high-wage sectors such as STEM and ICT. In LAC, only 2.2% of women are employed in science and technology fields, compared to 4% in high-income countries. This gap underscores the historical biases in educational and occupational pathways, which limit women's access to these sectors. MENA and SSA exhibit similar trends, with women's employment in technology and STEM remaining alarmingly low. Southeast Asia also struggles with this imbalance, as women in the region are largely absent from managerial and technological roles despite higher participation in services. South Asia's gender disparity is particularly pronounced. In India, systemic norms and limited access to

education confine women to lower-wage, informal roles. Approximately 30 percent of entry level roles in technology companies are occupied by women and this percentage decreases drastically at higher levels within the company. In Afghanistan, restrictions on women's education since 2021 have further curtailed their prospects in labour markets. These systemic barriers not only hinder individual career progression but also limit economic resilience and innovation potential at the regional level. As Figure 2 shows, there is a high level of informality in female employment in South Asia and SSA, compared to the other three regions, making women's work in these two regions even more precarious.

Figure 2: Gender wise percentage of informal labour in all the five regions



3.1.3 Regional Implications and Opportunities

The labour market trends across these regions highlight both shared challenges and region-specific nuances. While SSA and Southeast Asia demonstrate relatively higher female labour force participation rates, the informal and lower-wage nature of employment restricts women's economic mobility. Conversely, LAC and MENA exhibit lower participation rates but share the challenge of gender-based occupational segregation and technology-driven displacement risks. South Asia, with its vast demographic dividend, has the potential to harness its youthful workforce, provided systemic barriers are addressed.

Addressing these disparities will require targeted interventions that account for the unique contexts of each region. Policies aimed at fostering inclusive labour markets, investing in digital and technical education, and breaking down systemic barriers to women's participation in high-growth sectors are essential. By aligning regional strengths with

tailored strategies, these regions can create more equitable and resilient labour markets that empower women and drive sustainable economic growth.

3.2 Technology and Skilling Landscape

The technological and skilling ecosystems across Latin America, Southeast Asia, the Middle East and North Africa (MENA), Sub-Saharan Africa (SSA), and South Asia reveal common challenges and opportunities shaped by regional contexts. Insights into Technical and Vocational Education and Training (TVET) systems, digital skill gaps, and barriers to participation highlight systemic disparities that hinder inclusive growth, particularly for women. By analyzing these trends through shared themes, it becomes evident how regional and country-specific nuances contribute to global skilling challenges.

3.2.1 Technical and Vocational Education Training (TVET) Systems: Structure and Challenges

TVET systems are pivotal in equipping individuals with the skills necessary to meet market demands, yet they are often fraught with structural inefficiencies and gender imbalances. Moreover, attempts at measuring TVET across countries tend to be limited to formal state mechanisms that do not fully capture the scale of non-government or informal training mechanisms that are key in the provision of training to more vulnerable populations.

In Latin America, TVET systems operate at secondary, higher technical, and professional levels, with governance structures ranging from Argentina's centralized INET to Colombia's decentralized SENA. Similar systems are observed in South Asia, where India's National Skill Development Corporation (NSDC) aims to train millions, though inefficiencies limit progress, with the flagship scheme, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), only being able to train 3% of the targeted 400 million youth population by 2023. In SSA, challenges include high student-to-teacher ratios, as seen in South Africa's public TVET institutions, which average 66.6 students per teacher, compared to private institutions with a more manageable 16.9.

Gender inequities are pervasive across TVET systems. In Southeast Asia, traditional gender norms channel boys into vocational tracks while girls favor arts and social sciences, a pattern mirrored in other regions like MENA and South Asia. For instance, female enrollment in secondary vocational education in UAE remains below 36.9%, and in Bangladesh, women's participation in TVET programs remains limited despite robust frameworks. These patterns reflect a broader failure to align TVET curricula with women's needs, compounded by a historical focus on male-dominated industries.

3.2.2 Digital Skill Gaps and Emerging Technologies

The rise of AI and digital technologies underscores a critical need for advanced technical skills, yet gaps persist globally. Across regions, foundational skill deficiencies—such as basic digital literacy and cognitive abilities—disproportionately affect women. For example, in Southeast Asia, women often lack access to foundational skills like English proficiency, further hindering their adaptability to technological shifts. In MENA, advanced technical skills are scarce, with only 3% of Emirati women enrolled in ICT-related fields, reflecting underrepresentation seen across Egypt and Jordan as well.

While digital adoption varies, some regions show notable advancements. In SSA, Nigeria's internet penetration increased from 1.72% in 2005 to 31.9% in 2019, highlighting progress but also revealing gaps, as regional internet penetration remains at just 30%. By comparison, South Asia faces a staggering gender gap in mobile internet adoption, with a 31% disparity compared to the low- and middle-income country average of 15% (Mobile Gender Gap Report 2024). Latin America's ICT-focused TVET programs, despite their potential, suffer from low female participation, like in Chile where only 24% of women enrolled in secondary technical education.

3.2.3 Barriers to Women's Participation

Systemic barriers to women's participation in skilling programs cut across all regions. Cultural norms, caregiving responsibilities, and limited access to digital infrastructure are recurring challenges. In Sub-Saharan Africa, these issues are compounded by a reliance on non-formal apprenticeships that lack formal recognition, limiting women's career progression. Similarly, in South Asia, societal expectations restrict women's access to skilling initiatives, particularly in rural areas, while recent restrictions in Afghanistan have severely curtailed women's participation in TVET programs.

In Latin America, informal training fails to address women's specific needs effectively, leaving gaps in advanced skill acquisition. Southeast Asia's grassroots initiatives, such as Thailand's STEAM4Innovator program, attempt to foster inclusivity but frequently fall short of reaching underserved communities, highlighting a common limitation across regions.

Argentina

In Argentina, the world of technology offers both promise and challenge for women seeking to carve out a career in the growing IT sector. Among the 38 women interviewed for this study, aged between 18 and 66, many came from households with no history of higher education, their journeys reflecting powerful stories of social mobility. These women, hailing from cities like Buenos Aires, Córdoba, and Chaco, have fought to gain a foothold in a field where gender still shapes opportunities. With women making up just 33% of IT employees in Argentina, the sector remains dominated by men, perpetuating inequalities through horizontal segregation, which confines women to roles like design and testing, and vertical segregation, which limits their access to leadership positions.

The journey into IT is often fraught with hurdles. Many women spoke of moments of self-doubt and exclusion during their training, compounded by low representation in technical education. Fewer than 30% of students in IT-focused secondary or non-university courses are women. Even within the workplace, they often find themselves overqualified for roles compared to male colleagues. Despite these barriers, the IT sector offers transformative opportunities. Flexible work arrangements, remote jobs, and competitive salaries have drawn women into roles that were once out of reach. For some, national programs like "Codo a Codo" and "Argentina Programs" have become lifelines, providing free public training to boost their skills and confidence. Mentorship and gender-focused policies, such as quotas, have also played a pivotal role in encouraging women to step into technical roles.

The stories shared by these women reveal resilience and growth. Some pursued IT to complement existing skills, while others made bold career shifts into the sector. Many credited their success to flexible and accessible training pathways, which allowed them to balance education with their personal and professional lives. Yet, they also highlighted the need for stronger industry connections to bridge the gap between learning and employment. For these women, the IT sector is not just about career progression—it is about reclaiming agency in a field where their presence is still a work in progress.

3.2.4 Promising Initiatives and Comparative Insights

Despite these challenges, promising initiatives demonstrate potential pathways to bridge skill gaps. In MENA, the UAE's Advanced Skills Strategy emphasizes lifelong learning and AI skill development, a comprehensive approach mirrored by Jordan's National Digital Transformation Strategy. These top-down strategies contrast with Southeast Asia's efforts

in the form of Vietnam's AI training center, which focus on building technical skills among youth but lack broader scalability.

In South Asia, private-sector initiatives such as Bangladesh's FutureNation by UNDP and GrameenPhone, with a target to create economic opportunities for 1 million women and youth by equipping the beneficiaries with technical skills, showcasing the importance of public-private collaborations. This contrasts with SSA, where formal recognition of non-formal training remains a significant gap despite efforts like Kenya's Technical and Vocational Education and Training Act. Latin America's relatively higher representation of women in professional training programs, such as Argentina's 48% female ICT enrollment, offers lessons for regions struggling with inclusion in advanced technical fields.

By examining the shared challenges and successes across regions, it becomes clear that addressing systemic barriers requires localized yet scalable solutions. TVET systems must prioritize gender-sensitive curricula and align training with market demands, while governments and private-sector players must collaborate to expand digital infrastructure and ensure accessibility for women. Highlighting best practices, such as the UAE's strategic reforms and Southeast Asia's grassroots innovation, can inform tailored interventions that address regional disparities while fostering inclusive and sustainable growth in the global digital economy.

3.3 Gender Policy Landscape for Skilling and Employment

The gender policy landscape for skilling and employment across Latin America, Southeast Asia, the Middle East and North Africa (MENA), Sub-Saharan Africa (SSA), and South Asia reveals complex challenges and innovative region-specific initiatives. Despite progress in policy frameworks, barriers such as entrenched societal norms, insufficient infrastructure, and gaps in implementation persist. A comparative analysis demonstrates how regional policies target gender disparities in skilling and employment, with varying levels of success and innovation.

3.3.1 Gender-Sensitive Policies: Frameworks and Implementation Challenges

Governments globally recognize the need for gender-sensitive policies to address labour market disparities, yet their success often hinges on effective implementation. Latin America has been proactive in institutionalizing gender equity through legislative measures like Argentina's Comprehensive Sex Education Law and the Micaela Law, which mandate gender training for public officials. Similarly, in MENA's UAE, the Gender Balance Council aims to reduce employment disparities, while in South Asia, India's National Education

Policy 2020 emphasizes integrating vocational education with mainstream school education enhancing access for women. In Southeast Asia, Cambodian government took an admirable step through the Technovation 2023 initiative, a women-only training program for developing entrepreneurs and leaders for digital technology sector.

Despite these frameworks, cultural and infrastructural barriers impede progress. For example, in SSA, gender-based violence and societal norms deter women from participating in technical fields, while limited access to childcare and safe learning environments restricts opportunities in regions like UAE and Pakistan. Across MENA, vocational training programs lack gender sensitivity, with enrollment rates for women in Jordan remaining below 40%, reflecting similar trends in Sub-Saharan Africa and Southeast Asia. This highlights a common gap between policy aspirations and practical implementation.

3.3.2 Promoting Inclusive Skilling and Employment: Public-Private Partnerships

Public-private collaborations emerge as crucial drivers of inclusive skilling initiatives across regions. In Colombia, partnerships like SheWorks and Tigo facilitate ICT-focused training tailored for women, fostering their inclusion in emerging technology sectors. Southeast Asia's Vietnam showcases similar efforts through Accelerate Vietnam Digital 4.0, targeting underrepresented groups in small and medium enterprises. In contrast, SSA's reliance on informal training through trade associations and apprenticeships often lacks formal recognition, undermining women's career progression.

Bangladesh exemplifies effective public-private synergy with programs like GrameenPhone's FutureNation, which equips marginalized women with technical skills. However, such initiatives are sparse in regions like MENA and Southeast Asia, where grassroots efforts focus on localized solutions without much scope for scalability. By contrast, solutions in MENA like the Advanced Skills Strategy integrates lifelong learning and AI skill development within national strategies, demonstrating the potential of aligning private sector expertise with government frameworks.

3.3.3 Addressing Structural Barriers: A Comparative Perspective

Across regions, structural barriers such as caregiving responsibilities, societal expectations, and limited digital access hinder women's equitable participation in skilling and employment. Latin America's "#EducationwithGenderEquality" initiative in Chile addresses these issues by promoting inclusive vocational pathways and combating gender-based

violence in educational settings. Similarly, South Africa's National Skills Development Strategy emphasizes inclusive skilling to enhance women's participation in STEM fields, mirroring efforts in Egypt's ICT Sustainable Development Strategy to integrate women into the digital economy.

MENA's progress is marked by investments in digital infrastructure, such as Egypt's "Digital Egypt" program targeting marginalized groups. However, gender biases in training curricula and lack of safe environments persist across regions. In South Asia, Afghanistan's Education Law previously guaranteed equal access to education before restrictions in 2021 reversed progress. In contract, programs like Digital India aim to enhance women's access to technology and skills. These variations highlight the importance of context-specific interventions to dismantle structural barriers.

Several regions demonstrate innovative approaches to gender-sensitive policies. In MENA, Jordan's Vocational and Technical Skills Development Law emphasizes gender-sensitive training, while Chile's "AllWomenConnected" program fosters digital literacy among women. Southeast Asia's grassroots programs, such as Cambodia's vocational training initiatives in ICT and agriculture, offer localized solutions but require greater scalability. Meanwhile, SSA's Kenya has enacted the Technical and Vocational Education and Training Act to integrate gender equity into TVET systems, though implementation gaps remain.

Latin America's relatively advanced public-private partnerships, like Argentina's "Voces de la ETP" (TVET Voices) initiative and "TIC TAC hora de innovar" (TIC TAC time to innovate) program, provide valuable lessons for other regions. These efforts demonstrate how tailored mentorship, and targeted campaigns can inspire young women to pursue technology-focused careers. South Asia, with its vast demographic potential, highlights the need for systemic reforms to align national policies with grassroots implementation, ensuring marginalized groups are included in skilling ecosystems.

effectiveness of existing frameworks. Regions like the UAE and Chile exemplify strategic reforms, while grassroots innovations in Southeast Asia and SSA highlight the potential for community-driven change. By learning from these diverse approaches, regions can bridge gender gaps and create equitable pathways for women in the global labour market.

4. Way Forward

Addressing challenges in skilling and employment requires a comprehensive and unified strategy that incorporates lessons across the Global South region. Despite regional differences, shared priorities emerge around enhancing TVET systems, fostering public-private collaborations, and ensuring inclusivity in training programs.

Strengthening Education and Training Systems

Reforming education systems, particularly TVET, is critical to aligning training with labour market demands. Across regions, integrating digital literacy, practical skills, and gender-sensitive curricula can address systemic barriers. For instance, Latin America emphasizes embedding gender perspectives into TVET programs, while MENA's focus on STEM education for women through advanced skills strategies reflects similar goals.

Flexible training formats, including hybrid models combining online and offline learning, are pivotal to accommodating diverse needs such as caregiving responsibilities. Southeast Asia and SSA have embraced hybrid systems to expand access, showcasing how adaptable formats can address regional challenges. Micro-credentialing, offering modular and stackable courses, is another emerging solution to meet evolving skill demands while ensuring lifelong learning opportunities.

Enhancing Opportunities Through Financial and Social Support

Ensuring equitable access to skilling programs requires targeted financial and social support mechanisms. Scholarships and stipends, as seen in South Asia's Digital India initiative, play a crucial role in reducing barriers to entry for women and marginalized groups. SSA's emphasis on financial incentives also underscores the importance of addressing economic constraints to improve participation rates.

Infrastructure support, such as providing childcare facilities and co-working spaces, is another critical enabler of participation. Latin America's exploration of childcare-integrated skilling programs highlights a scalable model that can be adopted across other regions. In

addition, mentorship programs and role models are essential for breaking stereotypes and encouraging participation in high-growth fields like STEM and ICT. Regional examples such as Colombia's mentorship initiatives and Southeast Asia's community-focused programs demonstrate the value of guidance and support networks.

Promoting Public-Private Collaboration

Public-private partnerships are indispensable for scaling impactful skilling initiatives and addressing infrastructure gaps. Collaboration between governments and private sector actors can pool resources and expertise to create sustainable pathways for skilling. Latin America's partnerships in STEM and ICT training, Southeast Asia's Accelerate Vietnam Digital 4.0 initiative, and public-private collaborations in South Asia's National Skill Development Corporation (NSDC) showcase how diverse regions leverage such synergies.

In regions with limited infrastructure, private sector contributions are particularly critical. MENA's integration of private expertise into national strategies, such as the UAE's Advanced Skills Strategy, offers a replicable model for aligning industry needs with skilling frameworks. In SSA, partnerships between TVET institutions and industry demonstrate potential for enhancing the relevance and scalability of skilling programs.

Expanding Digital Access and Infrastructure

Digital inclusion is a cornerstone of any successful skilling strategy. Regions like SSA and South Asia face significant challenges in bridging the digital divide, particularly in rural and underserved areas. Programs such as Egypt's "Digital Egypt" and SSA's rural connectivity investments illustrate efforts to improve digital infrastructure, though more focused outreach is required to ensure equitable access. Affordable digital devices and internet services must be prioritized to close existing gaps. Southeast Asia's localized digital training centers in Vietnam exemplify region-specific solutions that can be scaled to address widespread disparities. These efforts align with global priorities for fostering inclusive digital economies.

Effective monitoring and evaluation frameworks are essential to assess and refine initiatives. Gender-disaggregated data collection, as emphasized in MENA and Latin America, enables policymakers to track progress and ensure accountability. Investing in research to understand evolving skill demands is crucial across all regions, with South Asia's focus on integrating data-driven insights serving as a key example.

5. Conclusion

As these cases from around the global south point, a multi-faceted and regionally adaptive approach is key to addressing systemic barriers in skilling and employment. By reforming education systems, enhancing financial and infrastructural support, promoting public-private collaborations, and deploying data-driven insights, countries can bridge skill gaps and prepare for the challenges of a rapidly evolving global economy. Drawing on best practices and innovative solutions from Latin America, Southeast Asia, MENA, SSA, and South Asia can ensure a cohesive and sustainable pathway toward equitable and inclusive development.