

# Women's Work and AI

## Unlocking Potential, Bridging the Divide



**Authors:** Sharati Roy | Dr. Mahima Taneja

Policy Brief | December 2025

## About IWWAGE

The Institute for What Works to Advance Gender Equality (IWWAGE) was established in 2018 with an aim to build and deepen evidence around the low participation of women in the economy to find solutions to support the development of gender inclusive policies and programmes.

## About GxD hub

The Gender x Digital hub (GxD hub) is a cross-disciplinary platform dedicated to advancing meaningful digital connectivity among women and girls in India.

*IWWAGE and GxD hub are initiatives of LEAD at Krea University (IFMR). LEAD at Krea University is an action-oriented research centre housed at the Institute for Financial Management and Research (IFMR), a not-for-profit society which is also the Sponsoring Body of Krea University.*

## About the Future of Work Series

Various factors are changing the employment landscape, from skilling demands and sector-specific job creation to fertility rates and women's health. And while more women are gradually entering the workforce, their workplace experiences are far from on par with those of men. In their Report "Women in the Workplace 2024", McKinsey & Co. estimates that globally it will take nearly 50 years for women to achieve parity. Achieving gender equality is hindered by social dimensions that shape women's experiences in the workplace. Imminence lies in creating a workplace experience that is inclusive and equitable for everyone. Against this backdrop, what strategies can keep women in India's workforce as we confront a constantly evolving future of work? IWWAGE's Future of Work series seeks to answer this question through roundtable consultations and secondary research focusing on emerging sectors. The series highlights gender-responsive principles in various thematic areas to enable and enhance women's workforce participation.

# Acknowledgements

This brief emerges from secondary research and a roundtable stakeholder discussion held on September 22, 2025.

We extend our sincere gratitude to Ms. Sharon Buteau, Executive Director, LEAD at Krea University and Ms. Yashita Jhurani, Associate Director - Strategy and Partnerships, GxD hub, LEAD at Krea University for their thoughtful moderation of the roundtable discussion and for their role in shaping the direction of this policy brief. We would also like to thank Ms. Radha Chellapa, Former Executive Director, IWWAGE, and Dr. Sona Mitra, Advisor, IWWAGE, for their steadfast guidance.

Our heartfelt thanks to Ms. Anjora Sarangi, Consultant, and Ms. Vaidehi Sahasrabhojanee, Policy Associate, GxD hub, LEAD at Krea University for their key insights that shaped this brief. We also appreciate Ms. Sruthi Kutty, Senior Policy Manager, IWWAGE, for her incisive analytical inputs and sustained intellectual engagement in shaping the conceptual framework of the roundtable and framing of the brief.

Many thanks to Mr. Pariat Singh for administrative support. The editorial and design team included Ms. Rachita Malik, Head - Communication and External Engagement, IWWAGE; Ms. Diksha Singh, Associate Director – Communications and Outreach, LEAD at Krea University, and Mr. Sakthivel Arumugam, Manager - Creative Design, Learning & Communications, LEAD at Krea University.

©Copyright @ 2025 Institute for What Works to Advance Gender Equality (IWWAGE), an initiative of LEAD at Krea University.

This document is not a priced publication and can be used or cited, with due credit and proper acknowledgement to the authors and the source. For further information, please write to [communications-iwwage@ifmr.ac.in](mailto:communications-iwwage@ifmr.ac.in)

# Contents

## About IWWAGE

## About the Future of Work Series

## Acknowledgements

## 01 Section 1: Introduction

### Context and India's AI Policy Environment

---

05

## 02 Section 2: Women in AI and Data Value Chain work (Digitally-Embedded Livelihoods)

---

08

## 03 Section 3: AI-augmented Work

---

10

## 04 Section 4: Way Forward in Making AI Work for Women

### 4.1 Strengthen Women's Participation in the AI Data Value Chain

### 4.2 Enable AI-Augmented Livelihoods in Agriculture, Health, and MSMEs by gender-intentional design and closing the foundational gender digital gap

### 4.3 Strengthen Governance, Safeguards, and Research

---

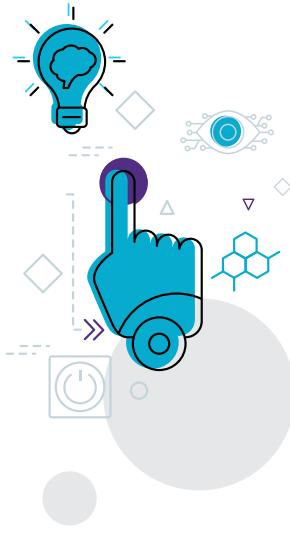
13

## 05 Annexures

---

16

# 1. Introduction



Artificial Intelligence (AI), like other digital technologies, is not neutral in its design, adoption, or use. It reshapes labour markets and societies, with its greatest gains emerging when AI complements rather than replaces human skills (ILO, 2025).<sup>1</sup> The integration of AI across sectors such as healthcare, finance, and education offers significant benefits, including improved efficiency and enhanced decision-making, but also raises concerns about job displacement and deepening inequalities. Its impact will depend on whether AI leads to automation, partially or fully replacing workers, or augmentation, bringing in efficiency or increasing productivity in existing work models. In either case, the way AI tools are designed, deployed, and scaled can deepen structural inequities or systematically address them. This duality is particularly urgent and complex in India, where a robust Digital Public Infrastructure (DPI) stack is developing alongside the rapid expansion of data and the gig economy. Adopting a forward-looking approach, this brief explores both digitally-embedded work opportunities in the AI/data value chain and AI-augmented livelihoods, focusing on opportunities for women's participation and economic empowerment in the digital ecosystem.

## Key Terms

**AI-augmented livelihoods:** Livelihood models where AI tools/platforms are used to access or exchange traditional work or bring in efficiency. AI tools are not essential to how work is organised or how tasks are carried out; they only augment the process of work. e.g., frontline workers or farmers using AI-based apps to access information.

**Digitally-embedded work:** Work models fully integrated and performed in digital environments, where both processes and outputs are digital. A significant category of digitally-embedded work involves microtasks performed in the AI/ML chains (i.e. humans training AI models) and in the production and processing of data value chains.

**AI Data Value Chain (DVC):** It organises how raw digital inputs are collected (through various connected devices, platforms, sensors), cleaned, labelled, curated, and transformed into insights for AI and analytics (Curry, 2016). At each stage of the DVC (generate → collect → process → analyse → use/monetise), human interface or intervention is required.

**Source:** [Genderx Digital Hub. 2025. Decoded: Insights on Women and the Future of Digital Work in India. LEAD at Krea University](#)

<sup>1</sup> Gmyrek, P. (2025, September 29). [Generative AI at work: What it means for jobs in Europe and beyond. International Labour Organization](#)

## Context and India's AI Policy Environment

India's economy has been digitalising at a remarkable pace, emerging as the third-largest digitalised country globally and 12th among G20 nations in user-level digitalisation. The State of India's Digital Economy Report 2024 projects that the digital economy will grow nearly twice as fast as the overall economy, contributing about one-fifth of national income by 2029–30 and reshaping patterns of work and employment across sectors.<sup>2</sup> India presents a stark contrast, as the world's second-largest network of internet and smartphone users coexists with over 40 per cent of non-internet users and more than half the population without smartphones.<sup>3</sup> While rural internet and smartphone adoption are accelerating, disparities in broadband access and digital aptitude remain substantial.

**Within this landscape, India's digital economy - projected to reach \$1 trillion by 2029 - is being shaped by foundational DPIs such as Unified Payments Interface (UPI), Aadhaar, Ayushman Bharat Digital Mission (ABDM), Open Network for Digital Commerce (ONDC), and DigiLocker as a cornerstone for democratising digital access and enabling new forms of work.**

AI is further transforming India's workforce and economy. According to a Randstad Report<sup>4</sup>, seven in ten employees used AI tools at work in 2024, a jump from five in ten the previous year, driving productivity and new forms of work across sectors. Small and medium businesses (SMBs) are embracing AI, with 90 per cent of adopters saying AI is making their operations more efficient.<sup>5</sup> Indian SMBs are either using or experimenting with automated service chatbots, marketing campaign optimisation, and content generation as their top three use cases.

AI-based automation and augmentation can thus enhance efficiency and can also provide new modes of outreach, such as adaptive learning modules and health data management tools. However, recent evidence from Harvard Business School (2025) suggests that the gender gap in AI tool usage is nearly universal across all regions, sectors, and occupations. Women are 20 per cent less likely to engage with new tools such as OpenAI's ChatGPT and Anthropic's Claude. In Kenya, even with equalised access to these generative technologies, the gender gap persists.<sup>6</sup> Multinational firms such as Ernst & Young (EY) and ITU Development Sector have undertaken a two-year programme to skill girls and women in the latest and emerging technologies for AI. These in-person trainings are being piloted in 12 countries across the globe, with India being one of the first cohorts.<sup>7</sup>

Thus, unless the gender digital divide is bridged by solving barriers of shared device access, unstable connectivity, lack of advanced digital skills, and poor digital trust and safety, the AI transition may deepen existing inequalities. Even among those women with nominal access to devices, gaps in digital skills and meaningful productive use of technology persist. In rural India, according to the National Sample Survey 2025 CMS-Telecom survey<sup>8</sup>, a large proportion of young women (aged 15–29) lack basic digital fluency: many are unable to send/receive e-mail, attach documents, use copy-paste, perform online banking, or create presentations. Women's online activity tends to be more passive and entertainment-oriented, while their engagement in productive, income-generating, or civic digital tasks (e-governance, digital payments, job-related platforms) remains significantly lower than men's.<sup>9</sup> For instance, a study of 120 library professionals in Karnataka found a clear gender gap in AI awareness and adoption, with women significantly less likely than men to use AI tools.<sup>10</sup> Moreover, women remain underrepresented in AI/ML education and workforce pipelines in India, limiting their ability to shape or benefit from AI-driven growth. Ensuring that women are not merely passive users but active participants in shaping India's digital and AI future remains key to inclusive growth.

<sup>2</sup> Ministry of Electronics & IT. (2025). [Future Ready: India's Digital Economy to Contribute One-Fifth of National Income by 2029-30](#).

<sup>3</sup> Deepak, M., Mansi, K., Aarti, R., Krithika, R., and Mayank, M. (2024). State of India's Digital Economy (SIDE) Report, 2024. Delhi: IPCIDE, Indian Council for Research on International Economic Relations (ICRIER)

<sup>4</sup> Randstad. (2024, November). [Understanding talent scarcity: AI & equity](#).

<sup>5</sup> Salesforce. (n.d.). [Small & Medium Business Trends Report — resource center](#).

<sup>6</sup> Otis, Nicholas G., Solène Delecourt, Katelynn Cranney, and Rembrand Koning. "Global Evidence on Gender Gaps and Generative AI." Harvard Business School Working Paper, No. 25-023, October 2024. (Revised August 2025.)

<sup>7</sup> International Telecommunication Union. (n.d.). [AI Skills Accelerator for Girls](#).

<sup>8</sup> Ministry of Statistics & Programme Implementation. (2025). Comprehensive Modular Survey: Telecom (CMS-Telecom), 2025 (NSS 80th Round, January–March 2025). National Statistical Office, Government of India.

<sup>9</sup> Thomas, S. (2025, September 16). [Digital dreams, gendered realities: Women in digital India](#). Centre for Economic Data and Analysis (CEDA), Ashoka University. Retrieved from

<sup>10</sup> D'Souza, F. (2024, July 10). [Awareness and Adoption of AI Technologies in the Libraries of Karnataka](#). arXiv.

## AI Policy Landscape

The Government of India's AI Mission, with a budget of INR 10,000 crore, signals the growing potential of economic gains underpinned by the integration of AI into critical DPI. Within this ecosystem, multiple institutions are expanding access to AI-related skilling. The Ministry of Skill Development and Entrepreneurship (MSDE) and Microsoft have launched 'AI Careers for Women', an industry-aligned skilling initiative to be piloted across women's colleges across six states in the country.<sup>11</sup> Nationally, accelerated AI integration could contribute an estimated USD 500–600 billion to India's GDP by 2035, with financial services and manufacturing expected to capture 20–25 per cent of sectoral GDP through AI-enabled efficiencies. The Government of India's INR 10,000 crore IndiaAI Mission underpins this transformation through strategic investments in computing infrastructure, innovation centres, India-specific datasets, and AI education. A strong inclusion agenda ensures that technological progress translates into equitable opportunity; initiatives such as BHASHINI, BharatGen, and Sarvam 1-1 are developing Indic language AI for digital accessibility, while literacy and skilling programs like Yashoda AI and AI Kiran are creating pathways for women's empowerment in the digital economy.

This dedicated effort is further reinforced by comprehensive national skilling initiatives by the National Institute of Electronics and Information Technology (NIELIT) covering domains such as AI,

blockchain, cloud computing, cybersecurity, and electronics, and partnerships such as FutureSkills Prime (a NASSCOM partnership)<sup>12</sup> and the Skill India Digital Hub (SIDH).<sup>13</sup> Complementing these efforts, state governments in Gujarat, Maharashtra, Karnataka and others, alongside partnerships with global technology leaders such as NVIDIA and Microsoft, are building local AI ecosystems that foster innovation, research, and inclusive growth. For instance, Jharkhand's initiative to train 52,300 Scheduled Caste/Scheduled Tribe (SC/ST) and Economically Weaker Section (EWS) women in AI skills shows how targeted interventions can broaden participation. However, many women remain situated at the foundational skilling level. Clearer bridges from basic digital literacy to advanced, AI-relevant competencies would enable more women to benefit from India's expanding AI-driven economy.

**India thus stands at a critical crossroad where innovation must be inclusive. The nation's approach to AI should ensure it benefits everyone, especially women and marginalised communities. AI is undoubtedly a tour de force, and by investing in skills and tools that promote broad participation, India can move beyond narrow adoption to build an equitable, more resilient digital economy. This is a pivotal moment to shape AI as a force for social good.**



<sup>11</sup> Press Information Bureau. (2025, April 22). [MSDE and Microsoft launch 'AI Careers for Women' by establishing 30 Centres of Excellence in women colleges across six states. Government of India.](#)

<sup>12</sup> FutureSkills Prime. (n.d.). [FutureSkills Prime: India's Technology Skilling Hub.](#)

<sup>13</sup> [Skill India Digital. \(n.d.\). Home.](#)

## 2. Women in AI and Data Value Chain work (Digitally-Embedded Livelihoods)

India's AI market is poised for rapid growth, with projections indicating an expansion from its current size to approximately US \$17 billion by 2027.<sup>14</sup> This surge is expected to drive significant demand for skilled AI professionals. A vast amount of human labour underpins the development of AI systems like ChatGPT, Gemini, and DALL-E, which rely on human-in-the-loop (HITL) processes involving data annotation, labelling, and validation. Data workers such as curators, content moderators, and feedback providers ensure the accuracy and safety of AI models by refining the raw data that trains them.

The rise of AI and automation has thus fuelled a parallel data-labelling and microwork industry in which India is emerging as one of the world's largest data-labelling markets, **projected to exceed \$7 billion and employ nearly one million people by 2030.** These developments are creating new, remote, and low-barrier livelihood opportunities for job seekers, particularly women, in rural areas and Tier 2/3 towns. Language tools like Bhashini further expand this reach by opening up regional data tasks.<sup>15</sup> Data workers are essential to the functionality and reliability of these systems.<sup>16</sup> While the United States is protective of its AI infrastructure and data centres, it adopts a laissez-faire approach to data annotation — many European and American firms outsource work through digital labour platforms and business process outsourcing companies in the Global South.<sup>17</sup> The gig economy for this AI/data microwork in the Global South has expanded rapidly, driven by affordable labour and

digital access, creating flexible work opportunities, particularly for women. Data enrichment tasks such as annotation and labelling now form a key part of this economy.<sup>18</sup> BBC India (2025)<sup>19</sup> reports small towns across India are emerging as hubs for AI-related work, including dataset creation and transcription services. This surge has resulted in **80 per cent of data annotators now being concentrated in non-metro cities.**<sup>20</sup> For instance, Desicrew, a Chennai-based firm operating in rural Tamil Nadu, employs a 70 per cent women workforce, highlighting the potential of **AI-linked digital work to empower women. In other AI-based BPOs, women account for 40–50 per cent of entry-level roles** and are twice as likely to engage in remote digital work compared to similar in-office roles. However, **participation declines in higher-skilled and managerial positions due to limited career pathways and high attrition rates.**<sup>21</sup> Echoing this precarity, Mushro's 2025 exploratory study on the gendered landscape of data annotation work in Latin America focuses on the “triple burden” borne by women: unpaid care responsibilities, economic instability, and the unpredictable nature of gig work.<sup>22</sup> The study reveals that women are often compelled into annotation work due to caregiving responsibilities and financial struggles. Despite being an indispensable resource within the AI supply chain, **women workers face low wages, inconsistent access to tasks, and limited opportunities for higher-skilled work**, reflecting deep labour market segmentation and monopoly conditions.

<sup>14</sup> Gupta, R., Chawla, S., Jain, S., Selarka, T., Gupta, S., Ghosh, A., & Jain, N. (2024, February 21). AI Powered Tech Services: A Roadmap for Future Ready Firms. BCG & NASSCOM.

<sup>15</sup> Gender x Digital hub (GxD hub). (2025, November). [Decoded: Women and the Future of Digital Work in India.](#)

<sup>16</sup> Arya, N. (2025, September 11). [India's data workers: The human labour making machines learn. Ideas for India.](#)

<sup>17</sup> Wu, T. (2025). [Analysing artificial intelligence data annotation in China and the West: The political economy of AI data-labour. Big Data & Society. Advance online publication.](#)

<sup>18</sup> Aapti Institute. (2025, April 26). [The humans behind AI: Co-creating best practices for data workers' well-being.](#)

<sup>19</sup> BBC News. (2025, December 8). [Why AI is being trained in rural India.](#)

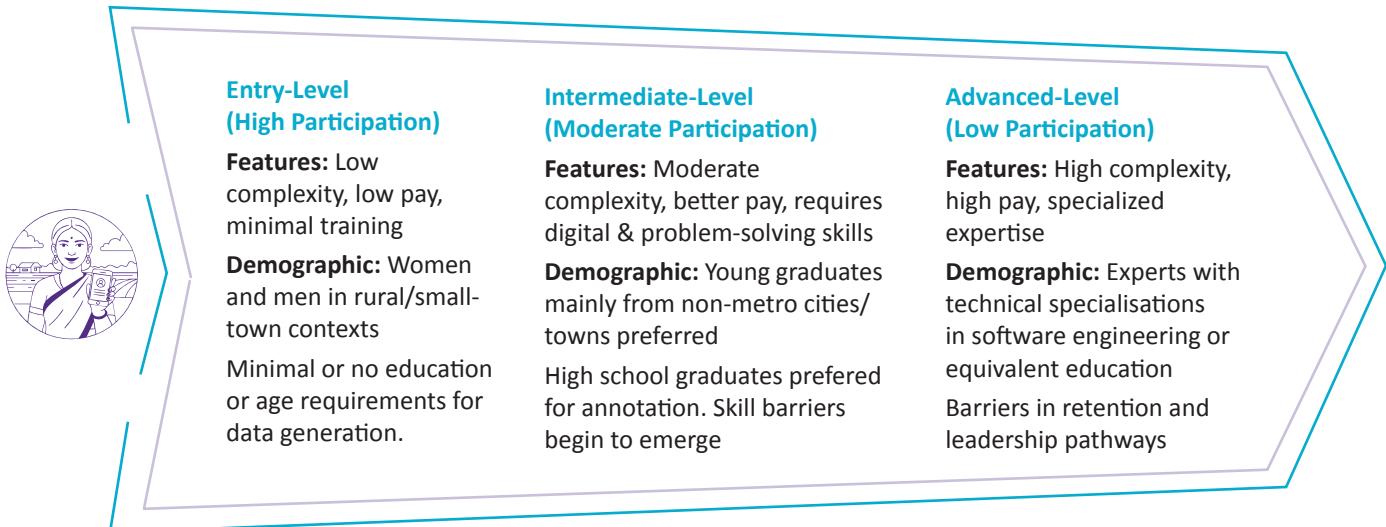
<sup>20</sup> NASSCOM. (2021). [Data annotation: Billion-dollar potential driving the AI revolution.](#)

<sup>21</sup> Gender x Digital hub (GxD hub). (2025, November). [Decoded: Women and the Future of Digital Work in India.](#)

<sup>22</sup> Mushro, L. B. (2025). From double to triple burden: [Gender stratification in the Latin American data annotation gig economy. arXiv.](#)

It is also conversely true that for many first-time salaried women, these opportunities have been transformative, leading to greater financial security and improved educational outcomes for their children. However, in India, the same caveat persists—that these opportunities do not necessarily guarantee pay parity or career progression. Many women data workers face low wages, limited recognition, and a lack of visibility, and women's participation is often concentrated in low-to-mid-skilled roles involving basic digital literacy and routine annotation tasks, with few pathways to

higher-value or decision-making positions. Moreover, autonomy over digital devices, unreliable connectivity, weak incentive structures, and the double burden of digital and household responsibilities further constrain mobility. Marginalised minorities such as Adivasi and Dalit women in India are a largely invisible labour force within the global AI supply chain.<sup>23</sup> Their participation in the tech economy is through the low end of the skill spectrum, and these women workers neither understand nor benefit from AI systems. Data annotators continue to lead precarious livelihoods.



### Women's participation in AI/data value chain work funnels as tasks become complex and better paid

<sup>23</sup> Centre for Development Policy and Practice (CDPP). (2025, July 31). [Ghosts in the Machine: Adivasi women and the hidden labours of AI](#).

## 3. AI-augmented Work

### Agriculture and Healthcare

India's digital transformation has also relied on women at the frontlines of service delivery. The Government of India has prioritised deploying digital tools to address developmental gaps, especially through ASHAs (Accredited Social Health Activists) and AWWs (Anganwadi Workers), who play crucial roles in maternal and child health. Other frontline and last-mile cadres like BC Sakhis, LoKOS Sakhis, and Agriculture Extension Workers have also been using mobile phones to enable financial inclusion, digitise records, enhance access to entitlements, and share information or advisories.<sup>24,25</sup>

**Emerging applications of AI in agriculture, healthcare, and last-mile service delivery present new livelihood opportunities for women, particularly in rural contexts.**

In the agriculture sector, tools like the multilingual voice-based chatbot Kisan e-Mitra deliver real-time advisory services to farmers in 11 regional languages, fielding over 20,000 daily queries on schemes such as PM Kisan Samman Nidhi and generating more than 9.2 million responses.<sup>26</sup> The government harnesses AI and Internet of Things (IoT) through the National Pest Surveillance System, which employs machine learning to identify pests in 61 crops and over 400 species via photos, supporting 10,000+ extension workers in climate-resilient interventions - and AI analytics that integrate field images with satellite data for precise crop-weather monitoring and sowing guidance. AI promises to empower rural women in agriculture across four areas: (1) localized information via AI apps delivering farming advice, weather, and prices in accessible formats; (2) unbiased credit and insurance through data-driven scoring and parametric climate protection; (3) precision tools for soil/crop analysis and real-time IoT insights, vital for women dominating smallholder labor; and (4) service coordination via ML demand forecasting.<sup>27</sup> In India, another app, SukhaRakshak AI, developed by the International Water Management Institute, aims to improve India's drought preparedness by integrating real-time data from the South Asia Drought Monitoring System with AI-driven, multilingual advisories tailored for farmers,

extension officers, and government officials. Built on Gemini 2.0 Flash and RAG architecture, it delivers localised, actionable insights using district-level contingency plans and satellite data. SukhaRakshak AI also recognises the vital role of women in India's agricultural sector, ensuring they benefit equally by offering multilingual voice and text guidance tailored to varying literacy levels.<sup>28</sup>

In a similar vein, The George Institute for Global Health and the University of Oxford developed SMARTHealth Pregnancy 2 (SHP2), a cost-effective, app-based tablet technology to assist ASHAs in identifying and managing high-risk conditions throughout pregnancy and postpartum. The SMARTHealth GPT chatbot was co-developed with local stakeholders in Hindi and Telugu to provide real-time support to ASHAs. Using focus groups and 'pile sorting' activities, ASHAs identified key questions relevant to their work.<sup>29</sup>

These innovations demonstrate the potential of AI to enhance women's productivity, decision-making, and service delivery. At the same time, barriers related to trust and safety, ownership and access, skills and competence, and social norms persist. Ethical concerns over data privacy, information accuracy, and the spread of deepfakes and synthetic media limit trust in AI tools. Broader distrust in digital platforms arises from fears of scams, fake jobs, and online harassment. To that effect, the National Commission for Women launched 'Yashoda AI' in May 2025 to equip women, especially in rural/semi-urban areas, with AI literacy, cybersecurity, digital privacy, and safe online skills for inclusion and empowerment. By August 2025, it trained 2,500 participants, ranging from ASHA workers to local leaders, micro-entrepreneurs, and government officials, targeting 1 crore long-term participants via workshops.<sup>30</sup>

These technological inventions, especially when unpacking AI-augmented rural livelihoods, must be understood in tandem with the gendered divide in mobile-phone access. The National Sample Survey 2025 CMS-Telecom survey<sup>31</sup> reports that over half of rural women aged 15 and above do not own a mobile phone, even though more than 76 per cent had used one in the past three months. This gap indicates that a large proportion of women rely on shared or borrowed devices, rather than having personal, autonomous access. Social norms around care work, phone use, and male gatekeeping further restrict women's digital and economic agency.

<sup>24</sup> Sreerupa. (2024, December). [Digitalisation at the frontlines: ASHA's experiences across Haryana, Rajasthan, Kerala and Meghalaya](#). Institute of Social Studies Trust.

<sup>25</sup> Gender x Digital hub (GxD hub). (2025, November). [Decoded: Women and the Future of Digital Work in India](#).

<sup>26</sup> Press Information Bureau. (2025, April 1). [KISAN E-MITRA and IoT enabled systems to improve crop productivity](#). Government of India.

<sup>27</sup> CGAP. (2025, March 12). [Sowing the Seeds of Resilience: Can AI empower women in agriculture?](#)

<sup>28</sup> International Water Management Institute. (2025, July 8). [India to get its first AI-based chatbot to tackle drought](#).

<sup>29</sup> The George Institute for Global Health. (2025, May 8). [AI for community health workers in India: A bottom-up approach to technology development \(Part 3\)](#).

<sup>30</sup> Press Information Bureau. (2025, August 6). [Around 2,500 women from rural and semi-urban areas trained under NCW's "Yashoda AI" literacy program since May 2025](#). Government of India.

<sup>31</sup> [Ministry of Statistics and Programme Implementation. \(n.d.\). Dataset catalog entry 239 \[Data set\]](#). NADA.



## Women-led Businesses and MSMEs

The MSME sector presents significant opportunities for women, both as entrepreneurs and as employees. Out of 1109.8 lakh employees in the MSME sector, 264.9 lakh (24 per cent) were women.<sup>32</sup> From July 2020 to February 2025, a total of 2,380 lakh women-owned MSMEs and Informal Micro Enterprises (IMEs) have registered on the Udyam Registration Portal (URP) and Udyam Assist Platform (UAP), respectively. Therefore, total women-owned MSMEs and IMEs constitute 40 per cent of the total number of MSMEs and IMEs in the country.<sup>33</sup>

Generative AI can help MSMEs improve efficiency, gain market insights, streamline operations, and expand market access. **About 7 per cent of MSMEs are delving into AI-powered tools such as inventory management apps and customer engagement platforms.**<sup>34</sup> These tools can come in clutch, especially for women-owned businesses with low operating costs. However, many women-owned MSMEs face barriers due to a **lack of digital readiness, limited data management skills, and inadequate AI regulations**, especially in developing countries.<sup>35</sup>

Most women-led nano and micro enterprises in India remain informal and rely on manual bookkeeping, often due to limited skills and concerns about tax liabilities. AI-enabled digital recordkeeping tools can ease this burden and generate data that helps formal lenders assess business health and extend credit. AI-powered tools can also help overcome barriers to scale and efficiency.<sup>36</sup> In E-commerce, Retail, and Marketing, women entrepreneurs can leverage AI-driven analytics to understand customer preferences, optimise pricing, manage inventory, and run targeted ad campaigns while operating with lower capital. Poor market linkage due to unaffordable and inaccessible digital marketing instruments has consistently been a roadblock for small women entrepreneurs. AI-powered tools can address this gap by supporting women business owners to: build websites with minimal effort; copywriting; produce customised content for products/services tailored to meet varying requirements of different social media platforms; SEO optimisation; editing/proofreading for professional messaging, etc. Programs such as HerShakti in

Karnataka are training women to integrate AI into marketing, operations, and customer engagement, the long-term effects of which are yet to be seen. Nonetheless, by capitalising on the opportunity opened up by AI, women-led MSMEs can reach new markets and streamline operations.<sup>37</sup>



<sup>32</sup> Press Information Bureau. (2024, December 12). [Women owned MSMEs \[Press release\]](#). Government of India.

<sup>33</sup> Ministry of Micro, Small & Medium Enterprises. (n.d.). [MSME Dashboard](#).

<sup>34</sup> Kumar, V. (2025, June 26). [Smartphones power MSMEs: 84% of women entrepreneurs go mobile-first in rural Bharat](#). The Economic Times – ETBFSI.

<sup>35</sup> Wilson, M. (2024, November 1). [Navigating the impact of AI on MSMEs](#). UN Today.

<sup>36</sup> IFMR LEAD. (2023, December). [E-enabling Women Entrepreneurs: Digital Solutions for Financial Management](#). hlong-term

<sup>37</sup> Arora, T., Laxman, K., & Appaya, S. (2022, October 17). [Beti Kamao: Empowering India's micro-level women entrepreneurs](#). The World Bank.

## 4. Way Forward in Making AI Work for Women

India stands at a pivotal moment: AI technologies are expanding rapidly across sectors, yet women's participation remains constrained by digital divides, gender norms, and fragmented skilling pathways. A strong, regulatory policy framework can help democratise access to AI's benefits while ensuring ethical safeguards. Vulnerable cohorts of people, such as women, clerical workers and older adults lacking digital skills, require targeted support through reskilling, digital education, social protection, and job reintegration programmes.<sup>38</sup> The way forward must therefore combine gender-intentional design, institutional safeguards, and pathways for economic mobility. The recommendations below, which emerged during the Round Table discussion with experts, are organised into three categories aligned with women's current and emerging roles in the AI economy.

### 1. Strengthen Women's Participation in the AI Data Value Chain

Women in digitally embedded AI data-value-chain work, comprising annotation, transcription, moderation, testing, and structured content creation, remain concentrated in low-value, repetitive, and precarious tasks. They face stagnation due to weak progression pathways, opaque algorithmic management, limited exposure to advanced roles, and the lack of a clear skills framework used by employers, platforms, and skilling bodies. Additionally, major actors (AI/BPO firms, AI-work platforms, infra labs, SHGs, NGOs, job-matching platforms) currently operate in silos, making mobility difficult.<sup>39</sup>

#### Action Agenda



##### 1.1 Build structured, upward-skilling pathways

- Introduce a national AI and digital skills progression ladder aligned with NSQF, mapping work from entry to advanced levels: Use interoperable micro-credentials, stackable certifications, and common digital skills frameworks to ensure recognition across employers and platforms.
- Skill frameworks must reflect real digital work, including NSQF-aligned competencies across Levels 1–7 (from basic operation to advanced judgment and team leadership).

##### 1.2 Create mobility pipelines for women

- Apprenticeships with AI infra labs, AI-work platforms, and BPOs to convert low-order data tasks into recognised, promotable roles.
- Bridge programmes linking BA/BSc graduates to roles in data ops, evaluation, model oversight, and AI safety.
- Promote transparent promotion systems and leadership training for emerging supervisors—addressing the “leaky pipeline” in AI service work.
- Aggregate work demand and supply, with pathways for progression.

##### 1.3 Improve working conditions

- Mandate transparency around task pricing, workload criteria, and algorithmic rating systems.
- Institute grievance mechanisms, mental-health safeguards, contracts with benefits, fair pay, and remote/flexible options for women's retention.

##### 1.4. Shift from users to creators

- Introduce AI clubs, maker spaces, robotics labs for girls.
- Provide Placement-linked AI/ML scholarships and mentorship.
- Incentivise women-led AI startups and mandatory gender-disaggregated reporting for all AI skilling programmes.

<sup>38</sup> Gmyrek, P. (2025, September 29). [Generative AI at work: What it means for jobs in Europe and beyond. International Labour Organization.](#)

<sup>39</sup> Gender x Digital hub (GxD hub). (2025, November). [Decoded: Women and the Future of Digital Work in India.](#)

## 2. Enable AI-Augmented Livelihoods in Agriculture, Health, and MSMEs by gender-intentional design and closing the foundational gender digital gap

Women's use of AI tools to augment their current livelihood models remains low because design often ignores realities such as shared phones, intermittent connectivity, low digital confidence, safety concerns, and local language preferences. Tools also sometimes duplicate effort or introduce surveillance risks.

### Action Agenda



#### 2.1 Gender-intentional technology design

- Build voice-first, gesture-first, offline-capable, local-language interfaces designed for low bandwidth and shared-device use.
- Incorporate privacy layers, simple UI flows, and safety features like password locks, message blocking, and time-sensitive pushes.
- Mandate co-design with women at prototype, testing, and iteration stages.
- Require platforms to adapt algorithms for women's intermittent access, mobility constraints, and shared-device conditions

#### 2.2 Expand device access and autonomy

- Introduce subsidised devices, or SHG-owned community device hubs with managed access.
- Build local digital hubs and common centres in villages for women to work safely.
- Prioritise last-mile connectivity in women-heavy worksites and geographies.

#### 2.3 Build women-centric digital capability

- Introduce community-led, peer-based models using SHGs, FLWs, and trusted intermediaries.
- Assess existing skills, confidence, and attitudes before training design (multi-dimensional digital metrics).
- Train for real tasks: digital payments, marketplace use, advisories, documentation, and online safety.

#### 2.4. Shift from users to creators

- Introduce AI clubs, maker spaces, robotics labs for girls.
- Provide Placement-linked AI/ML scholarships and mentorship.
- Incentivise women-led AI startups and mandatory gender-disaggregated reporting for all AI skilling programmes.

### 3. Strengthen Governance, Safeguards, and Research

Weak gender-sensitive AI governance risks embedding socio-economic, caste, linguistic, and gender biases. The existing evidence highlights the need for clear oversight across datasets, platforms, and workplaces, including mental-health, safety, and labour protections.

To unlock the full potential of AI for women, India must adopt a dual approach: **AI for women**, which focuses on developing technologies that are safe, inclusive, equitable, and context-aware; and **AI by Women**, which ensures that women can meaningfully participate in, lead, and shape the AI moment by expanding pathways for education, employment, and leadership in the sector.

#### Action Agenda



Build gender-disaggregated datasets for evaluation, especially in public AI models.



Conduct fairness audits for differential performance across women's groups, including rural, low-literacy, and multilingual contexts.



Create independent audit systems for bias, consent, privacy, labour practices, and harmful content exposure.



Support research on women's experiences of AI systems, transitions in digital labour, and the socio-technical realities shaping digital work.



Build in gender-intentional evaluations of all AI models/use cases and evaluate them from model testing to the deployment and outcomes stage.

## 5. Annexures

### List of Participants

IWWAGE and GxD hub are immensely grateful for the contribution of the expert participants in the roundtable stakeholder consultation. The consultation benefited from the invaluable insights and suggestions of:

- **Aditi Namdeo**  
J-PAL
- **Anita Manoharan**  
JustJobs Network
- **Anjora Sarangi**  
GxD hub, LEAD at Krea University
- **Ananya Grover**  
HealCycle
- **Chetana Koulagi**  
The Nudge Institute
- **Eunsong Kim**  
Women for Ethical AI, UNESCO
- **Khushal Wadhawan**  
India AI Mission (MeitY)
- **Leenika Khatta**  
NASSCOM
- **Mahima Taneja**  
GxD hub, LEAD at Krea University
- **Maitri Singh**  
Digital Empowerment Foundation
- **Namita Bhandare**  
Independent Journalist
- **Prachi Bansal**  
Jindal Global University (JGU)
- **Prachi Karhanis**  
Wadhwani AI
- **Pradipta Kundu**  
Centre for Human-Centred Computing – IIIT Delhi
- **Radha Chellappa**  
IWWAGE
- **Ria Basu**  
Wadhwani AI
- **Sachin Dhawan**  
The Dialogue
- **Sabina Yasmin**  
LEAD at Krea University
- **Salil Arora**  
IIIT Delhi
- **Shipra Nigam**  
JustJobs Network
- **Sharon Buteau**  
LEAD at Krea University
- **Sona Mitra**  
Research & Policy, IWWAGE
- **Urmi Bhattacharya**  
Inclusion Economics
- **Yashita Jhurani**  
GxD hub, LEAD at Krea University



---

**IWWAGE – An Initiative of LEAD at Krea University**

Block M 6, Second Floor, Kharera,  
Hauz Khas New Delhi, Delhi - 110016

 [www.iwwage.org](http://www.iwwage.org) | [www.ifmrlead.org](http://www.ifmrlead.org) | [www.gxdhub.org](http://www.gxdhub.org)