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# **Girls and Women at the Centre: Advancing Non-Traditional Livelihoods in India**

**Skill Development, Labour & Employment Division**

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<sup>1</sup>NITI Working Papers describe research in progress by the author(s). The contents and the views expressed therein do not necessarily represent the views of NITI Aayog. Corresponding author: Dr. Sakshi Khurana (sakshi.khurana@gov.in)

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## LIST OF ABBREVIATIONS

<b>AI</b>	Artificial Intelligence
<b>CTS</b>	Craftsmen Training Scheme
<b>CCTV</b>	Closed-Circuit Television
<b>DAY-NRLM</b>	Deendayal Antyodaya Yojana - National Rural Livelihood Mission
<b>DDU-GKY</b>	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
<b>DGT</b>	Directorate General of Training
<b>FY</b>	Financial Year
<b>FWC</b>	Financing Women Collective
<b>GDP</b>	Gross Domestic Product
<b>GeM</b>	Government e-Marketplace
<b>ICRW</b>	International Centre for Research for Women
<b>IEC</b>	Information, Education and Communication
<b>ILO</b>	International Labour Organization
<b>IME</b>	Informal Micro-Enterprises
<b>IMF</b>	International Monetary Fund
<b>IT</b>	Information Technology
<b>ITeS</b>	Information Technology Enabled Services
<b>ITI</b>	Industrial Training Institute
<b>LED</b>	Light Emitting Diode
<b>LTT</b>	Long-Term Technical Training
<b>MEDP</b>	Micro Entrepreneurship Development Programmes
<b>MoRD</b>	Ministry of Rural Development
<b>MSDE</b>	Ministry of Skill Development and Entrepreneurship
<b>MSME</b>	Micro, Small, and Medium Enterprises
<b>MUDRA</b>	Micro Units Development & Refinance Agency
<b>MWCD</b>	Ministry of Women and Child Development
<b>NABARD</b>	National Bank for Agriculture and Rural Development
<b>NAVYA</b>	Nurturing Aspirations through Vocational Training for Young Adolescent Girls
<b>NCERT</b>	National Council of Educational Research and Training
<b>NCS</b>	National Career Service

<b>NCVET</b>	National Council for Vocational Education and Training
<b>NEP</b>	National Education Policy
<b>NSDC</b>	National Skill Development Corporation
<b>NSTI (W)</b>	National Skill Training Institute for Women
<b>NTL</b>	Non-Traditional Livelihoods
<b>NTLN</b>	Non-Traditional Livelihoods Network
<b>PLFS</b>	Periodic Labour Force Survey
<b>PMKVY</b>	Pradhan Mantri Kaushal Vikas Yojana
<b>POSH</b>	Prevention of Sexual Harassment
<b>PSSCIVE</b>	Pandit Sunderlal Sharma Central Institute of Vocational Education
<b>SCERT</b>	State Council of Educational Research and Training
<b>SDG</b>	Sustainable Development Goals
<b>SHG</b>	Self-Help Groups
<b>SIDH</b>	Skill India Digital Hub
<b>SSC</b>	Sector Skills Councils
<b>SSDM</b>	State Skill Development Missions
<b>STEM</b>	Science, Technology, Engineering, and Mathematics
<b>STT</b>	Short-Term Training
<b>UAP</b>	Udyam Assist Platform
<b>ULB</b>	Urban Local Bodies
<b>URP</b>	Udyam Registration Portal
<b>WEP</b>	Women Entrepreneurship Platform

# Chapter 1

## Charting the Landscape for Girls and Women

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India stands at a pivotal demographic and economic moment, with the largest youth population in the world and about 65% of its people under the age of 35 (PIB, 2025). In addition to harnessing the country's demographic dividend, it is equally essential to leverage the gender dividend by equipping girls and women with relevant, future-ready skills. This advantage, however, converges with profound global transformations: robotics and automation, artificial intelligence, digitalisation, energy generation/storage and green transition that are reshaping production systems and altering the demand for skills at a pace not previously witnessed (World Economic Forum, 2025; ILO, 2025). Equitable access to quality education, vocational training, and workplace learning is a decisive factor in expanding India's economic potential. Advancing women's participation in the labour force through targeted, high-quality, and relevant skill development is critical to achieving the vision of Viksit Bharat 2047. For rural women, young women, women with disabilities, and women entrepreneurs, skill development serves as the bridge to dignified work, upward mobility, and sustainable livelihoods. When these groups are equipped with relevant and market-aligned skills, the economy gains a more diverse and capable workforce that can meet growing industry demands. Unlocking this potential requires a long-term vision and roadmap for skilling, up-skilling, and lifelong learning, aligned with the evolving needs of the labour market.

However, current labour market outcomes indicate that this potential remains latent and only partially realized. Between 2022 and 2025, the Female Labour Force Participation Rate (FLFPR) for women aged 15 and above in India combining rural and urban areas, rose from 33.9% to 40%, according to the Periodic Labour Force Survey (PLFS) 2025, marking reduction in the gender gap. Over the same period, male labour force participation increased slightly from 78% to 79.1%. Despite the notable improvement in women's participation, the large and persistent difference between male and female participation rates indicates that a substantial gender gap continues to prevail. This gender gap may persist due to entrenched structural barriers in accessing quality employment, including restrictive social norms (Paliwala & Neetha, 2011; Khurana, 2015; Jayachandran, 2021), occupational segregation (ILO, 2024; Kapsos, Bourmpoula, & Silberman, 2014) limited mobility (Chatterjee & Sircar, 2021) and training ecosystems that reproduce gendered assumptions about "suitable" trades (World Bank, 2025).

According to the International Monetary Fund (IMF), removing barriers to female labour force participation in India could increase overall welfare by 35% and boost economic output by 12% (IMF, 2018). The World Bank estimates that higher female participation in manufacturing alone could boost output by about 9% (World Bank, 2024). Equipping women with the right skills and ensuring their equal access across sectors is therefore not only an equity issue, it is a national growth imperative. Capturing

this opportunity requires addressing both supply and demand-side barriers. On the supply side, women need access to quality education beyond secondary levels, market-relevant training, and productive assets such as credit or capital (Rao and Khurana, 2022). On the demand side, enterprises must reduce structural barriers, including mobility and safety constraints, workplace biases, and the disproportionate burden of unpaid care work. A gender-responsive skilling ecosystem, aligned with labour market requirements, is critical to ensure that women not only enter the workforce but thrive within it.

Recent evidence indicates that although women have achieved parity or majority representation in higher-education enrolment globally, they remain markedly under-represented in technical, vocational, and STEM-oriented training, while men continue to dominate these fields (UNESCO, 2025). According to WEF (2025), women's limited participation in non-traditional and high-growth sectors is closely linked to gaps in access to market-relevant and future-ready skills, particularly in domains shaped by technological change. At the same time, the future of work is rapidly generating opportunities in areas such as green energy, electric mobility, digital services, logistics, advanced manufacturing, construction, and ICT (World Economic Forum, 2025). This reflects a deeper issue of skills-to-sector misalignment, where women are not adequately represented in emerging, high-productivity roles. In India too, women are found to be concentrated in traditionally female-dominated trades, shaped by institutional priorities, employer attitudes, and placement practices, resulting in limited access to higher-paying and formal employment opportunities (Anand, S, Nanda, Pal, & Sharma, 2020). This creates a paradox: while access to training has expanded through national skilling initiatives, the alignment between women's skills and labour market demand remains insufficient (Singh, 2024). Complementing this, digital access and usage remain "gendered in nature," with significant gaps in adoption, intensity of use and digital literacy, all of which directly constrain women's ability to access labour market opportunities (UNDP, ICRIER, 2024). This points to the need for a more targeted skilling ecosystem that aligns women's capabilities with emerging sectoral demand and enables their movement into higher-productivity livelihoods.

In this context, promoting Non-Traditional Livelihoods (NTL) emerges as a strategic imperative. NTL refer to women entering sectors historically dominated by men or emerging industries including roles in STEM, renewable energy, green jobs, and technology-driven fields. Diversifying women's employment options and expanding access to emerging and high-growth sectors can aid women's economic empowerment and drive inclusive growth (UNDP, 2024). Recognizing this moment of convergence between demographic potential and technological transformation, this working paper is part of a collaborative effort between NITI Aayog and EMpower to assess India's current skilling and employment ecosystem through a gender lens and to propose a strategic framework that expands women's access to NTLs. By integrating evidence from available data on long-term and short-term skilling, the paper positions women's participation in high-growth, non-traditional sectors not only as a pathway to inclusive development, but as a foundational economic requirement for India's transition toward a resilient, future-ready, and innovation-driven economy.

By re-engineering existing livelihoods and reducing barriers to entry, NTL also strengthen women's agency and aspirations. The National Education Policy, 2020 (NEP 2020) presents a unique opportunity

to embed NTL into education and skilling systems at scale. Mainstreaming these approaches can ensure that girls and women are equipped with both employable skills and the confidence to pursue diverse livelihoods. The recently notified four labour codes contain gender-neutral equality clauses and women-focused protections, mainly around pay equity, maternity and social security, night work, and representation, providing a much-needed fillip to women's participation in the workforce. Collectively, these strategies can strengthen India's livelihoods ecosystem and prove to be a critical step toward realizing the objectives of Viksit Bharat.

## Objectives

This paper aims to advance the case for women's participation in NTL by examining how current skilling systems influence their entry into both traditional and non-traditional fields, using an evidence-driven assessment of both long-term and short-term skill training programmes. The objectives of the study are as follows:

1. Review enrolment and certification patterns across major national skill development programmes to identify structural distribution and participation trends of women across different training routes.
2. Assess the representation of women in non-traditional skilling pathways and identify areas of under-representation.
3. Provide evidence-based recommendations for interventions, policies, and partnerships that can expand women's participation in non-traditional livelihoods.

## Methodology

This study is grounded in analysis of the publicly available national skilling datasets and supported by existing research on gender, labour markets, and vocational education. The analysis draws on available data on Industrial Training Institutes (ITIs), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY). ITIs, which constitute the backbone of India's long-term vocational training ecosystem, have been analyzed alongside PMKVY, the flagship short-term skilling scheme of the Ministry of Skill Development and Entrepreneurship (MSDE), and DDU-GKY, the flagship rural skilling programme of the Ministry of Rural Development (MoRD). The inclusion of both long-term and short-term skilling pathways enables a more comprehensive view of women's participation across the broader skilling ecosystem. These datasets were examined to assess gender-wise enrolment, certification outcomes, placement trends, and sectoral patterns across long-term and short-term skilling pathways. The analysis focuses on identifying participation disparities, sectoral

clustering, and the extent of women’s representation in technical, industry-linked, and non-traditional domains.<sup>1</sup>

The paper also reviews national and international literature, policy documents, and gender-focused evaluations to situate these patterns within broader structural and institutional contexts. It has attempted to provide a comprehensive understanding of the gendered dynamics within India’s skilling landscape and suggest recommendations for advancing training in non-traditional sectors. The intent is to use official skilling records to help identify where gendered gaps are most pronounced, particularly in technical and industry-linked trades that align with non-traditional livelihoods. This evidence base can inform future studies that explore how women navigate transitions into NTL pathways in practice.

## 1.1 What Are Non-Traditional Livelihoods?

The Non-Traditional Livelihoods Network (NTLN)<sup>2</sup> defines non-traditional livelihoods (NTL) as “livelihood practices that help women break stereotypes emerging from the intersections of gender, caste, class, religion, sexual orientation, disabilities and other marginalities and oppressive structures, within a dynamic context of space and time. Non-traditional livelihoods increase the set of viable livelihood choices available to women, give them access, and control over skills, technology, market, mobility and resources”. They create economic stability along with psychological, social and political empowerment (NTLN, 2020). Examples of non-traditional livelihoods include training women as drivers, masons, electricians, or plumbers, roles which are considered to be traditionally dominated by men. Further, emerging and higher-skill roles, such as technicians in renewable energy, IT and digital services, or positions in retail operations and supply chain management, reflect sectors where female participation has historically been low.

The concept of “non-traditional” varies by context, with roles viewed as non-traditional in one setting potentially considered conventional in another. The idea of a ‘geography of gender’ highlights how

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<sup>1</sup> While the original datasets available on the SIDH Portal include gender categories beyond the male–female classification (such as transgender/others), these categories have not been included in the present analysis. This is due to their relatively small representation in the datasets and the study’s primary focus on women’s participation, with male data used as a comparative baseline to contextualize observed patterns.

<sup>2</sup> NTLN is a consortium of over 30 civil society organisations and 10 individuals working in the non-traditional livelihoods space. They are “a collective of organisations working with socially and economically marginalised women in urban and rural India to advocate for gender equality through facilitating/organising skill development and/or adult education programmes for generating livelihoods in general, and non-traditional livelihoods, in particular.

context-specific constraints shape which choices hold strategic consequences for women's lives (Kabeer, 2013). For instance, what is considered non-traditional in the rural context might be normalized in the urban context. Designing NTL programming therefore requires sensitivity to place, norms, and shifting labour markets.

Strengthening women's entry into such pathways demands confronting the structural barriers that limit access to quality education, market-aligned skills, assets, mobility, and safety. For decades, skill-building efforts have channeled women into low-paid, gendered occupations that preserve rather than challenge existing divisions of labour. Non-Traditional Livelihoods (NTLs) offer a strategic opportunity to diversify career options, challenge social norms, and expand income potential; however, they involve more than a shift into new sectors. NTLs require young women to navigate deeper transitions from informal to semi-formal or formal work, from home-based environments to public workplaces, and from kin-regulated authority to market-regulated systems. These are high-friction transitions, marked by social negotiation, risk, and resistance within families and communities. For NTL programming to be effective and sustainable, it must therefore be gender-sensitive, labour-market relevant, begin early in a girl's educational journey, and embed essential soft skills that strengthen agency and resilience. By mainstreaming these approaches within the NEP 2020 and broader livelihoods ecosystem, India can meaningfully expand young women's pathways into dignified, future-oriented work.

### **NTL and the Sustainable Development Goals: Building an Inclusive and Equitable Workforce**

The 2030 Agenda for Sustainable Development Goals (SDGs) indicates that development will only be sustainable if its benefits accrue equitably to both women and men. NTL thus has an important role to play as it can serve as an enabler to challenge gender norms, reduce gender pay gaps, and provide 'decent jobs', thereby having a direct linkage with SDG 8 on Decent Work and SDG 5 on Gender Equality. SDG 8 complements SDG 10 of reducing inequality within and among countries. Evidence suggests that inequality between women and men in a household substantially contributes to overall income inequality in society.

A comprehensive strategy for education and vocational training is essential to achieve these goals. To fully realize the transformative potential of non-traditional livelihoods and their alignment with the SDG agenda, a strategic focus on skilling women and girls is critical. This involves equipping them with the capabilities to access emerging opportunities in high-growth sectors and urban economies, thereby fostering economic empowerment, strengthening gender equity, and accelerating progress towards a more resilient and inclusive labour market.

## 1.2 Skilling Women & Girls in Non-Traditional Livelihoods: A Game-Changer for the Indian Economy

Skilling more women and girls and bringing them into the labour force has significant economic potential. According to the World Bank (2024), if female labour force participation in South Asia were raised to the level of men, regional GDP and, by extension, per capita income could grow by 13 percent under moderate assumptions, and by as much as 51 percent if women gain equal access to high-productivity jobs and the same tools and opportunities as existing workers (World Bank, 2024). Manufacturing and modern services, i.e., sectors that are key drivers of economic vitality, account for a larger share of employment in larger cities, i.e., 48% as compared with 38% for smaller cities and 18% for rural areas (NITI Aayog & Asian Development Bank, 2022). A shift towards greater female participation in manufacturing alone could raise India's output by 9% (World Bank, 2024). These figures underscore the importance of enhancing skill development for women in these sectors to harness the economic benefits of skilling initiatives fully.

As women's participation in the workforce expands, the focus must shift towards sectors that offer sustainable and high-growth employment opportunities. In this context, manufacturing and the services sector emerge as crucial enablers, providing women with access to skilled jobs in non-traditional domains and strengthening their role in India's economic transformation.

### **Nurturing Aspirations through Vocational Training for Young Adolescent Girls (NAVYA) initiative**

The government has recognized this potential and launched a flagship Nurturing Aspirations through Vocational Training for Young Adolescent Girls (NAVYA) initiative in June 2025 to specifically support women in acquiring skills for non-traditional livelihoods. NAVYA, implemented by the MSDE in collaboration with the Ministry of Women and Child Development (MWCD), is currently operational as a pilot programme across 27 districts in 19 states, including aspirational and tribal regions. It focuses on equipping young women (aged 16-18 years who have completed at least Class 10) with vocational skills in emerging and non-traditional sectors such as digital marketing, cybersecurity, AI-enabled services, drone assembly, solar photovoltaic installation, graphic design, professional makeup artistry, CCTV installation, and smartphone repair. The programme also integrates a 7-hour module on life skills, including hygiene, conflict management, communication skills, workplace safety, and financial literacy.

Source: PIB dated 28 September 2025. *Empowering Adolescent Girls for a Viksit Bharat*. [doc2025928649601.pdf](#)

## 1.3 Tapping the Potential of Manufacturing & MSMEs for Women's Employment

Women's entry into industry-linked sectors has begun to gain momentum in recent years, reflecting a gradual restructuring of India's labour market. Evidence from PLFS 2025 (MoSPI, 2025) reflects this shift: in urban areas, nearly 21.7% women are now employed in manufacturing, a larger share than that of urban men (19.8%). In rural regions, women's participation in manufacturing stands at 9% closely aligned with male participation at 8.8%. A combined rural-urban view over time further nuances this shift. PLFS data indicate that between 2022 and 2025, women's participation in manufacturing remained stable (11.1% to 11.7%), while their share in services increased from 20.9% to 23.5%, suggesting that recent diversification has been driven more by service-sector expansion, with industry-linked employment yet to see comparable growth. These patterns reflect an ongoing broadening of women's employment beyond traditionally gendered roles, highlighting the potential for targeted interventions to strengthen women's access to manufacturing and other traditionally gendered sectors.

The Micro, Small, and Medium Enterprise (MSME) sector has established itself as a cornerstone of the Indian economy, playing a critical role in employment generation, innovation, exports, and inclusive growth. Currently, MSMEs contribute 30 % to India's GDP. In manufacturing, MSMEs contributed 35.4% to all-India manufacturing output in FY22 (PIB, 2025), underscoring their importance in the industrial sector. Data from the Directorate General of Commercial Intelligence and Statistics further reaffirms this, with MSME-specified products constituting 45.7% of India's total exports in 2023-24 (Ministry of Finance, 2024). These contributions are matched by their impact on employment. MSMEs create 38.7 million jobs in trade, 36.2 million in services, and 36 million in manufacturing, reflecting their reach across rural and urban landscapes (World Bank, 2024).

Both the manufacturing and MSME sectors hold significant potential to expand women's participation in non-traditional and higher-value economic activities. Recent labour reforms have also opened regulatory space for women to participate in a wider range of non-traditional roles. Under the Occupational Safety and Health (OSH) Code, 2020 women can now be employed across all types of work, including night shifts, subject to consent and safety provisions (PIB, 2025). This legal shift removes one of the longstanding constraints that limited women's entry into manufacturing, logistics, and other shift-based, high-growth sectors. To fully harness this opportunity, greater emphasis is needed on translating growth in these sectors into sustainable economic empowerment for women.

The manufacturing and MSME ecosystems offer scalable entry points for formal and better-quality employment, especially for women transitioning out of agriculture or informal work. Targeted skilling in areas such as digital literacy, machinery operation, quality assurance, and design can enable women to move into more technical and better-paying roles. The MSME sector's extensive backward and forward linkages also make it a strong platform for women-led enterprise development, provided access to credit, markets, and mentorship is expanded. While the MSME sector presents a significant

opportunity for women's employment in non-traditional sectors, SHGs further complement these efforts by fostering rural entrepreneurship and financial independence, equipping women with the skills and resources needed to thrive in emerging economic spaces.

## 1.4 Self-Help Groups (SHGs) Driving Rural Livelihoods for Women

Self-Help Groups increasingly operate as a form of social infrastructure that enables women's transition into non-traditional livelihoods (NTLs). With nearly 10 crore women mobilized across 90.9 lakh SHGs as of July 2025 (PIB, 2025), this network has evolved into one of the largest platforms for women-led economic participation in the country. Beyond their traditional role in savings and credit, SHGs now anchor a diverse ecosystem of rural enterprises from solar panel assembly and LED bulb production to sanitary pad manufacturing, demonstrating their capacity to foster entry into skill-intensive and unconventional sectors (Ministry of Finance, 2024). The government's aspiration to create two crores 'Lakhpati Didis', through training in marketable skills such as plumbing, drone operation and repair, and other non-conventional vocations, signals a deliberate shift toward enhancing women's economic resilience and self-reliance (Department of Economic Affairs, 2024). This transition is reinforced by institutional mechanisms. NABARD describes the SHG-Bank Linkage Programme as a community-based institutional platform, positioning it as infrastructure rather than just a financial channel (NABARD, 2025). Programmes such as Micro Entrepreneurship Development Programmes (MEDPs) and Livelihood & Enterprise Development Programmes (LEDPs) of NABARD have provided nearly 5.85 lakh SHG members with enterprise incubation, credit facilitation, and targeted skills training (Ministry of Finance, 2024). Digital infrastructure further expands the scope of NTL participation. The Open Network for Digital Commerce (ONDC) has onboarded over 1 million women across 76 SHGs, enabling them to diversify markets, adopt sustainable production practices, and improve revenue margins by 46% through digital visibility and innovative marketing approaches (Ministry of Finance, 2024).

The expanding link between SHGs and the MSME ecosystem is enabling women to move into non-traditional areas of work by giving them the training, credit, and market connections required to sustain such enterprises. Roles in renewable energy, agro-processing, and eco-tourism, once considered out of reach are increasingly becoming viable options. In doing so, SHGs act as critical social infrastructure that helps narrow gender gaps in employment and supports a more inclusive growth story for the MSME sector.

## **Women Entrepreneurship Platform (WEP)**

The Women Entrepreneurship Platform (WEP), incubated by NITI Aayog and now operating as a public-private partnership, demonstrates how ecosystem coordination can accelerate women-led enterprises. As an aggregator, WEP provides a plug-and-play framework that aligns government, private sector, and ecosystem actors under a unified delivery model.

WEP's model addresses both supply and demand-side gaps. On the supply side, it mobilises catalytic partnerships, blends public investment with private capital, and strengthens coordination among peers and industry stakeholders. On the demand side, it improves access to finance through the Financing Women Collective, reduces information asymmetry via a portal covering 800+ schemes, and builds enterprise capabilities through mentorship and capacity-building via a dedicated microsite.

The approach is being scaled through state chapters, beginning with Telangana, with Madhya Pradesh and Tripura underway, to create region-responsive and locally anchored entrepreneurship ecosystems for women.

Source: WEP (Information received on 17 December 2025).

The preceding discussion situates women's workforce participation within a structural transition, where expanding sectoral opportunities and enabling policy frameworks are beginning to reshape the contours of employment. Yet, the way these shifts are reflected in women's occupational outcomes varies across sectors and pathways. The way women are integrated into the workforce mediated by institutional structures, skilling systems, and social norms continues to shape both their participation and their occupational positioning. This shifts the focus beyond the availability of opportunities to how access to them is structured and how workers are distributed across roles within the labour market. It is within this context that non-traditional livelihoods gain prominence, as they represent both an outcome and a pathway of structural transformation. The next section therefore moves beyond the macro landscape to analyze the dynamics of the skilling ecosystem, examining how current training structures and enrolment patterns shape women's distribution across traditional and non-traditional domains, and where recalibration is required to enable a more substantive shift.

## Chapter 2

# The Case for Expanding Women's Access to Non-Traditional Livelihoods

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This section underscores the strategic importance of NTLs in enhancing women's economic participation and expanding access to diverse and high growth employment opportunities, addressing labour market imbalances, and reducing occupational segregation across sectors. From this standpoint, it becomes essential to examine how existing skilling ecosystems are shaping women's participation in both traditional and non-traditional domains. A review of enrolment and certification patterns across major national skill development programmes provides critical insights into the structural distribution of women across different training routes. These trends highlight the extent to which technical, industry-linked, and higher-value pathways remain male-dominated, while women continue to participate predominantly in short-term, service-oriented, and traditionally feminized trades. Understanding these patterns is key to identifying where targeted interventions are required to expand women's entry into NTLs and to design programme strategies that align training access with national economic priorities.

### 2.1 Why Non-Traditional Livelihoods?

Non-traditional livelihood opportunities will enable young women to consciously enter occupations where their entry may have been previously constrained because of their gender so that they can access increased job security, greater incomes and benefits within the formal workplace. Furthermore, their engagement in NTL has the ability to enable disruption in relation to social norms because the mechanism utilized is disruptive in and of itself (Dhawan, 2020). The impact of engaging in NTL can be profound for young women. When females choose careers in non-traditional sectors and are given the skills and support, they need to succeed, they not only gain financial independence but bolster their self-worth and standing in their families and communities.

The household and community mediate women's access to vocational training and education through social norms, which curtail their choice of trades and occupational categories. Barriers to entry into stereotypically 'feminine' jobs, such as teaching, nursing, etc., are lower in contrast to non-traditional jobs since they adhere to gender norms and are often located in the vicinity of where women live. These constraints and norms have led to occupational segregation in the labour market. As per trend analysis undertaken by the International Center for Research for Women (ICRW) in 2020, 79% of women were concentrated in sectors such as agriculture, paid domestic work, manufacturing (tobacco, textiles, apparel), education and health, whereas 21% of women worked in non-traditional sectors such as services. Out of the five sectors where women were concentrated, agriculture and domestic work have

low earnings, require fewer skills and are dominated by casual and self-employed workers (Anand, Nanda, Pal, & Sharma, 2020).

Since skilling leads to employability, enabling women to transition into non-traditional livelihoods requires expanding their access to technical, industry-linked training ecosystems. To understand how women are currently positioned within India's skilling ecosystem, this paper examines three major national training architectures that together capture distinct dimensions of vocational skilling: ITIs, which represent the country's long-term training system; PMKVY 4.0, which reflects short-term, industry-aligned skilling across emerging sectors; and DDU-GKY, which focuses on placement-linked rural skilling for economically vulnerable youth. Taken together, these schemes provide a comprehensive lens to assess gendered participation across long-term and short-term skilling, as well as across urban-industrial and rural livelihood-oriented training ecosystems.

## 2.2 Current Trends in Skilling: Implications for Women in Non-Traditional Livelihoods

### 2.2.1 Trends in Industrial Training Institutes (ITIs)

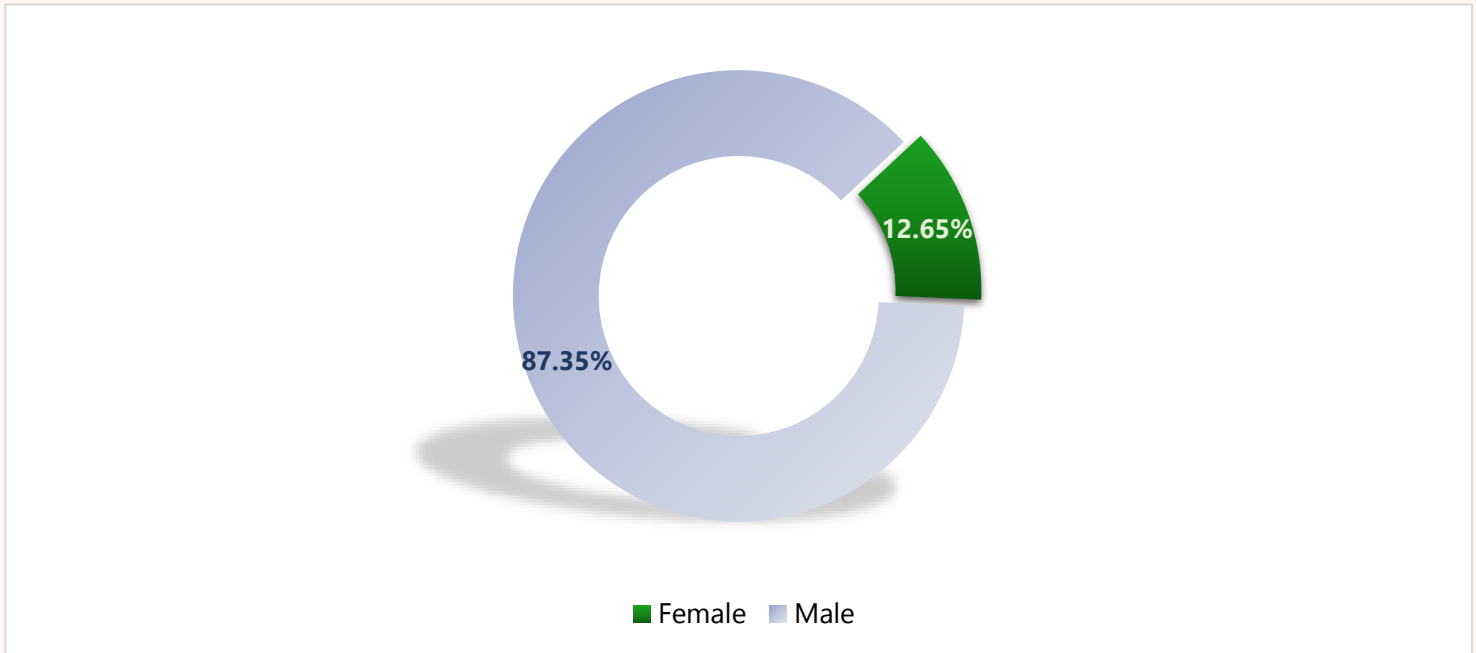
The Directorate General of Training (DGT), under MSDE, is the nodal agency for long-term vocational training in India. It oversees a nationwide network of over 15,021 ITIs which are the backbone of India's formal skill development ecosystem through which the Craftsmen Training Scheme (CTS) is implemented.

ITIs offer 1–2-year long training programmes in both Engineering and Non-Engineering trades, aimed at equipping youth with skills relevant to industrial, service, and manufacturing sectors.

The analysis presented below draws upon official data available on the SIDH Portal, which serves as the central repository for ITI data under the DGT. The dataset used is cumulative in nature, covering the period 2019–2024, as reflected on the ITI Public Dashboard of the portal (accessible at: <https://dgt.skillindiadigital.gov.in/>).

## Gender Distribution, Stream-wise and Trade-wise Trends

Fig 1: Cumulative (2019-24) Gender-wise share of candidate admissions in ITIs (in per cent)

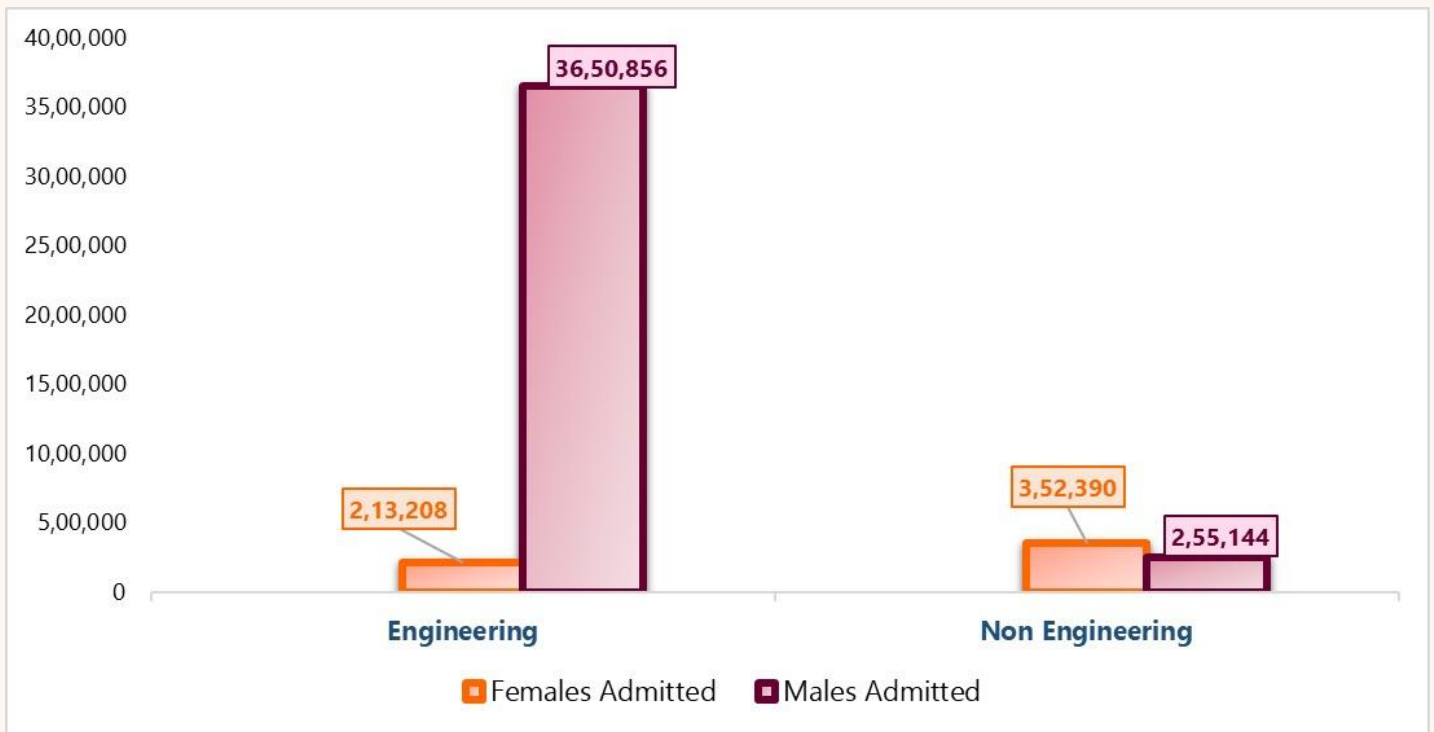


Source: ITI Public Dashboard as on 17.03.2026

Data on ITI enrollment, as depicted in Figure 1, shows that a total of around 44.79 lakh candidates were enrolled across ITIs from 2019-2024. Of these, 5.67 lakh were females (12.65%), while 39.1 lakhs were males (87.35%).

The gender skew in ITI admissions has important implications: ITIs form the core training pipeline for India's manufacturing, construction, and engineering workforce, sectors that are traditionally male-dominated, but critical for national growth. Thus, a lower proportion of women enrolling for ITI training would in turn, lead to a fewer number of women joining sectors where there is high demand for skilled workers.

Fig 2: Cumulative (2019-24) Streamwise candidate admissions in ITIs (in absolute numbers)



Source: ITI Public Dashboard as on 17.03.2026

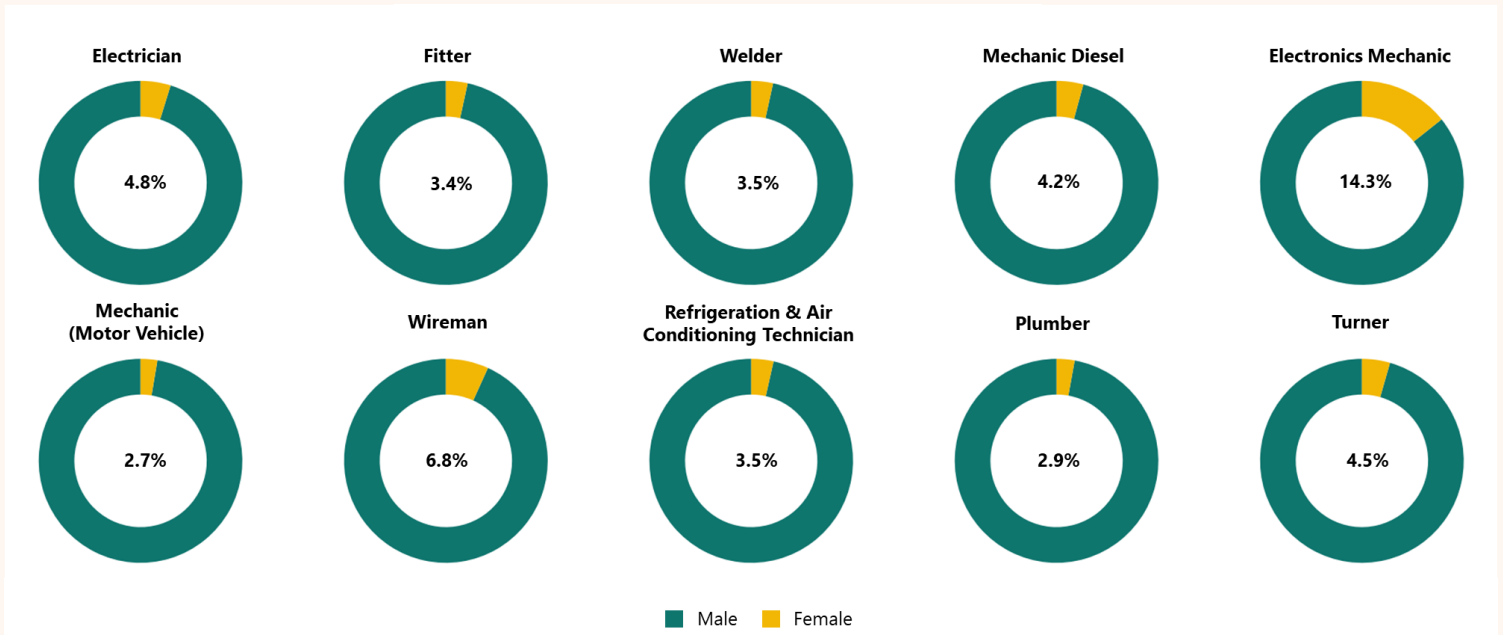
A deeper look into stream-wise enrolment in Figure 2 reveals how this overall imbalance manifests within the ITI system:

- **Engineering Trades:** Only about 2 lakh seats were filled by women, compared to nearly 36.5 lakh seats taken up by men. Women’s share in engineering trade such as electrician, fitter, welder etc. is barely 5.5%. This indicates that technical and mechanical occupations, despite being skill-intensive and better-paying, remain non-traditional domains for women.
- **Non-Engineering Trades:** In contrast, non-engineering streams recorded nearly 3.5 lakh female and 2.6 lakh male admissions. This shows that women outnumber men in service-oriented trades such as fashion design, cosmetology, secretarial practice, sewing technology etc.

This dual pattern illustrates a gender bifurcation within the skill ecosystem:

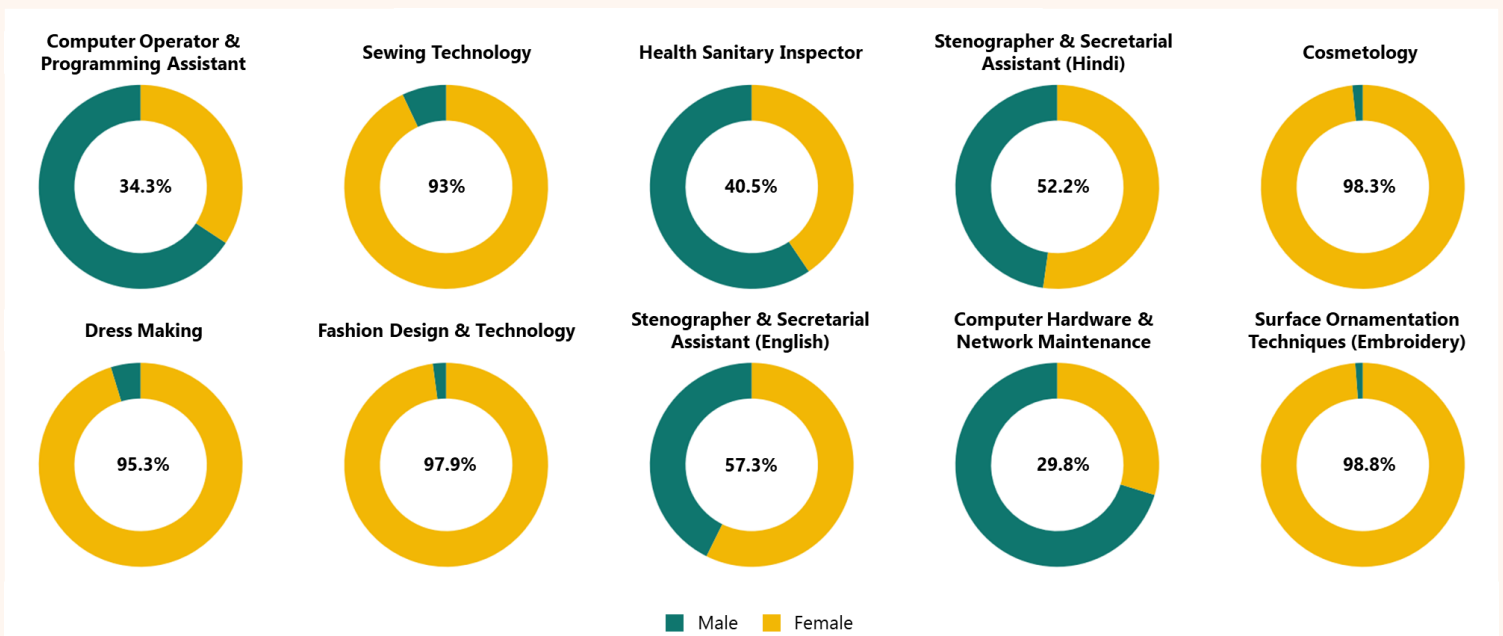
- Women predominantly choose traditional, socially “acceptable” skill domains, often linked to household, caregiving, or creative activities.
- Men continue to dominate technical and field-based training, aligning with industrial and mechanical work.
- Simultaneously, male enrolment in non-engineering trades remains low, reinforcing entrenched gender stereotypes that associate service roles exclusively with women. This gendered distribution reflects how societal norms continue to shape occupational choices for both genders.

**Fig 3: Female Participation (%) across Top 10 Engineering Trades by Enrolment in ITIs (Cumulative, 2019–24)**



Source: ITI Public Dashboard as on 17.03.2026

**Fig 4: Female Participation (%) across Top 10 Non-Engineering Trades by Enrolment in ITIs (Cumulative, 2019–24)**



Source: ITI Public Dashboard as on 17.03.2026

## Trade-Level Gender Segmentation within Engineering Trades

The engineering cluster exhibits near-universal male dominance across all major trades, with female participation largely remaining in the 2–7% range, as reflected in Figure 3.

- Core trades such as *Fitter* (3.4%), *Welder* (3.5%), *Mechanic* (Motor Vehicle) (2.7%) and *Plumber* (2.9%) indicate gender exclusion at the entry level of industrial skills formation.
- Even in relatively less physically intensive electrical trades such as *Electrician* (4.8%) and *Wireman* (6.8%), female presence remains marginal, suggesting that barriers are not purely physical, but institutional and socio-cultural, including lack of targeted mobilisation, absence of gender-sensitive infrastructure in ITIs, and entrenched perceptions about “appropriate” occupations. The persistence of gendered nomenclature where the trade itself is conventionally referred to as “*Wireman*” by default, further reinforces the implicit male orientation of such roles.
- The consistency of low female participation across all engineering trades reflects the pipeline problem within the skilling ecosystem, where girls’ exposure to technical subjects (STEM at school level, early vocational orientation) remains limited. This reduces the likelihood of women even considering ITI-based technical trades, indicating that exclusion begins well before entry into ITIs.

## Trade-Level Gender Dynamics within Non-Engineering Trades

A closer examination of trade-wise enrolment within non-engineering streams in Figure 4 reveals that shows that women’s higher participation in this category is variable across different sectors and concentrated in a limited set of trades. The data reflects a differentiated and internally segmented pattern of participation, shaped by the nature of the trade and its perceived alignment with gender norms, rather than reflecting widespread gender inclusion across all non-engineering trades.

- Within non-engineering trades, a clear distinction emerges between semi-technical/digital trades and traditionally feminised trades. Trades such as *Computer Operator and Programming Assistant (COPA)* (34.3% female) and *Computer Hardware & Network Maintenance* (29.8% female) continue to exhibit male dominance with partial female inclusion, despite falling outside the engineering category. This indicates that proximity to technology, digital systems, and higher labour market value continues to attract or favour male participation, even within ostensibly more inclusive streams.
- In contrast, female participation is heavily concentrated in a narrow set of trades aligned with traditional gender roles, including *Cosmetology* (98.3%), *Surface Ornamentation Techniques (Embroidery)* (98.8%), *Fashion Design & Technology* (97.9%), *Dress Making* (95.3%), and *Sewing Technology* (93%). These trades demonstrate near-total feminisation, pointing to a clustering effect where women are channelled into a limited subset of occupations that are socially perceived as appropriate or acceptable.

- At the same time, a few trades such as *Stenographer & Secretarial Assistant (Hindi)* (52.2%), *Stenographer & Secretarial Assistant (English)* (57.3%), and *Health Sanitary Inspector* (40.5%) display relatively balanced gender participation. These may be understood as transitional or semi-neutral occupational spaces, where both men and women are able to participate due to a combination of factors such as formal-sector linkage, moderate skill requirements, and broader social acceptability.

The ITI landscape reveals a pronounced segmentation in how men and women are distributed across trades. Female participation in engineering remains negligible, while their higher enrolment in non-engineering is tightly grouped within a smaller set of socially ascribed roles. Presence in semi-technical and digitally oriented trades remains comparatively lower, indicating constrained movement into domains with stronger labour market linkages. As a result, the skilling system continues to channel women into a narrower band of occupations, with implications for their access to more stable and higher-value employment pathways.

## 2.2.2 Trends in PMKVY 4.0

Pradhan Mantri Kaushal Vikas Yojana (PMKVY), implemented by MSDE, is a flagship short-term skilling programme under the Skill India Mission. Launched in 2015, the scheme aims to provide industry-relevant skill training, Recognition of Prior Learning (RPL), and certification to enhance employability among youth.

Since its inception, PMKVY has evolved across multiple phases. PMKVY 1.0 (2015–16) was introduced as a pilot to incentivize short-term training through certification-linked monetary rewards, covering around 19.86 lakh candidates. PMKVY 2.0 (2016–20) scaled the programme significantly with a target of 1 crore candidates and a decentralized implementation structure involving both central and state components, resulting in training of over 1.10 crore candidates. PMKVY 3.0 (2020–22) introduced a district-level focus and special interventions such as the Customized Crash Course Programme for COVID Warriors and the Skill Hub Initiative aligned with the National Education Policy (NEP) 2020, training around 7.37 lakh candidates (MSDE, 2025).

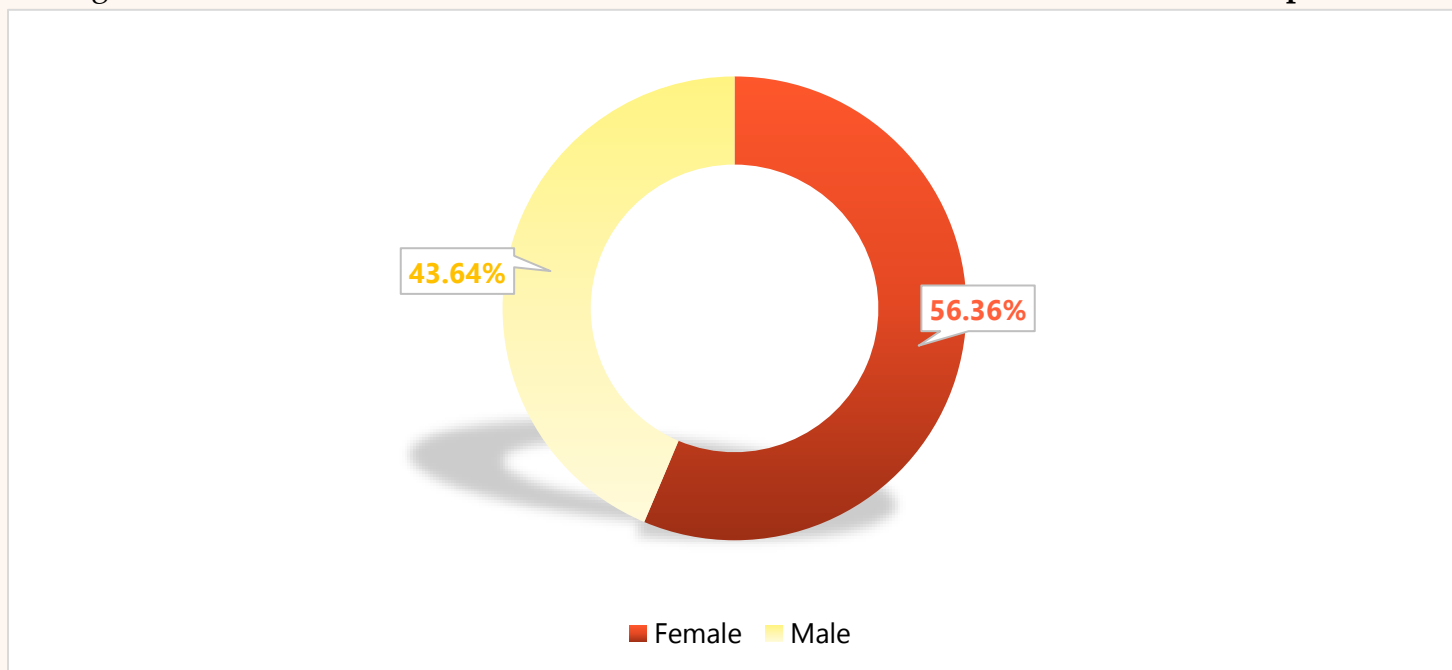
Building on these phases, PMKVY 4.0 (2022–26), announced in the Union Budget 2023–24, represents a shift towards a more industry-driven and future-oriented skilling ecosystem. The current phase emphasizes demand-driven training aligned with Industry 4.0 and emerging sectors such as artificial intelligence, robotics, mechatronics, IoT, drones, green jobs, and international mobility. PMKVY 4.0 incorporates several structural and operational enhancements. It adopts a demand-driven approach based on skill gap assessments and industry consultations, promotes sectoral and cluster-based skilling linked to local economic ecosystems, and integrates On-the-Job Training (OJT) to enhance industry exposure. The scheme also introduces flexible and hybrid training models, including modular courses and micro-credentials, and leverages existing

infrastructure such as ITIs, schools, and higher education institutions through Skill India Centres. Digital integration through the SIDH platform enables end-to-end tracking, certification, and monitoring of the scheme. Concurrently, PMKVY 4.0 incorporates employability and life skills modules and includes targeted provisions to improve participation of women, PwDs, and other marginalized groups (MSDE, 2025).

This paper analyses data for PMKVY 4.0 (cumulative from 2022-26) which presents sector-wise gender-disaggregated data. The data is available on PMKVY Dashboard linked to the SIDH Portal (accessible at: <https://www.skillindiadigital.gov.in/pmkvy-dashboard>).

### Gender Distribution and Sectoral Trends

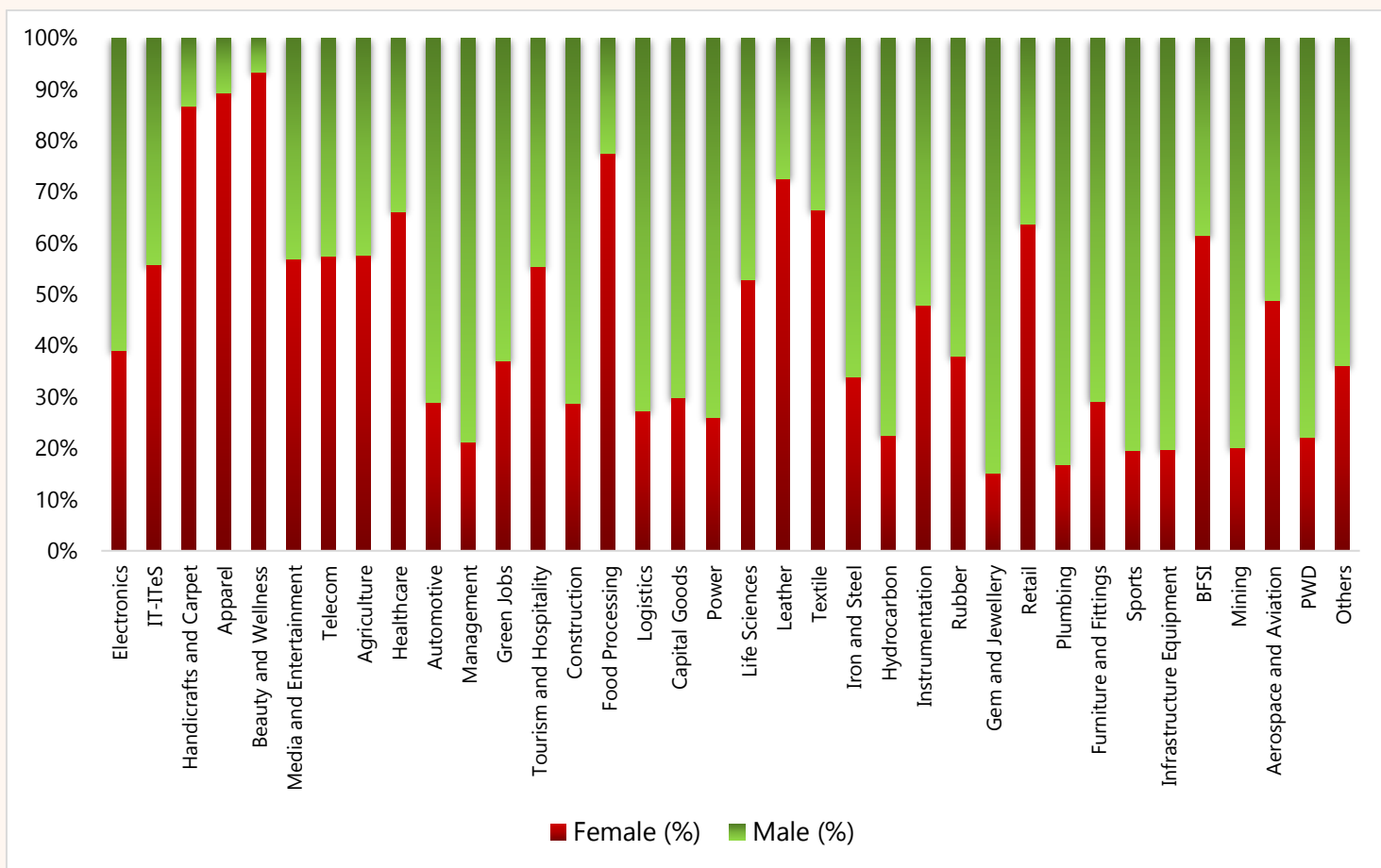
Fig 5: Cumulative Gender-wise share of Candidates Certified under PMKVY 4.0 (in per cent)



Source: PMKVY Dashboard as on 17.03.2026

As seen in Figure 5, a total of 18.86 lakh candidates have been certified under PMKVY 4.0 till mid-March 2026, including 10.63 lakh women (56.36%) and 8.23 lakh men (43.64%). This distribution reflects a positive gender representation, with women forming the majority of certified candidates under the current phase.

**Fig 6: Cumulative Sector-wise Gender Distribution of Certified Candidates under PMKVY 4.0 (in per cent)**



Source: PMKVY Dashboard as on 17.03.2026

However, a closer look at the sectoral distribution in Figure 6 highlights a strong gendered concentration in traditional domains. The majority of women trainees are concentrated in service-oriented and traditionally feminized sectors such as *Beauty & Wellness, Apparel, Textile, Handicrafts and Carpet, Food Processing, Healthcare and Life Sciences*. In these sectors, women constitute between 65% to 95% of certified candidates.

By contrast, women’s participation remains notably lower in industrial and technical trades, notably in *Power, Automotive, Management, Plumbing, Logistics, and Mining*, where female representation rarely exceeds 20–30%. These sectors, though critical for India’s industrial growth and higher-value employment, continue to be perceived as male-dominated spaces both socially and institutionally.

The analysis, therefore, reflects a dual narrative: while women are numerically dominant in PMKVY 4.0, their participation is sectorally confined, pointing to persistent structural and cultural barriers that limit entry into non-traditional livelihoods.

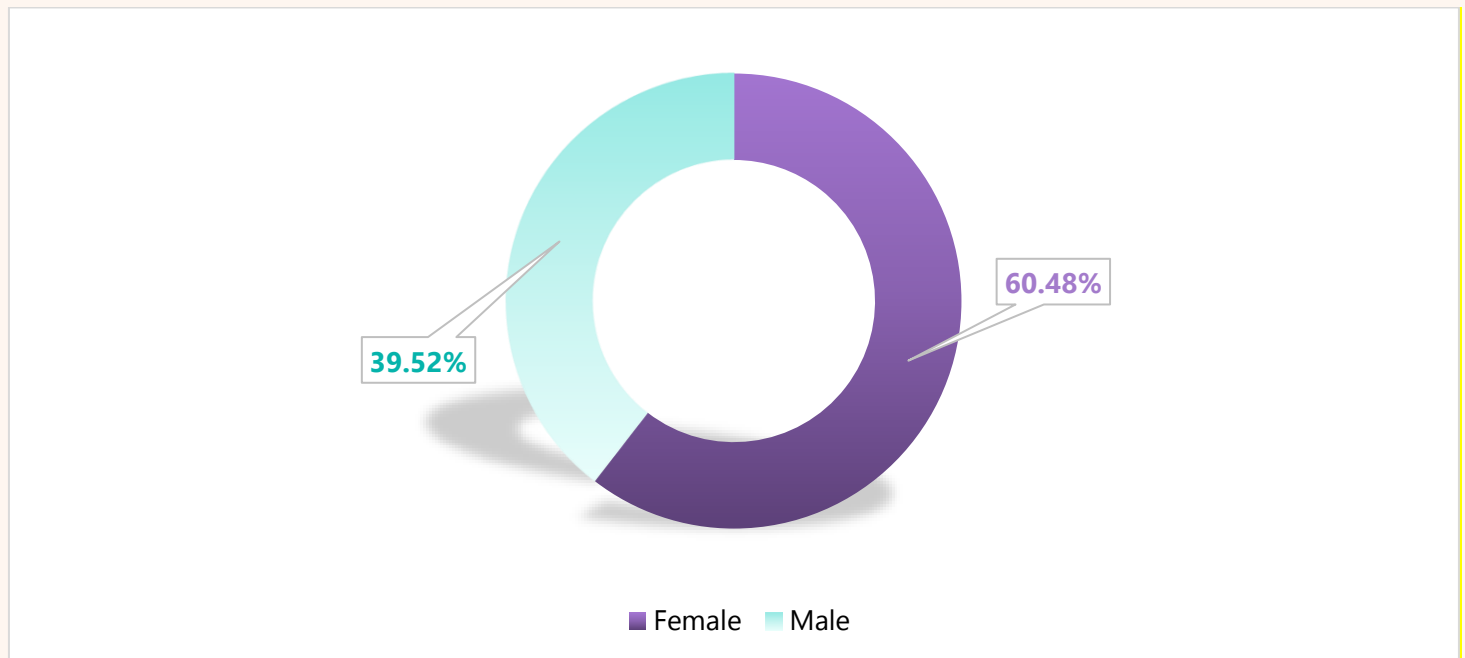
### 2.2.3 Trends in DDU-GKY

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is the flagship rural skilling and placement-linked programme under the Ministry of Rural Development (MoRD), launched in 2014 as a part of the Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM). The programme is a short-term training programme designed to enhance the employability of rural youth aged 15–35 years, with a focus on individuals from poor and socially disadvantaged households, by providing demand-driven, market-aligned skill training and facilitating access to formal wage employment in high-growth sectors. DDU-GKY follows a placement-linked implementation model under which training partners are mandated to achieve minimum placement targets for trained candidates in jobs meeting prescribed norms

For the purpose of this analysis, data has been sourced from the Rural Skills Division, Ministry of Rural Development (MoRD).

#### Gender Distribution and Stream-wise Trends

Fig 7: Cumulative (FY 2014-15 to FY 2025-26) Gender-wise share of Candidates Trained under DDU-GKY (in per cent)



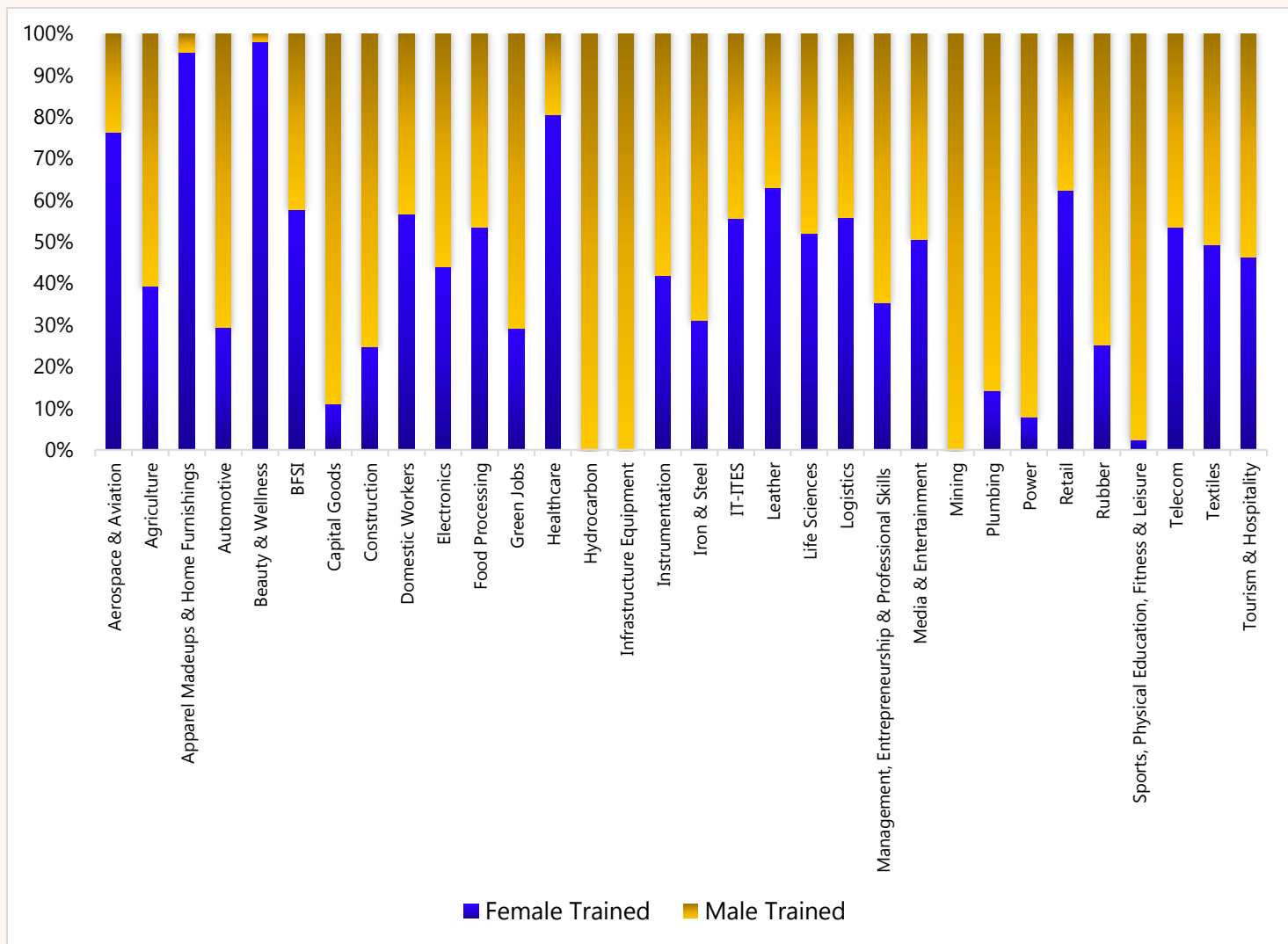
Source: Rural Skills Division, MoRD vide data received dated 16.04.2026

As may be seen in Figure 7, a total of 4.56 lakh candidates have been trained under DDU-GKY till FY 2025–26. Of these, 2.76 lakh (60.48%) are women and 1.80 lakh (39.52%) are men.

This suggests that women constitute the majority of certified candidates under DDU-GKY in this period. This reflects the programme’s strong focus on rural women’s economic inclusion, supported by residential training, safe learning environments, and placement-linked outcomes. However, the

distribution of women across sectors shows signs of gendered occupational patterns, with implications for livelihood quality and wage potential.

**Fig 8: Cumulative (FY 2022-23 to FY 2025-26) Sector-wise Gender Distribution of Certified Candidates under DDU-GKY (in per cent)**



Source: Rural Skills Division, MoRD vide data received dated 16.04.2026

Figure 8 shows that women are highly concentrated in sectors that are traditionally considered “female-oriented” or care and service-based, such as:

- Apparel Madeups & Home Furnishings and Beauty and Wellness, where women account for over 90% of certified trainees.
- Healthcare, where nearly 4 out of 5 certified candidates are women.
- Aerospace & Aviation, Retail, Domestic Workers, Food Processing, and BFSI where women hold a moderate majority.

In contrast, sectors considered non-traditional for women, such as Construction, Automotive, Capital Goods, Power, Rubber, Plumbing, Hydrocarbon, Infrastructure Equipment, and Sports, Physical Education, Fitness and Leisure, show low female representation, in several cases ranging below 20%, and in some sectors close to negligible levels.

This distribution may also indicate that women's participation pattern in skilling under DDU-GKY continues to be shaped by constraints related to relocation, safety perceptions, and social norms that are often more pronounced in rural settings, where factors such as restricted mobility, and distance from urban employment hubs create additional friction for women seeking to enter non-traditional sectors.

#### **2.2.4 Insights from the Analysis: Gendered Patterns in Skilling and Their Implications for Non-Traditional Livelihoods**

The analysis across enrolment data of ITIs, PMKVY 4.0, and DDU-GKY schemes reveals a consistent trajectory: women's participation in India's skilling ecosystem is increasing in numbers, but remains constrained by structural, cultural, and institutional factors that continue to influence access to non-traditional livelihoods. Women form a substantial share of certified or trained candidates, yet their concentration is overwhelmingly in service-oriented, care-based, or craft-linked domains. This pattern is consistent with research indicating that young women are more likely to enroll in trades perceived as "appropriate" or low-risk, such as beauty, tailoring, healthcare assistance and office support (Anand, S, Nanda, Pal, & Sharma, 2020). By contrast, their representation in technical, industrial, and field-based occupations which are the core of India's high-value labour market, continues to be limited. Men continue to dominate engineering and industrial trades, but are markedly absent from non-engineering, service, and care-related fields. This pattern, where women are concentrated in certain vocational trades while men dominate technical and industrial trades, perpetuates occupational segregation and restricts both genders from exploring emerging opportunities in a diversifying economy.

A pronounced distinction also emerges between long-term training (LTT) offered through ITIs and short-term training (STT) delivered under PMKVY and DDU-GKY. While STT schemes show higher female participation because they align with service-oriented and socially accepted roles, LTT pathways remain male-dominated to a greater extent due to their technical and industry-linked nature.

Within LTT itself, the skew is further intensified at the trade level, where women's already limited participation is concentrated away from core industrial trades. The State of Working India Report 2026 highlights that entrenched gendered divisions of labour are also reflected within ITI training systems, where technical, industrial, and field-based trades are disproportionately occupied by men, while women remain concentrated in a narrower range of clerical and care-oriented trades. In this context, vocational training systems often reproduce, rather than disrupt, existing labour market segmentation at the pre-employment stage (Azim Premji University, 2026). This, in turn, dampens the potential to fully realise the demographic dividend by limiting women's access to productive and higher-paying sectors,

restricting their economic mobility and workforce participation, thereby constraining the goals of women-led development and growth.

On the labour demand side, employers tend to prefer men for roles requiring higher experience, as well as for sales-oriented, machine-related, and elementary-skilled jobs. In contrast, women are more likely to be preferred for service-oriented, clerical, and domestic or caregiving roles (World Bank Group, 2023). This reflects the persistence of gendered job allocation patterns within labour markets, where occupational roles are differentiated along gender lines. These challenges are further compounded by structural constraints such as lack of transport, safety concerns, absence of gender-sensitive infrastructure (separate toilets, safe commuting) diminish women's chances of being placed in or retaining roles in heavy industries, even if they are trained (DGT, 2024).

In the long run, mainstreaming gender into skill development is not only a matter of social justice but also an economic imperative. Expanding women's participation in high-growth, non-traditional sectors and creating gender-inclusive training ecosystems will enhance productivity, diversify India's skilled labour pool. Building on these insights, the following section outlines targeted recommendations to address the gaps identified in this analysis and strengthen pathways for women's entry into non-traditional livelihoods, thereby accelerating progress toward the broader goals of inclusive and sustainable growth envisioned in *Viksit Bharat 2047*.

## Chapter 3

# Recommendations: Life Cycle Approach to Support the Journey of Girls and Women into the Skilling Ecosystem

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The skilling ecosystem in India covering short term and long-term training programmes and apprenticeships provides a strong foundation to advance women's participation in non-traditional livelihoods. Targeted enhancements can not only expand access and outcomes for women, but also align workforce capabilities with evolving labour market needs.

At the same time, women's skilling trajectories rarely unfold in a linear manner. Skilling needs are not uniform across women's life stages as training participation and retention are affected by marriage, childbirth, migration, care responsibilities and, at times, discrimination in training sites and workplaces. Young women entering the labour market, mid-life women re-entering after career breaks, and older women seeking livelihood diversification require differentiated skilling pathways. Recognizing this calls for the design of interruption-resilient skilling pathways that allow women to pause, re-enter, progress or transition without penalty. Embedding early exposure during adolescence to career awareness, technical learning, and gender-equitable norms can help shift mindset barriers long before training decisions are made. Such early scaffolding matters because choice is not only economic; it is social, psychological and negotiated.

In order to achieve this, it is important to embed a life cycle approach into the skilling strategy to encourage more women and girls to take part in non-traditional vocational training by creating comprehensive curricula for women and to encourage women to enroll themselves in these programmes. In order to take into account, the variables that affect the journey of young women to the skilling centres and beyond, the paper proposes a life cycle approach i.e., Pre-Training, Training and Post Training support.

### 3.1 Foundational (Age 10 onwards)

- 1. Develop and implement school curricula that systematically address and eliminate gender-based stereotypes.**

**Rationale:** A gender-transformative education and life skills curriculum enables critical engagement with societal norms, exposes girls and boys to non-traditional roles, and cultivates the agency and ambition necessary to navigate and pursue a wider spectrum of professional pathways. General

employability and entrepreneurship skills such as communication, confidence-building, problem-solving, business management, digital and financial literacy are foundational for sustaining women in these trajectories.

**Action:**

- Provide all school students with comprehensive technical and life skills training through immersive, experiential learning, which is gender-transformative in alignment with the NEP 2020.
- Integrate this training within the frameworks of National and State education boards as well as in the curriculum and guidelines developed by bodies such as Sector Skills Councils (SSCs) and other Awarding Bodies operating under the regulatory oversight of National Council for Vocational Education and Training (NCVET).
- Design the curriculum and school textbooks in a gender-neutral and gender-inclusive manner. Ensure that curricular content, textbooks, and pedagogical materials eliminate gender stereotypes in language, imagery, examples, and occupational representations.

## 2. Early Exposure to Non-Traditional Livelihood Options

**Rationale:** Early exposure to a diverse range of livelihood options can enhance girls' participation in the workforce by shaping aspirations and challenging restrictive social norms before they become entrenched. Introducing these concepts during formative years allows for the cultivation of broader perspectives, agency, and preparedness for non-traditional careers.

**Action:**

- Leverage existing schemes and adapt curricula to provide girls aged 10 and above with early exposure to livelihood options, awareness-building, and foundational skills.
- Under the aegis of the NEP 2020, introduce non-traditional livelihood trades into school curricula with clear progression pathways, assessments, and linkages to further skilling opportunities.
- Embed essential life skills within curricula, including navigating financial systems, basic first aid, self-defense, languages, and other competencies that support employability and personal empowerment.
- Integrate storytelling, case studies, and digital media in classrooms highlighting women succeeding in non-traditional livelihoods to challenge stereotypes and inspire aspirations.

### Jharkhand's Market-Linked Tejaswini Model

Tejaswini, implemented by the Jharkhand Women's Development Society and the Department of Women, Child Development and Social Security with World Bank support, operates across 17 districts. The programme focuses on empowering girls and young women aged 14-24 by improving secondary school retention and providing market-linked skills training. The Project has made progress towards successfully rolling out its community level interventions by way of setting up community level platforms (clubs and safe spaces), registering over one million beneficiaries against the original target of 680,000, and imparting life skills education to about 97 percent of registered girls. With over 9,000 girls either completing skills training or currently receiving training, 8,565 girls having completed bridge education, and 7,533 enrolled with open schooling for secondary education by February 2023. Against a revised training target of 30,000, the Project has completed training for 5,232 participants (vocational and business skills), with an additional 4,124 participants currently receiving training in ongoing batches.

Source: World Bank. (2023). *Tejaswini: Socio-economic Empowerment of Adolescent Girls & Young Women (Project P150576) – Implementation Completion and Results Report*. <https://documents1.worldbank.org/curated/en/>

### 3. Highlighting Female Role Models to Drive NTL Aspirations

**Rationale:** Stories of local and community role models and exemplars, such as women scientists and mathematicians, can pique girls' interest in science and mathematics and encourage them to pursue promising careers in STEM fields and non-traditional occupations.

#### Action:

- Implement targeted Information, Education, and Communication (IEC) campaigns under initiatives like Beti Bachao Beti Padhao to showcase female role models and reinforce gender equity.
- Engage parents as key stakeholders to enhance the effectiveness of programmes and policies. Parental involvement strengthens confidence in girls' learning outcomes and skill development. This can be operationalized through State and Central school networks, with mobilizers from skilling programmes such as PMKVY and DDU-GKY providing guidance on non-traditional career pathways and vocational opportunities.
- Leverage SHGs to reach families and communities, using their trusted position to disseminate information on skilling, vocational training, apprenticeships, and non-traditional livelihood opportunities. Organize skill melas, job fairs, and recruitment drives with participation from SHGs and community leaders to directly connect girls and women with employment and training pathways in non-traditional sectors.

### **Kudumbashree's Diversified NTL Initiatives**

Kudumbashree in Kerala has steadily pushed women into non-traditional livelihood sectors such as waste management, construction, electronics repair, plumbing, facility management, digital services, and even wellness enterprises. Through initiatives like the Haritha Karma Sena for decentralized waste management and all-women construction and repair groups, the mission provides training, skilling, and enterprise support that help women move beyond conventional work. The focus is on expanding their economic options, improving income potential, and breaking gender barriers by giving women the skills and confidence to operate in fields traditionally dominated by men.

Source: Kudumbashree website: <https://www.kudumbashree.org/>

## **3.2 Pre-training**

### **1. Offer career counselling and aptitude tests in Schools & ITIs**

**Rationale:** Information about non-traditional trades, their scope for growth and upward mobility should form a part of career counselling and guidance at the secondary school level for young women so that they can make informed choices regarding their skilling, higher education, and careers.

**Action:**

- Introduce aptitude, interest-based skilling, and vocational education at the school and college level, as envisaged in the NEP 2020, to allow girls to explore their interests.
- Introduce aptitude tests for ITI aspirants, and pre-placement and career guidance support to enable matching skill sets and interests with specific requirements.
- Organise Open Days at skilling centres for potential female trainees and their parents to enable them to make informed choices regarding the courses and encourage them to explore new trades. These may be organised in convergence with Model Career Centres, which can provide career guidance, information on vocational pathways, and counselling support to help young women and their families better understand available training options and potential employment opportunities.

## 2. Provide access to skilling information through multiple networks

**Rationale:** Programmes and policies designed for youth, girls, and women often fail to reach the intended beneficiaries. Ensuring widespread access to information and opportunities is therefore critical to expanding participation in skilling initiatives for women and girls.

### Action:

- Conduct a mapping of schemes available to girls and women through the State and Central Government.
- Create a dissemination plan tapping into India's robust civil society sector that is deeply embedded within communities. Mobilise information using these networks to bring existing training schemes and enrolment opportunities to young people and communities.

### **Mo E-Ride: Bhubaneswar's Model for Inclusive Green Mobility**

Mo E-Ride, implemented by GIZ India in partnership with the Capital Region Urban Transport (CRUT) in Bhubaneswar, brings together green mobility and inclusive livelihood creation. The e-rickshaw feeder service is driven entirely by women, transgender, and HIV-positive drivers, who receive hands-on training in vehicle operation and soft skills. The initiative improves clean first- and last-mile connectivity while opening up income opportunities for groups that often face social and economic exclusion.

Source: GIZ website: <https://www.giz.de/en/regions/asia/india/news/>

### **Indo-German Energy Programme: Access to Energy in Rural Areas (IGEN ACCESS), GIZ**

Under the Indo-German Energy Programme–Access to Energy in Rural Areas (IGEN ACCESS) led by GIZ India, a structured capacity-building initiative has strengthened women's participation in the Decentralized Renewable Energy ecosystem. A total of 5,749 women entrepreneurs across 11 states received training in business development, product handling, and enterprise management, enabling energy-linked livelihoods. To ease mobility and time constraints shaped by gender norms, the programme introduced Digital Akshay Urja Training, allowing women to access high-quality training remotely and at flexible times.

Source: GIZ website: <https://www.giz.de/en/projects/access-energy-rural-areasigen-access-phase-ii>

### 3.3 During Training

#### 1. Offer non-traditional livelihoods training with complementary skills grounded in ‘market needs’

**Rationale:** In addition to technical skills training, offering complementary skills increases the chances of successful completion and retention in non-traditional trades that are sustainable, socially transformative and gender equal, in terms of training and practical tools, with adequate feedback loops.

#### Action:

- Offer more market-oriented NTL skilling courses aligned with the National Skill Qualifications Framework for women at the central and state levels through ITIs, PMKVY, DDU-GKY and National Skill Training Institute for Women (NSTI (W)). These can be in high-demand sectors such as construction, retail, electronics & IT hardware, wind and new and renewable energy, among others.
- Create programme curricula that include non-technical skills and focus on building the self-efficacy and core life skills of their trainees with adequate feedback loops to enhance the efficacy of the programme.

#### Enhancing Participation of Women in Skill Trainings - Tripura’s SHE Skill Centres

Tripura’s SHE Skill & Entrepreneurship Centre (SSC) is a pioneering initiative aimed at enhancing women’s workforce participation and promoting inclusive economic growth through targeted skill development and entrepreneurship support. Launched on 8 March 2025 at ITI Indranagar, Agartala, the first centre marks the beginning of a state-wide network envisioned across all 8 districts. The SSC focuses on equipping women aged 18 to 45 years, particularly from marginalised and economically disadvantaged backgrounds, with market relevant technical and entrepreneurial skills. Currently, National Institute of Electronics and Information Technology (NIELIT) is conducting the first batch of 20 women trainees under a Certified Web Developer (240-hour) programme. Beyond training, the centres are being designed to serve as employment facilitation hubs, connecting women to job opportunities through hands-on exposure, personalised mentoring, and active industry linkages thereby fostering self-reliance and sustainable livelihoods for women in both traditional and emerging sectors.

Source: Directorate of Skill Development, Govt. of Tripura.

## 2. Offer counselling during training to enhance the retention of women

**Rationale:** Providing on-site counselling and psychometric support within training centers helps address personal, social, and motivational barriers, thereby improving retention of women in skilling programmes. Strategic investment in such support services has the potential to increase programme completion rates and long-term engagement.

### Action:

- Create access to counselling within ITIs and other skilling centres to enable women to address the barriers to entry that limit them from fully participating in programming. Career-oriented counselling should provide prospective trainees with information on resume writing, the type of work in the sector, job availability, and the scope for upward mobility.

## 3. Integrate private sector participation to strengthen skilling and employment outcomes

**Rationale:** Assessment of market demand and engagement of corporates throughout the lifecycle has the potential to increase placement and retention for trainees.

### Action:

- Involve industry representatives in the curriculum design of ITIs, Polytechnics, and other training institutes to align skilling programmes with current and projected market demand, including inputs on emerging technologies, industry standards, and practical skill requirements to improve employability and placement outcomes for trainees.
- Create industry-linked apprenticeship pipelines led by private sector employers, with companies reserving structured apprenticeship opportunities for women trainees in non-traditional trades to facilitate their transition from training institutes to the workforce.
- Promote industry-supported scholarships, fellowships and innovation challenges in collaboration with Central and State governments to increase the participation of girls and women in high-growth and emerging sectors such as renewable energy, electronics manufacturing, semiconductors, and financial services.

### **Promoting Women's Entry into Non-Traditional Trades through Targeted Training Models**

In Kerala, the Archana Women's Centre provides hands-on instruction in masonry, carpentry, electrical work, and plumbing, enabling women to take up skilled technical roles traditionally closed to them. In Jaipur, ACCESS Development Services has created the Pink City Rickshaw Company, where low-income women receive training in e-rickshaw driving, customer handling, and basic vehicle maintenance, allowing them to offer safe, eco-friendly transport services to tourists.

These models show how focused training, supportive ecosystems, and visibility in public spaces can open non-traditional livelihoods for women at scale.

Sources: 1. Archana Women Centre: <https://www.archanawomencentre.org/>

2. Access Development Services: <https://pinkcityrickshawcompany.com/>

#### **4. Offer supportive infrastructure in training centers**

**Rationale:** Skill training programmes and institutions need to be sensitive to the infrastructure requirements of women. Absence of childcare and lodging are a major hindrance preventing female skills training participation. Women bear a disproportionate burden of unpaid care work, which creates 'time poverty' and restricts their ability to acquire skills or take up paid work.

#### **Action:**

- Ensure availability of affordable childcare facilities, such as crèches, clean and hygienic, separate washrooms for women, and safe transportation at skilling centers.
- Provide accessible accommodation to trainees in order to mitigate one of the most significant barriers to women and girls' participation in skills training.
- Strengthen monitoring and evaluation across ITIs and other skilling schemes, and make them more robust by incorporating gender-sensitive indicators such as the availability of functional toilets for females, the proportion of females joining NTL-related trades, etc.

## Improving Female Enrolment in Government ITIs and Polytechnics: Insights from the Sudakshya Initiative

Sudakshya, implemented by the Directorate of Technical Education and Training under Odisha's Skill Development and Technical Education Department, is recognised as a strong model for improving women's participation in technical education. The scheme follows a lifecycle approach mobilising eligible girls for admission into Government ITIs and, since 2023-24, Government Polytechnics and Diploma institutions, and providing comprehensive financial support during training. Tuition fees are waived, admission-related charges reimbursed, and beneficiaries receive a monthly allowance of ₹1,500 for hostellers and ₹500 for day scholars, along with hostel rent reimbursement. Post-training, the scheme supports apprenticeships and offers one-time relocation assistance for out-of-state placements. Backed by government investments in hostel and institutional capacity, Sudakshya has increased girls' enrolment in Government ITIs from around 7% in 2016-17 to over 22% by 2022-23.

Source: *Annual Activity Report 2022-23*, Skill Development and Technical Education Department, Government of Odisha.

### 5. Offer mobile skills training

**Rationale:** Women often lack access to skilling opportunities due to distance from training centers. Bringing skilling programmes to women's doorsteps will increase the enrolment and retention of women from the most marginalized geographies and communities.

#### Action:

- **Deploy Mobile Skilling Units** equipped with trainers, training materials, and assessment tools to conduct short-term courses within village clusters.
- **Integrate flexible training schedules** (half-day, staggered batches, weekend-based) to accommodate women's household and caregiving responsibilities.

## 3.4 Post-Training

1. **Create a link between training and employment through placement cells and engagement with the potential employers.**

**Rationale:** Creating a roadmap from skilling to employment is essential because not everyone receives access to jobs even after training. Additionally, Skill training must be demand-driven with a buy-in of prospective employers, not supply-driven.

**Action:**

- Strengthen the functioning of placement cells in ITIs and skilling centres to provide structured support for placements, apprenticeships, and employer engagement, with targeted efforts to support women trained in technical and non-traditional trades in securing suitable employment.
- Link the placement cell to portals such as SIDH and National Career Service (NCS) so that the market can absorb women in non-traditional trades, and vacancies are publicised with training centres and civil society organisations.
- Institutionalise employer engagement mechanisms, including regular recruitment drives, apprenticeship linkages, and industry partnerships, and include industry leaders and representatives on relevant advisory boards of skilling institutions to strengthen industry-training linkages. This can encourage firms to hire women from technical training streams and support their entry and retention in sectors where female participation remains low.

## **2. Cultivate post-placement support, including mentorship and access to the alumni network**

**Rationale:** Women have weaker professional networks, which hamper their access to career growth, opportunities for upward mobility, promotion, and leadership roles. Supporting women post-placement through access to mentors and maintaining alumni networks is crucial to retention. Alumni can be pivotal in being role models and a support system for their peers. Therefore, meaningful engagement with alumni is an important aspect of ecosystem building for women in skill training.

**Action:**

- Encourage initiatives to create formal spaces for alumni to engage with one another – once they have completed their formal training.
- Direct ITIs to maintain an updated alumni database and organise knowledge exchange sessions and networking opportunities for them.
- Support women accessing NTL skill training opportunities in forming women's collectives/SHGs through provisions of seed funding, preferential procurement clauses, access to digital and physical markets, etc. Existing schemes, such as Startup India, MUDRA Scheme, etc., can be leveraged for this purpose.

### **From Beneficiaries to Builders: How PMAY-G Enabled Women Masons in Madhya Pradesh**

The Government of Madhya Pradesh has institutionalized the training of rural women as Mahila Raj Mistri where women masons engaged in the construction of pucca houses under the Pradhan Mantri Awas Yojana-Gramin (PMAY-G). The State has trained a substantial number of women in masonry, with nearly 9,000 women trained as masons in Madhya Pradesh, marking a significant step towards gender inclusion in a traditionally male-dominated skilled construction trade.

Source: *Madhya Pradesh Sushasan and Development Report 2022*, NITI Aayog – NITI for States Portal.  
<https://www.nitiforstates.gov.in/>

### **3.5 Concluding Insights**

The analysis presented in this paper underscores a persistent concentration of women in a limited set of non-technical trades, while opportunities in high-growth sectors remain underutilized. Breaking the pattern of women's concentration in a certain set of trades requires sustained, ecosystem-wide reform that strengthens early exposure, improves access to technical pathways, and embeds gender-responsive design across training, placement, and workplace systems.

Advancing non-traditional livelihoods as an integral component of India's skilling architecture will require coordinated action across Central Ministries and State Governments, private sector and industry, and civil society organizations. A structured approach is essential to broaden women's access to emerging labour-market opportunities and to strengthen pathways leading to higher-value occupations.

For Central and State Governments, this includes strengthening convergence across skilling, education, and livelihood programmes; improving access through targeted scholarships and better dissemination of schemes; institutionalizing gender-disaggregated data systems; and ensuring enabling infrastructure such as crèches, transport, and residential facilities. For education and skilling bodies, the focus must be on embedding non-traditional livelihood content within curricula from an early stage, eliminating gender bias in training frameworks, offering NTL-focused courses, updating course offerings in emerging sectors such as renewable energy and Industry 4.0, and ensuring gender-inclusive quality benchmarks such as ITI grading.

The role of private sector and industry is pivotal in aligning skilling with demand through gender-sensitive recruitment practices, investments in training and scholarships, structured apprenticeship and placement pathways, and the establishment of safe and enabling workplace systems. Civil society organizations remain central to last-mile delivery through community mobilization, counselling, mentoring, exposure to non-traditional careers, facilitating linkages to training and employment, and addressing social norms, safety, and mobility constraints.

This paper outlines suggestions built on a life-cycle approach for women and girls, building on this coordinated framework. By integrating gender-transformative skill development, strengthening institutional capacity, and forging deeper industry partnerships, India can unlock a broader spectrum of opportunities in high-growth sectors from manufacturing and renewable energy to digital and advanced services. These efforts, coupled with strong community engagement and post-placement support, can enable women not only to enter the workforce but to thrive, lead, and innovate.

As India moves toward the vision of Viksit Bharat 2047, building a gender-balanced, future-ready workforce will be foundational. Advancing non-traditional livelihoods for women is therefore not a peripheral initiative, but a core national priority that can strengthen productivity, enhance social equity, and accelerate inclusive economic progress.

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