

# From Education to Employability: A Gendered Spatial Analysis of Workforce Participation in India

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## *Abstract*

*The relationship between education and employment remains a critical concern in developing economies, particularly in the context of gender disparities. Over the past few decades, India has made remarkable progress in expanding access to education, especially for women. Despite significant improvements in female educational attainment in India, participation of female in the labour force continues to remain low and uneven across regions, while it is a key driver of economic growth, gender equality and social development. This chapter explores why this gap persists, examines the gendered spatial patterns of workforce participation in India, and analyses how education and skill development influence female employability. By utilizing the secondary sources of the data such as the Periodic Labour Force Survey (2026), World Bank (2025), All India Survey on Higher Education(2022), and Census of India(2011)etc. the study reveals a persistent disconnect between education and employment, influenced by structural,*

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Book Name: Panch Parivartan: A Five-Fold Journey from Tradition to Transformation

Pub: Anu Books. ISBN:978-93-7847-006-6

DOI: <https://doi.org/10.31995/book.ab371-a226.ch.7> Plagiarism Report: 06%

*cultural, and spatial constraints. The southern and western states in India such as Maharashtra, Karnataka, and Tamil Nadu tend to have higher female participation rates, while northern states like Bihar and Uttar Pradesh often report lower rates. Despite better education and infrastructure, labour force participation of female is lower in urban areas than in rural areas. The study highlights the need for gender-sensitive policies that integrate education, skills, and employment opportunities to achieve inclusive growth.*

**Keywords:** *Female labour force participation, Education, Employability, Gender, Spatial inequality, Skill development.*

## **Introduction**

India stands at a critical juncture in its development trajectory, driven by the potential of its demographic dividend, as a large proportion of its population falls within the working-age group. With one of the largest youth populations in the world, the country possesses significant potential to accelerate economic growth. In this context, education has emerged as a central pillar of transformation. Over the past few decades, a substantial progress has made by India in expanding the access to education, particularly for women, reflecting a broader commitment to inclusive development and human capital formation.

As per the Census of India (2011) report, female literacy rate in India improved significantly from 53.67% in 2001 to 65.46% in 2011, reflecting substantial progress in basic education. This upward trend is also evident in higher education, where female enrolment has expanded considerably. According to the All India Survey on Higher Education (2021–22), women's enrolment in higher education rose from 1.57 crore in 2015 to 2.07 crore in 2022, reflecting a growth of 31.6%.

However, this encouraging story takes a different turn when we look at employment. Despite being more educated than ever before, many women in India are not part of the workforce. This raises an important question: Why does education not lead to employment for many women? The answer lies in a complex mix of social expectations, traditional gender roles, unpaid household responsibilities, limited job opportunities, safety concerns while travelling and at workplace, lack of childcare facilities and regional inequalities (Afridi, 2025; Bernhardt et al. 2018; Eswaran et al. 2013). Education may open doors, but many women still find those doors difficult to walk through.

## **Relationship between education and employment**

At a basic level, the relationship between education and

employment seems straightforward. Education helps individuals gain skills, which improve their chances of finding work. This idea is rooted in ‘Human Capital Theory’, which views education as an investment that enhances productivity and economic growth (Becker, 1964). But in reality, this pathway is rarely smooth, especially for women. To better understand this, we can think of the process as a chain:

**Education → Skills → Employability → Workforce**

At each stage, barriers can emerge. A woman may receive an education but lack access to skill training. She may gain skills but still struggle to find suitable employment. Even when jobs are available, social norms or safety concerns may prevent her from participating (Chakraborty et al. 2018). Though participation of females in labour force increased in recent years but this growth has largely been concentrated in rural areas and within the informal sector (PLFS, 2024). This pattern has raised concerns regarding the quality and sustainability of such employment. In contrast, female labour force participation in urban regions has remained relatively stagnant (PLFS, 2025), while highly educated women continue to encounter significant barriers to entering or remaining in the workforce (Klasen & Pieters, 2015).

This is where the idea of **gendered geography** becomes important. The concept of gendered geography highlights how access to resources, opportunities, and mobility is unevenly distributed across space and shaped by social norms and institutional structures (Elledge, 2022; Hanson, 2010; Massey, 1994). Women in urban areas may have better access to education but still face mobility or safety constraints. Women in rural areas may participate more in work, but often in low-paid and informal sectors. Understanding these layered realities is essential if we want to move from simply educating women to truly empowering them economically.

This chapter aims to understand this gap and examine how education and skill development shape employability outcomes for women across different regions of India. By adopting a gendered and spatial perspective, it seeks to uncover the structural barricades that hinder participation of women in the labour market and to explore pathways for achieving inclusive growth.

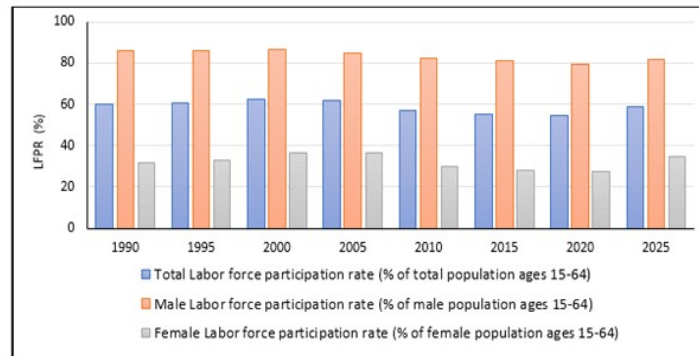
### **Data Sources and Methodology**

This study is based on the secondary sources of data from different reliable sources, including the Periodic Labour Force Survey (PLFS), 2026; International Labour Organization (ILO), 2026; World Bank, 2025; All India Survey on Higher Education (AISHE), 2022; Census of India, 2011

etc. and relevant policy documents and research studies which provides a comprehensive information on employment trends, educational attainment, and spatial pattern of workforce participation in India. The study implements a spatial, descriptive and analytical method to inspect the trends and patterns in female labour force participation. In addition, GIS-based mapping helps identify regional patterns and disparities. Through the analysis of statistical data and existing literature, it identifies the key economic, social and structural factors influencing the participation of women's in the labour market.

### **Trend and Spatial Patterns of Female Workforce Participation in India**

Female workforce participation is a crucial driver of economic growth, gender equality and social development. **Figure 1** shows a long-term decline followed by recent recovery in labour force participation in India. Male participation remained consistently high but gradually declined from 86% in 1990 to around 81.6% in 2025. In contrast, female participation is significantly lower and more volatile rising until 2005 (36.7%), then sharply declining to 27.8% in 2020, before recovering to 34.9% in 2025 (World Bank, 2025). This reflects a persistent gender gap, despite recent improvements, consistent with global labour force trends.



**Figure 1:** Trends of Labour Force Participation Rate in India, 1990-2025

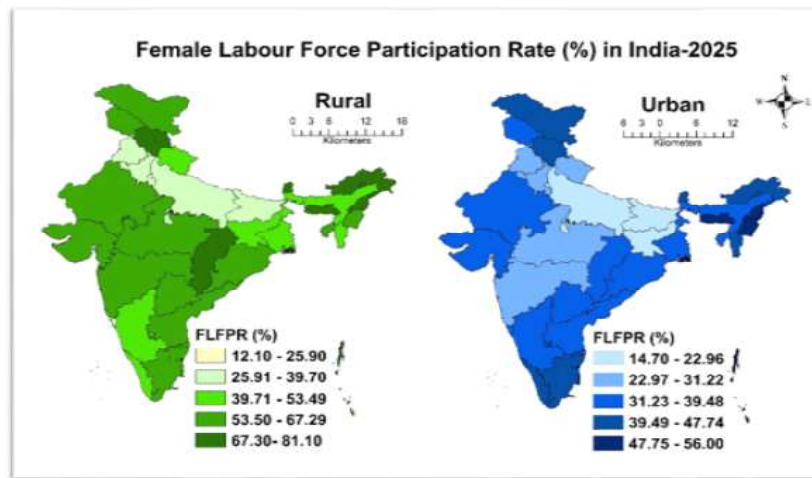
**Source:** Prepared by the author's by using data from World Bank, 2025.

*Figure 2* illustrates that, southern and western states such as Maharashtra, Karnataka, and Tamil Nadu tend to have higher female participation rates, while northern states like Bihar and Uttar Pradesh often report lower rates (PLFS, 2025). According to Srivastava et al. (2025), district level workforce participation of women (who worked in the past 12 months) ranges from a low of 10.9% in Arwal (Bihar) to a high of 61.4% in Bijapur (Chhattisgarh). Self-employment (in the past 12 months)

varies from 0.7% in Gopalganj (Bihar) to 19.8% in East Sikkim, while cash earnings range from 8.4% in Gopalganj to 55.9% in Nizamabad (Telangana). Significant intra-state variations are evident in Bihar (Arwal–Jamui) and Uttar Pradesh (Azamgarh–Aligarh). Higher participation is observed in districts such as Chandel (Manipur) and Nizamabad, highlighting strong regional and local inequalities (Srivastava et al., 2025).

### **Rural–Urban Differences in Female Labour Participation in India**

**Figure 2** illustrates that labour force participation rates of female of age group 15-59 years differ widely across states and between urban and rural areas. According to the PLFS, 2025, rural areas have witnessed a recent increase in female participation, largely driven by engagement in the agriculture work and informal sector. This phenomenon is sometimes referred to as the ‘*feminization of agriculture*’, where women take on a larger share of agricultural labour due to male migration and economic necessity. Another reason is, agricultural work allows women to stay close to home and maintain flexible schedules, making it easier to balance paid work with household responsibilities compared to fixed, commute-based urban jobs. Stronger community support systems in rural areas also encourage higher female participation. Extended families and close social networks help share childcare, eldercare, and household responsibilities, enabling women to engage in work without fully giving up caregiving roles.



**Figure 2:** Female Labour Force Participation Rate (%) among the women age 15-59 years in India.

**Source:** Prepared by the author's by using the data from Periodic Labour Force Survey, 2025.

However, such employment is often characterized by low wages, lack of security, and limited upward mobility. On the contrary side, urban areas present a paradox. Despite better educational and infrastructural facilities, female participation remains relatively low. This can be attributed to a mixture of factors, including safety concerns, commuting challenges, lack of affordable childcare, lack of suitable jobs, discrimination in hiring and wages, limited flexible work opportunities and social norms that restrict women's mobility. Spatial analysis reveals that regions with higher educational attainment do not always correspond to higher workforce participation, indicating the presence of structural and contextual barriers that disrupt the education-employment linkage.

### **Education and Skill Landscape in India**

In India, women now make up nearly half of all students in school and higher education (AISHE, 2022). This marks a significant shift from previous decades and gender gaps in primary and secondary education have narrowed (UDISE+, 2024). Yet, beneath this progress lie important challenges. Dropout rates remain high in certain regions, particularly in rural and economically disadvantaged areas (Shukla et al., 2024; Shukla & Tiwari, 2024). Moreover, not all education leads to employable skills. Many students graduate without the practical knowledge or technical expertise required by the job market. Second, women often cluster in certain fields such as arts and humanities which may offer fewer employment opportunities compared to technical or vocational fields.

Skill development programs, supported by the Ministry of Skill Development and Entrepreneurship, aim to address this gap. However, participation of women in such programs is still limited, and even when women receive training, it does not always translate into jobs. This highlights a critical issue: education alone is insufficient to ensure employability. The nature, quality, and applicability of education and skills present a crucial role in determining labour market outcomes.

### **The Education-Employment Disconnect**

A useful way to understand female workforce participation is through what researchers call a '*U-shaped relationship*' (Goldin C., 1994). Women with very low levels of education often work out of necessity, usually in informal or low-paying jobs. As education increases, participation may actually decline. This happens because women (and their families)

begin to aspire to better jobs, which may not be easily available. At higher levels of education, participation rises again but only for a relatively small group of women who are able to access professional or formal sector jobs. This pattern highlights a key issue: education raises expectations, but the labour market does not always meet them.

### **Barriers to Female Employability in India**

Despite rising educational attainment, women's transition into the workforce remains limited due to complex interplay of social, economic, spatial, and institutional constraints. One of the most significant barricades is the continued persistence of traditional gender norms that prioritize unpaid domestic responsibilities over paid employment. Marriage, childcare, and unpaid care work continue to disproportionately affect women's ability to seek and sustain jobs (Afridi et al, 2024). Women devote their significant share of time on home related tasks such as food preparation, cleaning, baby-sitting, and elder care. Although these activities are essential for household and societal functioning, they are seldom accepted as economic contributions, which making women's work largely invisible in official statistics. In middle-class households of the urban area, greater financial stability of the family often leads women to place their family responsibilities over paid work. When household income is adequate, employment of women's may be perceived as less necessary, which leading to voluntary withdrawal or not participating the women in the workforce (Klasen & Pieters, 2015; Mehrotra & Parida, 2019).

Economic factors further constrain employability. Women often get lower wages than men despite possessing similar experience and qualifications. Employer bias and societal stereotypes further limit hiring opportunities and hinder their career advancement (Chatterjee et al, 2015). Wage disparities and occupational segregation discourage participation of women in the workforce (Mehrotra & Parida, 2019). A large proportion of women in India remain concentrated in the the informal sector, where they get low wages and also job security is limited. These occupations often not provide the essential benefits to the working women such as maternity leave, childcare facilities, healthcare, and social security, prompting many women to exit the workforce during life events like pregnancy or childcare. With the rise of nuclear families, many women have limited access to family support, forcing them to prioritize caregiving over employment. This challenge is

closely linked to post-maternity workforce dropouts, as women often struggle to come back to work due to the absence of re-entry opportunities, flexible work hours, and supportive employment policies, leading to long-term or permanent exit from the labour market (Klasen & Pieters, 2015).

Spatial barriers also play a crucial role. Limited access to safe and reliable transportation (Alam et al, 2021), especially in rural and peri-urban areas, restricts women's mobility and access to workplaces. Safety concerns are a major barrier to women's employment. Unsafe commuting, insecure public transport, unsafe job-locations, sexual harassment in public spaces, limited grievance or reporting mechanisms, and insufficient infrastructure such as lack of safe sanitation facilities restrict women's mobility, discouraging them for traveling long distances or working late hours. Regional disparities in economic development mean that opportunities are unevenly distributed, further reinforcing gender gaps (Hanson, 2010).

Institutional challenges, including skill mismatch and weak linkages between training programs and industry needs, also hinder employability (Schneider & Pilz, 2024). Although literacy of female has improved significantly, numerous women still does not have the vocation and technical skills needed for getting or cope up with employment in modern sectors such as technology driven and advanced services in different sectors. Although initiatives supported by the Ministry of Skill Development and Entrepreneurship aim to enhance skills, their effectiveness in generating employment particularly for women remains uneven. Overall, these interconnected barriers highlight that improving female employability requires not only better education and skills but also supportive social norms, inclusive labour markets, and enabling infrastructure (National Statistical Office, 2025).

### **Pathways to Improve Female Employability**

The above findings point to a clear conclusion that improving education alone is not enough to increase women's workforce participation. The problem lies in the gap between education and employment, which is shaped by social norms, economic structures, and spatial inequalities. While recent trends show some improvement in participation, much of it is concentrated in informal sectors. This raises concerns about job quality and long-term sustainability. To overcome these challenges, a more practical and inclusive approach from the society, government, and the private sector is needed. For this, Education must be better aligned with the needs of the

job market so that women can acquire skills that are actually in demand. Strengthening skill development and digital training can further improve employability. Ensuring equal pay for equal work and reducing gender-based wage gaps can encourage sustained participation. Promoting labour-intensive industries in rural and semi-urban areas can generate accessible jobs for women. Flexible work options, work from home along with improved childcare support such as creches and paid leave, can help women balance work and family responsibilities. At the same time, improving public transport and ensuring safety can make it easier for women to access workplaces. Further, focusing on region-specific development can create more equal opportunities across different parts of the country. Alongside these measures, awareness initiatives can help shift societal attitudes. Increasing women's involvement in the employment is not only vital for gender equality but also for long-term economic growth of the nation.

### **Conclusion**

In conclusion, women's employability in India is shaped by the complex interplay of education, skills, social norms, and spatial inequalities. While significant progress has been made in expanding educational access, but the journey from education to employment remains incomplete. Bridging this gap requires more than just expanding access to education it requires creating an environment where women can translate their education into meaningful work. Addressing the education-employment disconnect requires a holistic approach that aligns skills with market needs, improves safety and mobility, and strengthens institutional support systems such as childcare and flexible work. Enhancing labour force participation of female is vital not only for gender equality but also for unlocking the full economic potential and achieving sustainable development of India.

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