



LABOUR FORCE PARTICIPATION RATE IN NORTH EASTERN REGION IN INDIA

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ABSTRACT:

This study examines the labour force participation rate (LFPR) in India's North-Eastern Region (NER), comprising eight states with diverse ethnic groups and socioeconomic conditions. The region shows distinct labour force patterns shaped by gender roles, rural-urban divides, and demographic factors. The LFPR data from 2019-20 to 2023-24 reveals an upward trend across states and nationally, with strong growth in female participation. Meghalaya, Sikkim, and Nagaland reported the highest LFPRs, whereas Mizoram and Tripura showed moderate rates. Assam recorded substantial LFPR increase, driven by rising female participation. The Compound Annual Growth Rate (CAGR) shows that female participation is growing rapidly across all states, exceeding the all-India female CAGR. Arunachal Pradesh, Assam, and Meghalaya performed significantly better than the national average. Economic and social factors encourage women's workforce participation, narrowing the gender gap. These findings provide insights into socioeconomic planning in the NER states.

Keyword : Labour force participation

INTRODUCTION :

The study of labour force participation (LFP) is a critical economic and social indicator, often considered as important as the unemployment rate for understanding a country's health and potential. It reveals the health of a nation's human capital utilization and the inclusiveness of its growth

The labour force is a primary factor in production. A larger and more engaged workforce directly contributes to a higher Gross Domestic Product (GDP). Understanding the LFP helps to forecast economic growth potential. This helps identify whether a country fully utilizes its human capital. A declining LFP rate, especially among prime-age workers, can signal a loss of productive capacity and a drag on per capita income growth. The LFP rates influence the economic dependency ratio (non-working vs. working population). A low or falling LFP increases the burden on a smaller group of workers to support children, retirees, and others outside the labour force, thereby straining public finances and social systems. Again, the female labour force participation rate highlights gender equality and economic development. High youth inactivity (neither in employment nor education/training) can lead to skills atrophy, social unrest, and long-term "scarring" effects on earnings. The LFP study identified at-risk groups. It helps to forecast future economic growth, fiscal challenges, and social trends. A country could see its unemployment rate fall not because people are finding jobs, but because discouraged workers have stopped looking and are no longer counted. Thus, the labour force participation rate (LFPR) indicates the percentage of all people of working age who are employed or seeking employment. The rate excludes individuals who are neither working nor looking for work, such as students, pensioners and homemakers. It measures how many people are engaged in or seeking to engage in the job market. The engagement of works covered a wide range from the household to the macro-level.

Thus, the labour force participation rate (LFTR) is defined as the percentage of persons in the labour force in the population.

$$\text{LFPR} = \frac{\text{No. of employed persons} + \text{No. of unemployed persons}}{\text{Total population}} \times 100$$

Male workforce participation plays a dominant role in the Indian labour force. In 2017-18 male participation in the total workforce stood at 55.5 percent, while women occupied 17.5 percent of the workforce. Both male and female participation rates have increased over the years. The increase in the female participation rate was faster than that of men's. This may be due to an improvement in the skills required by female workers. For this reason, female participation in the total workforce of a country continuously rose to 27.8 percent in 2022-23. However, male participation increased from 55.5 percent in 2017-18 to 56.2 percent in 2022-23.

This overall improvement was mainly driven by a strong increase in female participation. The female LFPR rose sharply from 17.5 percent in 2017–18 to 31.7 percent in 2023–24, while the male LFPR increased only slightly from 55.5 percent to 58.2 percent during the same period. This indicates that women's participation in the workforce has expanded significantly, contributing the most to the national increase in the LFPR.

A closer look at the rural–urban divide shows that rural India has led to an overall improvement. The rural LFPR for “persons” increased from 37.0 percent to 46.8 percent, a gain of nearly 10 percentage points. The rise was particularly strong among rural women, whose LFPR increased from 18.2 percent to 35.5 percent, marking an exceptional growth of 17.3 percentage points, the largest increase among all categories of women. In contrast, urban areas witnessed smaller but still positive changes: the urban LFPR for “persons” rose from 36.8 percent to 41.0 percent, and urban female LFPR improved from 15.9 percent to 22.3 percent, an increase of 6.4 percentage points.

Because women's participation grew much faster than men's, the gender gap in the LFPR narrowed considerably during this period. Nationally, the male–female difference in the LFPR fell from 38.0 percent in 2017–18 to 26.5 percent in 2023–24. The rural gender gap declined sharply from 36.7 to 22.4 percent, showing real progress, whereas the urban gender gap remained relatively large, narrowing only slightly from 41.1 to 36.7 percent.

Table -1: All India Labour Force Participation Rate (LFPR) (in percentage) in usual status (ps+ss)

YEAR	RURAL			URBAN			TOTAL		
	male	female	person	male	female	person	male	female	person
2017-2018	54.9	18.2	37	57	15.9	36.8	55.5	17.5	36.9
2018-2019	55.1	19.7	37.7	56.7	16.1	36.9	55.6	18.6	37.5
2019-2020	56.3	24.7	40.8	57.8	18.5	38.6	56.8	22.8	40.1
2020-2021	57.1	27.7	42.7	58.4	18.6	38.9	57.5	25.1	41.6
2021-2022	56.9	27.2	42.2	58.3	18.8	39	57.3	24.8	41.3
2022-2023	55.5	30.5	43.4	58.3	20.2	39.8	56.2	27.8	42.4
2023-224	57.9	35.5	46.8	59	22.3	41	58.2	31.7	45.1

Source : Annual Report. (2020- 2025) Periodic Labour Force Survey (PLFS). National Statistical Office, Ministry of Statistics and Program Implementation, Government of India.

The data also reveal that the increase in female participation did not occur evenly across all the years. There were periods of faster growth, especially between 2018 and 19 and 2019–20, and again between 2022 and 23 and 2023–24, when the rural female LFPR increased by approximately five percentage points each time, indicating a major shift, with more women entering or being counted in the rural labor force. Urban female participation also grew, but from a slightly lower starting point and at a much slower pace, rising from 15.9 percent to 22.3 percent during the same period. This persistent rural-urban gap suggests differing economic structures, social norms, or job opportunities

AREA OF STUDIES (NORTH EASTERN REGION OF INDIA) :

The North-Eastern Region (NER) of India includes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. Although India is developing rapidly, this region is still considered backward, and many efforts have been made to improve its conditions. However, it continues to lag behind other parts of the country.

The region is rich in natural beauty, with evergreen forests, bamboo and pine trees, hills, and rivers. Most people depend on agriculture, mainly subsistence farming, where crops are grown for family use rather than for sale. It is also one of the most culturally and ethnically diverse regions of India.

The NER shares long international borders with Bangladesh, Bhutan, China, and Myanmar and is close to the Nepal and Indo-China regions. This location provides good potential for trade; however, the region still faces many natural and human-made challenges. One major concern is the large gap between its potential and actual economic performances. This region is known for tea production, handicrafts, and martial arts.

Table-2 : Population, area and density of population in North Eastern States (NER)

states	population (as per census 2011)	area (per sq.km)	density of population
Arunachal Pradesh	13,83,727	83,743	17
Assam	3,12,05,576	78,438	398
Manipur	28,55,794	22,327	115
Meghalaya	29,66,889	22,429	132
Mizoram	10,97,206	21,081	52
Nagaland	19,78,502	16,579	119
Sikkim	6,10,577	7,096	86
Tripura	36,73,917	10,486	350
Total NE	4,57,72,188	2,62,179	173
All India	1,21,08,54,977	32,87,263	382

Source: Census of India 2011, Office of the Registrar General and Census Commissioner, India. Ministry of Home affairs, Govt. of India

The North-Eastern Region (NER) of India has a population of approximately 4.58 crore and covers an area of 2.62 lakh square kilometers. Its average population density is 173 persons per sq. km, which is much lower than the all-India average of 382 persons per sq. km. This low density is mainly due to the region's hilly terrain, large forest areas, and

Labour Force Participation in North Eastern India (NER):

The labour force participation in Northeast India represents a critical research focus due to the region's unique geographical, cultural, and economic characteristics. The eight states, with their diverse ethnic groups and socioeconomic conditions, show distinct labour patterns influenced by gender roles, rural-urban divides, and demographic structures. Understanding labour participation is vital for economic growth and social development.

The northeastern states show labour force participation rates diverging from national trends because of local cultural norms and economic opportunities in these states. Tribal customs and community-based livelihoods affect workforce engagement differently than in urbanized areas, while agriculture and informal sectors in rural areas contrast with urban service sectors. Age demographics create varying challenges in employment access across different population segments.

This study analyzes labour force participation in the northeastern region to identify disparities and their causes, focusing on gender differences, rural-urban contrasts, and age group variations. This analysis aims to inform policy interventions for workforce inclusion and provide insights into socioeconomic planning strategies tailored to the unique contexts of these states.

Table -3: LFPR in North Eastern Region of India (All ages) All ages (rural + female)

states	2019-20			2020-21			2021-22			2022-23			2023-24		
	male	female	person	male	female	person	male	female	person	male	female	person	male	female	person
Arunachal Pradesh	52	16.7	35.3	53.2	20.1	37.5	51.1	22.4	37.3	57.5	41.9	49.8	58.7	49.9	54.4
Assam	55.6	12.4	34.6	59.5	18.6	39.7	56.6	21	39.4	42	13.9	30.8	61.1	36.8	49.1
Manipur	51.9	22.8	37.5	47.6	16.3	32.4	47.5	17.4	32.8	52.3	22.5	37.3	52.7	36.3	44.4
Meghalaya	48.1	28.9	38.2	47.4	32	39.4	47.2	32.2	39.6	49.5	38.4	43.8	54.6	47.1	50.7
Mizoram	56.6	30.4	43.9	55.8	33.3	45	52.5	25.2	38.9	50.6	32.7	41.7	50.2	30.4	40.4
Nagaland	60.2	33.7	47.5	57.8	37.2	47.9	54.8	34.5	44.7	55.9	40.2	47.8	55.7	42.7	49.1
Sikkim	63.9	49.1	57.1	68.9	52.7	61.2	67.7	47.5	58	68	56.1	62.3	65.7	56.9	61.7
Tripura	60.7	19.1	40.1	60.8	24.8	43.3	60.7	21.5	41.6	60.6	28.5	44.5	63.5	36.8	50
All India	56.8	22.8	40.1	57.5	25.1	41.6	57.3	24.8	41.3	56.2	27.8	42.4	58.2	31.7	45.1

Source : Annual Report. Periodic Labour Force Survey (PLFS). National Statistical office, ministry of Statistics and programme Implementation (2020-25)

In the northeastern states, men dominate workforce participation compared with women. In 2019-20, the national male participation was 56.8%, while that of women was 22.8%. Arunachal Pradesh, Assam, Manipur, Meghalaya, and Mizoram have male participation levels below the national average. Nagaland, Tripura, and Sikkim were above this threshold, with Sikkim having the highest at 63.9% and Meghalaya the lowest at 48.1%. For women, the corresponding figures were 12.4% and 49.1%, respectively. Overall, workforce participation in Sikkim was the highest at 57.1%, followed by Assam at 34.6%, and at the national level, it was 40.1%. In 2020-21, national participation increased to 57.5% for men and 25.1% for women. AP, Meghalaya, Manipur, and Mizoram had lower male participation than national level, while Assam, Nagaland, Tripura, and Sikkim were higher. Sikkim led both female and male participation at 68.9% and 52.7%. Female participation ranged from 16.3% in Manipur to 52.7% in Sikkim, with the latter exceeding the national average. For total participation, Sikkim, Tripura, Nagaland, and Mizoram exceeded national level, while AP, Assam, Manipur, and Meghalaya were lower.

In 2022-23, Tripura exceeded India's male workforce participation rate of 56.2%, while other NER states were lower than this rate. Assam had the lowest at 42% (lowest) and the highest at 68% in the NER. For female participation, only Assam (13.9%) and Manipur (22.5%) were below the national level of 27.8%, while the other NER states were higher than the national average. Sikkim led with 56.1%, followed by Arunachal Pradesh (41.9%). For overall participation, Assam, Manipur, and Mizoram fell below the national rate of 42.4%. Sikkim (62.3%), AP (49.8%), and Nagaland (47.8%) were highest. In 2023-24, Sikkim (65.7%), Tripura (63.5%), Assam (61.1%), and AP (58.7%) led the male participation rates, while the other NER states fell below the national average of 58.2%. Mizoram (50.2%), Manipur (52.7%), Meghalaya (54.6%), and Nagaland (55.7%) were lowest. Only Mizoram decreased from the previous year. For female participation, only Mizoram (30.4%) was below the national average (31.7 %). Sikkim led with 56.9%, followed by AP (49.9%) and 47.1%.

Table-4: Labour Force Participation Rate (LFPR) (in percentage) in usual status (ps+ss) 15 years and above (NER)

states	2019-20			2020-21			2021-22			2022-23			2023-24		
	male	female	person	male	female	person	male	female	person	male	female	person	male	female	person
Arunachal Pradesh	68.8	22.9	47.5	73	27.6	51.4	69.5	31.2	51.1	77.2	58.7	68.2	79.2	66.5	73
Assam	77	16.4	46.9	79.2	24.6	52.7	79.5	28.2	54.2	90.1	20.3	55.4	83.3	50.2	66.9
Manipur	70.9	29.9	50.3	65.4	21.4	43.4	65.5	23.4	44.7	70.6	31.3	51.1	70.8	48.7	59.6
Meghalaya	75.3	45.7	60.2	75.4	51.6	63.1	74.4	50.2	62.1	79.6	60.9	70	82.3	71.8	76.9
Mizoram	69.8	37	53.8	70.3	41.7	56.5	67.4	34.7	51.6	67.2	45.1	56.4	66.1	41.7	54.2
Nagaland	76	43	60.3	74.1	47.6	61.3	75.8	51.5	64.2	79.3	65.2	72.5	82.4	64.3	73.3
Sikkim	79.8	59.4	70.4	82.5	61.1	72.1	83.5	57.8	71	82.1	68.6	75.7	83.4	68.2	76.2
Tripura	78.1	24.2	51.2	80.6	30.8	55.6	76.7	26.7	52.2	74.9	35.2	55.1	78.9	47.1	63
All India	76.8	30	53.5	77	32.5	54.9	77.2	32.8	55.2	78.5	37	57.9	78.8	41.7	60.1

Source : Annual Report. Periodic Labour Force Survey (PLFS). National Statistical office, ministry of Statistics and programme Implementation (2020-25)

The labour force participation rate (LFPR) in usual status (ps+ss) for individuals aged 15 years and above across the northeastern states and at the all-India level shows significant trends between 2019 and 20 and 2023–24.

At the all-India level, the LFPR has shown a steady rise over the five years—from 53.5% in 2019–20 to 60.1% in 2023–24. Male participation increased slightly from 76.8% to 78.8%, whereas female participation grew remarkably from 30% to 41.7%, indicating improved female engagement in the labour market in the state.

Among the northeastern states, Meghalaya, Sikkim, and Nagaland consistently report the highest overall LFPRs. Meghalaya's rate increased from 60.2% to 76.9%, with female participation rising sharply from 45.7% to 71.8%, showing one of the strongest female work participation trends in the region. Similarly, Nagaland's LFPR rose from 60.3% to 73.3%, supported by increases in both men and women. Sikkim maintained high participation levels, improving from 70.4% to 76.2%, with women remaining consistently active (approximately 60–68%).

In contrast, Mizoram and Tripura had moderate participation rates in the study. Mizoram's overall LFPR fluctuated in the 50–55% range, ending at 54.2% in 2023–24, with stable male participation but no consistent growth in female rates. Tripura, however, showed an improvement from 51.2% to 63%, mainly due to the increase in the female LFPR from 24.2% to 47.1%.

Assam recorded a substantial increase in total LFPR from 46.9% to 66.9%, driven by a dramatic rise in female participation—from 16.4% in 2019–20 to 50.2% in 2023–24, indicating a major structural shift in the labour market. Manipur also experienced gradual improvement, rising from 50.3% to 59.6%, while Arunachal Pradesh showed steady growth from 47.5% to 73%, reflecting significant labor market expansion for both sexes in these states.

Overall, the data reveal a clear upward trend in labor force participation across all states and at the national level, with particularly strong growth in female participation, suggesting positive developments in employment opportunities, gender inclusion, and economic engagement in recent years.

Table-5: Labour force participation in India between (15-59) years in usual status (ps+ss) (NER)

states	2019-20			2020-21			2021-22			2023-24		
	male	female	person	male	female	person	male	female	person	male	female	person
Arunachal Pradesh	70	23.6	48	74.5	28.1	52.4	72	32.3	52.8	81.6	68.9	75.4
Assam	81.8	17.4	49.5	83	26.6	55.8	84.6	30.9	58.2	87.3	52.8	70.2
Manipur	74.9	31.4	52.9	69.9	23.1	46.4	72	25.3	48.6	76.1	52.2	64.1
Meghalaya	75.9	47.5	61.5	76.3	53.3	64.5	75.8	51.1	63.4	83.3	74.3	78.7
Mizoram	75.3	39.5	57.7	74.6	42.9	59	73.4	37.5	56.2	72.9	47.1	60.5
Nagaland	80.4	43.3	62.4	79.3	47.9	63.6	81.4	53.1	67.7	86	66.3	76
Sikkim	81.9	61.8	72.4	84.3	62.9	73.7	87.1	61.6	74.7	85	68.4	77.1
Tripura	82.4	26.1	54.2	86.3	33.4	59.2	84	29.6	57.1	84.7	52.9	69
All India	81.2	32.3	56.9	81.2	35.2	58.4	81.8	35.6	58.9	83.5	45.2	64.3

Source : Annual Report. (2020- 2025) Periodic Labour Force Survey (PLFS). National Statistical Office, Ministry of Statistics and Program Implementation, Government of India

The data on the Labour Force Participation Rate (LFPR) between 15 and 59 years in the North-Eastern Region (NER) of India, under usual status (ps+ss), from 2019–20 to 2023–24, show consistent improvement across most states, particularly for women. In Arunachal Pradesh, overall participation rose sharply from 48% in 2019–20 to 75.4% in 2023–24, mainly due to a remarkable increase in the female LFPR from 23.6% to 68.9%. Assam also witnessed a strong upward trend, with total LFPR rising from 49.5% to 70.2%, driven by female participation jumping from 17.4% to 52.8%. In Manipur, the total LFPR increased from 52.9% to 64.1%, with both male and female rates steadily improving. Meghalaya consistently maintained one of the highest participation levels in the region, increasing from 61.5% to 78.7%, with women's LFPR remaining notably high (from 47.5% to 74.3%). Meanwhile, Mizoram showed moderate growth, from 57.7% to 60.5%, although the female rate increased from 39.5% to 47.1%. Nagaland registered a strong rise in both male and female LFPRs, lifting the total participation from 62.4% to 76%. Sikkim remained the region's leader, maintaining very high LFPRs throughout (around 72–77%), supported by a high female rate of above 60%. Tripura also saw a notable increase in the total LFPR from 54.2% to 69%, largely due to the rise in female participation from 26.1% to 52.9%. Compared to the All-India average, which rose from 56.9% in 2019–20 to 64.3% in 2023–24, most northeastern states performed above the national level, reflecting robust labor market engagement and a significant narrowing of the gender gap in the region's workforce.

COMPOUND ANNUAL GROWTH RATE OF LFPR IN NORTH EASTERN REGION

Table-6 : Compound annual growth rate of LFPR in NER (all ages) during 2019-20 to 2023-24

states	Compound annual growth rate(percentage)		
	male	female	person
Arunachal Pradesh	2.45	24.47	9.03
Assam	1.9	24.3	11.2
Manipur	0.31	9.75	3.44
Meghalaya	2.52	10.16	5.83
Mizoram	-2.37	-1.65	
Nagaland	-1.54	4.85	0.66
Sikkim	0.56	2.99	1.56
Tripura	0.91	14.02	4.51
All India	0.49	6.81	2.38

Author's calculation from data

From the above annual compound growth rate of labour force participation in the NER for all ages, it can be seen that male participation in the total workforce generally increased. Meghalaya witness the highest rate of growth of male participation with 2.52 per cent growth during 2019-20 to 2023-24 followed by Arunachal Pradesh and Assam states. However, Mizoram and Nagaland had negative male participation growth rates during these years. Mizoram witness the negative growth rate of -2.37 per cent down and Nagaland -1.54 per cent low during these years. The remaining NER states had positive compound growth rates during these years. For women, Arunachal Pradesh and Assam have very high growth rates of 24.47 percent and 24.3 percent, respectively, followed by Tripura and Meghalaya. Sikkim has only 2 percent CGR, and Mizoram has 0 percent CGR. In all persons combined, Assam had the highest CGR (11.2%), followed by Arunachal Pradesh (9.03%). All the other states of the NER also have a positive CGR during these years, except Mizoram, which has a negative CGR of (-1.65%) during this period.

Table -7 : Compound annual growth rate of LFPR in NER (15years ad above) during 2019-20 to 2023-24

states	Compound annual growth rate (percentage)		
	male	female	person
Arunachal Pradesh	2.86	23.76	8.98
Assam	1.59	25.08	7.36
Manipur	-0.03	10.25	3.45
Meghalaya	1.79	9.46	5.02
Mizoram	-1.08	2.42	0.15
Nagaland	1.63	8.38	3.98
Sikkim	0.89	2.8	1.59
Tripura	0.2	14.25	4.24
All India	0.52	6.81	2.35

Author's calculation from data

The Compound Annual Growth Rate (CAGR) of the LFPR for persons aged 15 years and above between 2019 and 20 and 2023–24 shows that the northeastern region experienced substantial improvements, primarily driven by women's increasing participation in the labour force. The female CAGR is exceptionally high in several states—especially Assam (25.08%), Arunachal Pradesh (23.76%), and Tripura (14.25%)—far surpassing the all-India average of 6.81%. In contrast, the male CAGR remains modest across most states and is negative in Mizoram (–1.08%) and nearly stagnant in Manipur (–0.03%). Consequently, the overall “person” CAGR reflects these strong female gains, with Assam (7.36%), Arunachal Pradesh (8.98%), Meghalaya (5.02%), and Tripura (4.24%) performing significantly better than the national average (2.35 %). Overall, the data highlight a major structural shift in the region, marked by rising female workforce participation and a gradual narrowing of the gender gap, even as male participation remains relatively stable or slightly declines in some states.

Table-8 : Compound annual growth rate of LFPR in NER (15-59 years) during 2019-20 to 2023-24

states	Compound annual growth rate (percentage)		
	male	female	person
Arunachal Pradesh	3.11	23.89	9.45
Assam	1.31	24.86	7.24
Manipur	0.32	10.7	3.92
Meghalaya	1.88	9.36	5.06
Mizoram	-0.65	3.58	0.95
Nagaland	1.36	8.89	4.02
Sikkim	0.75	2.1	1.27
Tripura	0.55	15.18	4.95
All India	0.56	6.95	2.48

Author's calculation from data

The Compound Annual Growth Rate (CAGR) of the labour force participation rates for a person between 15 and 59 years across the northeastern states reveals a striking gender contrast. Female participation has grown exceptionally fast in all states, with Assam (24.86%), Arunachal Pradesh (23.89%), and Tripura (15.18%) showing the strongest gains, far exceeding the all-India female CAGR of 6.95%. Male LFPR growth is comparatively modest everywhere, mostly between 0.3% and 3%, and in Mizoram, it is slightly negative (-0.65%). As a result, the overall “person” CAGR is largely driven by rising female participation, with Arunachal Pradesh (9.45%), Assam (7.24%), and Meghalaya (5.06%) performing particularly well compared to the national average of 2.48%. This pattern highlights a significant structural shift in the region, indicating increased economic involvement of women and a gradual narrowing of gender gaps in labour force participation.

REFERENCES :

Government of India (2025). Women and Men in India 2024- Selected indicators and data- Govt. of India, Ministry of Statistics & Programme Implementation, National Statistics Office, Social Statistics Division

Government of India (2020-21 to 2024-25) Annual Report. Periodic Labour Force Survey (PLFS). National Statistical office, ministry of Statistics and programme Implementation

Chattopadhyay, S., & Chowdhury, S. (2022). Female labor force participation in India: An empirical study. *The Indian Journal of Labour Economics*, 65(1), 59-83.

Sorsa, P., Mares, J., Didier, M., Guimaraes, C., Rabate, M., Tang, G., & Tuske, A. (2015). Determinants of low female labor force participation in India.

Chaudhary, R., & Verick, S. (2014). Female labor force participation in India and beyond. *ILO Working Papers*

Sanghi, S., Srija, A., & Vijay, S. S. (2015). Decline in rural female labor force participation in India: A relook into the causes. *Vikalpa*, 40(3), 255-268

Reddy, A. B. (2016). Labor force participation of the elderly in India: Patterns and determinants. *International Journal of Social Economics*, 43(5), 502-516.

Bhalla, S., & Kaur, R. (2011). Labor force participation of women in India: some facts, some queries.

Chattopadhyay, S., & Chowdhury, S. (2022). Female labor force participation in India: An empirical study. *The Indian Journal of Labour Economics*, 65(1), 59-83.

Gupta, V. (2023). Determinants of female labor force participation in India: Evidence from the supply side. *The Indian Journal of Labour Economics*, 66(1), 203-223

Rustagi, P. (2013). Changing patterns of women's labor force participation and employment in India. *Indian Journal of Labour Economics*, 56(2), 215-241.

Census of India 2011: Office of the Registrar General & Census Commissioner, India. Ministry of Home affairs, Govt. of India

Powell, A.A & Murphy, C.W (1995) Labour Force Participation. Springer Science and Business Media, Berlin, Germany.