Education

Is women empowerment a part of the inclusive growth story of the Indian economy?

Bharat Bhushan[1*], Amrendra Kumar Singh[2] and Supriti Mishra[3]

[1] Assistant Professor, Shyam Lal College, University of Delhi, Delhi, India

[2] Assistant Professor, Shyam Lal College (Evening), University of Delhi, Delhi, India

[3] Assistant Professor, Shyam Lal College, University of Delhi, Delhi, India

Correspondence Author: Bharat Bhushan

Received 19 Apr 2021; Accepted 4 Jun 2021; Published 19 Jun 2021

DOI: https://doi.org/10.54660/.JAES.2021.1.1.37-42

Abstract

Notwithstanding advancements, women and men lack equal possibilities for economic participation, and when women engage, they do not attain equivalent recognition, remuneration, or perks as their male counterparts. According to the World Economic Forum, closing the worldwide gender gap in female labour force participation and equal opportunities will take 217 years at the current rate of advancement. This paper has attempted to investigate the underlying causes of gender disparities in workforce participation. The primary factors we have examined include a high mortality rate, particularly the concept of "missing women" as articulated by Amartya Sen; disparities in opportunities, such as insufficient education and healthcare services; and restricted access to financial resources, which hampers equitable prospects in the labour market. These issues are closely linked to income inequality, especially in emerging and developing nations.

The paper has tried to prove the validity of all the arguments used in the paper. The research paper has tried to link all the arguments to India. Stating the cause and need for gender equality, the research may help to analyze the loopholes in the current policies which aim to improve the condition of women. In conclusion, we suggest some workable solutions.

Keywords: Gross Domestic Product (GDP), Female Labour Force Participation Rate (FLPR), GDP in PPP terms, Women empowerment, Gender equality, GDP per capita, Regression analysis

Introduction

In India, there are still significant and enduring gender differences in women's economic engagement despite the country's tremendous economic progress. The growing participation of women in the economy during the last century has been a major contributor to growth. Numerous factors contribute to this empowerment, such as higher rates of female labour market participation, a decline in discrimination, and pay disparities that incentivize more work. Economic development and women's empowerment, which is characterized as enhancing women's access to development components—specifically, rights, health, education, and employment opportunities—have a positive relationship.

Development by itself has the potential to significantly reduce gender disparity in two ways: on the one hand, it can promote progress, and on the other, it can impede it. To put it another way, empowerment can quicken progress. Beyond advancing gender equality alone, empowering half of the potential workforce has substantial economic benefits, as the World Development Report (2012) emphasizes.

In India, the augmentation of reservations for women in panchayats—rural local self-governance—has significantly enhanced women's political engagement. Nonetheless, significant gender discrepancies persist in economic participation. The 2023 World Economic Forum's Gender Gap Index positioned India 127th among 146 nations regarding economic participation and opportunity.

What accounts for the significant discrepancies in women's economic engagement in India? Is it inadequate infrastructure, insufficient education, or the gender distribution within the labour force and industries? Or are there weaknesses in social and business networks?

Possible causes of disparity

1. Economic development, fertility, and maternal mortality

The problem of "missing women" is one of the strongest signs that discrimination against women still happens. There are fewer women than you would expect if girls and women in the developing world were born and died at the same rate as boys and men. Amartya Sen came up with the phrase in a now-classic piece in the New York Review of Books (Sen, 1990) to show this. The World Development Report (2012) says that six million women go missing every year. Two-thirds of them are never born, five percent die before they turn one, twenty-one percent during their fertile years, and thirty-eight percent after they turn sixty.

In the years when they can have children, women are most likely to be missing than men, except before birth and in early childhood. This isn't because of open discrimination, but because women carry and give birth to babies, which is a dangerous job in and of itself. According to Jayachandran and Lleras-Muney (2009), the sudden drop in the death rate of mothers in Sri Lanka caused boys and girls to reach the same

level of schooling. It is thought that for every year that life expectancy goes up, girls get more years of schooling compared to boys. This means that economic growth could improve the lives of women in two ways: first, by lowering the risk of death during childbirth; second, by lowering fertility, which goes hand in hand with economic growth. There are many things that can affect maternal mortality, but it is less likely to happen if people are wealthier and can give birth in a good facility and if health services work better.

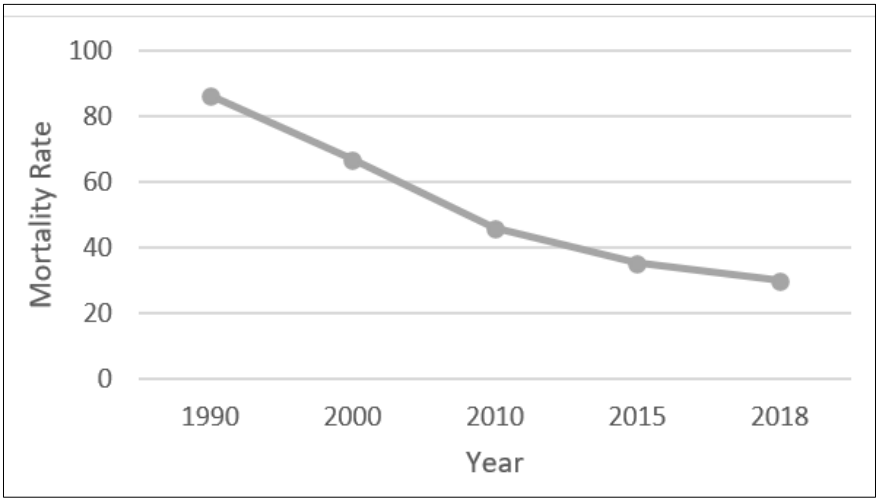

Fig 1: Female mortality rate in India (per 1,000 live births)

The data from World Bank shows a falling mortality rate over the years for India (FIG-1). The factors like per capita income have improved from 1990-2018, this has lead to more awareness and emphasis on women health. The female mortality rate which was as high as 86.4 in 1990 declined to 29.9 in 2018. With greater awareness and growth in the economy the expectations are to observe a further declining mortality rate.

2. Literacy rate

Increased education for society as a whole is expected to reduce the enduring gender disparity in literacy rates. Given that literacy is linked to prosperous economies, it is essential to address the gender disparity in literacy rates. A rise in literacy rates is associated with a reduction in the proportion of the population living on less than $2 per day. Furthermore, concentrating on the education of women would generate a "growth premium" in global GDP trends. The low female literacy rate significantly undermines family planning and population stabilization initiatives in India.

Fig 2: Literacy Rate (% ages 15-24)

The literacy rate for both men and women have increased over the year from 1981-2018 in India. The female literacy rate for year 1981 was 40.32 while it was 66.31 for male in the same year. It can be observed from the FIG-2 that the female literacy rate got a boost between the years 1991-2001. At present the female literacy rate seems to be very close and almost converging with the male literacy rate. The gap which was as huge as 25.99 in 1981 has shrunk to 2.83 in 2018.

3. Female labour force participation rate

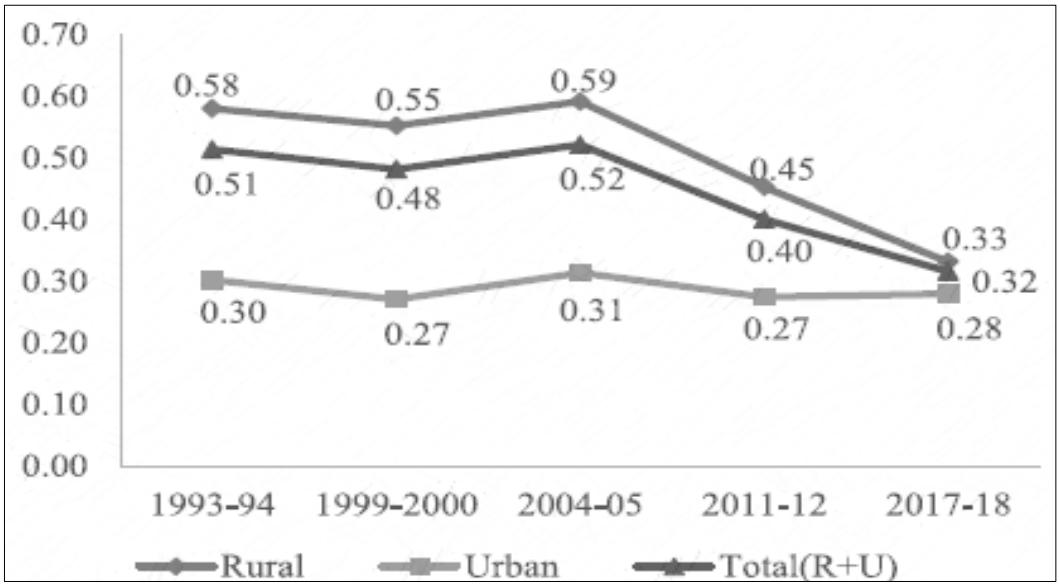

Fig 3: Female labour force participation rate

The labour force participation rate in urban areas has shown an indefinite trend, it first increased and recently it declined. Whereas in rural areas, there was a sudden decline in female labour force participation over the period 2004-2018. Therefore, a net decline was observed in total labour force participation.

Literature review

Esther Duflo's NBER working paper series examines the interrelationship between women's empowerment and economic development, highlighting their connection to economic growth. She asserted that as nations progress, the empowerment of women will ensue organically. She posits that economic progress, by alleviating poverty and enhancing opportunities, can significantly positively influence gender equality. Development will facilitate women's empowerment, while empowering women will influence decision-making, so directly affecting development. Women's empowerment and development mutually enhance one another, leading to women becoming equal partners in more affluent countries. Her research demonstrated a positive correlation between women's empowerment and economic progress, supported by periodic government programs aimed at the welfare of women.

"Although the effects of gender inequality in schooling on economic growth have been thoroughly examined, there is insufficient study investigating the correlation between women's labour force participation and economic growth. Furthermore, the findings of this study do not consistently convey a coherent narrative, which can be partially ascribed to data limitations and econometric difficulties related to reverse causality, indicating that growth and women's economic participation do not exhibit a unidirectional relationship.

Baliamoune-Lutz (2007) [7] posited that gender discrimination in the labour market adversely affects growth, with results contingent upon the selected nations, the study's timeframe, and the incorporation of educational gender inequality as a control variable. Mina Baliamoune-Lutz examined the association between female labour force participation and economic growth in Sub-Saharan African and Arab nations, uncovering a negative correlation. This mostly arises from the historical economic participation rates of women, which are low in Arab countries and high in Sub-Saharan Africa, although predominantly within low-productivity sectors, alongside the structural characteristics of the regional economies. Esteve-Volart's (2009) study, conducted in India with panel data from sixteen states between 1961 and 1991, illustrates that gender discrimination in the labour market, indicated by the female-to-male ratio in managerial positions and non-agricultural employment, adversely affects per capita income. This study aims to investigate the correlation between economic growth and female labour force participation in India. Numerous studies have demonstrated a U-shaped correlation between economic development and women's economic participation (Goldin 1994; Tansel 2002; Fatima and Sultana 2009; Kottis 1990) [18, 16]. The participation of women in the work market is anticipated to initially decrease with economic advancement, thereafter stabilise, and ultimately increase, resulting in a U-shaped trajectory. This is indicative of structural transformations in the economy, the evolving impact of income and substitution effects, and a rise in women's educational attainment within the population (Goldin 1994) [18]. In a low-income, agriculture-dependent economy, women engage in the workforce as contributing family workers on family farms or companies.

This work is unpaid, however it is recognised as part of the labour force. This phase of economic development is marked by high birth rates and low educational achievement among women." Economic expansion generally involves a shift in sector composition, marked by a heightened focus on industrialisation, while agriculture recedes in significance, leading to a decrease in women's labour market involvement. Agricultural duties are more readily amalgamated with other

household chores traditionally allocated to women. Furthermore, the career prospects in the early stages of industrialisation are unattractive to women mostly because of societal conventions that dissuade their participation in blue-collar jobs. As household incomes increase during economic growth, there is a propensity for women to exit the labour force as their financial contributions become superfluous. Economic expansion engenders numerous alterations that subsequently enhance women's engagement in the labour force. Increased educational attainment enhances career prospects; the fertility rate declines, alleviating child-rearing obligations for women, and new socially acceptable roles in the service sector arise for women. As wage levels rise, the substitution impact prevails over the income effect.

Numerous investigations have confirmed the presence of the U-shaped phenomenon in empirical research across time. The initial wave of publications employed cross-sectional data from many nations to examine this association (Goldin 1994; Mammen and Paxson 2008) [18]. Tansel (2002) examined this association among provinces in Turkey over three time periods, yielding results that corroborate the U-shaped hypothesis.

Using cross sectional data to support this hypothesis can lead to the 'Kuznets fallacy' where in the relationship is an artefact of the data and is not validated using time series data (Tam 2011). This concern was addressed by the use of panel methods in two separate studies which once again found evidence supporting the U-shaped pattern of women's LFPR within a country (Tam 2011; Luci 2009).

A study was designed to re-examine the evidence on U-shaped curve combining female labour force participation and economic growth in 162 countries (Ewa Lechman and Harleen Kaur, 2015). They supported the argument on a bigger and more recent context that LFPR falls initially and then it grows systematically. The slope of curve may vary for low income, middle income and high income countries. Still, a constant, U-shape is observed for a longer time series.

Methodology

The tool we have used to measure women's empowerment is female labour force participation rate. We have analyzed the impact of gross domestic product per capita on the female labour force participation rate and hence on women empowerment. We methodically examined the causes and observed a converging literacy rate of male and female and a declining mortality rate. This forced us to expect an increasing labour force participation over the years. For further analysis, we compared the economic growth (GDP) and female labour force participation of India and we didn't observe a definite increasing trend. This study utilised data derived exclusively from the World Bank. The descriptive regression models for all the variables were examined to make sure they fell within an acceptable range.

Our analysis is based on the two distinct variables, i.e. the dependent variable in this study is Female Labor Force Participation (% of total labour force) and the independent variable is Gdp Per Capita in PPP terms which explains the approximate level of economic growth. Finally, we developed a cross sectional data consisting of both the variables from India over the period 1990-2018.

After plotting the data graphically, we observed the U-shaped relationship, defining both the female labor participation and GDP per capita.

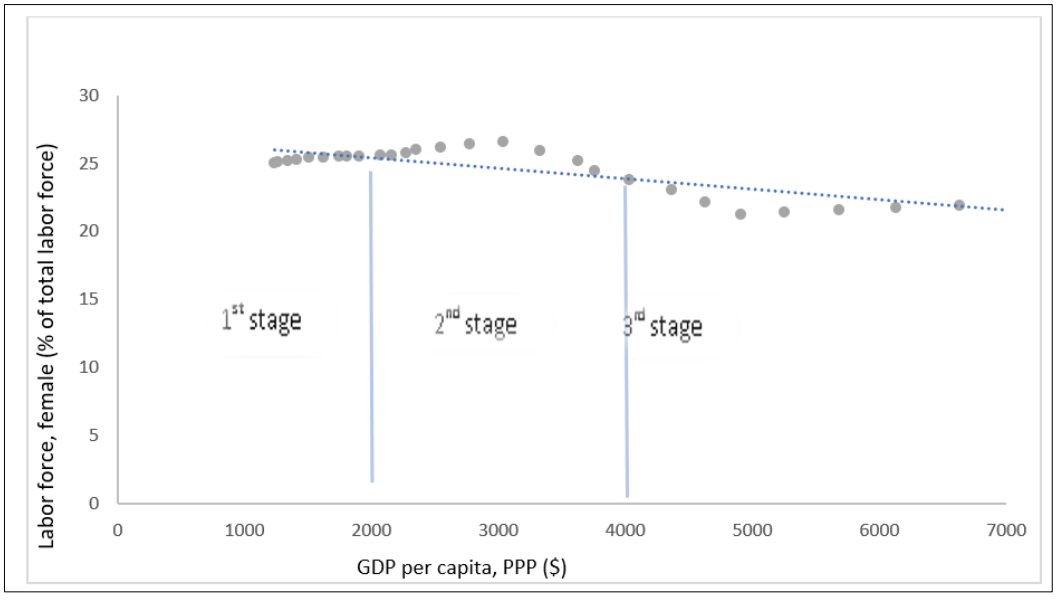

Fig 4: Labour force participation and GDP per capita

1st stage –

- In this stage, we observed that the GDP per capita was gradually rising in the period 1990-2004. In 2004, it attained the maximum GDP per capita of 2774.42. Also, the women labor force participation increased in this phase. On going deep for the reasons behind this increase, we found that GDP was influenced more by the agriculture sector than other sectors. The agriculture sector held a major proportion of 58.5 over the period 2003 - 04. Women participation has always been greater in agriculture sector. More Agriculture production encouraged more female labor force participation. This

was the main cause for higher female participation in the 1st stage.

- In this period family income was low, so women entered the job sector to uplift the family income. Their participation was mostly in primary sector due to lack of education and opportunity.

2nd Stage -

- In 2005, we observed a sudden declining rate of women labor participation. Participation has continuously decreased over the years 2005-2012. During this period, we further observed a declining agricultural impact, whereas other sectors increased their proportion comparatively. The fallen agricultural proportion led to the fall in the female labor force participation. On the other hand, the newly introduced urbanised jobs were not welcoming and suitable initially for women. Therefore, the impact of the urbanisation was not much significant among women in this phase. This led to a net decline in female labor force participation.
- The graph above (figure 2) shows an increasing female literacy rate. In short run this causes a decline in female labour force participation as with greater awareness and opportunity women focus more on pursuing higher education.

3rd stage-

- After having the continuously declining female labor force participation, we observe a rise in female labor force participation for the years 2012 and beyond. The major reason behind this has been the increasing significance of urbanisation. The literacy rate of female has also been observed converging with male in this phase, which has been a reason for this sudden boost. With increase in technology, women have found the other sectors welcoming and suitable for them.
- 33% of India's science and technology are women graduate, this is significant "brain drain" from modern service sector.
- Following the second stage the women after completing higher studies, have now started contributing in the economy with better significance as compared to first stage. The short run decline in second stage has proved to be helpful in long run.

Model

After explaining the different stages of female labor force participation, we have adopted the OLS method to define the model. We have defined the female labor participation rate ($FLPR_t$) as the dependent variable and GDP per capita ($GDPpc_t$) as the explanatory one, where t represents for the year. The model is expressed as:

$$FLPR_t = \alpha + \beta GDPpc_t + e_t$$

Where, t-period (year), α- intercept coefficient, and β is variable coefficient.

	Coefficients	Standard Error	t Stat	*p*-value
Intercept	26.98738486	0.371088	72.725	0.00
$GDPpc_t$	-0.000778384	9.56E-05	-8.14286	0.00

Regression statistics	
Multiple R	0.842988657
R Square	0.710629876
Adjusted R Square	0.699912464
Standard Error	0.973758092
Observations	29

The first point to notice that the regression coefficient is individually statistically highly significant, for the p-value is quite low. Secondly, on the basis of the F statistic we can also conclude that collectively the input GDP per capita is highly significant, because its p value is also very low. The R^2 value of 0.71 is also high, which means that 71% of the dependent variable is predicted by the independent variable.

The interpretation of the coefficient of $GDPpc_t$ of about -0.000778384 is that if we increase $GDPpc_t$ by 1$ the female labour force participation decreases by 0.000778384%.

Conclusion

A net fall in the female labour force participation is observed for the years 1991-2018. Although we see a negative relation between FLPR and GDP per capita, the slope is very much insignificant. The per capita income has been increasing continuously, causing the women to withdraw from the labour force. It is the tendency that women enter the labour force during recession in the economy i.e. when per capita income is low. Whereas, as conditions improve and per capita income rises, they withdraw from the labour force. The three phases show the short term relation between the factors which is highly significant. On a broader perspective these relations do not seem to be highly influencing each other.

Seeing the higher participation of women in education in recent years, it is expected that they will enter the labour force with a time lag. This participation is expected to a more resourceful as compared to that of 1990s years, since women are now not only limited to agriculture and have widely distributed over the different sectors.

References

1. Abraham V. Employment growth in rural India: distress driven? Econ Polit Wkly. 2009;44(16):97–104.
2. Alessandrini M. Jobless growth in Indian manufacturing: A Kaldorian approach, 2009 Nov, 1–32.
3. Anker R. Theories of occupational segregation by sex: An overview. Int Labour Rev. 1997;136:315.
4. Arellano M, Bond S. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. Rev Econ Stud. 1991 Apr 1;58(2):277. doi:10.2307/2297968.

5. Attanasio O. Female labor supply as insurance against idiosyncratic risk. J Eur Econ Assoc. 2005;3(2–3):755–64. Available from: http://onlinelibrary.wiley.com/doi/10.1162/jeea.2005.3.2-3.755/abstract
6. Azam M. The impact of Indian job guarantee scheme on labor market outcomes: evidence from a natural experiment. Bonn, Germany, 2012.
7. Baliamoune-Lutz M. Gender inequality and growth in Sub-Saharan Africa and Arab countries, 2007.
8. Bhalotra SR, Umaña-Aponte M. The dynamics of women's labour supply in developing countries. IZA Working Paper, 2012. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1591706
9. Blundell R, Bond S. Initial conditions and moment restrictions in dynamic panel data models. J Econom. 1998 Nov;87(1):115–43. doi:10.1016/S0304-4076(98)00009-8.
10. Bruno M, Ravallion M, Squire L. Equity and growth in developing countries: old and new perspectives on the policy issues. World Bank Policy Research Working Paper No 1563, 1998 Jan.
11. Chowdhury S. Employment in India: What does the latest data show? Econ Polit Wkly. 2011;46(32):23–6.
12. Central Statistics Office (CSO). Selected socio-economic statistics India, 2011. New Delhi: Ministry of Statistics and Programme Implementation, Government of India, 2011.
13. Das M, Desai S. Why are educated women less likely to be employed in India? Testing competing hypotheses. Social Protection Discussion Paper Series, 2003. Available from: http://www.sonaldedesai.org/das_and_desai_2003_on_women.pdf
14. Dutta M, Satyabhama S. Regional variations in occupational segregation in India: Some evidence. In: Sarker D, editor. Agriculture industry interactions: an approach to developing economies. New Delhi: Gyan Publishing House, 2010, p143.
15. Esteve-Volart B. Gender discrimination and growth: theory and evidence from India, 2004. Available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1127011
16. Fatima A, Sultana H. Tracing out the U-shape relationship between female labor force participation rate and economic development for Pakistan. Int J Soc Econ. 2009;36(1/2):182–98. Doi:10.1108/03068290910921253.
17. Gaddis I, Klasen S. Economic development, structural change and women's labor force participation: Examination of the feminization U hypothesis. University of Gottingen, Germany, 2012. Available from: http://www.uni-goettingen.de/en/82144.html
18. Goldin C. The U-shaped female labor force function in economic development and economic history. In: Schultz TP, editor. Investment in women's human capital and economic development. Chicago: University of Chicago Press, 1994.
19. Himanshu. Employment trends in India: a re-examination. Econ Polit Wkly. 2011;46(37):43–59.
20. Kabeer N, Natali L. Gender equality and economic growth: Win-win? 2013.
21. Kannan KP, Raveendran G. Counting and profiling the missing labour force. Econ Polit Wkly, 2012, 47(6).