Study on Economic Empowerment of Indian Women through Education – an Enabling Factor for Women Labour Force Participation

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ABSTRACT: World Bank (2010) asserts that women empowerment is one of the key elements for poverty reduction and achieving primary development goals among developing economies. In India where the focus is increasingly shifting towards ‘inclusive growth’, empowering women through improved education has become a key central policy across the nation. UN Women Report, 2005 establishes that educating the girl child is extremely important not only to ensure gender equality but in enabling them to be part of the countries labor force thereby aiding economic growth. This study therefore dwells deeper into the state of adult education of women in India and finds that even though the enrolment rates of women has been increasing, but the employment of women continues to be extremely low. This study further outlines the various reasons and barriers that affect women employability and subsequently put forward various policy measures to be taken up by the government to tackle this problem of women education as a limiting factor to their labor force participation.

Key words: Education, Enrolment, Labour Force Participation, Women Empowerment,

I. INTRODUCTION

According to UNDP (2012), Education and Training are basically the guide to produce beneficial learning and knowledge to all. However, educated women have been to a great extent are not included in formal and significant strategy and decision making parts in regards to the various aspects of the society as well as the environment, in any case, they have contributed definitively to the arrangement of environmental issues. It is vital to watch that allowing women a fair part in basic leadership and management would convey to shoulder their full information, experience and sense of duty regarding the management of various issues. Thus the labour force participation of women is falling even though there is a significant increase in education of women in the tertiary sector. Women must be viewed as able accomplices in sustainable development and not just as casualties of environmental corruption or even exclusively as recipients of development activities.

The following study focuses on making women empowerment stronger in India by increasing the Labour force participation of women which in turn is directly affected by the gross enrolment of women in higher secondary and tertiary education. The study tries to find out linkages between education and work force participation so as to establish grounds for inducing women empowerment in the Indian economy. This paper establishes the fact that enrolment of women is directly responsible for the LFP of women in any economy and is the key to achieve sustainable economic growth in terms of gender equality and employment opportunities in a country. The report also stresses on the fact that even though education enrolment is increasing in India, the LFP of women is however falling. Therefore, the aim of the report is to identify the gaps regarding the same and give policy recommendations to tackle the problem. (Lekhi, 2012)

In India where the focus is increasingly shifting towards ‘inclusive growth’, empowering women through improved education has become a key central policy across the nation. UN Women Report, 2005 establishes that educating the girl child is extremely important not only to ensure gender equality but in enabling them to be part of the countries labor force thereby aiding economic growth. This study therefore dwells deeper into the state of adult education of women in India and finds that even though the enrolment rates of women has been increasing, but the employment of women continues to be extremely low. This study further outlines the various reasons and barriers that affect women employability and subsequently put forward various policy
measures to be taken up by the government to tackle this problem of women education as a limiting factor to their labor force participation.

The report initially starts with an overview of education and literacy in India followed by an intensive study regarding the linkages between education, employment and empowerment. Further the report deals with a regression analysis to find out the factors affecting enrolment in India. Lastly the report identifies the gaps and gives policy recommendation to overcome those gaps and ensure sustainable economic growth in the economy.

II. ADULT EDUCATION IN INDIA - AN OVERVIEW

India having a huge population definitely has an equally large education system with most of its population consisting of young children and adults. However as compared to these statistics, even though there are Indians who have secured places on a global platform there is a majority of Indian men who have completed only 3 years of schooling on an average. The figure is even lesser for that of Indian women. For the section of people complete the necessary years of schooling the quality of education varies widely thus creating vast regional disparity between region depending on the type of schools prevailing there. Along with these issues there are other problems regarding the teaching staff, rate of dropouts, female illiteracy etc that explains the various shortcomings in the Indian Education system as a whole.

According to Patel, I (2009), For any country, the level and nature of education is the most significant amongst the various noteworthy parameters for improvement. It has been observe that in India, the aggregate literacy has seen an increasing trend over decades yet the quality needs colossal improvement. Education isn't only the capacity to peruse and compose yet additionally an entire procedure of human change. The cooperative energy amongst training and learning must be all understood by everyone for the holistic development of the society. Education and Training are basically the guide to produce beneficial learning and knowledge to all. Learning itself is at last an individualized and deep rooted process, whereby human change happens inside the person. Learning has different structures, for example, pre-learning, fortification of learning, classroom learning, individualized and autonomous learning of little gatherings or expansive masses, improvement learning, self-learning and self-coordinated or self-guided learning. A prominent aftereffect of learning is the utilization of information and abilities for the advantage of the general public, the nation and the world. Adult education plays an important role in adding to the human resource advancement.

I. Trends

In India, the trend of literacy has been such that even though the literacy rates have been increasing over time the gender disparity in terms of literacy rates, gross enrolment etc have more or less been the same i.e. high. As per the census, Indian economy saw literacy rates under 7% during 1901 which increased to a two digit figure of almost 16% during 1950. Post independence saw the rise of more and more schools thus making education accessible to larger masses which increase the literacy rates substantially to 65.5% as on 2001. However as stated earlier, there has always been a major difference between the literacy rates of men and women such that in 1981 the literacy rates for men was 56% whereas for women it was a mere 29.01% which shows a considerably high degree of inconsistency. After 2001 even though this inconsistency prevailed but the percentage of literate women increased to 54% showing a substantial growth in enrolment of women in schools. (Govinda. R and Biswal. K, 2005).

I.(a) Gender Variations in Literacy

There has been moderately more noteworthy advance in the literacy rate of females amid the most recent two decades. The gender oriented differences have been lessened in 2001 contrasted with what it was in 1981 and 1991. Male-female differential in literacy rate was 26.62 rate in 1981 and 24.84 rate around 1991, which diminished to 21.70 rate during 2001. The advance in the female literacy rate conceals the way that, the reduction in outright number of non-proficient females in the time period of 1991 and 2001 is generally little contrasted with that of the males. In 1991, the number of uneducated men in the nation was 128,099 million, which boiled down to 106,654 million of every 2001. The reduction in the quantity of male unskilled people was 16.74% amid 1991-2001. In 1991, the quantity of female unskilled people was 200,068 million, which diminished to 189,554 million of every 2001. The abatement was only 5.25% amid a similar period. (Bhat, 2009)
The above table shows the number of females per 100 males in Higher Education. As we can correctly observe there has been an increasing number of women going for higher education since 2000-01. This shows that there is an extremely significant increase in women enrolment with respect to higher education.

I. (b) Regional Disparities in Literacy

According to Govinda, R and Biswal, K (2005), There exists enormous varieties in literacy rates crosswise over states (regions) in India. As per 2001 statistics, Kerala stays on the best with a literacy rate of 90.9%, while Bihar is at the base with a literacy rate of 47.5%. In 2001, 23 states/UTs had literacy rate equivalent to or over the national normal (Chhattisgarh having literacy rate of 65.18% included). States/UTs having literacy beneath the national normal are Assam, Madhya Pradesh, Orissa, Meghalaya, Andhra Pradesh, Rajasthan, Dadra and Nagar Haveli, Uttar Pradesh, Arunachal Pradesh, Jammu and Kashmir, Jharkhand and Bihar. Around the same time, 24 states and UTs had male and female literacy rates equivalent to or more than the national normal. States having female literacy rate underneath the national normal are Chhattisgarh, Andhra Pradesh, Orissa, Madhya Pradesh, Rajasthan, Arunachal Pradesh, Dadra and Nagar Haveli, Uttar Pradesh, Jammu and Kashmir, Jharkhand and Bihar.

Between of 1991 and 2001, Kerala has enlisted the most reduced increment in the literacy rate (1.11 rate), basically as a result of the high literacy rate in the base year. Among the educationally in reverse states for the most part situated in the north, Bihar has demonstrated the least increment in the literacy rate amid the most recent decade (i.e. 10.04 rate), and Rajasthan and Chhattisgarh have enlisted the most noteworthy increment (i.e. 22.48 and 22.27 rate separately). The literacy rate amid the most recent decade has additionally expanded generously in Uttar Pradesh (16.65 rate), Arunachal Pradesh (17.03 rate), Andhra Pradesh (17.02 rate) and Madhya Pradesh (19.44 rate ), and Orissa (14.52 rate). Amid the most recent decade, the educationally in reverse states situated in the Hindi talking belt of the nation have contributed essentially to the decrease of illiteracy in the nation

The following chapters shows the importance of women empowerment and how education is a crucial way of achieving the same via increase in labor force participation. The chapter focuses on how education and empowerment of women are related and what are the linkages between the two.

### III. ROLE OF EDUCATION IN EMPOWERING WOMEN BY INCREASING LABOUR FORCE PARTICIPATION

The initial section of this chapter focuses on establishing a relationship between education and the labour force participation of women in order to promote women empowerment in India. Subsequently the later part of the chapter establishes the fact that education is the key to induce labour force participation of women in India by increasing the enrolment of women in tertiary education. It also states that Enrolment of women in higher education will result in increased employment for women enabling them to earn more that will in turn empower them.

**II. a) Meaning of Women Empowerment**

Empowerment can be seen as methods for making a social domain in which one can settle on choices and settle on decisions either separately or by and large for social change. The empowerment reinforces the
inborn capacity by method for gaining information, power and experience (Jeremy, 2005). Empowerment is the way toward enabling or approving individual to think, make a move and control work in a self-sufficient way. It is the procedure by which one can pick up control over one's fate and the conditions of one's lives. There are dependably various components in the general public which are denied of their essential rights in each general public, state and country, yet these components need in the familiarity with their rights. On the off chance that we enroll such components from the general public, at that point women would top this rundown. Truth be told, women are the most imperative factor of each general public. Despite the fact that everyone knows about this reality, yet no one is prepared to acknowledge the same. Thus, the significance which used to be given to women is declining in the present society. As a result of this growing inclination of thinking little of women, for example, to influence them to possess an auxiliary position in the public arena and to deny them of their fundamental rights, the requirement for enabling women was felt. (Nair, N, 2010)

II. b) Importance of adult education for women

According to M. Phule, "Education is what shows the contrast between what is great and what is malevolent". On the off chance that we think about the above definition, we come to realize that whatever transformations that have occurred in our history, education is at the base of them. The gap in the male-female literacy rate is only a straightforward pointer. While the male scholarly rate is over 82.14% and the female literacy rate is only 65.46%. (Grepin, 2015). Another snag is the belief system the women were think about just house spouse and better to be live in the house.

Women empowerment is the significant part in any general public, state or nation. It is a woman who assumes a prevailing part in the essential existence of a kid. Women are an imperative area of our general public. Education as methods for empowerment of women can achieve a positive attitudinal change. It is in this way, urgent for the financial and political advance of India. Women Empowerment is a worldwide issue and discourse on women political right are at the fore front of numerous formal and casual campaigns around the world. (OECD, 2012)

Education is point of reference of women empowerment since it empowers them to reacts to the difficulties, to stand up to their customary part and change their life. So we can't disregard the significance of education in reference to Labour Force Participation (LFP) of women. The expanding increase in women enrolment in India, the empowerment of women has been perceived as the issue of paramount importance in deciding the status of women. By which it will constrain on women's empowerment. As per united national development fund for women (UNIFEM) the term women’s empowerment can be defined as follows:

- Acquiring learning and comprehension of gender relations and the manners by which these relations might be changed.
- Developing a feeling of self-esteem, a faith in one's capacity to secure wanted changes and the privilege to control one's life.
- Gaining the capacity to produce decisions practice dealing power.
- Developing the capacity to sort out and impact the heading of social change, to make an all the more simply social and financial request, broadly and universally.

Accordingly, empowerment implies a mental feeling of individual control or impact and a worry with genuine social impact, political power and legitimate rights. It is a multi level develop referring to people, associations and group. It is a global, continuous process focused in the nearby group, including common regard, basic reflection, mindful and assemble interest, through which individuals without an equivalent offer of esteemed assets increase more prominent access to the control over these assets. (Rouf Ahmad Bhat, 2015).

II. c) Linkages between education and labour force participation

Two vital late patterns in most creating nations have been the increase in female work force participation and the end of gender disparities in school enrolment. In this report, we investigate both the causes and the impacts that they have had on the lives of ladies. A focal topic that develops is the connection between the two wonders: as increments in training have provoked more ladies to enter the work force, enhanced work showcase openings have likewise incited increments in female instruction. (Bhaie. E and Mpuga, P, 2011)

We know the impacts of the increase in education and labor supply. Notwithstanding expanded labor supply, there is likewise significant confirmation that female education defers fertility and prompts more healthy youngsters once a women has them in this manner demonstrating that women who are knowledgeable and educated tend to settle on better choices and are qualified for do likewise. There is some proof that women with more education qualification marry later and on better terms, and are more beneficial themselves. This plainly shows women empowerment in any society. (Bhaie. E and Mpuga, P, 2011)

According to Araf (2016), expansion in education of women is a vital determinant of the increase in the female labour force participation especially into moderately high-paying job opportunities. Financial specialists have since quite a while ago noticed a positive correlation amongst education and female labor force
participation in most creating nations and late common analyses affirm that this relationship gives off an impression of being causal. Interlaced with these increments in female education is the sectoral move toward administrations and small scale manufacturing that by and large goes with growth and development. One such example showing occupation development in developing nations that has excessively expanded female work are back-office handling in India

According to Kadir. N (2016), education at a more elevated level (post higher level) upgrades the skills of women and increments the odds of their having the capacity to be employed. From the previous segment we can conclude that exceptionally educated women have high goals for good employments and high incomes and subsequently they are more liable to look for work by and large and are focused towards finding decent work specifically. By augmentation, this suggests that profoundly instructed women are more probable to have less offspring as they exchange child care responsibilities for work and income. In this manner, government endeavors to eradicate poverty as considered in the NDP also, MDGs should focus to expand female work force support.

The government should mean to accomplish dominant part female education past secondary level for excellent outcomes including work force interest coming about into, bring down richness what's more, mortality, and great youngest nourishment results. The partners' education (all levels) additionally plays an essential part in the women's capacity to work. We find that women whose partners have an elementary, secondary and post-secondary education are between 4-5% more prone to work looked at to their partners whose partners have no education by any stretch of the imagination. This may propose that informed men are more empowered to discover employment for their partners, either from their contacts or by building up organizations for them. It might likewise mean that learned men marry educated women who are more inclined to acquire employment. By and large, keeping in mind the end goal to increment female work force cooperation in a developing economy, men ought to likewise be included. This can be accomplished either through education or through sharpening efforts or both that expound on the significance of a working mother in a family unit. Else, it is a typical hne in developing nations for men to choke out the employment capability of their spouses despite the fact that they might be profoundly educated. (Grepin, 2015)

According to Linden (2013) 17% of women with post-secondary education are independently employed contrasted with 61% of women with no education by any stretch of the imagination. Then again, half of women with post-secondary education have wage or pay employments contrasted with just 8% with no education. It is watched that the level of women (14%) with wage employments at secondary level isn't even a large portion of that of women at post-secondary level featuring the part of advanced education in expanding the odds of good employment. It is stressing that there is a high level of women (61%) in self-employment with no education. It suggests that the accomplishment of their organizations is in question because of need of fundamental information in disconnecting costs from incomes furthermore, deciding a net revenue. In any case, education of the girlchild is instrumental in expanding wage employment, lessening the level of women working at home or in self-employment. It is significant that independent work is a key answer for unemployment issue in developing economy, however ought to again be coupled with high education for guaranteeing better outcomes.

Thus it can be rightly said that increase in enrolment of women in higher education such as university or post graduation will essentially help in increasing the labour force participation of women thus providing them with better job opportunities and enabling them to improve their quality of life. Therefore, it can be established that the increase in enrolment of women in the tertiary education sector will result in their empowerment via increased labour force participation.

The following chapter shows the relationship between the Gross Enrolment Rate of Women in tertiary education, Government expenditure and Percentage of GDP per capita. It tries to establish that with the increase in the government expenditure and decrease in poverty, enrolment of women tends to increase.

**IV. FACTORS AFFECTING ENROLMENT OF WOMEN IN INDIA**

As we have discussed in the previous section, women enrolment has been increasing over time in primary, secondary and tertiary education. The following segment tries to establish a relationship between Gross enrolment of women in the tertiary level and the factors that results in the increased these enrolment rates. This section includes a regression analysis in order to explain the dependence of women enrolment in tertiary education - Higher Education on factors like Increasing Government Expenditure and Falling rates of Poverty in terms of increase in GDP per capita.
TABLE 2: Gross Enrolment of male and female as % of population.

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary Classes I-V (6-10 years)</th>
<th></th>
<th>Middle Classes VI-VIII (11-13 years)</th>
<th></th>
<th>Higher Secondary Classes IX-XII (14-18 years)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female Male Total</td>
<td></td>
<td>Female Male Total</td>
<td></td>
<td>Female Male Total</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>85.90 104.90 95.70</td>
<td></td>
<td>49.90 66.70 58.60</td>
<td></td>
<td>35.03 24.60 30.09</td>
<td></td>
</tr>
<tr>
<td>2001-02</td>
<td>86.91 105.29 96.30</td>
<td></td>
<td>52.09 67.77 60.20</td>
<td></td>
<td>27.74 38.23 33.26</td>
<td></td>
</tr>
<tr>
<td>2002-03</td>
<td>93.10 97.50 95.30</td>
<td></td>
<td>56.20 65.30 61.00</td>
<td></td>
<td>33.21 41.29 37.52</td>
<td></td>
</tr>
<tr>
<td>2003-04</td>
<td>95.58 100.63 98.20</td>
<td></td>
<td>57.62 66.76 62.40</td>
<td></td>
<td>34.26 42.94 38.89</td>
<td></td>
</tr>
<tr>
<td>2004-05</td>
<td>104.67 110.70 107.80</td>
<td></td>
<td>65.13 74.30 69.93</td>
<td></td>
<td>35.05 44.25 39.91</td>
<td></td>
</tr>
<tr>
<td>2005-06</td>
<td>105.75 112.80 109.40</td>
<td></td>
<td>66.41 75.15 70.10</td>
<td></td>
<td>35.80 44.58 40.42</td>
<td></td>
</tr>
<tr>
<td>2005-07</td>
<td>108.00 114.60 111.40</td>
<td></td>
<td>69.60 77.41 73.80</td>
<td></td>
<td>36.80 45.00 41.10</td>
<td></td>
</tr>
<tr>
<td>2007-08</td>
<td>112.60 115.30 114.00</td>
<td></td>
<td>74.40 81.50 78.10</td>
<td></td>
<td>41.90 49.40 45.81</td>
<td></td>
</tr>
<tr>
<td>2008-09</td>
<td>114.00 114.70 114.30</td>
<td></td>
<td>75.60 82.70 79.80</td>
<td></td>
<td>43.50 51.00 47.40</td>
<td></td>
</tr>
<tr>
<td>2009-10</td>
<td>113.80 113.80 113.80</td>
<td></td>
<td>79.00 84.30 81.70</td>
<td></td>
<td>46.10 52.50 49.40</td>
<td></td>
</tr>
<tr>
<td>2010-11</td>
<td>115.30 114.90 115.50</td>
<td></td>
<td>82.90 87.50 85.20</td>
<td></td>
<td>48.50 55.70 52.20</td>
<td></td>
</tr>
<tr>
<td>2011-12</td>
<td>107.10 105.80 106.50</td>
<td></td>
<td>81.40 82.50 82.00</td>
<td></td>
<td>97.60 97.20 97.40</td>
<td></td>
</tr>
</tbody>
</table>

Source: Educational Statistics at a glance 2014

The table shows the increase in enrolment rates of both male and female in different levels of education. We can conclude that the enrolment rates for especially women has been increasing at a significantly fair rate at par with that of men. The following are the determinants or factors that affect the women enrolment rates in India. For this analysis, the dependent factors are - Government Expenditure on Education (% of Government expenditure) and GDP per capita (current US $).

III. a) Government Expenditure On Education

Since we have learnt so far that the government has tried a considerable measure of endeavors to advance education in India, Government consumption on education has been one of the significant determinants. As indicated by Tasleem Araf (2016), The education commission 1964-66 did an analysis of money related necessity of the educational segment, and prescribed that we should expand the extent of GDP spend on education to 6 percent of GDP by 1985-86. Among other suggestion this proposal was acknowledged by the government and it was chosen to raise the spending on education to 6 percent of GDP by 1986. National education strategy 1968 likewise suggested that speculation on education should expand bit by bit to six percent of national income as quickly as time permits. It was settled in the National educational arrangement of 1986, to expand the speculation on education to achieve the level of 6 percent of national income.

Focus, State and Union-Territories government are the principle wellsprings of financing education divisions; with State government has lion share. Offer of the State government has decrease yet at the same time State government contributes in excess of 33% of aggregate consumption on education. Amid the last one and half decade some real patterns have been found in financing education. The offer of state government in absolute consumption has decays from 88% out of 2000-01 to 74% of every 2013-14. Rate Share of central government has expanded fundamentally amid a similar period from 12 percent in 2000-01 to 26 percent in 2013-14. The outstanding element of the is genuine use on education which is gotten by isolating ostensible consumption with the GDP deflator, Genuine use demonstrates the genuine measure of cash spend on this part by wiping out the impact of expansion. On the off chance that we take a gander at the level of GDP spend on

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education for both Center and States. An expanding pattern throughout the years the level of GDP spend on education gone up from 0.51% out of 2000-01 to 1.19% of every 2013-14 has been observed. However, the level of GDP spent by state government demonstrates a declining pattern such that state's offer has declined from 3.63% in the year 2000-01 to 2.53% out of 2007-08 from that point it has increments and came to at 3.26 percent in 2013-14. (Tasleem Araf 2016)

III. b) GDP per capita in India

Poverty is an enormous issue in India, regardless of having one of the speediest growing economies on the planet, coordinated at an development rate of 7.6% in 2015, and a sizable market economy. The World Bank investigated and proposed alterations in May 2014, to its poverty figuring technique and purchasing power uniformity purpose behind assessing poverty around the globe, including India. As showed by this reexamined reasoning, the world had 872.3 million people underneath the new poverty line, of which 179.6 million people lived in India. Toward the day's end, India with 17.5% of total aggregate masses, had 20.6% offer of world's poorest in 2011. Beginning at 2014, 58% of the total masses were living on under $3.10 consistently. As demonstrated by the Modified Mixed Reference Period (MMRP) thought proposed by World Bank in 2015, India's poverty rate for period 2011-12 stayed at 12.4% of the total people, or around 172 million people; taking the reconsidered poverty line as $1.90. (World Bank, 2014)

Low level of per capita income itself is an impression of low ordinary proficiency of work compel that is traceable to a backward advancement and absence of reproducible significant capital in regard to work. Kept up augmentation of productive cutoff that constitutes money related advancement makes valuable business openings with always rising gainfulness. This makes possible a dynamic digestion and coordination of the GDP per capita into developing monetary activities regularly incorporating rising gainfulness in their present occupation with better advancement or move to new occupations with redesigned aptitudes. The consequent higher benefit not simply upgrade living standard yet furthermore outfit them with the techniques for the preparation and capacity improvement among their adolescents and get ready for an intergenerational upward compactness. (Helen Abadzi, 2011)

Here, the GDP per capita has been taken as the second explanatory variable for the relapse display since India’s the level of working poor has been altogether falling in the previous decade and in this manner it can be properly said that with the falling rate of working poor, the per capita GDP has been expanding along these lines empowering the general population to spend a bit of their approaching in teaching their youngsters particularly young women.

III. c) Multiple Regression Model

Multiple regression is the type of regression where there are more than two variables in total. The purpose of multiple regression is to establish a relationship between several independent or explanatory variables and a dependent variable. The simplest possible multiple regression model is three-variable regression, with one dependent variable and two explanatory variables.

In this particular model there are three variable namely Enrolment of Women in Tertiary education, Percentage of government expenditure on education and GDP per capita. This regression model tries to establish a relationship between the dependent variable i.e. Enrolment of Women in Tertiary Education and the two explanatory variables i.e. Government Expenditure and GDP per capita.

The regression Equation can be explained as under:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + u$$

In this equation Y stands for the dependent variable, \( \beta_0 \) stands for the intercept and it gives the mean or average effect on Y of all the variables excluded from the model, although its mechanical interpretation is the average value of Y when \( X_1 \) and \( X_2 \) are set equal to zero. The coefficients \( \beta_1 \) and \( \beta_2 \) are called the partial regression coefficients, \( \beta_1 \) measures the change in the mean value of Y with per unit change in \( X_1 \), holding the value of \( X_2 \) constant. Put differently, it gives the “direct” or the “net” effect of a unit change in \( X_1 \) on the mean value of Y, net of any effect that \( X_2 \) may have on mean Y. Likewise, \( \beta_2 \) measures the change in the mean value of Y per unit change in \( X_2 \), holding the value of \( X_1 \) constant. That is, it gives the “direct” or “net” effect of a unit change in \( X_2 \) on the mean value of Y, net of any effect that \( X_1 \) may have on mean Y. u is the term denoting the stochastic disturbances in the model. This absorbs the effect of all the variables that effect Y or the Dependent variable. (Gujarati and Porter, 2009)

For this particular analysis let's assume the Null (H_0) and Alternate (H_1) Hypothesis to be as under,
H₀ = Government Expenditure (X₁) and GDP per capita (X₂) has no effect on Enrolment Of Women (Y)
H₁ = Government Expenditure (X₁) and GDP per capita (X₂) has an effect on Enrolment Of Women (Y)

\[ Y(Enrolment) = \beta_0 + \beta_1(Govt \ Expenditure) + \beta_2(GDP \ per \ capita) + u \]

In the above equation, Y stands for Enrolment Of Women in the Tertiary Sector (current US $), X₁ stands for the first explanatory variable i.e. Expenditure on Education (% of Government Expenditure) and X₂ stands for the second explanatory variable i.e. GDP per capita (Current US $).

Following is the data on which the regression analysis is based. The data has been taken for a recent time period i.e. 2000 to 2014 which makes the number of observations to be 15.

**TABLE 3**: Gross Enrolment of Women in Higher Education, Government Expenditure on Education and GDP per capita.

<table>
<thead>
<tr>
<th>YEARS</th>
<th>GROSS ENROLMENT OF WOMEN IN HIGHER EDUCATION (% OF POPULATION)</th>
<th>EXPENDITURE AS % OF GOV'T. EXPENDITURE</th>
<th>GDP PER CAPITA (Current US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>35.03</td>
<td>10.497</td>
<td>438.865</td>
</tr>
<tr>
<td>2001</td>
<td>27.74</td>
<td>11.546</td>
<td>447.014</td>
</tr>
<tr>
<td>2002</td>
<td>33.21</td>
<td>13.655</td>
<td>466.201</td>
</tr>
<tr>
<td>2003</td>
<td>34.26</td>
<td>12.922</td>
<td>541.135</td>
</tr>
<tr>
<td>2004</td>
<td>35.05</td>
<td>11.552</td>
<td>621.318</td>
</tr>
<tr>
<td>2005</td>
<td>35.81</td>
<td>11.532</td>
<td>707.008</td>
</tr>
<tr>
<td>2006</td>
<td>36.81</td>
<td>13.643</td>
<td>792.026</td>
</tr>
<tr>
<td>2007</td>
<td>41.92</td>
<td>13.788</td>
<td>1078.166</td>
</tr>
<tr>
<td>2008</td>
<td>43.55</td>
<td>12.766</td>
<td>991.485</td>
</tr>
<tr>
<td>2009</td>
<td>46.11</td>
<td>12.822</td>
<td>1090.318</td>
</tr>
<tr>
<td>2010</td>
<td>48.51</td>
<td>11.743</td>
<td>1345.77</td>
</tr>
<tr>
<td>2011</td>
<td>77.63</td>
<td>13.677</td>
<td>1461.672</td>
</tr>
<tr>
<td>2012</td>
<td>81.59</td>
<td>15.063</td>
<td>1446.985</td>
</tr>
<tr>
<td>2013</td>
<td>89.94</td>
<td>16.091</td>
<td>1452.195</td>
</tr>
<tr>
<td>2014</td>
<td>92.11</td>
<td>18.897</td>
<td>1573.118</td>
</tr>
</tbody>
</table>

*Source: Complied and constructed by author using the data from World Bank and MHRD.*

From the above table we can see that the enrolment rates of women has been increasing from 2000 to 2014 and so is the Government expenditure on education. However the GDP per capita has been increasing. It has been established in the earlier sections that both the explanatory variable have a positive impact on enrolment of women. On the basis of this regression has been run and the results of the analysis are as follows.
Multiple R is the correlation coefficient and must range between 1 to 0 where 1 represents a perfect positive correlation and 0 represents no relationship at all. According to this analysis the correlation coefficient is 0.91018 which shows a very high positive correlation between the variables. R square is the coefficient determination which basically tells that the variation in the dependent variable Y is explained by the changes in the explanatory variable. Here the R square is 82.85% which shows that 82.85% variations in Y can be explained by the variation in $X_2$ and $X_3$.

The regression analysis indicates that if the other parameters are constant the coefficient of Government Expenditure ($\beta_1$) is 4.6826 i.e. 468.26%. This indicates that with an additional increase in government expenditure the Enrolment of Women increase by an average of 468.26%. Similarly the coefficient of GDP per capita ($\beta_2$) is -0.8205 i.e. 82.05% . This shows that with a fall in the percentage of GDP per capita the Enrolment of Women increases by 82.05%.

The $p$-values measure the compatibility of the data with the null hypothesis. a lower $p$ value means that the null hypothesis can be rejected and data can provide enough evidence to reject the null hypothesis for the entire population. Here, the $p$-values of $X_1$ and $X_2$ are less than 0.05 which means that the null hypothesis ($H_0$) can be rejected.

Therefore we can conclude that there is a positive relationship between the Gross Enrolment of Women in Tertiary Education, Government Expenditure on Education and GDP per capita in India. It can also be concluded that Government Expenditure has a more significant impact in increasing the enrolment rates of women in tertiary education.

Since it has been established so far that increase in enrolment rates induces labour force participation of women in various sectors of occupation, the following chapter focuses on giving policy recommendations to increase labour force participation of women as well as it stresses on making economic empowerment of women sustainable in the long run.

V. SUSTAINABILITY IN WOMEN EMPLOYABILITY AND POLICY RECOMMENDATIONS

IV. a) Female Labour Force Participation (FLFP) - India.

**TABLE 4 : Regression Analysis : ANOVA and SUMMARY OUTPUT**

<table>
<thead>
<tr>
<th>SUMMARY OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regression Statistics</strong></td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>

**ANOVA**

<p>| Source : Compiled and constructed by author using the data from World Bank, Educational Statistics at a glance (2014), and MHRD |</p>
<table>
<thead>
<tr>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2</td>
<td>5878.551828</td>
<td>2939.47591</td>
<td>28.57329401</td>
</tr>
<tr>
<td>Residual</td>
<td>12</td>
<td>1217.459012</td>
<td>101.454680</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>7096.40794</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
<th>Lower 95.0%</th>
<th>Upper 95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>40.5847159</td>
<td>35.30431526</td>
<td>1.14900163</td>
<td>0.27294282</td>
<td>-36.3567791</td>
<td>117.486211</td>
<td>-36.3567791</td>
</tr>
<tr>
<td>EXPENDITURE</td>
<td>4.68263123</td>
<td>1.71535422</td>
<td>2.72364097</td>
<td>0.018482813</td>
<td>0.936990808</td>
<td>8.42859438</td>
<td>0.936990808</td>
</tr>
<tr>
<td>WORKING POOR</td>
<td>-0.8205058</td>
<td>0.24073831</td>
<td>-3.403540</td>
<td>0.000187215</td>
<td>-1.34508928</td>
<td>-0.29004234</td>
<td>-1.34508928</td>
</tr>
</tbody>
</table>

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Inclusively, about portion of all women work, and late increments in rates of female work drive investment have added to a falling gender disparity in employment in numerous nations. However, in India, trends in women's interest in the market economy are moving the other way. In spite of a fast fertility progress, expansive increments in women's educational accomplishment, and considerable financial development in the course of recent decades, the offer of Indian women working has fallen of lately. As of now, just around 33% of India's a large portion of a billion grown-up females report being a piece of the work constrain.

**TABLE 5**: Labour Force Participation of women in both organized and unorganized sectors.

<table>
<thead>
<tr>
<th>YEARS</th>
<th>LABOUR FORCE PARTICIPATION OF WOMEN (% 15 AND OLDER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>34.8</td>
</tr>
<tr>
<td>1995</td>
<td>35.4</td>
</tr>
<tr>
<td>2000</td>
<td>33.8</td>
</tr>
<tr>
<td>2005</td>
<td>36.8</td>
</tr>
<tr>
<td>2010</td>
<td>28.6</td>
</tr>
<tr>
<td>2011</td>
<td>27.7</td>
</tr>
<tr>
<td>2012</td>
<td>26.8</td>
</tr>
<tr>
<td>2013</td>
<td>26.8</td>
</tr>
<tr>
<td>2014</td>
<td>26.7</td>
</tr>
<tr>
<td>2015</td>
<td>26.8</td>
</tr>
</tbody>
</table>

*Source: Human Development Report (2015), UNDP.*

These falling rates of female employment and declining patterns in women's labour force participation (LFP) rates are potential foundations for concern, since advertise work for women is regularly connected with their better access to financial openings and with more noteworthy basic leadership control inside the family unit. From a macroeconomic point of view, low rates of market work among women likewise infer a critical underuse of work assets in the economy. (Grendle, 2015)

**Fig 1**: Rankings of countries according to LFP (2013)

*Source: World Bank (2013)*

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Study on Economic Empowerment of Indian Women through Education – an Enabling Factor for ...

India's Female Labor Force Participation (FLFP) rate has remained noticeably low and the International Labor Organization positions India's FLFP rate at 121 out of 131 nations in 2013, one of the most minimal on the planet. India had the most reduced FLFP rate in South Asia, except for Pakistan. All inclusive, just parts of the Arab world held a lower FLFP rates than India. (World Bank, 2013)

According to Figure 1, India had an FLP rate of 27%, China has 63.8%, US having 56% , Nepal at 79.5%, Bangladesh at 35.7% and Pakistan at 23.3% as on 2013.

The reasons due to which the Labour Force Participation is low in India are majorly identified as two. Firstly, desincentivising women to drop out of the work force because of the stability of the family incomes by the increase in the income of the male persons in the family. (World Bank, 2017). More of 19.6 million women, identical to the number of inhabitants in Romania, dropped out of the workforce amid this period, of which women residing in the rural areas represented 53%.

Secondly, another conceivable clarification for the current drop in FLFP is that with the current development of adult education, and in addition quickly changing social standards in India, all the more working age youthful females (15 to 24 years) are picking to proceed with their instruction as opposed to join the work force early. The decrease in the FLFP rate for females in the vicinity of 15 and 24 years old was to an expansive degree because of an expansion in female enrolment in instruction. (ibid)

Women are decreasing in the workforce in spite of the enrolment of young girls in advanced education expanding from 39% to 46% in the vicinity of 2007 and 2014. (ibid). Between 2004-05 and 2011-12, FLFP has dropped over every single educational classification in both rural and urban zones. This shows regardless of one's attainment of education, the motivation for females to take an interest in the work force has declined over the period.

IV. b) Policy Recommendations to increase LFP of women in India

As we have observed so far, even though the enrolment rates of women in education have been increasing over time the labour force participation (LFP) has not been increasing significantly. More so, the labour force participation has been fairly stagnant and even decreasing.

Over time there have been a lot of policies by the government in order to improve the status of women in the economy. Some of these policies are listed as follows:- Support to Training an Employment Program (STEP), Beti Bachao Beti Padhao, Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG), Ujjwala Scheme, Conditional Maternity Benefits Schemes and many more. However these schemes have not proved to be that efficient since the LFP rates have not increased after their implementation. Therefore the Government of India formulated the draft of the National Policy Of Women in 2017 that covers broad areas that are instrumental in empowering women through education and employment. (MWCD, 2017)

According to the experiences of the developed economies, women LFP can be increased in the following ways :
1. Activities and initiatives that bring women into open authority positions such as the continuous Rural Support Programs Network, in which the Asian Development Bank (ADB) and other institutional givers help endeavors to include women in nearby considerate society authority and leadership. (Iyer et al , 2012)
2. Media mediations to advance a more positive picture of women's work, and after that tried and assessed. The spread of media has been appeared to affect women's empowerment. Specifically, it has been discovered that the presentation of satellite TV crosswise over new zones of rural India not just diminished the adequacy of aggressive behavior and violence at home and child inclination, yet additionally expanded women's self-rule. (UNESCO, 2015)
3. Another way in which researchers try to propose to increase the FLFP in India is by improving the working environment of women in the workplace which basically deals with prevention from harassment and unethical practices like prevalence a glass ceiling in organisations.
4. The quality and pertinence of vocational studies for women ought to likewise be thoroughly surveyed, considering the high level of occupation related isolation and the low female labor force participation levels at center levels of training. Some of the cross-sectional examinations have made suggestions to grow vocational studies for women that would in turn promote self-employment (Jensen, 2009)

IV. c) Conclusion

Throughout the report it has been established that education is key to ensure women empowerment and especially adult education contributes significantly to the increasing work force of women in any economy thus empowering the women of the economy. However, in India the trend of labour force participation of women has not been impressive even though there is an extremely significant increase in the gross enrolment rates of women in tertiary education with the increase in government expenditure and reduction in poverty.

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According to Bown (2004), the extensive variety of ways to deal with encouraging economic empowerment through literacy professional grams checked on above demonstrates that useful literacy can bolster and produce little scale pay producing ventures to improve women's vocations, especially if concentrating on particular gatherings of women and expanding on their existing work. There is likewise potential to challenge the customary division of labor by gender orientation and to give diverse gender orientated examples by taking women's empowerment in a transformative sense as the beginning stage.

In order to make women empowerment sustainable, there is a need for the policies to percolate to reach the grassroot levels so that quality education can be provided to all women of all backgrounds. India has many such policies to make this happen. For example the "Khabar lahariya" programme of and NGO called Nirantar which ensures the widespread reach of rural newspaper in local languages so as to make all the women aware of the issues that concern them and their communities. Nirantar ensures ICT training that basically deals with providing women with knowledge about internet and digital mode of communication thus exploring the technical aspects. (Ghose et al 2010).

Thus, it is evident from the study that education is the primary way of empowering women via inducing women labour force participation and even though LFP is less in India, the policies of the developed economies can be implemented at a large scale to make women empowerment sustainable.

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