

## **Women Education and Empowerment: Its Impacts on Socioeconomic Development in Bangladesh and Nepal**

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### **Abstract**

Women education is penetratingly associated with the formation of women's identity, decision making capability, mobility and contribution to the socioeconomic development of household, community and nation. For decades, in developing-patriarchal countries like Bangladesh and Nepal men's preference advocated for women's modest education. Hence, how especially education empowers women by enhancing their active participation in sustainable socioeconomic growth and human capital development (by delaying marriage, managing family-size, increasing gross family income and escalating literacy rate) needs to be studied. In this paper, time series and cross-sectional data have been analyzed by using econometric software EViews. Data from World Bank, IMF (International Monetary Fund), BBS (Bangladesh Bureau of Statistics), and CBS (Central Bureau of statistics) of Nepal have been used as secondary information for descriptive and quantitative analysis. The analysis demonstrates there is positive and significant impact of women education on the socioeconomic growth of Bangladesh and Nepal. The study also brings light on the agenda of formulating effective educational policy for women education in developing countries.

**Keywords:** Socioeconomic development, women education, developing countries

## Introduction

Every civilized society considers education sector as a necessary indicator of economic and social advancement. The necessity of equal role for men and women cannot be denied in a nation's developmental process. In order to achieve social, cultural and economic prosperity it is highly necessary for human societies to utilize its human capital. In the developing patriarchal countries like Nepal and Bangladesh in South Asian region, women education plays a crucial role in sustainable socioeconomic development. The major focus of this paper is to demonstrate the connection between women education and nations' development, which to be achieved by maintaining nations' socio-economic wellbeing (starting from delaying marriage, managing family-size, increasing gross family income and escalating literacy rate as well). As women education is penetratingly associated with the formation of women's identity, decision-making capability, mobility and empowerment educated women are found more capable of making a contribution to the socioeconomic development of household, community, and nation.

The World Bank has identified women empowerment as one of the key constituent elements of poverty reduction, and as a primary development assistance goal. The Bank has also made gender mainstreaming an importance in development assistance, and is in the process of implementing an ambitious strategy to this effect. A policy research report by the World Bank (2001a), for example, identifies gender equality both as a development objective in itself and as an instrument to enhance growth, minimize poverty and encourage better governance.

Yet to date neither the World Bank nor any other major development agency has developed a rigorous method for measuring and tracking changes in levels of empowerment (World Bank, 2002). In the absence of such measures, it is difficult for the international development community to be self-confident that their efforts to empower women are ensuring that the important Millennium Development Goals (2000) will be achieved. Interestingly, most of the development parameters show better results in Bangladesh and Nepal than the other neighboring countries although women are often found in more vulnerable condition (if we analyze data taking Millennium development goal in consideration). The root causes of vulnerability are limited access of education hence less empowerment to them. It again tries to address in sustainable development goals (SDG) which are going to start from 2016 (Report of sustainable development 2016).

Oxaal's (1997) study on females in the developing countries has found women typically receiving less education than males. In the countries with high GNP there seems to be greater educational equality for males and females but amongst the poor countries, there is considerable variation, both in overall levels of enrolment and in female/male enrolment ratios. Factors such as social and cultural attitudes and policy priorities along with development disadvantage factors are significant in low women enrolment in such countries. For most poor households in these countries, household work is preventing girls from attending schools. Other constraints are concerns about girls' safety both in school and journeying between home and school, especially at their puberty in nations like Bangladesh and Nepal. World Bank (1995), investment in female education has been asserted by the World Bank as an important development strategy for the developing countries which has been broadly agreed across a range of agencies and governments. Its advantages have been explained with the examples of positive health and fertility with the example of Pakistan, the country of study taken by World Bank (1995).

Todaro and Smith (2015, 2012) pointed out the lack of skilled manpower in developing economies as one of the constraints for development. Drucker (1974) observed that a country is underdeveloped because it is undermanaged and unexpectedly, management has become a

critical constraint in the underdeveloped countries which in turn reminds the concept of World Development Report (2009) that economic growth is seldom balanced. For instance, high poverty, illiteracy, and mortality in some parts of the world set against the prosperity, literacy, and longevity in other parts are challenging the balance and resulting in ever-growing gaps between the developed and developing world to be urgently addressed to protect the enterprises in developing countries until they are ready to compete (World Bank 2009).

#### **Rational and objectives of the study**

- I. Women's education in developing countries is considered less important, which seems to create hindrance to the formation of women's identity and power.
- II. Women are in vulnerable situation in developing countries and basically women education enhances them in decision making capability and mobility.
- III. Educated women can participate in various income generating activities thus can help more in financing families.
- IV. Educated women have more chances of employment; when around 50% population actively participate in income generation it contributes to the national economy as well.
- V. Women education and empowerment contribute to the socioeconomic development of developing countries like Nepal and Bangladesh

#### **Hypothesis**

H1: Women education and empowerment have significant impact on women enhancement in developing countries like Nepal and Bangladesh.

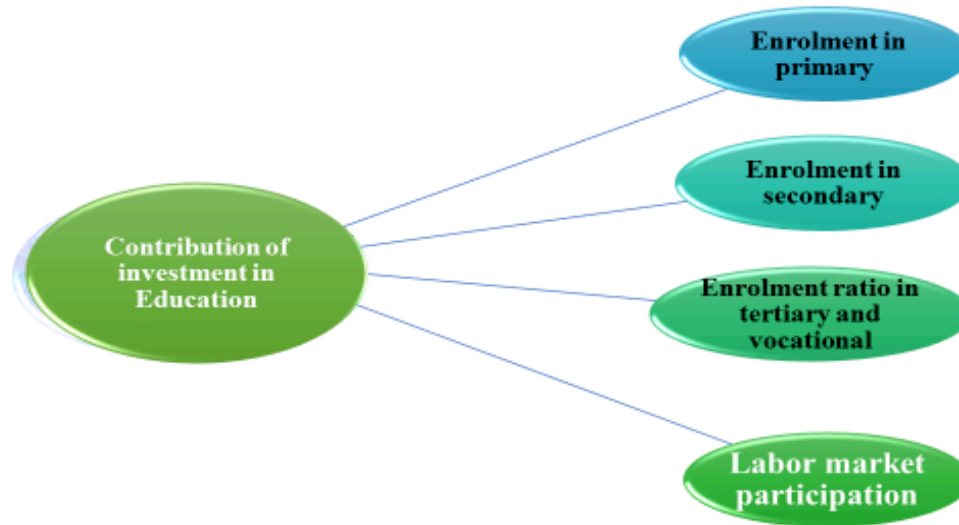
H2: Women education has positive impact on economic growth in developing countries like Nepal and Bangladesh.

H3: Women education has significant impact on labor force participation in developing countries like Bangladesh and Nepal.

H4: Women education has positive impact on socioeconomic development of developing countries like Nepal and Bangladesh.

## Conceptual Framework

### Conceptual Framework I

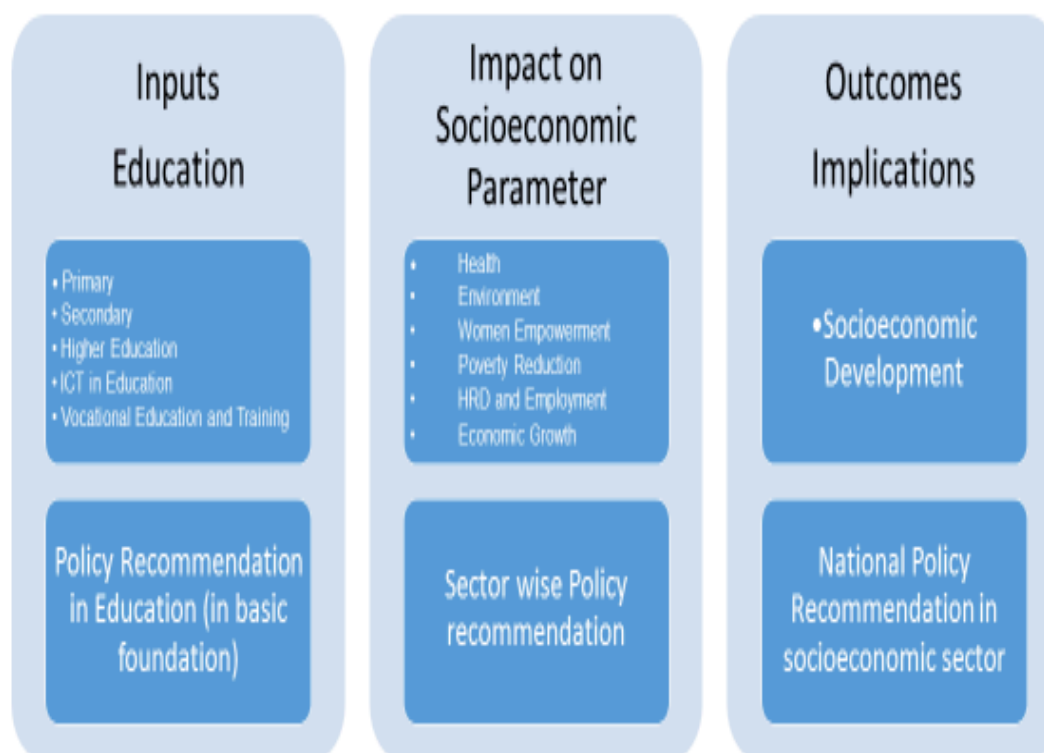


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The above conceptual framework shows there is interrelation between dependent variable that is investment in education and independent variable which are primary education, secondary education, tertiary education and its contribution to labor market participation.

The lower comprehensive conceptual framework shows that basically there are three sectors in this study which are inputs, impact and output. This complex structure shows the education sector is the backbone of socioeconomic changes and development.

## Comprehensive conceptual Framework



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Source: Authors own model for Ph.D. research

### Background of study areas

This research paper tries to cover the core areas of research in developing countries where female education gets less priority either from patriarchal perspective or religious perspective or the perspective of poverty. Most of the south Asian, African and the countries of sub-Saharan are in the similar situation. Problems are so deep rooted in these areas which should be analyzed and find some alternative solution to overcome from these persistent problems. In this paper, the attention is given to some selected south Asian countries like Bangladesh and Nepal, and some other countries for cross country comparison as well. Although women education in other south east Asian countries are also given less importance the idea behind selecting Bangladesh and Nepal is that there are similar macroeconomic parameters and women status in terms of education and women empowerment. The rationale for choosing Nepal and Bangladesh is that

both the countries represent many features of political conflict and the transitional aspects of developing countries. Nepal is one of the successful political whose new constitution deviates from the former unitary system by dividing the country into seven federal states. The new constitution guarantees inclusion of women, lower caste groups, tribal groups, people from the southern plains, Muslims and other marginalized communities into the state mechanism by means of proportional electoral system at the federal and state levels (Nepal's constitution, 2015). In Nepal although more than 50% population is of women, their participation in education and income generating activities is in far poorer in comparison to males. What could be the key strategies to overtake the country from vicious circle of poverty? As education is linked with so many socioeconomic factors like health, environment, poverty, HRD, women empowerment and so on this current study proposes education one of the prime factors which may expedite and sustain the development process.

Bangladesh is also a small Southern Asian country, bordering the Bay of Bengal between Burma and India. People's living standard of Bangladesh and Nepal are similar from various perspectives especially from women empowerment zone. The values of the most of the socioeconomic parameters of both countries are similar too. Bangladesh with an impressive track record on growth and development in south Asia can be the major trade partner of Nepal in different areas and products. If we look back the past decade, the economy has grown at nearly 6 percent per year, and human development has gone hand-in-hand with economic growth. The poverty falling rate is also significant since 1992. The interesting part is that the macroeconomic condition, women education and empowerment level of Bangladesh are comparable with that of Nepal. For decades, in developing-patriarchal countries like Nepal, Bangladesh and many Asian countries men's preference advocated for women's modest education. Hence, how especially education empowers women by enhancing their active participation in sustainable socioeconomic growth and human capital development (by delaying marriage, managing family-size, increasing gross family income and escalating literacy rate) needs to be studied.

Education is fundamental to promote agency, which expresses the capacity of rural poor to escape from poverty and hunger with their own power. An educated woman is more likely to find a job, but has also, *ceteris paribus*, a capacity to use more rationally the resources she owns (Sen, 1999). Educated and informed people have more probability to select valuable objectives in life, such as having stable access to food for their household as "female literacy is unambiguous and statistically significant reducing impact on under five mortalities, even after controlling for male literacy" (Sen, 1999, 197).

### **Literature review**

A gender equality perspective draws attention to the need for non-education sector policies to reduce women's disadvantage through legal reforms and enforcement of existing legal protection in the areas such as justice and compensation for physical attack, especially laws on the employment of young children, and laws relating the age of marriage (Brock & Cammish, 1991). Thus, it is recommended that investment is made more intensive in non-formal and job-oriented training for women (Herz et al., 1991). Besides, the high opportunity costs of girls' education in loss of household labor underline the need for non-education sector investment. For example, in Morocco, a survey indicated that apart from non-education sector investments different kinds of investment were more important in increasing female enrolment than males (Oxaal, 1997).

Women's empowerment in relation to microcredit programs is a prominent issue in the literature of microcredit. Microcredit is an extension of very small loans to insolvent borrowers

who typically lack collateral, steady employment and a verifiable credit history. Microfinance sponsors economic development, employment and growth through the support of micro-entrepreneurs. Not only the founder of the Grameen Bank was awarded the 2006 Nobel Peace Prize on the microcredit program of Bangladesh but it has also been a topic of great interest for researchers since its introduction in mid-1970s. The study views women's empowerment from an emancipation perspective (Sayma et al., 2009).

The experience from Bangladesh has shown that rural women are more competent in management than men hence, micro finances in Bangladesh have targeted them to provide loans with an ultimate objective to empower and alleviate women's poverty. In Bangladesh, 94% of microcredit borrowers are women and the recovery rate of loans is 98% (Grameen Bank Annual Report, 2006). Bangladesh Grameen bank's credit contribution has been marked by the rise of household consumption too (Khandker, 1998). As implied, it is worth stating that an empowered woman is confident in her ability; is capable of leading her life independently; is socially as well as economically independent; is opinionated, enlightened and has freedom of all sorts of domination; and finally she is someone who is capable of standing for her own rights (Sayma et al., 2009). The World Bank Policy Research Report on engendering growth (King & Mason, 2001) unambiguously suggests that equal status to both sexes is essential for sustainable economic growth and reduction of poverty in the less developed countries. On the other hand, research brings an idea that achievement of greater authority in the household by women is an important policy goal for improving not just the well-being of women themselves, but also that of children in the households (King & Mason, 2001).

Afridi (2010) examines the extent to which inequality in educational investments in male and female children in India varies by the degree of empowerment of the mother within her household. While educational level determines women's ability to access market opportunities outside the household, the extent of her autonomy reflects the social and cultural institutions that determine her control over the use of her own or other household members' resources within the family. The analysis establishes the presence of a robust, positive relationship between mother's empowerment and a smaller sex difference in household investments in children's schooling. Taken together, the results indicate that in families in which mothers are more educated and have greater authority; discrimination against educational investments in daughters is less. This result is robust to unobservable family characteristics that impact on the schooling of both daughters and sons equally and to any possible endogenous relationship between women's empowerment and family size.

Regarding the importance of women empowerment, Chakrabarti & Sharma (2012) observe that a woman in a society is recognized as a key agent to accelerate the developmental processes that are sustainable (World Bank, 2001). It is supposed to play the critical role in the development through a multiplier process. However, women's empowerment does not merely mean that their up-liftmen and providing opportunities to them in the context of basic human rights; it is an environment, which ensures the full freedom to make use of the opportunities and in which equality with men can be enjoyed by all women everywhere.

Chakrabarti & Sharma's (2012) study is an exercise to explore possible directions of causation of level of women's empowerment, a latent variable, with related factors with the view to identify the causes of slow growth of it in India applying the 'Structural Equation Modelling' (SEM) method to Third National Family and Health Survey data conducted during 2005–2006. The results recognize the inefficiency of education and employment policies formulated in India

for women required to bring about behavioral changes among women to fight against the norms of patriarchal society, though significant regional variations are not to be denied. The study thus, suggests for priority to an awareness campaigning program to change social norms.

In addition, the benefits of female education for women's empowerment and gender equality in terms of family health, fertility, reduction in child mortality, girls' enrolment, women's earning capacity, legal awareness and educational attainment, are broadly recognized. Morrison (2007) perceives education as an important component of opportunities and empowerment. Female education improves human development outcomes such as child survival, health, and schooling; the impacts on these outcomes are larger for a given increase in women's education than for an equal increase in men's education (World Bank 2001).

Ojha (2012) in his rigorous study about women and poverty focuses on inequality and discrimination in access to resources which have implications for the well-being of women, their families, and communities, as well as for economic growth and development. Priority must be given to identifying and addressing women's unequal access to economic and financial resources, including employment, social security and productive resources such as land, property and natural resources. Particular attention needs to be given to the obstacles faced by poor women in accessing micro-financing. Women's access to social protection schemes, including unemployment benefits, health insurance, and pension schemes should be increased throughout the life cycle. Research on the gender perspectives of climate change needs to be further strengthened. Bajracharya (2010) in his study has found that women in developing countries, particularly mothers, have dual roles in their households as income generators and primary caregivers to their children.

Economic integration and economic development are taking place all around the world, affecting both developed and developing countries. In the latter, women's absolute participation in economic activities, as well as their wage, is increasing. However, the shifts from lower-waged and low-skilled employment lag behind the global trends. Women often experience a high rate of displacement, as more skilled labor is needed (Mehra & Gammage, 1999). With this in mind, investigating the effects of economic integration on female labor market outcomes is, therefore, of great importance to gain further insights into how to enhance women's opportunities on the labor market.

An education system or educational policy provides a strong vehicle for the development of a country. In this direction, Nepal has experimented with several systems (Pyakuryal & Subedi, 2000). Improved educational opportunities open the doors to better income and advanced agricultural productivity, help combat harmful legacy views of gender roles, allow people to make smarter choices surrounding health risks and behaviors, and offer a broader view of the environment and global economy. This in turn directly links to poverty-reduction efforts, for instance, the family faces less poverty-related restrictions if the family head has some education comparatively.

Informal education and child development programs have not been effective due to lack of inter-ministerial coordination and lack of ownership among local bodies, lack of support from politicians in program operations, and lack of information management and reporting system in the education sector at lower units (MOF/Nepal, 2010a). Despite significant improvements in educational attainments, inequality persists in literacy rates across all regions, castes, and ethnic groups and by gender (UNDP, 2009b). Some of the reasons are a lack of timely printing of textbooks, geographical remoteness, natural calamities, and general strikes etc. There are also



difficulties in delivery of food items, maintaining its quality, its storage, and regular distribution under Food for Education Program (MOF/Nepal, 2010a).

In Bangladesh, almost half of the population consists of women. Nevertheless, “women continue to lag behind men in the educational and economic fields” (Jayaweera, 2006). The gender gap is even wider in higher education. A 2002 World Bank report suggests that in Bangladesh female students represent 24 percent of the student population in public universities. Gender disproportion is even stronger in the country’s private universities, where only 17 percent of all students (and less than 1 percent of all teachers) are female. In Bangladesh, the proportion of female educators at the tertiary level is estimated at a mere 4 percent of the teaching staff. Although the Government continues to place importance in educating women in Bangladesh (an example of such an initiative is the 1997 National Women’s Advancement Policy) the women participation in education and workforce and another developmental action is still far less than expected.

### Data and Methodology

In this research paper, the sources of information (data) are taken from different published sources like World Bank, International Monetary Fund (IMF), Human Development Reports (HDRs), CIA World Fact-Book (2015), Central Bureau of Statistics (Nepal), and Bangladesh Bureau of Statistics, Economic Surveys of Nepal and Bangladesh and various other development and gender reports.

Gauss, C. F. (1808) used the technique of Ordinary Least Square has been used as method of regression analysis under certain assumptions namely, the equation to be estimated is linear in parameters, is non stochastic, has zero mean value, possess equal variance of distribution etc. The study period of this research is 1995 to 2013/14 on the basis of availability of data. The following equation is used to estimate model.

$$\ln(\text{GDP}) = C_0 + C_1 \ln(\text{IE}) + C_2 \ln(\text{ME}) + C_3 \ln(\text{FE}) + C_4 \ln(\text{LFP}) + U_n \dots \dots \dots (1)$$

#### Equation (1) is for Nepal.

Where GDP, IE, ME, FE, LFP and U representing Gross Domestic Products (dependent variable), (independent variables) investment in education, male education, female education, labor force participation and error term respectively, whereas C<sub>0</sub>, C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub> are coefficients denote respective parameters and U<sub>n</sub> is error term in equation of model (1).

$$\ln(\text{GDP}) = C_0 + C_1 \ln(\text{IE}) + C_2 \ln(\text{ME}) + C_3 \ln(\text{FE}) + C_4 \ln(\text{MLP}) + C_5 (\text{FLP}) + U_b \dots \dots (2)$$

#### Equation (2) is for Bangladesh

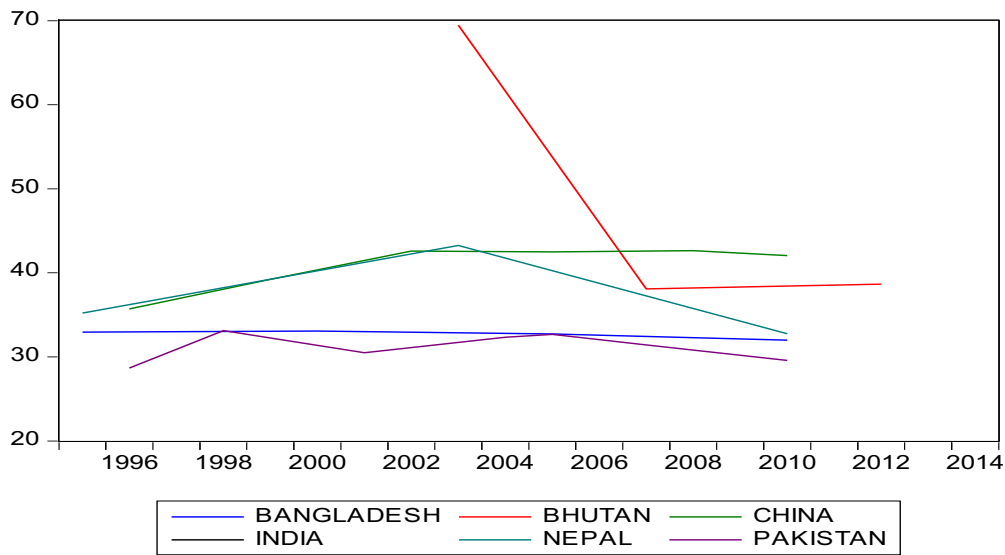
Where GDP, IE, ME, FE, FLP, MLP and U<sub>b</sub> representing Gross Domestic Products (dependent variable), (independent variables) investment in education, male education, female education, female labor force participation, male labor participation and error term respectively, whereas C<sub>0</sub>, C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub>, C<sub>5</sub> are coefficients denote respective parameters and U<sub>b</sub> is error term in equation of model (2)

**Analysis, result and discussion (descriptive and quantitative)**

Descriptive analysis

Descriptive analysis is made on the basis of data available in World Bank data source (2015), HDRO calculations based on data from UNDESA (2015), UNESCO Institute for Statistics (2015), United Nations Statistics Division (2015), World Bank (2015a), Barro and Lee (2014) and IMF (2015), CBS Nepal and BBS Nepal.

**Figure 1. Gini index (World Bank Estimate)**

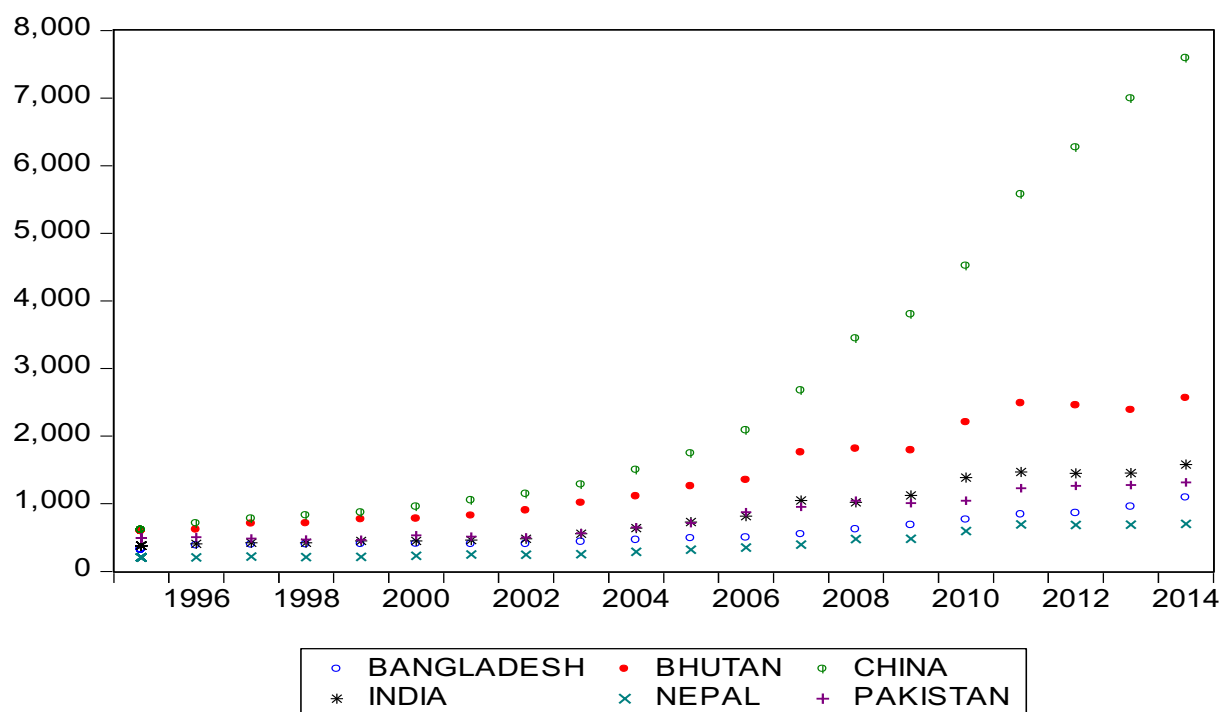


Source: World Bank data 2015

Figure 1 shows the Gini coefficient, which shows the gap between have and have-nots (Rich and poor). In this area Bhutan had terrible data before 2008 and after 2004 different country are managing their Gini coefficient. Nepal is also doing significant progress in this area after 2004.

**Figure 5. GDP Per Capita (Current US\$)**

## Women Education and Empowerment; Its Impacts on Socioeconomic Development in Bangladesh and Nepal



Source: World Bank data 2015

In figure 5 per capita income of China is higher than other countries and it shows that economy of China is booming now. In second position there is Bhutan which is followed by India and the economy of remaining countries is found in lower size.

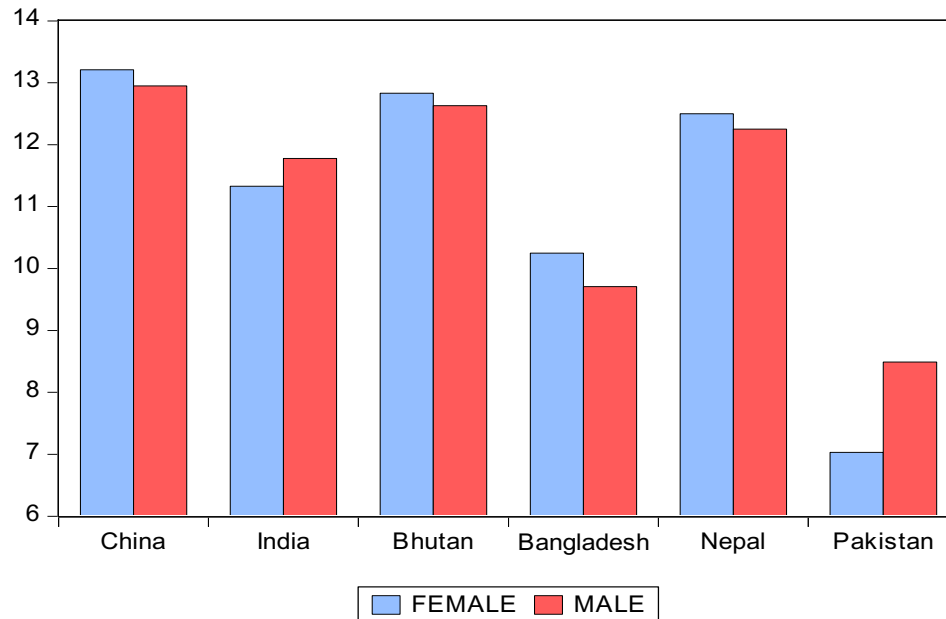
**Table 1. Expected years of schooling (2014)**

HDI rank	Country	Expected years of schooling
90	China	13.07
130	India	11.70
132	Bhutan	12.62
142	Bangladesh	9.98
145	Nepal	12.35
147	Pakistan	7.79
	Very high human development	16.41
	High human development	13.62
	Medium human development	11.78
	Low human development	9.00
	Developing countries	11.71

Source HRD report (2015)

Table 1 shows the expected years of schooling. Expected years of schooling means the average schooling of the people. In the table China, Nepal and Bhutan are in tremendous progress followed by India and Bangladesh. But Pakistan is found in lower in the scale.

**Figure 6. Expected Years of schooling (2014), Gender prospective**

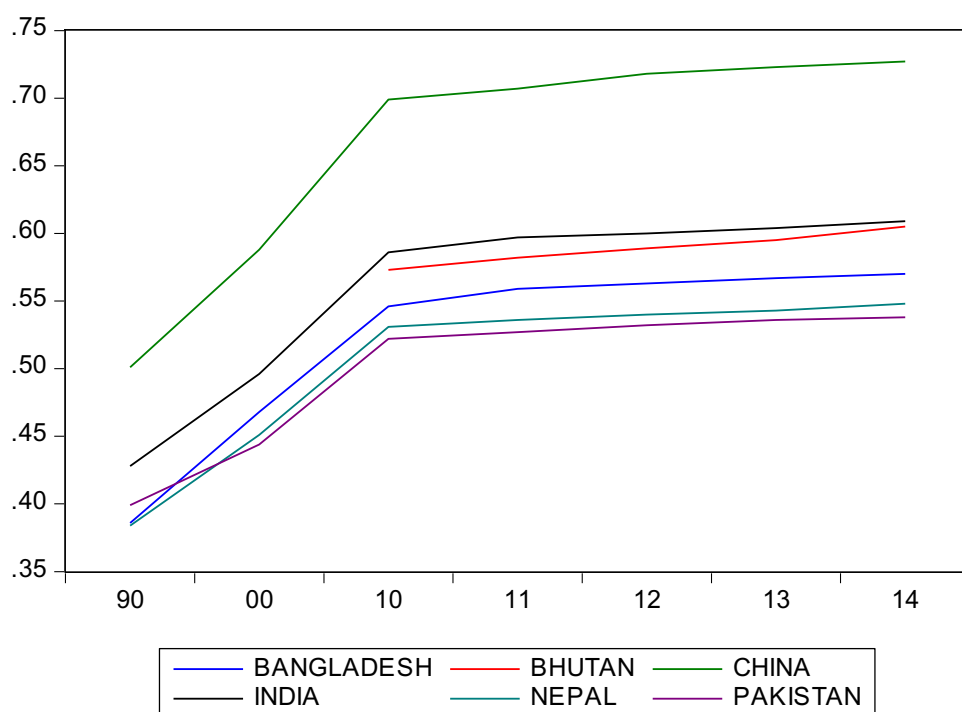


Source HRD report (2015)

In figure 6 expected years of schooling is given from gender perspective. China, Nepal and Bhutan seem to show better results as average years of schooling are high. Moreover, women's average schooling is greater than that of men's. This is a very important sign and indicators of women empowerment. In this regards remaining countries India, Bangladesh are seen lower in scale, but the case of Pakistan little is quite alarming.

**Figure 7: Trend of Human Development Index (HDI), 1990-2014**

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Source HRD report (2015)

Figure 7 shows the trend of human development index. Here China is found again in the best condition and followed by India, Bhutan and the status of remaining countries is lower in scale.

**Table 2. Gender Development Index, HDI and life expectancy at birth (years)**

HDI Rank	Country	Gender Development Index(GDI)		Human Development Index (HDI)		life expectancy at birth(years)	
		GDI Value	GDI group	Female	Male	Female	Male
90	China	0.943	3	0.705	0.747	77.30	74.30
130	India	0.795	5	0.525	0.660	69.50	66.60
132	Bhutan	0.897	5	0.572	0.638	69.70	69.20
142	Bangladesh	0.917	4	0.541	0.590	72.90	70.40
145	Nepal	0.908	4	0.521	0.574	71.10	68.20
147	Pakistan	0.726	5	0.436	0.601	67.20	65.30

Source HRD report (2015)

Table 2 is related to Human Development Index (HDI), Gender Development Index (GDI) and life expectancy by birth. In this China is leading in three different categories. HDI of remaining countries are following China.

1.1.1. **Analysis of Issues and methodology**

**Model for Nepal**

Model OLS diagnostics using Eviews 8

$$\ln(\text{GDP}) = C_0 + C_1 \ln(I) + C_2 \ln(\text{ME}) + C_3 \ln(\text{FE}) + C_4 \ln(\text{LFP}) + \text{Un} \dots (1)$$

Where

GDP, I, ME, FE, LFP and U represent Gross Domestic Products (dependent variable), (independent variables) investment in education, male education, female education, labor force participation and error term respectively, whereas C0, C1, C2, C3, C4 are coefficients denote respective parameters and Un is error term in equation of model (1).

**Table 4. Data analysis for Nepal**

Dependent Variable: LNGDP

Method: Least Squares

Date: 03/08/16 Time: 03:26

Sample: 1995 2013

Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNI	0.079959	0.033847	2.362382	0.0332
LNFE	0.191902	0.207599	0.924387	0.3709
LNME	-0.233683	0.223897	-1.043706	0.3143
LNLFP	0.488750	0.246283	10.10525	0.0000
C	-17.73849	4.326128	-4.100315	0.0011
R-squared	0.946698	Mean dependent var		24.31776
Adjusted R-squared	0.995755	S.D. dependent var		0.340182
S.E. of regression	0.022165	Akaike info criterion		-4.559668
Sum squared resid	0.006878	Schwarz criterion		-4.311131
Log likelihood	48.31684	Hannan-Quinn criter.		-4.517606
F-statistic	1056.481	Durbin-Watson stat		0.583744
Prob(F-statistic)	0.000000			

**Analysis, finding and report for Nepal**

In the above analysis GDP is dependent variable where if we increase 1% in investment in education GDP will be increased by 7.99%. The analysis shows if we increase 1% in female education it impacts 19.19% increase in GDP which is more exciting result and there is strong positive relation. But in the case of male education analysis it shows negative relation. As there was a civil war in Nepal almost for 10 years and most of the youth were involved in revolution it had negative impact on the nation’s economy. The war took place in between 1996-2006 but this study focused almost on the same period that is 1995-2013. There is significant and positive impact of labor force participation in the GDP of the country. All individual value of t-statistics are not significant but the value of F-statistics is <5% so combined impact of all variables to GDP is positive and significant. So, research clearly shows that there is vital role of women education in socioeconomic development of Nepal. There is high value of R square 0.9466 that means 94.66% value of dependent variable that is GDP is explained by the given independent variables like investment in education (IE), female education (FE) at least secondary, Male education (ME) at least secondary and labor market participation (LMP). There was serial/autocorrelation and serial correlation has been removed by taking second lag in LNGDP by using Breusch-Godfrey serial test. Moreover, there is no heteroscedasticity which is checked by Breusch-Pagan-Godfrey test. Residuals are normally distributed which is tested by Histogram Normality that is Jarque-Bera test

**Model for Bangladesh**

Model OLS diagnostic:

$$\ln(\text{GDP}) = C_0 + C_1 \ln(\text{IE}) + C_2 \ln(\text{ME}) + C_3 \ln(\text{FE}) + C_4 \ln(\text{MLP}) + C_5 (\text{FLP}) + U_b \dots (2)$$

Where GDP, IE, ME, FE, FLP, MLP and  $U_b$  represent Gross Domestic Products (dependent variable), (independent variables) investment in education, male education, female education, female labor force participation, male labor participation and error term respectively, whereas  $C_0, C_1, C_2, C_3, C_4, C_5$  are coefficients denote respective parameters and  $U_b$  is error term in equation of model (2).

**Table 6. Data analysis for Bangladesh**

Dependent Variable: LNGDP  
 Method: Least Squares  
 Date: 03/08/16 Time: 10:49  
 Sample: 1995 2013  
 Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNIE	0.072762	0.053223	1.367103	0.1948
LNFE	0.237882	0.098354	2.418629	0.0310
LNME	0.316956	0.157811	-1.374781	0.1924

LNFLP	1.904752	0.278218	6.846250	0.0000
LNMLP	0.555128	0.204857	2.709832	0.0179
C	-17.38494	2.599788	-6.687062	0.0000
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R-squared	0.968900	Mean dependent var	26.17551	
Adjusted R-squared	0.998477	S.D. dependent var	0.419220	
S.E. of regression	0.016363	Akaike info criterion	-5.135539	
Sum squared resid	0.003481	Schwarz criterion	-4.837295	
Log likelihood	54.78762	Hannan-Quinn criter.	-5.085065	
F-statistic	2360.479	Durbin-Watson stat	1.539547	
Prob(F-statistic)	0.000000			

### Analysis, finding and report for Bangladesh

- In the above analysis GDP is dependent variable if we increase 1% in investment in education GDP will be increased by 7.27%
- In this research analysis it shows if we increase 1% in female education it impacts 23.78 % increase in GDP. It shows a strong positive relation of nation's GDP with female labor force participation (FLP)
- In the case of male and female education analysis it shows both have positive and significant relationship to GDP.
- There is significant and positive impact of labor force participation; both male labor force participation (MLP) and female labor force participation (FLP) in the GDP of the country.
- All individual value of t-statistics are not significant but the value of F-statistics is <5% so combined impact of all variables to GDP is positive and significant.
- So, research clearly shows that there is vital role of women education in socioeconomic development of Bangladesh
- There is high value of R square 0.9689 that means 96.89% value of dependent variable that is GDP is explained by the given independent variables like investment in education (IE), female education (FE), Male education (ME), Female labor participation (FLP) and Male labor participation (MLP)
- There is no serial correlation by using Breusch-Godfrey serial test
- There is no heteroscedasticity which is checked by Breusch-Pagan-Godfrey test
- residuals are normally distributed which is tested by Histogram Normality that is Jarque-Bera test

**Testing of variables for stationary:** Unit root test is done by using Augmented Dickey–Fuller (ADF) test. Test result shows that all variables are stationary; there is no random walk at certain level either in no difference, first difference and second difference. ADF is used to test all three



i.e. intercept, trend and intercept and none by using automatic selection in Schwarz Info Criterion (SIC) test.

### **Conclusion**

This research clearly shows that there is crucial role of women education in socioeconomic development and economic growth of Nepal, Bangladesh and many least developed and developing countries. From the rigorous review of various literature, descriptive analysis and quantitative analysis it is likely crystal clear that there is significant role of women education in various development paradigms. This research work is also primarily meant to find the reasons of gender inequality in education in Nepal and Bangladesh and its further impact on GDP growth. The critical link between the status of women in society, particularly literacy levels-empowerment, and a nation's economic growth is now well understood. The low socio-economic status of women in these countries is beginning to be recognized as a potentially significant drag on the country's growth.

### **Recommendation for policy implications**

From the above analysis and findings of the government of Nepal and Bangladesh we recommend for giving high priority for women education, training and other human resource development programs to get high labor market participation, which enhance faster economic growth and socioeconomic development. Because analysis shows there is significant degree of positive relation between economic growth and other independent variables which are considered in this model. All the above descriptive analysis shows that women education plays the crucial role in delaying marriage, managing family-size, increasing gross family income and escalating literacy rate within the family. Policy makers should keep these things in mind and should formulate more female promoting policies.

Women education is key factor of female labor force participation which has important role to increase productivity and economic growth, so more budget should be allocated in education, training and women empowering programs. Research also shows that countries which are more promising in socioeconomic and multidimensional development have more gross enrolment ratio in primary education, secondary education and tertiary education of women and both gender. So government should formulate the policy accordingly.

Research also shows gender development indexes (GDI), human development index (HDI) and life expectancy rate at birth are significantly correlated with level of education in both sexes. So the developing countries should revise their policies accordingly. Current conflict of some countries, women deprivation and high population growth rate, multidimensional poverty index, Gini coefficient and poverty ratios either at national level or total headcount ratio with minimum \$ 1.90 per day also related to level of education. If governments are able to provide time relevant education to all then most of the above problems should be automatically solved or adjusted.

In the light of all recommendations above it might be asserted that women education contributes significantly to the economic growth and socioeconomic development of Bangladesh

and Nepal. So government of these countries and rest of other developing countries should consider investing at HRD, and policy should be formulated with accordance with the gender equity in relation to women education and empowerment. Finally, to narrow it down, a Chinese proverb is narrated below:

“If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people”.

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