

Female Education As A Determinant Of Economic Growth: The Case Study Of Pakistan

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ABSTRACT

The contribution of female education has been very important in the GDP growth of the country, but this very sector has been ignored by the Government. This paper focuses on the importance of female education and highlights its significance for national development. It also brings out some impediments, obstacles and barriers confronting female education, especially the low level of the investment on the sector in the rural areas of Pakistan. The study further identifies the effects of female contribution in labor force participation. The study explores the opportunities to encourage the role of female in the developmental activities.

Keywords: Female Education; Female Labor Force Participation; GDP Growth; Capital

INTRODUCTION

Every civilized society considers the education sector as a necessary indicator of economic and social advancement. Equal role of men and women cannot be denied in developmental activities. It is necessary for human societies utilize its human capital to achieve social, cultural and economic prosperity. Needless to emphasize, female education plays a central role in the development process. Indeed, nothing of lasting value can be achieved without recognizing women's potential role.

The study focuses on the importance of female education and highlights the obstacles womenfolk encounter, especially in the rural areas of Pakistan. Millions of children orphaned and traumatized by natural and human-made disasters or handicapped due to their involvement in strenuous labor forced by their destitute parents, do not have access to education. However the situation is worse in the societies where gender discrimination also prevails. Women are the pulse of a society just like a household is the index of a community's well-being. The degree of civility in modern civilized world is measured by the level of rights women enjoy and the extent of their participation in different spheres of national life. An anonymous writer said 'Give the women what is women's and to men what is men's and there you have a community which is bound to make progress.' Pakistan despite being an Islamic society, which guarantees equal rights for men and women, is still struggling for protection of women's rights due to lack of education, economic backwardness, dependence of women on men, centuries-old social taboos, prejudices against women, and absence of opportunities for their steady advancement.

Why is female education important? Todaro (2007) asserts that gender discrimination, in education, hinders economic and social development, and that it needs to be eliminated by maximizing educational opportunities due to following four reasons¹;

- The rate of return in women's education is higher than that of men's
- Increasing women's education not only increases productivity in the fields but also results in greater labor force, lower fertility and improved child health and nutrition.

¹ Michael P. Todaro "Economic Development" Edition (2007)

- Improved child health and nutrition and more educated mother lead to multiplier effects on the quality of a nation’s human resources for many generations to come.
- Women carry a disproportionate burden of poverty and landlessness that permeates developing societies, so that any significant improvement in their role via education can have an important impact on breaking vicious cycle of poverty and inadequate schooling.

Studies by UN and the World Bank conclude that social benefits of educated women are more than the expected. However evidences from Pakistan and Bangladesh show that the female education is negatively related to family’s income, and one of the reasons cited for the negative relation and the discrimination is that male is supposed to support parents in old age, however in contrast female after marriage will move and be responsible to her husband’s family.

The broad objectives of the study are to:

- Examine the causes of gender inequality in education;
- Investigate how gender inequality in education impacts economic growth and development; and
- Draw suitable policy implications for minimizing the gender-based adverse effects on economic development.

Section 2 reviews the related literature, section 3 is about methodology used therein, section 4 brings together the main results empirical results, and the paper is concluded in section 5.

LITERATURE REVIEW

According to Todaro (2007), females lag behind males in education in almost every developing country and by at least 10% at primary level. The female adult literacy rates of different countries are 12.6%, 48.0%, 57.8%, 54.5% and 39.6% 43.2% respectively, which are much lower than that of male. These figures show the persistence of a substantial gender gap (Table-1). A study was conducted by Satha and Raza (1994) to check the status of women in South Asia. It argued that patriarchal family structures in the region curtailed the powers of women and autonomy of women, and that this disparity is astonishingly large in the North as compared with that in South India. It stands to reason that equality in the status of male and female will most probably lead to better chances of fertility control in married life.

Table 1: The Educational Gender Gap

Countries	Adult Literacy	Education Index	Female Adult Literacy Rate (% Aged 15 And Above)	Male Adult Literacy Rate (% Aged 15 And Above)	Public Expenditure On Education As A Percentage Of Total Government Expenditure
Afghanistan	28.0	0.354	12.6	43.1	0.5
South Africa	88.0	0.843	87.2	88.9	17.4
Bangladesh	53.5	0.53	48	58.7	14.2
Egypt	66.4	0.697	57.8	74.6	12.6
India	66.0	0.643	54.5	76.9	10.7
Pakistan	54.2	0.492	39.6	67.7	11.2
Mexico	92.8	0.886	91.4	94.4	25.6
Morocco	55.6	0.574	43.2	68.7	26.1
Kenya	73.6	0.69	70.2	77.7	17.9

Source: United Nation Development Program, Human Development Report, 2009

Table-1 shows, gender gap prevails in a number of developing countries, but Bangladesh, India, Morocco, and Pakistan female child is astonishingly disadvantaged. (Zubeda Khan, Ghulm Y. Soomro and Samina Soomro (1994) explored the role of educated women, especially in urban cities where medical facilities are significantly

better are of crucial significance as they affect the family's health acquisition. Zeba Aysha (2000) explains that various aspects of women's status are determined by a combination of social-economic and community-level factors; and that initial education level for women is of critical importance not only to women themselves but also for the country's economic performance. It is estimated that if equal enrolment rates of girls and boys had been attained at primary and secondary schools in 1960, the annual rate of GDP would have been increased by 0.61% (Rana Ejaz Ali Khan & Tasnim Khan (2002) Thus, successful schooling is positively influenced by the health and nutrition. Even though one can quarrel about the numbers, the fact remains that the gender gap in education has severely affected the growth rate of Pakistan economy. Even more significant in this respect are the inter-provincial differences between the gender discrimination within Pakistan. In the province of Baluchistan, the female literacy is about 5% and in the NWFP it is at the most 15%.

Toor (2000) discussed the role of government to reduce gender discrimination in education. The Education Policy (1998-2010) set a target of 90% enrollment of children (age group 5-9) by efficient utilization of available resources. However, the target has not been achieved due to bad governance, inefficient utilization of resources and illiteracy of parents which lowered the female enrollment as compared to the male enrollment i.e. 35% and 59% respectively. Part of the reason for this state of affairs is that sons are preferred over daughters, because of the parents' anticipated futuristic support from their sons in their old ages. (Naqvi & Shahnaz, 2000) examined the effects of different demographic, socio-economic and human capital related factors on the decisions of female to enter into labor force and concluded that the educated women of the family can easily take decision to seek employment as compared to un-educated women.

Qayum, (2008) 1981 Census of Population shows that females were 48% of the population and 16% of them were literate as compared to 35% of male, however the rate was only 7% for females against 26% for the males in rural areas. Literacy rate for female was raised to 21% and 47% for male in 1991. The primary enrollment rate of girls was 46% as compared to 80% boys in 1987-88, and a higher drop-out rate among girls, which reflected the low priority given to girl education.

(Parveen, 2008) concluded that development is not only characterized by the growth of production and income, it is closely linked with and necessitates the evolution and transformation of economic and social structure, which results from the will for change of the governments in power and the mobilization of national efforts.

Pakistan's vigorous GDP growth of almost 6% in recent years and the prominence of its female political leaders have not been translated into welfare and productivity gains for its women. According to Gender Parity Index (GPI), in 2005 the combined Primary completion rate of both genders was 63.2. However, in the same year the Primary completion rate of boys and girls were 73.4 and 52.5, respectively.

The years 2001, 2003 and 2004 respectively experienced 58.6, 59.6 and 65.7 total net enrolment ratios (NER) in primary education of both genders. For the same years the Total NER in primary education of boys was 69.4, 68.9 and 75.5; however for girls the respective ratios were 47, 49.8 and 55. This really showed that the females had low NER as compared to that of males. One of the main obstacles in transformation into developed economy is under-investment on its people. *CIA World Fact-Book* (2006) ranked Pakistan at 155th in the world among the countries whose public expenditures on education is as low as 2% of the total GDP. The United Nations observed the steady increase in the share of women in wage employment in the non-agricultural sector of Pakistan with the passage of time i.e., in 2000-01 it was 7.4, increased to 8.9 in year 2002-03 and in 2004-05 it reached the level of 9.7².

The Government of Pakistan held Gender Gaps Aid Consortium meetings in 1990 and emphasized women development, which was evident from the studies of World Bank and UNDP. If female secondary school enrolment had been raised to 30% in 1965 then 1.2 (m) births per year and 0.3 (m) infant deaths would have been averted, and concluded that educating girls was the best investment any developing country could make (*Letting Girls Learn, World Bank*) World Bank, in collaboration from IDA and the government through an umbrella have providing financial support to increase the involvement and capacity of NGOs in social services delivery i.e. primary

² United Nations Statistic Division (2006)

education, population, health, and rural water supply with special emphasis on improving access for girls and women. The IDA-financed Baluchistan Primary Education Project, which works through the newly formed education committees, involves local communities in staffing, recruiting and training women teachers. This project has been a modest success. Within the first two years, 243 new multi-grade girls' schools have been established, and the enrolment rate of girls rose to 87% compared with 15% for the province as a whole. Innovative initiatives in the health sector constitute an example of steps taken under the Social Action Program to improve women's access to services. Over 8400 women health care providers have been recruited and different incentives provided to female health staff to work in underserved areas. In one province, where women doctors are unavailable, women technical officers are being trained to provide services. Elsewhere, infrastructure is being improved and the quality of training and services institutions is enhanced. Focusing on girls' educational achievements and career aspirations allows society to ensure women economic security, a better quality of life, and more career choices. All this shows that targeting more equitable educational techniques will not only improve the lives of individual women, but will also advance the community as a whole to attract more worthwhile contributors.

Is the gender inequality (in education) better economic choice from the economic efficiency's point of view? To answer this question, first of all, we must look into the reasons of gender inequality in education. Gertler and Alderman (1989) and Dollar and Gatti (1999) suggest three reasons for low investment in girls' education viz; consideration of low returns from girls' schooling, parents have no prospective benefit of girls' education, and the social preferences like traditions and culture. The Government of Pakistan has decided to cope with the problems of gender discrimination in the social and education established a Women's Division in 1979, the status of the Division had been raised to the Ministry of Women Development in 1985 and was allocated a sum of Rs. 1,815 (m) in 15 years (1979-94), while for the whole of 1993-94 there were only Rs. 85.8 (m) i.e. Rs. 1.40 per female for the development; the government increased budgetary allocation for education from 1% to 2% of GDP and contemplated to further increase it. The Ministry of Women Development formulates policies for women development. It is playing very important role to support women of both rural and urban areas. The ministry highlights the basic needs of Pakistani women it is in charge to make such policies and working on many projects which are related to development of women and providing equal employment opportunities for her. The basic objectives of ministry are as follows:

- To mainstream women's issues by integration into all sectors of national development;
- To ensure that government's policies, plans and programmes are made pro-gender;
- Women participate equally in decision making, implementation and benefits of national development efforts³.

The situation of women development is impressively changing over time in Pakistan. This development can be seen from the following facts and figures;

- Late Ms. Benazir Bhutto had the distinction of being the first woman prime minister of Pakistan.
- Dr. Fahmida Mirza currently elected as first woman Speaker of National Assembly of Pakistan.
- There are 76 female Members elected for the National Assembly in 2009.
- There are 43,646 nurses and 95,000 Lady Health Workers in Pakistan.
- A female lawyers association has been established for the welfare of the women lawyers.
- There are 1, 2, 4 and 5 women are working as Federal Minister, Federal Secretaries, Minister of State and Parliamentary Secretaries in the ministries of Pakistan, respectively.
- Women are also representing the National Assembly's standing committees and 3 NA Standing Committees are chaired by the female members.
- Women are also elected to the Senate of Pakistan and current strength of women in the senate is 17.
- One of the federal universities has the distinction of having the female vice chancellor. This university is specifically made for the women.
- Federal Board of Intermediate and Secondary Education is currently headed by a women.

³ Ministry of Women Development (2009)

- Ms. Shahnaz Wazir Ali headed the Higher Education Commission for a year. Now she is working as Special Assistant to the Prime Minister and the head of the NCHD (National Commission for Human Development).
- State Bank of Pakistan was recently headed by a female Governor.

Followings are different national and international organizations which are working for the development of Pakistani women in different fields of life.

- All Pakistan Women Association.
- Aurat Foundation.
- Blue Veins.
- Institute for Development Studies and Practice.
- Pakistan Federation for Business and Professional Women.
- Women Action Forum.
- Ghum-Gusar.
- Working Women Organization.
- Bedari.
- Professional Agriculture Women.
- Women Alert.
- Women Empowerment Literacy and Development Organization⁴.

METHODOLOGY

The technique of Ordinary Least Square (OLS by Carl Friedrich Gauss) is used because 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.--- it becomes a powerful method of regression analysis. The number of observations cover 27 years period i.e. 1980 to 2006, and the data were collected from International Financial Statistics (2006) and Economic Surveys of Pakistan. The following equation is used to estimate model.

$$\ln(Y) = \beta_0 + \beta_1 \ln(I) + \beta_2 \ln(ME) + \beta_3 \ln(FE) + \beta_4 \ln(LFP) + V \tag{1}$$

Where Y, I, ME, FE, LFP and V representing Gross Domestic Products (dependent variable), (independent variables) investment, male education, female education, labor force participation and error term respectively, whereas $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ denote respective parameters.

ESTIMATION AND RESULTS

Following tests used to test stationarity of data: (1) Unit Root Test, (2) Dickey-Fuller (DF), (3) Augmented Dickey-Fuller (ADF).

Null Hypothesis: Data is stationary
 Alternative Hypothesis: Data is not stationary.

Table 2

Variables	1 st Difference				
	Lags	Intercept		Trend	
ME	0	(-4.39)*	(-2.98)**	(-4.59)*	(-3.60)**
GDP	0	(-3.208)*	(-2.95)**	(-3.18)*	(-3.60)**
FE	0	(-5.69)*	(-2.98)**	-5.86*	(-3.60)**
LFP	0	(-5.255)*	(-2.98)**	-5.20*	(-3.60)**
I	0	(-4.39)*	(-2.98)**	(-4.33)*	(-3.60)**

Note: **The figures given in parenthesis are table values of UR Test at 5% of level of significance.

⁴ As visited www.gov.pk 20-12-2009

In this section we interpret the results of unit root test and estimate the model of OLS estimation. The stationarity of the data is measured by ADF test because it considers extra lagged terms of the variables in order to eliminate autocorrelation. The null hypothesis of unit root is tested at level and 1st difference. These tests show that at level all variables are stationary; therefore all the variables are significant at 5% critical value.

Table 3: Estimation Of Model Using OLS (Sample 1980-2006) (Dependent Variable: (GDP))

Variables	Coefficient	Std. Error	t-Statistic	Prob.	R ²	DW
C	0.046358	0.382527	0.121188	0.9046	0.995115	0.769279
I	0.245189	0.039168	6.259997*	0.0000		
ME	0.451805	0.104176	3.089036*	0.0054		
FE	0.320829	0.12 8067	2.162638*	0.8723		
LFP	0.058220	0.045184	1.288497**	0.2110		

Note: * At 5% level of significant ** At 10% level of significant

Investment makes a direct contribution to economic growth in the model; a 1% increase in investment leads to 24% increase in the GDP growth; however, the GDP is the sum of personal consumption, investment, government expenditures and net export .The last 20 years experienced an explosion of theoretical and empirical research that examined the effect of investment and productivity on long-term economic growth. The neoclassical model originally focused on investment in the accumulation of tangible and physical assets to explain economic growth; however, the concept of investment has been broadened by including human capital, research and development expenditures and investment in the infrastructure. This literature is limited to the neoclassical tradition only where benefits of investment are internal and in the form of enhanced productivity or higher wages. The new growth theory attaches greater significance to certain types of investment that create externalities and generate an additional productivity boost through production spillovers or the associated diffusion of technology. Both models share similarities concerning the central importance of investment and capital accumulation to economic growth, but differences between these models have important implications for the impact of investment on productivity and economic growth.

Male education also has a positive relation with GDP growth. A 1% increase in ME and FE leads to 44% and 32% increase in GDP growth respectively, the role of female education are nominal in economics growth of the country, because of gender inequality in education and underinvestment in the sector. As data of primary, secondary and higher level used for the paper therefore the coefficient of female education is showing squat roll of female education in GDP growth. Because from some years female education is very much promoting by government as it is discussed in literature but there is still low enrollment rate found in these three levels. Overall literacy is only 54% while adult female literacy is less than 36%. The Labor Force Participation is not playing as much important role as it should have had i.e., 1% increase in LFP leads to 5% increase in GDP. The problem of unemployment is becoming very severe day by day hence affecting the participation of female in economic activity because LFP includes participation of both genders in economic activity. The higher population growth results in higher LFP but in case of Pakistan it has not been observed ever in the history. The LFP rate indicates the supply of labor in the economy and the composition of the country's human resource; however labor force analysis helps in the policy formulation for employment, human resources development, determination of training needs. The model, free from autocorrelation according to D-W statistics, R² shows that 99% variation in GDP Growth is due to explanatory variables used in the study.

CONCLUSION

This research work is primarily meant to find the reasons of gender inequality in education in Pakistan and further its effects on GDP growth. The study showed that there is no strong relationship between female education and GDP growth as it should be. The critical link between the status of women in society, particularly literacy levels, and a nation's economic growth is now well understood. The low socio-economic status of women in Pakistan is beginning to be recognized as a potentially significant drag on the country's growth.

The quality of primary and secondary education has a declining trend, which lowered the enrollment of girls' at above mentioned levels. Although the contribution of female education in Pakistani' GDP growth is lower on these level but there are also recognized the impressive improvement in women development in last 5 to 6 years. But there is still need of the development of the women in Pakistan because women are 65% of total population and if they will be more educated then they can contribute in socio-economic development of Pakistan. The problem of unemployment becoming sewer day by day in Pakistan if both male and female equally contribute in labor force this problem can be solve easily.

RECOMMENDATIONS

- The construction of working women's hostels be made possible and be protected so that female be encouraged to complete their education in term of the better and safe future.
- We must clearly focus on quality, gender equality and improvement in literacy, learning opportunities for female, free and basic compulsory education and early childhood education. The early childhood education provides crucial basis for whole for education.
- Banks and financial institutions to extend credit to genuine women entrepreneurs on the pattern of Grameen Bank in Bangladesh be established.
- Technical and vocational training courses centers should be established.
- We have to recognize that Pakistan really needs to invest in female education; there are interregional variations across Pakistan. In some parts of the Pakistan access to education, it quality and literacy of women are better and in some areas it is lag behind. This gap needs to be addressed
- The major challenges facing Pakistan with respect to female education are not purely technical but of an organizational nature as well that require imperative attention for providing effective management skills and foresight to our women fold at the different ladders of development. There is today an increasing consensus to instill social perspective in our national effort tin order to ensure that women and their contribution in social and economic terms becomes a realizable goal for positive nation-building.

AUTHOR INFORMATION

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NOTES