Effect of Conflict and Military Expenditure on School Performance in South Asia

Abdul Rasheed Sithy Jesmy Reading PhD Universiti Utara Malaysia (UUM)

Mohd Zaini Abd Karim, Prof. Dr. Othman Yeop Abdullah Graduate School of Business, UUM

Shri Dewi Applanaidu, Dr., Department of Economics and Agribusiness School of Economics, Finance & Banking, UUM

Abstract

The quality of education, which determines school performances, is accepted as a key pillar of human capital development. However, military expenditure and conflict are enduring concerns and appear to be the main barriers to effective school performance in most of the developing world. This study attempts to examine the effect of conflict and military expenditure on three levels of school performance, namely, school enrolment rate, school completion rate and children out of school rate, in five major countries in South Asia over the period from 1980 to 2013 using panel regression methods. The findings of this study are that conflict and military expenditure create an obvious threat to children's education in South Asia. Therefore, the government, policy-makers and international educational organizations should take effective measures to increase educational opportunities in conflict affected areas through affirmative ways to minimize conflict which can subsequently decrease military budget.

Keywords: conflict, military expenditure, school performance.

1. Introduction

Ensuring human security through systematic education and progressive economic development is the key responsibilities of any performing government. An educated society is a key resource for the well-being of any country and has been acknowledged as the main pillar of human capital development and progress (Shakya, 2013). Moreover, education is a direct way to enhance output (Romer, 1990) and important for social stability (Easterly, Ritzan & Woolcock, 2000). Similarly, military security is essential to enhance human development (Benoits, 1973, 1978). However, ongoing conflicts and military budget in the developing world have become major hindrances to the development of the education system. Conflict, in the form of civil war, terrorism, political conflict, and border violence amongst others, is a serious issue and an ongoing concern in South Asia, which has experienced more than 400 conflicts from 1980 to 2013 (Upsala Conflict Database, 2014).

It is a region of multi-ethnic and multilingual people. It has experienced several ethnic conflicts due to disregard for minority rights. Twenty-six years of civil war in Sri Lanka and religious extremist attacks against minority groups in India, Bangladesh, and Pakistan have drawn the attention of the rest of the world. The failure of the democratic political system often leads to political conflicts in this region. Since 1958, the army ruled, more than one third of the political period in Pakistan and sixteen years from 1975 in Bangladesh. Under the military rule, the governments have repeatedly failed to deliver socioeconomic benefits to its citizens (Malhotra, 2008). Terrorist attacks are also very frequent in this region. Terrorist attacks in Mumbai, Kashmir, the Punjab and the India-Pakistan border, the several attacks by Liberation Tigers of Tamil Ealam in Sri Lanka and attacks by Shanti Bahini in Bangladesh have drawn the attention of the rest of the world. The main reasons for the civil war in Nepal include economic deprivation and an ineffectual political system.

Because of these ongoing conflicts, more than 200,000 people have been killed in this region. Figure 1 shows that death due to conflicts has increased over the years, particularly in South Asia.



Figure 1: Battle Related death in South Asia from 1980-2013 Source: Upsala Conflict Data Base, 2014

These ongoing conflicts have resulted in the increased defence budget in South Asian countries. In addition to that, the arms race and military developments have also led to increasing defence expenditure in this region. Since independence to current, military budget has been considerably higher in India and Pakistan. It started to increase greatly after the 1980s in Sri Lanka, Bangladesh and Nepal. Military spending in this region has continued to increase sharply by 77% since 2000, reaching USD 62 billion in 2013, which is equivalent to 3.7% of global military spending and 3.4% of Gross Domestic Product (GDP) of South Asian countries (SIPRI, Military expenditure database, 2014). The most important consequence of increasing and committing to higher military expenditure in South Asia is managing the funding requirement. The subcontinent is one of the poorest regions in the world and contributing only 2.9 to the global GDP in 2013 (World Bank, 2014). Although, it is a home for one fourth of global population, still 50% of the peoples are living below the poverty line (UNICEF, 2012). Collier (2006) also highlighted that poor economic performance in developing countries is the major risk factor to manage higher and increasing defence budget. Thereby, it is highly believed that developing countries like South Asia generally divert resources that are available to meet essential social economic challenges.

On-going conflict results in decrease school enrolment and school completion, and increase large number of children in out of school. For the reason that, conflict destruct schools and public infrastructure, closure of school, massive displacement of refugees, death of students and educators, deficit of teachers, spread of ineffectual diseases and child recruitment by rebel groups. According to the terrorism database, attacks by rebel groups on educational institutions have increased since 2004. Nearly 61% (1,147 institutions), the world's highest number of attacks against educational institutions, took place in South Asia (Gilsinandec, 2014). Moreover, millions have been displaced due to the conflict and 2.2 million people are still in refugee camps (International Displacement Monitaring Centre (IDCM), 2015). Moreover, it is important to highlight here that, from 1980 to 2013; the amount of money invested in education was less than 2% of GDP in all countries in South Asia (World Bank, 2014). The poor investment may also leads to reduce the institutional capacity of the education sectors.

Although South Asian countries have achieved excellent performances in primary education, the performance of secondary education and higher education are far below the global standard. As a result of conflicts and poor investment, secondary school completion and tertiary school enrolment have been dwindling. Out of school age population, only 52% would enrol in secondary school education, and only 20% would be able to complete their education. In the same group as well, on average, only 6.5% would enrol in tertiary schools and only half of them would complete their studies (Barro & Lee, 2010). In addition, the rate of children out of school is also high in conflict areas. It was estimated in 2013 that almost 124.1 million children were out of school (hereinafter OOS) in the world and of that, 36% were from conflict affected areas (UNICEF Institute for Statistics (UIS), 2014). In 2013, nearly 28.32 million children between the ages five and 13 years were out of school in South Asia, of which nearly 18 million were primary school age children (UIS, Regional Study, South Asia, 2014) (see Table 1 for more details).

Country	OOSCPE %	OOSCPE	OOSCSE% TSAP	OOSCSE	Total number of children OOS
	TPAG	(Million)		(Million)	(million)
Bangladesh	16.2	2.6	30.7	3.0	5.6
India	6.	7.8	5.7	4.0	11.9
Nepal	20	0.92	14	0.53	1.35
Pakistan	34.4	6.6	30.1	2.8	9.4
Sri Lanka	1.9	0.03	3.2	0.04	0.07
Total (Million)		17.95		10.37	28.32

Table 1: Total Number of Children out of Sc	chool in South Asia
---	---------------------

Source: UIS, Regional Study, South Asia, 2015; for India, Bangladesh, Pakistan and Sri Lanka; Nepal National Education Profile, World Bank, 2014 for Nepal

Note: OOSCPE- Out of school children in primary education; OOSCSE- Out of school children in early secondary; TPAP- Total primary age population; TSAP- Total secondary age population

The aim of this study is to examine the effect of conflict and military expenditure on school performance in South Asia. Most of the existing literature just uses one or two levels of schooling and generalizes the findings to performances of schools as a whole. Hence, this study constructs a common index for school enrolment rate and completion rate from primary, secondary and tertiary levels of school enrolment rates and completion rate respectively. Ali, Chaudhry and Farooq (2012) computed an education enrolment index by dividing the sum of all three levels of school enrolment by the respective age of the targeted population. This may be not a good index, because in developing countries, the primary school enrolment rate is generally much higher than the secondary and tertiary school enrolment rates. Considering the advantages of a common index, this study constructs the common index using principal component analysis¹.

Only one index² is selected by using Eigenvalues and Scree plot for school enrolment rate and school completion rate. Studying the consequences of conflict and military budget on educational performance is very important to the region of South Asia as it has been experiencing long periods of conflicts with higher military budget. The UNESCO Institute for Statistics (2014) highlights that conflict is one of the major obstacles to schooling. So far, however, this area has not been well researched. Lai and Thyne (2007) discussed the consequences of civil war and related budget on all three levels of school enrolments in the states and Poirier (2012) examined the same level of school performance in Sub-Saharan Africa. Nevertheless, the problem has not been studied well in South Asia. Therefore, this study attempts to provide empirical evidence on the effect of conflicts and military expenditure on the performance of schools in South Asia. Accordingly, section two reviews relevant literature in this field; section three provides the theoretical and econometric model and sources of data. Section four summarizes results of the analysis and section five discusses the policy implications and concludes the study.

1. Literature Review

Very few studies have reflected the impact of conflicts and military budget on school performance. Using panel data method, Lai and Thyne (2007) examined the effect of civil war on all levels of school enrolment and expenditure on education from 1980 to 1997. The author identified a significant negative impact of the civil war in the states on school enrolment. Poirier (2012) examined the effect of armed conflict and military expenditure on schooling in 43 Sub-Saharan African countries from 1950 to 2010 using the fixed effect panel model. He examined the impact of armed conflict and military expenditure on the rate of children not in school, primary school completion and secondary school enrolment.

He concluded that conflict and military spending have a significant effect on the rate of children not in school and rate of school enrolment in Sub-Saharan Africa. Indeed, Gates *et al.* (2012) found that conflict inversely impacts primary school enrolment and other indices of the millennium development goal. Shemyakina (2011) studied the impact of war on the schooling of male and female children and concluded that conflict negatively influenced school enrolment of female children in Tajikistan. Similarly, Chamarbagwala and Maran (2011) found civil war to be significantly and negatively influencing the schooling of both male and female children in Guatemala.

¹ Principal Component Analysis is the variable reduction technique. Awuse and Tandoh-Offin (2014) used factor analysis and obtained three unrelated variables from nine correlated welfare, economics and poverty variables, examining internal migration and development in Ghana.

² This study found only one factor (index) from primary, secondary and tertiary school enrolment. Similarly only one factor (index) found from primary, secondary and tertiary school completion.

Most of the reviewed studies summarized that conflict and military expenditure negatively impact educational attainment. Moreover, all the studies measure war effect by using dummy variable. However, the existing literature has focused mostly on specific levels of school enrolment and has generalized findings to the whole educational performance. Although, global educational institutions, including UNESCO have recognized that conflict and military expenditure are main obstructions to school performances, this topic has however not attract much attention in South Asia.

2. Methodology

2.1. Theoretical Model

There is limited extant literature that has examined the impact of military expenditure and conflict on education attainment, but more importantly, there is a lack of strong theoretical arguments. Inter-temporal welfare function has been used in several studies to examine the welfare cost.

However, application of this approach to examine military cost in social welfare is much more limited in scope and range. Rashid and Arif (2012b) made use of this approach to study the trade-off between military and social expenditures. The same theoretical framework used by Rashid and Arif (2012) employed in this study to examine the effect of military expenditure and conflict on school performance. According to this approach, it is assumed that a country maximises inter-temporal welfare subject according to the government's budget constraints. For the purpose of this study, it is assumed that the people in a country maximise the utility subject to government's budget allocation of civilian goods (education), military goods, and domestic products. The inter-temporal welfare function is:

$$U(0) = \int_{0}^{\infty} e^{-\rho t} U(C, Y, M) dt$$
(1)

Population in a country consumes civilian goods (education (C_i)), domestic products (Y_i) and military goods (M_t). Assumed marginal utilities³ (u_i) and partial derivatives (u_{ii}) which are positive and second derivatives (u_{ii}) are negative. Harrod-Domer growth model⁴ is postulated for the constraint to the welfare function. Therefore, the constraint is:

$$\dot{Y} = \left(\alpha + \frac{C_t}{K_t} + \frac{M_t}{K_t}\right) Y_t ; \quad \alpha = \left(\frac{1}{K} - \delta\right)$$
(2)

It is assumed that people in the country maximise utility subject to constrain in equation (2). Using Hamiltonian function,⁵ the optimization problem can be solved as:

$$H(Y_{t}, C_{t}, M_{t}, \mu) = e^{-\rho t} U(C_{t}, Y_{t}, M_{t}) + \mu \left(\alpha + \frac{C_{t}}{K_{t}} + \frac{M_{t}}{K_{t}}\right) Y_{t}$$
(3)

The following equation can be obtained after several mathematical manipulations:

$$u_{11}\dot{C}_t = \rho u_1 - u_{12}\dot{Y} - u_{13}\dot{M} - u_1\alpha - u_1\frac{C_t}{K_t} - u_1\frac{M_t}{K_t} + u_2\frac{Y_t}{K_t}$$
(4)

Assume military goods, civilian goods and GDP growths are changed at the same rate. Therefore, in the steady state equilibrium $\dot{C}_t = 0$, $\dot{M}_t = 0$ and $\dot{Y}_t = 0$; and equation (4)⁶ can be rewritten as:

 $\frac{1}{3} u_1 = \frac{\partial U_t}{\partial C_t} 0, \quad u_2 = \frac{\partial U_t}{\partial Y_t} 0, \quad u_3 = \frac{\partial U_t}{\partial M_t} 0$ ⁴ Growth is a linear function of investment. $\frac{\Delta Y_t}{Y_t} = \frac{\Delta K_t}{K_t} = \frac{I_t}{K_t} - \delta \quad \text{is equal to} \quad \dot{Y_t} = [\frac{sY_t}{K_t} - \delta] Y_t$

 $\dot{Y} = \left(\frac{s}{\theta} - \delta\right) Y_t$ and we know $s = \frac{S_t}{Y_t}$, $\theta = \frac{K_t}{Y_t}$ and ' δ ' are constant. Further, $S_t = I_t + G_t$ and government expenditure is allocated to civilian and military goods. Therefore, $G_{L} = C_{L} + M_{L}$

⁵ This expression could be derived from principles of optimization theory

$$0 = \rho u_1 - 0 - 0 - u_1 \alpha - u_1 \frac{C_t}{K_t} - u_1 \frac{M_t}{K_t} + u_2 \frac{Y_t}{K_t}$$

$$0 = \rho u_1 - u_1 \alpha - u_1 \frac{C_t}{K_t} - u_1 \frac{M_t}{K_t} + u_2 \frac{Y_t}{K_t}$$
(5)

For a given value of Y_t and K_t taking total differentiation of the equation (5), the partial impact of military goods on social goods (education), can be derived as:

$$\frac{\partial C_t}{\partial M_t} = \frac{(\alpha - \rho)u_{13} + \frac{u_1}{K_t} + \frac{u_{13}}{K_t} \frac{M_t}{K_t}}{u_{11}(\rho - \alpha) - \frac{u_1}{K_t} - \frac{u_{11}}{K_t} C_{K_t}}$$
(6)

Equation (6) explains the partial impact of military goods civilian goods.

2.2. Panel Regression Method to be Estimated

The panel regression method is widely employed in empirical research to examine the common behaviour, because it gives more information by pooling all individual countries and time, thereby enriching the empirical analysis. A significant number of studies have employed panel data analysis to examine the impact of military expenditure and conflict on school performance (Poirier, 2012; Gates *et al.*, 2012; Lai & Thyne, 2007). Equations (7) and (8) describe the panel data model for school performance in South Asia:

$$Y_{it}^{SA} = \alpha_{i} + X_{it}^{\prime}\beta + u_{it}$$
⁽⁷⁾

Where, i=1,2,...n (individuals); t=1,2,...T (time periods)

In the equation (7), Y is the dependent variable, X_{it} are k number of independent variables, β is the slope coefficient. If (j=0) then α is constant, it implies that individual heterogeneity is constant and if it takes a different value (j=1,2,3,4) then, individual heterogeneity exists. This study employs fixed effect (FE), and random effect (RE) models for the estimation purposes. In the FE model, α_i varies for each individual country; however, in the RE model α is constant. The individual heterogeneity in the RE model is measured through the random term $u_{it} = v_i + \varepsilon_{it}$. The appropriate model is selected using Hausman tests. Diagnostic tests in terms of multicollinearity, heteroscedasticity and serial correlation are also done to test robustness of the model. Using the equation (7), the panel regression model for school performance is formulated in the following way:

$$Y_{jit}^{SP} = \alpha' + \beta_1 \ln M E_{it}^{TE} + \beta_2 \ln E E_{it}^{TE} + \beta_3 \ln G N I_{it}^{PC} + \beta_4 \ln N S_t^C + \gamma D u m_{it} + u_{iit}$$

$$(8)$$

where, $Y_{j}^{School Performanc e} = \begin{bmatrix} Overall Performanc e School Enrollment (SE) \\ Overall Performanc e of School Completion (SC) \\ Children out of School (COS) \end{bmatrix}$ and,

't' is time period, 'i' countries, 'ln'represents the log transformation of variables, ME is the military expenditure ratio to total expenditure, EE is the education expenditure ratio to total expenditure, GNI^{PC} is the per capita gross national income, NS^{C} is the nutrition supply in terms of calories, Dum is the dummy variable to measure conflict-effect and U_t is the error term.

2.3.Data

The analysis focuses on five major countries in South Asia: namely, Bangladesh, India, Nepal, Pakistan and Sri Lanka. These countries have experienced long conflicts and their military budget is higher than the other productive socioeconomic sectors. The data for all South Asian countries used for this study include GNI per capita from 1980 to 2013; government expenditure on education from 1995 to 2013⁷ is collected from the World Bank's, World Development Indicator, 2014; data for military expenditure⁸ from 1998 to 2013 is collected from military expenditure database, Stockholm International Peace Research Institute (SIPRI).

⁷Various country level statistical reports are used to collect data for other years. For instance, education data for India is collected from various reports from department of higher education, Ministry of Human Resource development; data for Sri Lanka from Central Bank annual report of various issues; data for Pakistan from "50 years of Pakistan", Volumes I-IV, published by Pakistan Bureau of Statistics, Government of Pakistan; data for Nepal from Central Bureau Statistics. In Bangladesh, 1980-1987 data is extrapolated.

⁸ Data from 1980 to 1987 for India and Pakistan are collected from RCSS policy Study-10 (Singh and Cheema, 2000), while Sri Lanka and Bangladesh data are collected from RCSS policy Study-11 (Chowdhury and De Silva, 2000). However, data for Nepal from 1980-1987 is interpolated using appropriate univariate time series method

Data for per capita nutrition supply in terms of calories, is collected from the Food and Agricultural Organization (FAO) reports. Conflict⁹ data are collected from Upsala conflict database. The data for school enrolment for all South Asian countries is collected from World Bank's, World Development Indicator. However, the data for rate of children out of school and school completion are collected from world educational attainment data set established by Barro and Lee (2010).

This data is available only in five year interval basis and for the purpose of this study we annualize the dataset using univariate¹⁰ trend methods. A previous study by Poirier (2012) also annualized this dataset for their study. Due to the unavailability of data before 1980 for education and military expenditure, this study uses annual time series data from 1980 to 2013.

3. Empirical Finding and Discussion

The first step in panel data approach is to select the appropriate model from Hausman test. According to the Hausman test presented in Table 2, the FE model is selected as an appropriate model for all three levels of school performance.

Table 2: Select Appropriat	e Model Using H	Hausman Test
-----------------------------------	-----------------	--------------

Model	Statistics	Appropriate Model
Overall performance of school enrolment	195.79 (0.000)	FE
Overall performance of school completion	213.4 (0.000)	FE
Children out of school	577.31(0.000)	FE

Note: Probabilities are brackets, 'FE' denotes Fixed Effect Mode

Before we estimate the coefficient of the variables, it is important to test the diagnostic of the estimated model. This study tests the problem of multicollinearity, heteroscedasticity and autocorrelation in all three selected models. According to the diagnostic results, presented in Table 3, variance inflating factor (VIF) is very small in all three models. It implies that the independent variables are less collinear and there is no multicollinearity problem in the estimated models. However, the variance is not constant in the model of children out of school while this model does not have the problem of autocorrelation. Moreover, the problems of heteroscedasticity and autocorrelation are identified in the models of overall performance of school enrolment and overall performance of school completion. We estimate a robust model for school enrolment, school completion and children out of school by using robust standard error method. All three robust models have higher values of '*R*'-square and it implies the goodness of fit of the estimated model.

Table 3: Diagnostic Test Results

Model	VIF	Modified Wald Test for Heteroscedasticity	Wooldridge Test for Autocorrelation
School enrolment	1.84	33.37 (0.000)	188.173 (0.000)
School completion	1.84	42.81 (0.000)	51.802 (0.002)
Children out of school	1.84	12.39 (0.029)	2.913 (0.163)

Note: Probabilities are brackets

A robust FE model that rectifies the problem of heteroscedasticity and autocorrelation for overall performance of school enrolment is presented in Table 4. Coefficient for military expenditure and dummy variable representations of conflict are negative and statistically significant. It implies that a percentage increase in military expenditure share of total expenditure would diminish school enrolments by just 0.2%, while, conflict would decrease school enrolment about two percentage. Moreover, coefficients of education expenditure shares of total expenditure, GNI per capita and calory supply are positive and statistically significant. It shows that a percentage increase in the education expenditure share of total expenditure would increase school enrolment by just 0.3%. However, a percentage increase of GNI per capita and calory supply would enhance school enrolment about 15% and 28% respectively.

⁹ Uppsala data base includes a conflict in their database if there are at least 25 battle-related deaths that took place per calendar year.

¹⁰ For the annulazation, we use linear time series methods, such as, linear trend model $(Y_t = \alpha_0 + \beta t + \varepsilon_t)$, exponential trend model $(Y_t = \alpha_0 e^{\beta t} e^{\varepsilon})$, and quadratic trend model $(Y_t = \alpha_0 + \beta_1 t + \beta_2 t^2 + \varepsilon_t)$. Among these methods, the appropriate model that best fits the data set is selected by minimizing error statistics, such as, Mean Absolute Percentage Error (MAPE), Mean Absolute Diviation (MAD) and Mean Square Diviation (MSD).

Variables	Coefficient	't' Value
Education Expanditure & Total Expanditure	0.280	4.7*
Education Experiature % Total Experiature	0.280	4./
Log(GN Per Capita)	15.129	19.37*
Log(Calory Supply – Per capita)	28.383	4.97*
Military Expenditure % Total Expenditure	-0.179	-2.8*
Conflict Dummy	-1.986	-2.34**
Constant	-261.427	-6.31*

Table 4: Fixed Effect (Robust) Model for School Enrollment

*: one percentage level of significance; **: 5% level of significance

The FE robust output resolves the problem of heteroscedasticity and autocorrelation for overall performance of school completion as given in Table 5. According to the results, the coefficients for dummy variable representing conflict and military expenditure are negative, while the dummy variable is statistically significant an it is suggested that, conflict would diminish school completion by 1.7%. Similarly for the school enrolment, the education expenditure share of total expenditure, GNI per capita and calory supply are positive and statistically significant in determining school completion in South Asia. However, the education expenditure share of total expenditure would increase school completion only by 0.09%, while a percentage increase of GNI per capita and calory supply would increase school completion by 5% and 17% respectively.

Table 5: Fixed Effect (Robust) Model for School Completio	l for School Completio	for Sc	Model	(Robust)	Effect	Fixed	le 5:	Tab
---	------------------------	--------	-------	----------	--------	-------	-------	-----

Dependent Variable: Rate of Overall Performance of Shool Completion (15 Years and Above)					
Variables	Coefficient	't' Value			
Education Expenditure % Total Expenditure	0.090	2.36**			
Log(GNI Per Capita)	4.977	9.90*			
Log(Calory Supply – Per capita)	16.775	4.57*			
Military Expenditure % Total Expenditure	-0.037	-0.90			
Conflict Dummy	-1.684	-3.09*			
Constant	-148.855	-5.58*			
$R^2 = 0.663$					

*: one percentage level of significance; **: 5% level of significance

A FE robust model corrected for the problem of heteroscedasticity for children out of school is presented in Table 6. According to the results, the coefficients of military expenditure and conflict are positive and statistically significant. This implies that ongoing conflict is the main reason for children out of school at approximately 3.3% in South Asia, however, military expenditure would increase children out of school just by 0.2%. Moreover, the coefficients of education expenditure shares of total expenditure, GNI per capita and calory supply are negative and statistically significant. Also, these variables are responsible for the decrease in children out of school by 0.3%, 12% and 43% respectively.

Table 6: Fixed Effect (Robust) Model for Children out of School

Dependent Variable: Rate of Children not in School (15 Years and Above)					
Variables	Coefficient	't' Value			
Education Expenditure % Total Expenditure	-0.331	-4.76*			
Log(GN Per Capita)	-11.961	-13.13*			
Log(Calory Supply – Per capita)	-43.553	-6.51*			
Military Expenditure % Total Expenditure	0.229	3.06*			
Conflict Dummy	3.342	3.38*			
Constant	452.490	9.36*			
$R^2 = 0.793$					

*: one percentage level of significance; **: 5% level of significance

The overall results from FE (robust) models for school enrolment, school completion and children out of school conclude that conflict and military expenditures are adversely affecting school performance in South Asia. However, the effect of conflict on school performance is more severe than military expenditure. This is because, coefficient of conflict is greater and statistically significant in all three models. Moreover, investment on education, standard of living and nutrition supply enhance school performance. However, GNI per capita and calory supply have higher impact on school performance in relation to education expenditure. This finding is consistent with the theoretical arguments and empirical research. The research findings oo the impact of conflict on school enrolment is negative in this study, which is consistent with the findings of Lia and Thyne (2007).

However, they found a positive coefficient of the military budget on school enrolment, while this study contradicts their findings and finds a significantly negative correlation. The negative impact of military expenditure and conflict on school completion and children out of school is consistent with the earlier findings by Poirier (2012) in Sub-Saharan Africa. It is to be noted that, he focused only on secondary school completion.

The findings of this study demonstrate that conflict and military expenditure are devastating to school performance in South Asia and are becoming very obvious. Because of conflicts, thousands of populace died and millions were displaced as well as still living in refugee camps. More importantly, giving higher priority to the military sector in relation to the education sector makes it difficult to improvements in the education sector. Military budget has been double that of education expenditure for a long time in South Asian countries. This has resulted nearly three million children still being out of school and secondary and tertiary school performance being very poor in South Asia. From the above findings, it is therefore clear that conflicts and higher military expenditure have ultimately resulted in poor school performance in South Asia.

4. Policy Recommendations and Conclusion

This study examines the impact of conflict and military expenditure on three levels of school performance, namely: overall performance of school enrolment, overall performance of school completion and children out of school in South Asia from 1980 to 2013 by employing inter-temporal welfare theoretical model and FEt and RE panel data models. The overall performance of school enrolment and completion is derived from principal component analysis. The results conclude that military expenditure and conflict are the major obstacles to school performance and make it extremely difficult to achieve successful educational performances in South Asia.

Nevertheless, increasing the standard of living, investment in education and nutrition supply can motivate school children towards enhancing performance. Governments, policy-makers and world educational organizations need to come up with better and more effective initiatives to enhance learning opportunities for affected children in conflict areas. There is a need to invest higher amounts on education by minimizing the military budget, allocating more funds can enable the establishment of facilities, recruitment of sufficient teachers and the establishment of schools in the affected areas. Kailash Satyarthi (UNICEF, 2014) highlights that, "I refuse to accept that the world is so poor, when just one week of global spending on armies is enough to bring all of our children into classroom".

This statement teaches us the necessity to reduce military budget and allocate resources to the military sector more efficiently. Eventually, governments and policy-makers need to take concerted efforts to continuously increase investment in the education sector as it has been evidenced in literature that education plays a key role in developing crucial human capital that a country needs.

Reference

- Ali, S., Choudhry, I. S., & Farooq, F. (2012). Human capital formation and economic growth in Pakistan, Pakistan Journal of Social Sciences, 32(1), 229-240.
- Barro, R. J., & Lee, J.W. (2010). A new dataset of educational attainment in the World, 1950-2010, National Bureau of Economic Research, Working Paper 15902. http://www.barrolee.com/
- BBC news, 17th of December, 2014. Retrieved from, http://bbcnews.com.
- Benoit, E. (1973). Defence and Growth in Developing Countries. Lexington: Mass Lexington Books.
- Benoit, E. (1978). Growth and Defence in Developing Countries. Economic Development and Cultural Change. 26 (2), 271-280.
- Chamarbagwala, R., & Maron, H.E. (2011). The human capital consequences of war: Evidence from Guatemala. Journal of Development Economics 94, 41-46.
- Chowdhury, C., & De Silva, F. (2000). Defence expenditure in South Asia: Bangladesh and Sri Lanka. Regional Centre for Strategic Studies (RCSS) Policy Studies 11, Colombo, Sri Lanka.
- Collier, P. (2006). War and military Expenditure in Developing Countries and their Consequences for Development, The Economics of Peace and Security Journal. 1(1), 10-13.
- Easterly, W., Ritzen, J., & Woolcock, M. (2000). Social cohesion, institutions, and growth. Centre for Global Development, Working Paper 94. Retrieved from, www.cgdev.org.
- Gates, S., Hegre, H., Nygård, H. M., & Strand, H. (2012). Development Consequences of Armed Conflict. World Development, 40(9), 1713–1722, http://doi.org/10.1016/j.worlddev.2012.04.031
- Gilsinandec, K. (2014). The Atlantic news. Retrieved from, http://www.theatlantic.com.

- Hussain, N. (1997). Proliferation of small arms and politics in South Asia: The Case of Bangladesh. *RCSS Policy Studies 7*.
- Lai, B., & Thyne, C. (2007). The effect of civil war on education: 1980-97. Journal of peace research, 44(3), 277-292.
- Malhotra, N. (2008). Disentangling the relationship between legislative professionalism and government spending. *Legislative Studies Quartaly*, 33(3), 387-414.
- Ministry of Human Resource Development, 'Selected educational statistics 2004-2005, Department of Higher Education, Statistical Division, 107-108, Government of India.
- Poirier, T. (2012). The effects of armed conflict on schooling in Sub-Saharan Africa. International Journal of Educational Development, 32(2), 341-351.
- Rashid, A. K. M., & Arif, M. Z. U. (2012). Budgetary trade-off between military and education / health expenditure in developing countries: A panel data analysis. *International Journal of Research in Computer application and Management 2*, 1-6.
- Romer, P. M. (1990). Endogenous technological change. Journal of Political Economy, 98 (5), 71-102.
- Shakya, K. (2013). Achievement of Millenium Developments Goals in SAARC countries: A Case of Nepal. Journal of Pro Poor Growth, 01 (01), 19-28.
- Shemyakina, O. (2011). The effect of armed conflict on accumulation of schooling results from Tajakastan. Journal of Development Economics, 95. 186-200.
- Singh, J., & Cheema, P. I. (2000). Defence expenditure in South Asia: An Overview. *RCSS Policy Studies, 10*, Colombo, Sri Lanka.
- Stockholm International Peace Research Institute (SIPRI), Military Expenditure Database, various issues from 1988 to 2013, <u>http://www.sipri.org/databases/milex</u>.
- State Bank of Pakistan, Pakistan Bureau of Statistics, Various Issues.
- United Nation, Food and Agriculture Organization (FAO) of the United Nation, *Food Balance Sheet*, 23/October/2014, Retrieved from, <u>http://faostat3.fao.org</u>
- UNDP Human Development Reports (2004). Cultural Liberty in Today's diverse World, United Nations Development Programme, New York.
- Uppsala Conflict Database. (2014). Department of Peace and Conflict Research. Uppsala University, Sweden.
- UNICEF institution for Statistics (UIS). (2014), *Global Intiative on Out of School Children*, South Asia Regional Study, Regional Office for South Asia.
- World Bank (2014). World Development Indicators, *Comparative Data in the World: Education, Health, Defence and Economics,* World Bank.
- World Health Organization (2002). World Report on Violence and Health, Geneva, WHO.