

Impact of Public Education Spending on Economic Growth in Sri Lanka

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Introduction

Education is considered a major source of per capita output and economic development of a country. Usually, the development of education provides a strong impetus for economic growth through human capital formation and improving productive capacity of the labor force of a country. The Sri Lankan Government's commitment to spending on education since introduction of free education in 1945 has played a tremendous role in achieving national development of the country. But, the importance of education spending in Sri Lanka seems to be given low priority after liberalization of economy in 1977. The positive effect of education on economic performance and the functional relationship between education and economic growth experienced in many cases have been identified (Maritra and Mukhopadhyay, 2012; and Schultz, 1988). However, the contribution of education spending on economic growth in Sri Lanka is still a controversial issue due to the lack of literature in this area of study.

Objectives

The objective of this study is to examine the long-run impact of public spending on education and economic growth in Sri Lanka using datasets covering the period 1960 – 2011.

Theoretical Framework

The classical and neo-classical economists emphasized the contribution of education to economic growth. Lucas (1988) held the view that public spending on education promotes human capital which might in turn contribute to economic growth. Many empirical studies support the view

that efficient and sufficient spending on education fosters human capital formation and promotes economic growth (Maritra and Mukhopadhyay, 2012; and Schultz, 1988). Howitt (2005) argues that development in education generates private and social returns which directly contribute to economic growth. The human capital theory shows how education leads to increases in the productivity and efficiency of workers by increasing the level of their cognitive skills (Romer, 1990). Lucas (1988) states that according to Endogenous Growth Theory, technological progress and increased productivity accelerate economic growth through formation of human capital by increased spending on education

Methodology

The model of this study has been developed based on Endogenous Growth Theory and the available empirical evidence which directed to establish the conventional model employing Economic Growth (GDP) as a function of Recurrent Expenditure on Education (REE) and Capital Expenditure on Education (CEE). The Real Gross Domestic Product (RGDP) is used to measure the economic growth. Thus, the model is $RGDP = f(REE, CEE)$. The specified regression model is: $RGDP_t = \beta_0 + \beta_1 REE_{t-i} + \beta_2 CEE_{t-i} + u_t$, where β_0 , β_1 and β_2 are the constants and u_t is the random error. The necessary data collected and the definitions of variables tested were derived from Annual Reports of the Central Bank of Sri Lanka. The real values of all variables are derived using the Gross Domestic Product Deflator (GDPD) based on constant year as 1974.

The Augmented Dickey Fuller (ADF) unit root test was conducted at level and first difference level to confirm the stationary properties of the variables used in this study. Engel Granger co-integration test was used to determine whether the variables were co-integrated. In order to find the most suitable growth function, various models of lagged log-transformed regression models were tested. The suitable number of lags to the model was selected based on the Akaike Information Criterion (AIC). Error Correction Model (ECM) is tested to determine the short run equilibrium relationships between variables.

Results and Discussion

The results of ADF – Unit Root Test results indicate that the variables RGDP, LREE and LCEE are not stationary at levels, but all variables are

stationary at first difference at 1% significant level. Moreover, the estimated residuals were stationary at level implying that variables are co-integrated which confirms the long-run equilibrium relationships between public education spending and economic growth. The test findings suggest that economic growth in the current year is explained by one lag of all independent variables considered in the study. The results of the ECM confirmed the shortrun relationship between the variables.

Table 1: Results of RGDP Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LCEE _{t-1}	0.799779*	0.133110	6.008394	0.0000
LREE _{t-1}	0.368878*	0.076493	4.822368	0.0000
C	1.233636*	0.324507	3.801566	0.0004

R-sq. = 0.9357	AIC = 0.7226	F-statistic = 237.29
SER = 0.0838	D-WS = 0.9331	Prob.(F) = 0.9179
SSR = 0.3372	SC = 0.8785	Log. LH = 13.3424

*' indicates significant at 1% level

Thus, the estimated regression model is:

$$RGDP_t = 1.233636 + 0.368878L(REE)_{t-1} + 0.799779L(CEE)_{t-1}$$

The results of the co-integration test show that the coefficients of explanatory variables CEE and REE are positive and significant at 1% level. That is, a percentage change in capital expenditure will induce a Rs. 0.7997 million change in GDP while a percentage change in current education expenditure on education will induce a Rs. 0.3688 million change in GDP. The goodness of fit measure, R^2 shows that about 94% of economic growth can be explained by the changes in recurrent expenditure and current expenditure on education for the period of study. The co-integration results confirmed that there is a strong long run positive functional relationship prevails between the economic growth and expenditure on education.

Conclusion

The present study examined the long run effects of public education spending on economic growth in Sri Lanka. The empirical analysis of this

study confirmed that there were positive effects of public spending on education either from capital or recurrent expenditure on economic growth. Increased public expenditure on education in Sri Lanka in order to improve infrastructure facilities and quality of human resources of educational institutions contributed in enhancing human capital which resulted in promoting economic growth through increasing productivity of labor force. Major policy changes took place on the role of welfare state during the last three decades, especially, in reducing the public expenditure on education resulted in lowering the investment on education may affect sustainable growth of economy. Therefore, the welfare state policy should be complemented with growth oriented economic policy by provision of quality services for public education to ensure the sustainable growth path of the country. The issues of growth versus welfare trade-off should be given serious attention to promote sustainable and accelerated economic growth.

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