



ECONOMIC GROWTH OF SELECTED SOUTH ASIAN COUNTRIES: DOES INSTITUTION MATTER?

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ABSTRACT

In this paper we estimate the proximate determinants of economic growth in four major economies of South Asia with special emphasis on the role of institutions in conjunction with stock of physical capital, human capital and openness (measured as trade as percentage of GDP) as major predictor variables. World Governance indicators are available since 1996; therefore, we run a panel regression using the fixed-effect method of estimation for the period of 1996-2010. We also employ a dynamic panel using System- Generalized Method of Moments (SGMM) to counter the possible endogeneity among the variables and also the weak instrumental problem of earlier [Arellano and Bond \(1991\)](#) dynamic panel model. The two institutional measures, namely, voice and accountability and government effectiveness have appeared to be significant predictors of growth of selected South Asian countries. Our results also support the conventional growth predictors like physical and human capital but the effect of openness on growth surprisingly appears to be negative and significant in the period under study.

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Keywords: Economic growth, Physical capital, Human capital, Openness, Institutions, Panel data.

JEL Classification: O43, O16, O15, C23.

Contribution/ Originality

This paper contributes to the existing literature by investigating the influence of various measures of institution along with the standard explanatory variables (which include physical capital stock, human capital stock and openness) affecting economic growth of four major South Asian countries.

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1. INTRODUCTION

South Asian economies during recent times reveal that the overall macroeconomic performance of these economies has considerably increased compared to pre-1980s period. However, the major issue which is preventing South Asia from improving further is poor institutional quality, and, more importantly, the political instability and crisis (Devarajan, 2005; Devarajan and Nabi, 2006; Vadlamannati, 2009). These economic and political realities along with other social and cultural factors make South Asia a highly appropriate setting to study the determinants of economic growth in the region.

Table-1. Economic Characteristics of the countries under study

Country	Real GDP Growth (average)	Gross Fixed Capital Formation (average)	MYS(value at the end of 2010)	Average Education Expenditure (average)	Export GDP Ratio (average)	Import-GDP Ratio (average)
India	6.99	29.87	5.13	3.5	11.63	13.33
Pakistan	4.17	18.40	5.59	1.99	14.4	20.2
Srilanka	5.14	25.47	11.07	2.25	30.6	40.57
Bangladesh	5.62	23.13	5.79	1.65	11.03	17.83

Source: Author's calculation

Note: Data sources of the variables are mentioned in the text. Average values are over the period 1996-2010. Gross Fixed Capital Formation and Education Expenditure are expressed as percentage of GDP.

Our study proceeds as follows. Section I, gives a brief introduction of the South Asian economies and the economic characteristics of the countries under study. In Section II we provide a brief review of literature on the subject and discuss our points of departure. Section III discusses the model along with data and methodology. In Section IV, we estimate the various factors pertinent to the economic growth of the region, viz., physical and human capital, openness (defined as volume of trade as percentage of GDP), various institutional measures viz. democracy, bureaucracy, rule of law, political stability and absence of violence, regulation. We run a panel regression using the fixed-effect method of estimation. We also employ a dynamic panel using System- Generalized Method of Moments (SGMM) suggested by [Blundell and Bond \(1998\)](#). We report the results and provide economic explanations of the results of the econometric analysis. Section V draws conclusion and discusses some policy implications.

2. REVIEW OF LITERATURE

[Amsden \(1989\)](#) and [World Bank \(1993\)](#) have appreciated the rapid economic growth of the newly industrialized economies (NIEs) but [Rodrik, 2003; 1999](#) and [World Bank \(2005\)](#) have raised the concern about the problem of catching up of the other parts of the world. [Knack and Keefer \(1995\)](#) have argued that even good policy prescriptions fail because of poor institutional conditions, such as insecure property rights, weak rule of law. [Rodrik \(1996\)](#) has pointed out the difficulties encountered while reforming toward this direction. According to [North \(1990\)](#), “institutions are the rules of the game in a society”. [North \(1990\)](#) has argued that the institutions of

a given society affect the path of economic development by structuring political, economic, and social interactions among its members. As such, institutions can either promote economic development or impede its speed. [Rodrik \(1999\)](#) argues that domestic social conflicts are a key to understanding why growth rates lack persistence and why so many countries have experienced a growth collapse since the mid-1970s. He finds support for the hypothesis that countries with high inequality and weak institutional quality experienced the sharpest drops in growth after 1975. Many economists ([Kaldor, 1971](#); [Kuznets, 1973](#); [Nelson and Winter, 1974](#); [North, 1990](#)) had recognised the importance of institutions earlier also. [Barro \(1991\)](#) included variables like political assassinations, revolutions, etc. in his growth regressions. Since then there have been quite a number of attempts to include these and other variables pertaining to institution such as legal characters, quality of governance, ethnicity, bureaucracy, etc. in the growth analysis. While many ([Acemoglu et al., 2001](#); [Rodrik et al., 2004](#)) have emphasised the relevance of institution, there is also criticism against its relevance. [Glaeser et al. \(2004\)](#) have revisited the debate whether political institutions cause growth or whether, alternatively, growth and human capital accumulation lead to institutional improvement. They conclude that human capital is a more basic source of growth than institutions, that poor countries get out of poverty through good policies and subsequently improve their political institutions. [Eicher and Lenkert \(2009\)](#) have confirmed in their work that the impact of institutions varies substantially across sub sample of countries; they are about three times more important in developing countries than in OECD countries.

[Ahmed \(2006\)](#) examines which factors have contributed to the growth story of this region, despite such constraints and concludes that South Asia's development outcomes are the result of good policies. However, [Ahmed \(2006\)](#) also rightly remarks that the region needs to address the issue of growing income inequalities at the individual level as well as between areas within countries. The quality of human development needs to be substantially improved which will require deepening reforms and addressing the many governance and institutional challenges.

[Devarajan and Nabi \(2006\)](#) have made an effort to study the underlying reasons of high growth in this region from 2000-2005. [Devarajan and Nabi \(2006\)](#) have identified that institutions, external financing, especially remittances in South Asia as significant determinants of economic growth in the region. They have highlighted the high priority policy choices facing two or more South Asian countries: increasing productivity and attracting investment, improving the quality of labour; reducing inequality; and exploiting cross-border synergies. [Wagle \(2007\)](#) focusing on South Asian experience finds that liberalization efforts and inequality grew in the region during 1980-2003 and prescribes that policymakers should introduce policies that incrementally advance economic openness. [Ghani and Ahmed \(2009\)](#), [Sachs \(2009\)](#), [Volcker \(2009\)](#), [Basu and Maertans \(2009\)](#), [Ribound and Tan \(2009\)](#) have made analytical study of the growth story of the region. In the literature ([Narayan et al., 2010](#); [Jongwanich and Kohpaiboon, 2013](#)), the South Asian countries have been considered similar and homogeneous and for these reasons have been considered suitable to study using panel estimation techniques based on macro stylized facts. [Rizavi et al. \(2010\)](#) consider the region homogeneous on common history and historical relations, and [Jalles](#)

(2012) simply on international regional divisions. Narayan *et al.* (2010) investigate the relationship between health and economic growth through including investment, exports, imports and research and development (R & D) in South Asia for the period 1974-2007 using panel cointegration. They find that health, investment, exports, interaction between education and R & D have contributed positively to economic growth, imports have a statistically significant negative effect while education has had an insignificant effect on economic growth. Parida and Sahoo (2007) examine the export-led and manufacturing-led growth hypothesis for four South Asian countries; namely, India, Pakistan, Bangladesh and Sri Lanka for the period 1980-2002 using panel cointegration technique. They find support for export-led growth hypothesis and find that exports, fixed capital formation and expenditure on health and education to have statistically significant coefficients re-emphasizing the importance of these variables for higher economic growth. Hye *et al.* (2013) examine trade-growth nexus using data from six South Asian countries using time-series econometrics. They find that export-led growth (ELG) model is relevant to all countries except Pakistan, while import-led growth (ILG) model is relevant to all countries. The growth-led export (GLE) model applies to all countries except Bangladesh and Nepal. The growth-led import (GLI) model and export- import-led model are relevant for all countries in the sample. Cooray *et al.* (2013) show employing appropriate statistical tests, that despite apparent homogeneity in countries belonging to the same geographical area with similar technology, and apparent similar macro stylized facts, there could be other sources of heterogeneity such as different political, legal and economic institutions, and national policies that may change the focus. Ahmed and Krishnasamy (2013) have adopted the meta-frontier framework to analyse the technological gap and level of catch-up of the three regions in Asia, namely, Southern Asia, Eastern Asia and ASEAN5 with respect to the Asian technology as a whole for the period 1980-2006. They observed that countries in South Asia region displayed an improvement in technical efficiency and productivity relative to the Asian frontier but lagged in terms of technological advancement.

2.1. Points of Departure

A number of studies (Devarajan and Nabi, 2006; Basu and Maertans, 2009; Ghani and Ahmed, 2009; Ribound and Tan, 2009; Sachs, 2009; Volcker, 2009) have pointed out the importance of institutions in economic growth of the selected South Asian countries. However, the regnant scholarly consensus linking good governance to economic development has undergone surprisingly little empirical scrutiny in the region. Our study makes an attempt to estimate the proximate determinants of economic growth of the selected South Asian countries incorporating the institutional quality of the countries. In the original works of Solow (1956), the neo-classical production function with physical capital and raw labour inputs exhibited diminishing returns to physical capital per worker. Endogenous growth model as developed by Lucas (1988) is basically an extension of the Solow (1956) model where effective labour input replaces the raw labour. In these models growth may go on indefinitely because returns to investment in a broad class of capital goods - which includes human capital - do not necessarily diminish as economies develop.

Spillovers of knowledge across producers and external benefits from human capital are parts of this process; they help avoid the tendency of diminishing returns associated with accumulation of physical capital. Most empirical studies have used enrolment ratios, literacy rates to measure the level of human capital. However, the enrolment ratios often lead to overstatement, may fluctuate over time, is not limited by age repeaters. Moreover, enrolment ratios do not adequately measure the aggregate stock of human capital available contemporaneously as an input into the production function. So, we have used mean years of schooling (MYS) to proxy for human capital stock; MYS is the number of years of schooling received per person aged 15 and above.

Moreover, we also employ the latest data for physical capital stock available from Penn World Tables (Version 8.0). We run a panel regression using the fixed-effect method of estimation based on Hausman tests results. To counter the possible endogeneity among the variables and the weak instrument problem associated with Arellano and Bond (1991) estimator, we run a dynamic panel using the Blundell and Bond (1998) System -Generalized Method of Moments (SGMM).

Moreover, unlike a number of studies on East Asian growth miracle, research on South Asia's growth performance under the purview of New Growth Theory has been very limited.

2.2. New Growth Theories

In the New Growth Theories (NGT), the term A can represent institutions and other 'non-technological' factors. With the recognition of the role of institutions, NGT models led to the incorporation of distribution and inequality issues into the growth analysis. The NGT models thus promoted a multidisciplinary approach to the study of economic growth. The NGT models, by emphasising the role of institutions have brought growth theory closer to development theory. With availability of quantitative data on quality of institutions across countries, there has emerged a wide scope for studying the role of the various indicators of governance. It is more relevant in studying the economic growth of developing and transitional economies, which are still laying the basic institutional framework for proper functioning of market economies. The developing countries mostly have very appalling state of institutions which deserves special attention if these economies are to achieve their goals of high growth with sustainability. Mankiw *et al.* (1992) have pointed out that "the term A (0) reflects not just technology but resource endowments, climate, institutions, and so on; it may therefore differ across countries". Hence, improvements in institutions, through the term, A, can lead to higher steady state growth. So, by recognising that production function differs across countries, the role of institutions can be studied to analyse its role in the economic growth of developing nations. Following the New Growth Theories, we assume the term A to represent institutions and other 'non-technological' factors of the countries. Thus the various governance indicators are assumed to influence per capita GDP (PCGDP) via Total Factor Productivity (TFP). Due to the availability of wide range of institutional measures, we use the various governance indicators from Worldwide Governance indicators in a panel data framework from 1996 to 2010.

3. THE MODEL

Human capital in Solow model is not linked to dissemination of technical change as it is in Romer (1986), Lucas (1988), and Rebelo (1991) but is strictly exogenously determined. Endogenous growth model as developed by Lucas (1988) is associated with positive externalities related to the accumulation of human capital which is itself policy driven. Lucas (1988) explicitly introduces the production of human capital in which the education sector is relatively intensive in human capital. Externalities are generated by the education sector in the form of education and knowledge in the society. This raises the economy wide labour productivity.

Following Rebelo (1991), with a standard endogenous growth approach, a given country's production can be characterized by the augmented production function as

$$Y_{it} = A_{it} K_{it}^{\alpha} (HC)_{it}^{\beta} e^{u_{it}} \dots\dots\dots (1)$$

where,

Y_{it} = Aggregate income of country i at time t

A_{it} = Total Factor Productivity of country i at time t

K_{it} = Aggregate capital stock of country i at time t

$(HC)_{it}$ = Human capital stock of country i at time t

α and β are the coefficients of elasticity of stocks of physical capital and human capital

respectively. $e^{u_{it}}$ is the error term of country i at time t expressed in exponential form.

We assume openness to affect growth through total factor productivity (TFP). So, we have

$$A_{it} = (OPEN)_{it}^{\theta} \dots\dots\dots (2)$$

As already noted, in the New Growth Theories, the term A can represent institutions and other 'non-technological' factors. Assuming institution to affect growth via TFP, we have

$$A_{it} = (OPEN)_{it}^{\theta} e^{(\lambda Z)_{it}}$$

Now substituting for A_t , K_t and HC_t in equation (1) we get,

$$Y_{it} = (OPEN)_{it}^{\theta} e^{(\lambda Z)_{it}} (PCK)_{it}^{\alpha} (MYS)_{it}^{\beta} e^{u_{it}}$$

$$\ln Y_{it} = \theta \ln(OPEN)_{it} + \lambda Z_{it} + \alpha \ln(PCK)_{it} + \beta \ln(MYS)_{it} + u_{it} \dots\dots\dots (3)$$

where,

$\ln Y_{it}$ = natural log of per capita GDP in country i at time t

$\ln PCK_{it}$ = natural log of physical capital stock in country i at time t

$\ln OPEN_{it}$ = natural log of openness in country i at time t

Z_{it} = Institution measure in country i at time t

$\ln MYS_{it}$ = natural log of mean years of schooling in country i at time t

u_{it} = error term that varies across countries and time periods

3.1. Data and Methodology

Table 1 in Appendix 1 gives the variables description. Economic growth is measured in terms of PCGDP. Annual data PCGDP, physical capital stock, openness are from Penn World Tables for the four South Asian countries, namely, India, Pakistan, Bangladesh and Srilanka for the period 1996 to 2010. Barro and Lee datasets have been used which provide five yearly data on average years of schooling, we have interpolated for the interim years assuming exponential smoothing.

We employ the various governance indicators from Worldwide Governance indicators¹, (Kaufmann *et al.*, 2010). However, as the data on the governance indicators were bi-annual till 2002, so we have interpolated for the interim years assuming exponential smoothing. The Worldwide Governance indicators are aggregate indicators of six broad dimensions of governance, namely, Voice and Accountability, Political Stability and Absence of Violence and Terrorism, Government Effectiveness, Regularity Quality, Rule of Law and Control of Corruption. The six aggregate indicators are based on 30 underlying data sources reporting the perceptions of a large number of survey respondents and expert assessment worldwide. Voice and Accountability reflects the perceptions of the extent to which a country's citizens can participate in selecting their government as well as freedom of expression, freedom of association and a free media. Political Stability and Absence of Violence and Terrorism reflects the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism. Government Effectiveness reflects the perceptions of the quality of public services and the quality of civil services and the degree of its independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. Regularity Quality reflects the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit private sector development. Rule of Law reflects the perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts as well as the likelihood of crime and violence. We do not consider corruption indicator in this study as effect of corruption depends on the quality of institution (Meon and Sekkat, 2005). The governance indicators take values from -2.5(weak) to +2.5(strong). The indicators have been transformed so that the transformed indicators take values from 1 to 6. The transformed governance indicators are such that low values correspond to poor governance and high values correspond to better governance.

In this study we use panel data approach for the empirical analysis as data on the various measures of institution are available only for the period 1996 to 2010. Rewriting equation (3) as a dynamic panel data model in which current output is regressed on lagged output and a set of explanatory variables we get

¹ Using a linear regression set up of the basic specification we have tested for multicollinearity among the variables and found that Tolerance Level of all the variables to be more than 0.2, with mean VIF less than 3. However, as some of the governance indicators are highly collinear among themselves, so we incorporate each of the indicators individually.

$$\ln Y_{it} = (1 + \gamma) \ln Y_{it-\tau} + \lambda Z_{it} + \delta \ln X_{it} + \mu_i + \eta_t + u_{it} \quad \dots\dots\dots (4)$$

μ_i =country-effects

η_t =period-effects

The coefficient of lagged output is $(1 + \gamma)$ instead of γ .

Rewriting equation (4) in growth form we have:

$$\Delta \ln Y_{it} = (1 + \gamma) \Delta \ln Y_{it-\tau} + \lambda \Delta Z_{it} + \delta \Delta \ln X_{it} + \Delta \eta_t + u_{it} - u_{it-\tau} \quad \dots\dots\dots (5)$$

The $\ln Y_{it-\tau}$ component of $\Delta \ln Y_{it-\tau}$ will be correlated with the $u_{it-\tau}$ component of equation (5), and will render the OLS estimates to be inconsistent. Hence, this necessitates the use of instrumental variables estimation. The other methodological concern is the problem of possible endogeneity among the explanatory variables which can be countered using the Instrumental Variable method of estimation. However, it is extremely difficult to find good instruments. An alternative solution entails using lagged values of the explanatory variables, thereby ensuring that they are predetermined with respect to the dependent variable. The recommended estimator in this case is GMM suggested by [Arellano and Bond \(1991\)](#) which basically differences the model to get rid of the individual specific effects and along with it any time-invariant regressor. However, this method also suffers from weak instrument problem that biases the estimated coefficients. The [Blundell and Bond \(1998\)](#) System-GMM was developed to address this weak instrument problem; this method adds a level equation to the First Difference equation to construct a system which is estimated using differenced values of the variables as instruments. For random walk-like variables, past changes may indeed be more predictive of current levels than past levels are of current changes so that the new instruments are more relevant.

4. ESTIMATION

The descriptive statistics of the variables are given in Table 1 of Appendix 2. The numerical value of kurtosis was negative for openness, MYS and each of the measures of institution except political stability, implying low concentration of values near the central tendency of the distribution. However, the numerical value of skewness was positive for openness, MYS, regulatory quality and rule of law, implying that longer tail of the distribution was towards the higher values of the distribution in the period. Among the institutional measures, maximum coefficient of variation was observed for political stability, followed by rule of law.

4.1. Empirical Results

Based on Hausman test statistic, we find Fixed Effect model to be the most appropriate. With country specific effects, the influence of both forms of capital had been positive and significant, while the influence of openness was negative and significant (Table 2).

Table-2. Fixed Effect Results for institutional quality Dependent variable: ln PCGDP

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
C	2.96*** (0.00)	2.53*** (0.00)	3.00*** (0.00)	2.55*** (0.00)	3.17*** (0.00)	3.00*** (0.00)
ln PCK	0.52*** (0.00)	0.57*** (0.00)	0.52*** (0.00)	0.56*** (0.00)	0.51*** (0.00)	0.52*** (0.00)
ln OPEN	-0.12*** (0.0)	-0.17*** (0.00)	-0.12*** (0.00)	-0.19*** (0.00)	-0.08*** (0.00)	-0.12*** (0.00)
ln MYS	0.70*** (0.00)	0.68*** (0.00)	0.72*** (0.00)	0.75*** (0.00)	0.68*** (0.00)	0.72*** (0.00)
VOICE		0.10*** (0.00)				
GOVT			-0.01 (0.80)			
REGU				0.10*** (0.00)		
LAW					-0.05 (0.20)	
POLSTA						-0.004 (0.73)
Model Summary						
R^2	0.965	0.973	0.964	0.970	0.938	0.940
BP-LM	112.61***	146.28***	87.01***	58.56**	15.60**	45.25***
Hausman	525.58***	324.20***	298.36***	303.20***	363.45***	272.81***
F-statistic	187.69***	147.73***	109.38***	100.36***	142.93***	131.96***
Total observations	60	60	60	60	60	60

Source: Author's calculation

***significant at 1% level, ** significant at 5% level, * significant at 10% level. p-values in parentheses

Only the influence of voice and accountability and regulation was positive and significant and each of these two institutional measures increased growth of PCGDP of the countries by 10 percent.

To counter the problem of possible endogeneity among the explanatory variables we resort to the System-GMM suggested by [Blundell and Bond \(1998\)](#) to estimate the influence of these variables on growth of PCGDP of the four South Asian countries. In Model (1) to Model (5) of Table 3, the dependent variable is growth of PCGDP. The overidentification and AR(1) and AR (2) tests in estimations using System-GMM do not indicate problems with the instrument selection or the general specification of the models, though in Model (3) the null hypothesis of absence of first-order serial correlation is rejected at 11 percent level. However, the regression with rule of law indicator fails to satisfy the overidentification restriction (not reported to save on space).

Table-3. SGMM Results for institutional quality Dependent variable: $\ln\text{PCGDP}$

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
C	0.69*** (0.00)	0.65*** (0.00)	0.59*** (0.00)	0.70*** (0.00)	0.63*** (0.00)
$\ln\text{PCGDP}(-1)$	0.71*** (0.00)	0.68*** (0.00)	0.71*** (0.00)	0.71*** (0.00)	0.71*** (0.01)
$\ln\text{PCK}$	0.19*** (0.00)	0.21*** (0.00)	0.20*** (0.00)	0.20*** (0.00)	0.21*** (0.00)
$\ln\text{OPEN}$	-0.05*** (0.01)	-0.05*** (0.01)	-0.03*** (0.03)	-0.03*** (0.00)	-0.04** (0.06)
$\ln\text{MYS}$	0.08*** (0.00)	0.08*** (0.00)	0.06*** (0.00)	0.08*** (0.00)	0.07*** (0.00)
dVOICE		0.03*** (0.00)			
dGOVT			0.02*** (0.02)		
dREGU				-0.001 (0.07)	
dPOLSTA					0.004 (0.09)
Model Summary					
AR(1) (p-value)	-1.73 (0.08)	-1.68 (0.09)	-1.54 (0.11)	-1.66 (0.08)	-1.60 (0.09)
AR(2) (p-value)	-0.188 (0.82)	-0.225 (0.90)	-0.227 (0.82)	-0.22 (0.82)	-0.207 (0.83)
Sargan test (p-value)	71.68 (0.13)	65.70 (0.175)	70.28 (0.112)	62.93 (0.167)	52.36 (0.183)
Total observations	56	56	56	56	56

Source: Author's Calculation

Notes:

1. Instrumented: Change in $\ln\text{PCGDP}$. Instruments for Difference equation: GMM type: $L(2/)$ $\ln\text{PCGDP}$ for Model (1) to Model (6) Standard: $\ln\text{PCK}$, $\ln\text{OPEN}$, $\ln\text{MYS}$ for Model (1), and for Model (2) to Model (6) along with growth of the basic explanatory variables change in various governance indicators are taken into account. Instruments for Level equation: GMM type: LD $\ln\text{PCGDP}$ Standard: constant.

2. i) p - values in parentheses are with robust standard errors. ii) ***, **, * indicate significance level at the 1%, 5% and 10%, respectively

Given the way equation (5) is specified, the coefficient of $\ln\text{PCGDP}(-1)$ is $(1+\gamma)$, which has the value 0.71 in the Model (1) of Table 3. To test for convergence, however, we need to ascertain the sign of the estimate of γ . This implies that the estimate of γ equals -0.29. Evidence for significant conditional β -convergence was found in the period if we consider the basic specification. With voice and accountability, the speed of convergence slightly improved. Only the influence of voice and accountability and government effectiveness was positive and significant. When we controlled for endogeneity, while the influence of government effectiveness turned positive and significant, the influence of regulatory quality turned negative though insignificant. All the four economies except Srilanka had ranks above 100 in 2014. This possibly explained the negative though insignificant influence of regulatory quality when we controlled for endogeneity.

No significant influence of the other governance indicators was observed. Among the institutional measures, maximum coefficient of variation was observed for political stability. This justified the insignificant influence of political stability observed on economic growth of the countries. Since the system-GMM panel estimator controls for endogeneity, it confirmed that an

improvement in democracy and government effectiveness increased growth of PCGDP of the countries by 3 percent and 2 percent respectively. Surprisingly, the influence of openness was negative and significant in all specifications. Average of imports as a ratio of GDP had exceeded those of exports for each of the four countries in the period under study. The South-East Asian crisis during 1997-98 contributed to export growth slump in India. The export of textiles has also been affected by the restrictive and protectionist policies of developed countries on one hand and increasing competition from China on the other. Despite long-period of trade liberalization in Bangladesh, imports are still increasing faster than exports, increasing the trade deficit (Haque and Yusop, 2010). Export-led growth slogan coupled with extreme liberalization of trade in Pakistan has only seen imports immensely outstripping exports to open an alarmingly current account deficit in the 2000s (Afzal and Hussain, 2010). The period since 1977 in Srilanka can be classified as more liberal period when all restrictions on trade and transactions were abolished. During this period imports had continued to grow faster than exports, and trade balance had always been in deficit. Though trade liberalisation has been the mandate for SAARC countries since 1993, but interim trade liberalisation rounds under the South Asian Preferential trade agreement (SAPTA) remains dismal due to limited product coverage and tariff preferences. The signing of South Asian Free Trade Agreement (SAFTA) in 2004 gave a new ray of hope, but has not been very optimistic in the region. Moreover, SAFTA will become effective for all members only in 2016. South Asia still remains the least integrated region in the world. Cross-border conflicts since independence have eroded old trade and investment patterns. This explains the negative and significant influence of openness observed in the countries in the period 1996 to 2010. Sengupta and Banik (1997) noted that once the countries of the region decide on transit trade and mutual co-operation in trade and investment, they will realize that political differences are of secondary importance.

5. CONCLUDING OBSERVATIONS AND POLICY IMPLICATIONS

Both physical and human capital stocks were the crucial factors explaining growth of the four South Asian economies in the period 1996 to 2010. Openness was observed to have negative and significant influence on economic growth of the countries in the period. Only the measures of voice and accountability and government effectiveness had positive and significant influence on economic growth of the countries. When we controlled for voice and accountability, the speed of convergence slightly improved. The influence of government effectiveness turned positive and significant while the influence of regulatory quality turned negative though insignificant, when we controlled for the issue of endogeneity. Excessive regulations, political instability, weak rule of law observed in the region had insignificant influence in economic growth in the period under study. However, their persistence can impede growth in future.

5.1. Policy Implications

The study thus prescribes for higher investment in human capital, physical capital. But for the four major South Asian countries the education expenditure is hovering around 3 percent of GDP

in all the four countries. It is essential to manage conflicts and related political instability in a way that social investments are protected, intra-regional trade and investment climate is restored in the region. Moreover, the trade-weighted average tariff rate remains burdensome and complex non-tariff barriers further impede trade in the region. Bureaucratic investment regime creates an unfavourable environment for investment. State-owned institutions dominate the financial sector where foreign participation is limited. Foreign direct investment has been declining, discouraged by political instability, sectarian conflict, and heavy bureaucracy. Capital markets are also underdeveloped. Myriad non-tariff barriers and the government's reliance on tariffs as a revenue source increase the cost of trade.

Across the region, the main focus of policy reform should be to provide a prudent macroeconomic framework, by reforming the institutional framework and by supporting integration with the global economy. The quality of human development and the investment climate needs to be substantially improved which will require deepening reforms and addressing the many governance and institutional challenges. Institutional reform calls for immediate attention if the conventional policy prescriptions of fiscal adjustments are to reap adequate results in the region. This will ensure sustainability of growth in the region in future. While the institution supremacy view tends to discard policies in favour of institutions, our findings highlight that both economic policy and institutions matter for sustaining economic growth in South Asia.

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Appendix-1.

Table-1. Variables Description

PCGDP	PPP converted Gross Domestic Product(GDP) Per capita at 2005 constant prices
PCK	Physical Capital Stock
OPEN	Openness at 2005 constant prices (%)
MYS	Mean Years of Schooling
VOICE	Voice and accountability
GOVT	Government effectiveness
REGU	Regulatory Quality
LAW	Rule of Law
POLSTA	Political stability and Absence of violence and terrorism

Appendix-2.

Table-1. Descriptive statistics of variables in panel data analysis

	PCGDP	PCK	OPEN	MYS	VOICE	POLSTA	GOVT	REGU	LAW
Mean	3373.35	5430.5	46.91	4.77	3.17	2.16	3.12	3.03	3.13
Median	2928.82	4720.01	38.76	4.25	3.22	2.29	3.11	3.06	3.14
Standard Deviation	1293.48	2747.79	16.25	1.72	0.51	0.50	0.27	0.38	0.51
Kurtosis	0.17	0.76	-1.24	-1.29	-0.71	1.09	-1.14	-0.64	-1.85
Skewness	0.89	1.08	0.64	0.27	-0.15	-0.93	-0.2	0.26	0.04
CV	38.34	50.60	34.64	36.06	16.09	23.15	8.65	12.54	16.29
Min	1608.85	2035.24	28.85	2.44	2.13	0.77	2.62	2.37	2.48
Max	6790.67	13014.43	76.68	7.79	3.95	3.04	3.61	3.78	3.91
Count	60	60	60	60	60	60	60	60	60

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