

## Economic Freedom and Growth Nexus in Selected South Asian Countries

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### ABSTRACT

This paper was aimed to investigate the effect of Freedom for Economic activities on economic growth of South Asian countries; Pakistan, India, Bangladesh, Nepal and Sri Lanka over the period of 1995-2014. Panel data econometric technique Pooled Mean Group (PMG) was used to estimate the targeted research objectives. The estimated results revealed that Freedom from Corruption, Business Freedom and Monetary Freedom were essential for increasing the economic growth in South Asia. While, trade freedom showed negative effects on the growth in this region in long-run, but its effect was positive and significant in short-run. Further, government expenditure, population growth and trade openness also positively and significantly affected the growth while, inflation decreased the growth in South Asia in the long-run.

**KEY WORDS:** Economic Freedom (EF); Economic growth; PMG; South Asia;

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### INTRODUCTION

Economic growth is the other name of the increase in economic activities, creation of the stock of goods and services and leading to the prosperity of an economy [30]. Since 1956, through growth models economists have looked at the productivity of labor, capital accumulation, population growth and technological progress as an exogenous variable for the long-term growth. The GDP of the poorest countries grew faster than the GDP of the rich countries, emphasizing the importance of initial level of the income [29]. However, the Solow growth theory did not explain the technological progress later in 1980s, and growth theorists developed the alternative models of growth in which they used technology as an endogenous variable. More recent endogenous growth models have provided the answer to the question, “why productivity was lower in the poor countries as compared to rich countries?; through the difference in variables that add to contrasts in development rates, for example, learning overflows, innovative work, and human capital based on the theme that economic development is a function of changes in four components i.e. capital, human capital, labor and technology [26,17].

Social infrastructure described as a rule of law, property rights and the opportunity of agreement; plays a vital role in the growth of the economy and hence encompasses economic freedom [11]. The system of a market economy is the engine of innovation that works as a fuel for growth [1]. Nations which have fewer restrictions on the private sector and the transactions lead to the higher levels of growth in a nation [13]. Nowadays, the emphasis of economists has changed towards the role of various institutions in the economic growth. Therefore, the concept of economic freedom is also getting importance in recent economic literature.

For evaluating the role of institutions in various countries, different indexes of EF were constructed. EF not only explained the economies free from state interventions but also considered the extent to which a business sector economy was set up, with the central segments as international trade, insurance of individual property and free rivalry [1]. Economic freedom boosts the innovations driving the growth that will support institutional and political changes, welfare and will increase democracy. It is the inverse of unified arranging and legislative control system and decentralizes economic power and basic leadership over the economy [10]. In other words, EF is a composite based on the extent of business sector economy with deliberate understandings through the stable and predictable rule of law ensuring the private property system with a limited role of government possession, taxes and directions [5]. Property rights are beneficial for business regulations and the presence of advanced financial markets accommodating for the credit opportunities [14]. Interactions between various economic institutions and the policies have strongly influenced the economic growth. Moreover, the growth not only depends on some components of the EF, but also depends on the growth of the economy [32, 7].

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South Asia is a homeland to almost one quarter of world population. The region always remained fascinated to thinkers, researchers and philosophers due to its cultural variety, rich history, social and economic development. In South Asia the total population is 1.70 billion and nearly one third of them are very poor, having income less than US\$1 a day to consume. Only Maldives belongs to the group of ‘upper middle income countries’ in this region as defined by the World Bank. Pakistan, India, Bhutan and Sri Lanka belong to the category of ‘lower middle income countries’ in which Bangladesh and Nepal are in the list of low income countries [33]. Over the past three decades, this region has become one of the speediest development and growth growing region in the world though the gains of economic growth were utilized to improve the living states of the general population adequately. From 1980 to 2010, the region has increased economically by 5.9 per cent annually, by expanding the region’s global competitiveness in the sector of industrial and service. Economic progress was accomplished mainly through the structural changes that included exchange liberalization, changes in the budgetary division and de-regulation of state control of the economy [12]. Despite of the growth performance the countries in the region are alleged to suffer with unreliable degree of growth retarding factors such as corruption, discrimination, conflict, the high fiscal deficit, poor infrastructure, inflation and overall unfavorable environment for foreign investment [8]. Moreover, South Asia needs to maintain EG in a sustainable manner to improve the quality of life of its inhabitants and for poverty reduction. EF is one of the major determinant of EG especially in developing economies. Countries which are enjoying higher levels of EF have much level of living standard of their citizens, that countries get economic boost in development and growth. EF was higher, in those countries per capita GDP and overall wellbeing was higher [34]. More EF a society appreciates the more economic growth [31, 23]. If countries want to attain sustainable economic growth, they should improve their institutional and legal infrastructure for increasing the economic growth in South Asian region [2].

While the level of EF in a country and the country’s prosperity go side by side [9]. The literature on South Asian countries that explores the impact of EF on growth is limited. A large portion of the studies concentrated on the combined impact of the EF index and growth on developed nations. The work which found in this region also discussed only the combined effect of the index of EF and growth in foreign direct investment [21]. However, no study found in the relationship between the parts of EF (Business Freedom, Monetary Freedom, Freedom from Corruption and Trade Freedom) and economic growth in South Asian economies. The present study is an effort to fill this gap by making some contribution to the research in this area. This study also uses some macroeconomic variables such as government consumption, per capita income, total trade, inflation, population growth to achieve the specific objectives. The main objective of this research is to explore the impact of EF on economic growth on selected South Asian economies.

**MATERIAL AND METHOD**

Five South Asian Countries, named: Pakistan, Nepal, Bangladesh, Sri Lanka and India are selected for the empirical estimation of the objectives based on the data availability from 1995 to 2014.

This research uses different econometric models to achieve the research objective. For estimation of the results panel data techniques such as Pooled Mean Group (PMG) estimators and cross sectional short-run analysis are employed.

**Table 1. List of Selected Variables for Empirical Analysis**

Labels	Description of variables	Source of data
<b>GDP</b>	Gross Domestic Product, (annual % growth) used as a proxy for economic growth	World Bank (2014)
<b>BF</b>	Business Freedom, (Factor Score = 50 ×Factor average / Factor)	The Wall street Journal and Heritage foundation (2015).
<b>MF</b>	$(100 - \alpha \sqrt{\text{Weighted Average Inflation } i} - \text{PC penalty } i)$ as Monetary Freedom,	-----do-----
<b>TF</b>	$((\text{Tariff max-Tariff}) / (\text{Tariff max-Tariff min})) * 100) - \text{NTB}$ as Trade Freedom	-----do-----
<b>FC</b>	Freedom from corruption	-----do-----
<b>GE</b>	General government final consumption expenditure (%)	World Bank (2014)
<b>TO</b>	Total trade (Imports +exports/ GDP %)	----- do-----
<b>INF</b>	Inflation (consumer price index %)	----- do-----
<b>PG</b>	Population growth (annual %)	----- do-----

**Model specification**

Two different models are utilized for empirical analysis. The first model describes the relationship between levels of economic freedom; Business freedom, Monetary freedom, trade openness, government expenditure, inflation and economic growth. In this model GDP (economic growth) is used as the dependent variable while levels of the EF, inflation, trade openness and government expenditure used as the independent variables. In the second model GDP

growth is used as a dependent variable and freedom from corruption, trade freedom, inflation, and government expenditure and population growth are used as independent variables.

**Model-1: Business freedom, Monetary freedom and Economic growth**

This model specification takes following form:

$$GDP_{it} = \varphi_0 + \varphi_1 BF_{1t} + \varphi_2 MF_{2t} + \varphi_3 GE_{3t} + \varphi_4 INF_{4t} + \varphi_5 TO_{5t} + \varepsilon_{it} \quad (1)$$

Where

$\varphi_0$  = Intercept,  $\varphi_{it}$  = Slope coefficient, T= 1, 2, ...20 periods  $i=1, \dots, 5$  countries

$\varepsilon_t$  = Error term

**Model-2: Trade freedom, Freedom from corruption and Economic growth**

The model specification takes the following form:

$$GDP_{it} = \varphi_0 + \varphi_1 FC_{1t} + \varphi_2 TF_{2t} + \varphi_3 INF_{3t} + \varphi_4 PG_{4t} + \varphi_5 GE_{5t} + \varepsilon_{it} \quad (2)$$

Where

$\alpha_0$  = Intercept,  $\alpha_{it}$  = Slope coefficient, T= 1, 2, ...20 periods  $i=1, \dots, 5$  countries

$\varepsilon_t$  = Error term

And After collection of data, trend in data series was checked through LLC and IPS Unit Root Analysis. After checking the stationarity of data Pooled Mean Group (PMG) co-integration was applied. The panel PMG estimator is characterized by the multiplicities of the advantages as it allows the possibilities of estimating different variables when they are integrated at different order of stationary. This estimator estimates the short-run as well as the long-run relationship, along with an error correction coefficient [10].

**RESULTS AND DISCUSSION**

**Panel unit root test IPS and LLC**

**Table 2. LLC and IPS Panel Unit Root Test Results for Selected South Asian countries (1995-2014).**

Variables	At level				At 1 <sup>st</sup> Difference			
	$\eta_c$	P-value	$\eta_{c,t}$	P-value	$\eta_c$	P-value	$\eta_{c,t}$	P-value
<b>LLC Unit Root Test</b>								
<i>GDP<sub>it</sub></i>	-3.366	<b>0.004</b>	-2.622	0.004	-6.358	0.000	-4.951	0.000
<i>BF<sub>it</sub></i>	-0.110	0.451	-1.145	0.122	-7.431	0.000	-7.496	0.000
<i>MF<sub>it</sub></i>	-0.831	0.202	-0.069	0.472	-4.264	0.000	-4.152	0.000
<i>TO<sub>it</sub></i>	-0.481	0.312	0.503	0.698	-4.017	0.000	-4.787	0.000
<i>INF<sub>it</sub></i>	-1.695	0.04	-1.578	0.05	-6.772	0.000	-5.550	0.000
<i>GE<sub>it</sub></i>	-2.705	0.003	-2.140	0.016	-7.088	0.000	-5.851	0.000
<i>FC<sub>it</sub></i>	-4.309	0.000	-5.129	0.000	-11.246	0.000	-8.850	0.000
<i>TF<sub>it</sub></i>	-1.183	0.118	-0.297	0.383	-5.936	0.000	-4.709	0.000
<i>PG<sub>it</sub></i>	-6.362	0.000	-8.618	0.000	3.409	0.000	-2.721	0.000
<b>IPS Unit Root Test</b>								
<i>GDP<sub>it</sub></i>	-3.266	0.005	-2.381	0.008	-6.129	0.000	-4.448	0.000
<i>BF<sub>it</sub></i>	0.493	0.68	0.146	0.55	-5.556	0.000	-4.776	0.000
<i>MF<sub>it</sub></i>	-0.363	0.358	0.305	0.620	-3.549	0.000	-2.443	0.000
<i>TO<sub>it</sub></i>	0.401	0.651	0.387	0.653	-3.964	0.000	-3.318	0.000
<i>INF<sub>it</sub></i>	-1.367	0.08	-0.525	0.29	-6.191	0.000	-4.244	0.000
<i>GE<sub>it</sub></i>	-2.897	0.001	-2.228	0.012	-6.018	0.000	-4.345	0.000
<i>FC<sub>it</sub></i>	-4.369	0.000	-5.546	0.000	-9.970	0.000	-7.527	0.000
<i>TF<sub>it</sub></i>	-1.234	0.108	-0.469	0.319	-6.075	0.000	-4.603	0.000
<i>PG<sub>it</sub></i>	-4.092	0.000	-5.828	0.000	-3.713	0.000	-3.370	0.000

Note:  $\eta_c$  shows constant and  $\eta_{c,t}$  represents constant and trend. Source: Calculated by author

**Table-3: PMG Results for Selected South Asian countries (1994-2014).**

Dynamic specification: ARDL (1, 2, 2, 2, 2, 2)

(Dependent variable:  $GDP_{it}$ )

Variables	PMG long-run coefficients		
	Coefficients	t-statistics	P-value
Business Freedom( $BF_{it}$ )	0.018	2.056	0.047
Monetary Freedom( $MF_{it}$ )	0.041	3.437	0.001
Government Expenditure( $GE_{it}$ )	0.083	21.169	0.000
Inflation( $INF_{it}$ )	-0.113	-6.791	0.000
Trade-openness( $TO_{it}$ )	0.052	5.927	0.000
<b>Short-run coefficients</b>			
$EC_{it-1}$	-0.696	-2.121	0.041
$\Delta BF_{it}$	-0.016	-1.045	0.303
$\Delta MF_{it}$	-0.014	-0.554	0.582
$\Delta GE_{it}$	0.045	1.213	0.233
$\Delta INF_{it}$	0.026	1.337	0.189
$\Delta TO_{it}$	-0.012	-0.508	0.614
C	-3.568	-2.296	0.027

Source: Calculated by the author

The results of panel unit root test IPS and LLC show that variables like GDP (Economic growth) and GE (government expenditure) are integrated of order (0), while BF (Business freedom), MF (Monetary freedom), Inflation (INF) and TO (Trade openness) are integrated in order 1. After applying these tests, it is confirming that there is a mixed level integration between the series which include in this model. For estimating the long run relationship between variables pool mean group (PMG) / ARDL test was be applied. In this study, the explanatory variables are integrated of the order I (1) and I (0). In PMG first step is the estimation of long-run and the short-run relationship between the variables. Pooled mean group test not only gives the long-run and the short-run analysis, it also explains the cross sectional short run result. Results in (Table 3) explain the long-run as well as the short-run coefficients linkage between GDP growth and other variables. PMG results indicated that Business freedom (BF) and monetary freedom (MF) is positively and significantly related to economic growth (GDP) in long-run in South Asian countries. These results are the confirmation of the empirical findings of [16, 25]. Trade openness has also positively and significantly related to the economic growth in the long-run. Our results are consistent with the studies of [18, 27, 28, 19, 25, 2] has pointed out that there exists a long-run relationship between the trade-openness and economic growth. The result of this study indicates that with the increase in government expenditure the economic growth will increase in South Asia. This finding is in the line with the findings of [12] While; inflation negatively affects the economic growth in this region. This result supports the finding of [4, 24,3].

Error Correction term  $EC_{it-1}$  is negative which shows speed of the adjustment from short-run to the long-run equilibrium. This result shows that there is a dynamic adjustment from short-run to long-run equilibrium in GDP, Business freedom, Monetary freedom, Inflation, government expenditure and trade openness relationship in South Asian region. Error correction term coefficient value is about -0.69 which implies that a deviation from the long-run is corrected by 69% in each year. The results indicate that Monetary freedom, Business freedom, trade openness, and government expenditure is positively and significantly related to the economic growth in South Asian region in long-run while Inflation negatively but significantly affects the growth rate.

#### Cross Sectional short-run Error Correction Term (ECT) with GDP

**Table-4: Cross Sectional short-run ECT Results for Selected South Asian countries (1994-2014).**

Countries	ECT			
	Coefficients	Standard error	t-stat	P-value
Pakistan	1.122	0.043	-25.705	0.000
India	-0.211	0.002	-83.140	0.000
Bangladesh	-0.022	0.001	-1.927	0.149
Nepal	-1.761	0.053	-32.850	0.000
Sri Lanka	-0.407	0.082	-5.055	0.014

Source: Calculated by author

ECT shows dynamic speed of the adjustment toward long-run equilibrium. The EC term of Pakistan is negative, but gives inefficient results because the term coefficient value for Pakistan is  $> 1$  for consistent and efficient results the property of ECT is that it must be less than 1. The error correction term for India is also negative and significant coefficient reveals that deviation from the long-run equilibrium is corrected by 21% in each year. While the ECT of Sri Lanka shows efficient results the coefficient value is 0.40 with negative sign which reveals convergence towards equilibrium in long-run and p-value shows significant results. The value of ECT for Bangladeshis also negative, but insignificant While the error correction term of Nepal shows inefficient results because the  $ECT > 1$ , and p-value shows significance.

**Model-2: Economic Freedom and Economic Growth for Selected South Asian economies (1994-2014)**

The results of panel unit-root test IPS and LLC show that variables like GDP (Economic growth), FC (Freedom from corruption) and GE (government expenditure) are integrated of order (0), while TF (trade freedom), Inflation (INF) and TO (Trade openness) are integrated at order 1. The results revealed that there is a mixed level of integration between the series. For estimating the long-run relationship between the variable pool mean group (PMG) / ARDL test will be applied. When the explanatory variables are integrated of the order I (1) and I (0) Pooled mean group technique is appropriate for panel data analysis.

**Table-5: PMG Results for Selected South Asian countries (1994-2014).**  
Dynamic specification: ARDL (2, 1,1,1,1,1)  
(Dependent variable:  $GDP_{it}$ )

Variables	PMG long-run coefficients		
	Coefficients	t-statistics	P-value
<i>Freedom from Corruption(FC)<sub>it</sub></i>	0.043	1.826	0.072
<i>Trade Freedom(TF)<sub>it</sub></i>	-0.024	-3.158	0.002
<i>Government Expenditure(GE)<sub>it</sub></i>	0.110	22.505	0.000
<i>Population Growth(PG)<sub>it</sub></i>	0.922	4.149	0.000
<i>Inflation(INF)<sub>it</sub></i>	-0.102	-4.007	0.000
Short-run coefficients			
$\Delta TF_{it}$	-0.360	-3.718	0.000
$\Delta FC_{it}$	-0.003	-0.420	0.675
$\Delta TF_{it}$	0.006	3.064	0.003
$\Delta GE_{it}$	0.074	3.454	0.001
$\Delta INF_{it}$	0.029	01.291	0.201
$\Delta PG_{it}$	-8.703	-0.973	0.334
C	-0.080	-0.407	0.685

P-value is significant in the long-run at 1%, 5% and 10% level of significance; while TF, GE also shows significance. Source: Calculated by the author

PMG results (Table 5) indicated that freedom from corruption (FC) is significantly positive related to economic growth (GDP) in long-run in South Asian countries. This result is consistent with the [20] that indicates that growth is positively influenced by freedom from corruption. While Trade freedom has a negative and significant impact on economic growth the in long-run. The results of this study indicate that with the government expenditure increase in the South Asia the economic growth will also be enhanced. This result is a confirmation of empirical estimated findings of [22]. While in long-run inflation negatively affects the economic growth in this region. This outcome supports the findings of [4,24,3]. Population growth has also a positive impact on the economic growth in South Asian region. There is a positive correlation between population growth and economic growth in the long run [15]. On the other hand, in short-run only government expenditure and trade freedom significantly affect the economic growth in the long-run trade freedom negatively impacts the growth but in short-run this effect change into positive. Other variables only affect growth in long-run there is an insignificant relationship exist between freedom from corruption, population growth and inflation in short-run.

Error Correction term  $EC_{it-1}$  is negative which shows speed of the adjustment from short-run to long-run equilibrium or how much time are required for long-run relationship. This term is less than 1 ( $ECT < 1$ ) and shows significant at the 1%, 5% and 10 % level that shows consistent and efficient long-run results. This result shows that there is a dynamic adjustment from short-run to long-run equilibrium in GDP, freedom from corruption, trade

freedom, Inflation, government expenditure and population growth relationship in South Asian region. Error correction term coefficient value is about -0.36 which imply that a deviation from the long-run is corrected by 36% in each year. The negative sign means that there is a tendency towards long-run equilibrium. The negative sign of ECT confirms that there exists a long run relationship between the GDP growth, Economic freedom and other macroeconomic variables. The results indicate that freedom from corruption, government expenditure, population growth are positively and significantly related to the economic growth in South Asian region in long-run while Inflation and trade freedom negatively but significantly affect the growth rate. In short-run trade freedom positively affect the economic growth in South Asia. Government consumption also has a positive and significant impact on the growth in long-run as well as also in the short-run.

**Table-6: Cross Sectional short-run ECT Results for Selected South Asian countries (1994-2014).**

Countries	ECT			
	Coefficients	Standard error	t-stat	P-value
Pakistan	-0.543	0.030	-17.796	0.000
India	-0.601	0.010	-57.841	0.000
Bangladesh	-0.333	0.012	-25.927	0.000
Nepal	-0.253	0.030	-8.274	0.003
Sri Lanka	-0.070	0.008	-8.200	0.000

Source: Calculated by author

ECT shows dynamic speed of the adjustment toward long-run equilibrium. The EC term of Pakistan is negative; the coefficient value is 0.54 which indicates that 54% adjustment towards equilibrium in each year. EC term shows significance at the 1%, 5% and the 10% level. It's show the speed of convergence towards equilibrium. India error correction term is also negative and significant at the 1%, 5% and 10% level of the significance. ECT coefficient is 0.60 which reveals that deviation from the long-run equilibrium is corrected by 60% in each year. While the ECT of Sri Lanka shows efficient results the coefficient value is 0.07 with negative sign which reveals convergence towards equilibrium in long-run and p-value shows significant results at the 1%, 5% and the 10% level of significance. Bangladesh ECT is also negative and significant which revealed convergence towards equilibrium in long-run. ECT coefficient is -0.33. The Nepal Error correction term is also negative and revealed convergence towards equilibrium in long-run. EC coefficient is 0.25 examines deviation from a long run converge 25% towards equilibrium in each year. EC term of India is higher in South Asian region. The results from panel error correction model reveals causality exist between the dependent and the independent in short-run and the long-run.

### Conclusion and Recommendations

The purpose of this study was to estimate the impact of EF on the growth in the selected South Asian countries. This study covers the time of 1995-2014 by using PMG panel-data technique for the estimation of results. The results of the study reveal the general positive sign of the significant coefficients of the monetary freedom, business freedom and freedom from corruption confirms our hypothesis regarding the positive and significant impacts of these EF components on Growth. Further, we also realize that growth affected by many other factors such as government consumption, trade openness, population growth and inflation in long-run.

As policy implication, the general results of the study suggest that the South Asian countries need to attain the sustainable economic growth by achieving the highest level of economic freedom. Government should reduce their intervention to ensure that country is freer because this study has proven that EF is one of the main triggers of prosperity and growth. Policy makers make such policies which improve trade openness, because it enhances the economic growth. Policy makers and Government should improve or formulate policy that provide the monetary freedom and freedom from Corruption to improve the level of growth. The government should improve their consumption and do expenditure in such sides which increase the economic growth.

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