
Impact of Pre and Post Global Economic Crisis on Quality of Economic and Political Institutions and Economic Growth

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ARTICLE INFO

Article history:

Date of submission: 12-12-2021

Date of acceptance: 18-03-2022

JEL Classification:

C01

G28

H12

Keywords:

Growth

Institutions

SAARC

GMM

ABSTRACT

The Study investigates political as well as economic institutions nexus for the panel of SAARC countries over the period 2004 - 2020. We divide data into pre and post samples to find impact of international financial crisis. Static and dynamic panel Generalized Method of Moments (GMM) techniques are used to seek the estimation with fixed effects. The empirical results illustrate that improvement in institutions is necessary to enhance long run economic growth for SAARC countries. Pre and post samples differentiate the quality of political and economic institutions. The estimated results show that institutions are important for long run growth of SAARC countries. It reveals that there are some common factors which impact growth through declining quality of institutions. Economies can uplift the growth to overcome the effects of these factors by improving quality of economic as well as political institutions.

1. Introduction

Three input factors, labor, capital and technology, determines the output of an economy according to neoclassical Solow-Swan growth model (Solow, 1956; and Swan, 1956) however, countries have different structures through which they produces specific growth like institutions that leads to policy guideline. This model has been faced many changes like augmentation of human capital (MRW, 1992) and others. But most of them remain inexplicable pushing forces which determine economic growth except North. North (1990) was first who introduced institutions as determinants of the

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economic growth and since now literature is witness to its usefulness. The nations which have strong institutions “civil liberties” achieve economic growth (Kormendi and Meguira, 1985, Tullock, 1987). Country’s economic performance depends on performances of government according to OECD (2001). Washington Consensus provides supporting evidence that quality institutions are necessary for economic growth (Stiglitz, 2001). However, it is very difficult to measure the causality and impact of institutions and government policies on the economic growth (Radzeviča & Bulderberga, 2018).

This is the era of sustainable growth and development which is not possible without quality wise strong institutions particularly poor portion of the population (Thorbecke, 2013, Iheonu, Ihedimma and Onwuanaku, 2017). The basic hurdles for Africa and Latin American economies are uncertain and injustice in the judicial system, corruption, tax evasion, ill-defined property rights and incompetent institutions (Luiz, 2009: 65-70; Fosu, Bates & Hoeffler, 2006:2; Balianoune, 2005; Birdsall, 2007:578- 589; Charnock, 2009:77). Asian economies are achieving a significant impact of quality institutions whereas most of African economies are backward due to inefficient institutions. Due to this reason, international financial supportive institutions have shifted their strategies and focused on improving institutions of poor countries (Rodrik, 2008).

Institutions of developing countries promote reallocating activities and less focus on productive activities, create monopolies and discourage competitions and instead of developing opportunities, restrict them. These types of institutions give low investment and production (Yildirim & Gokalp, 2016).Institutions, at different stages of development, have different growth impact empirically as well as theoretically (Nawaz (2014); Valeriani and Peluso (2011). The studies suggested that institutions of developed countries perform better than developing countries. Iqbal and Daly (2014) divided growth effects of institutions by strong and weak democratic economies. According to them, strong democratic economies institutions

stimulate growth and fail to improve in weak democratic countries. However, theoretical foundation between institutions and growth is not found in the studies which are essential to understand the mechanism.

In addition, reliable and robust results depend on controlling endogeneity problem. Few studies examined the institutions-growth impact empirically through SYS-GMM technique to overcome the endogeneity problem (Nawaz, 2014). The study has investigated the nexus at different stages but no evidence is found to check the nexus of Institutions and growth after international financial crisis. As the financial crisis has changed market institutions where initial improvements in institutions of public order build confidence and lead to the economic growth in market institutions (Bodoh-Creed, 2019). This study fills the gap through investigating institutional-growth relationship before and after financial crisis as well as at cross country level. The investigation focused on geographically joint SAARC countries.

2. Literature Review

2.1: Institutions and economic growth

Economic growth is the combination of physical and human capital accompanied by technological developments. The level of per capita output is determined by input of physical and human capital with technological progress in a country as traditional economic growth theories suggested. Acemoglu and Robinson (2010) illustrate that why some countries have less human and physical capital and why they do not adopt modern technology are the common and simple questions asked in this field. But the suitable way to address the problem is searching fundamental reasons through the questions, why some countries grow and better-off than other countries which may be essential differences across countries". According to them, institutions are the fundamental determinants of economic growth along with physical and human capital.

There are three fundamental determinants in long run economic growth which has emerged in recent growth literature that are geography, participation in international trade and the role of institutional change. Modern discussion in growth literature shows that economists now focus on fundamental type of growth determinants with ignoring traditional growth determinants. Geography is dominant factor to determine economic growth in long run. The countries that are located dense climatic zones have less fertile land and chance of occurrence in diseases in those countries are very high so they remain less develop than those countries which have gifted by favored geographical location (Myrdal (1968), Diamond (1997) Gallup, Sachs and Mellinger (1999), Sachs (2001, 2003), and Olsson and Hibbs (2005). According to endogenous growth theory of neoclassical, landlocked countries and economic growth have negatively correlated. That is, the higher the degree of landlocked the lower will be the growth and high maritime access caused increase in economic growth of the country (Fulk, N. 2017), (MacKellar et al., 2002; Paudel, 2014).

Second component (participation in international trade) of growth literature generates income gap between rich and poor [Sachs and Warner (1995) and Frankel and Romer (1999)]. Role of institutional changes, a third element of long run economic growth, has been discussed in literature since Adam Smith's era. North (1981) gave a new direction to institutions in economic growth as a core and key determinant of economic growth. More recently, Ronald Coase (1960) established an association of transaction cost and institutions with new classical theory. He concluded that market solution condition is zero transaction cost that maximizes income weather institutional arrangement is considered or not (Coase, 1960). However, North (1987) argued that transaction cost is general phenomenon but institutions are important in growth.

Quality of institutions has been inversely affected by geographically landlocked countries (Carmignani, 2015). Democracy (Comeau, 2003; Rock, 2009; Narayan et al., 2011) political stability (Barro, 1991; Aisen and Veiga,

2013) property Rights (Tornell and Velasco, 1992; Peev and Mueller, 2012) civil and political freedom (Kormendi and Meguire, 1985; McMillan et al., 1991) are the institutions which main determinants of quality of institutions.

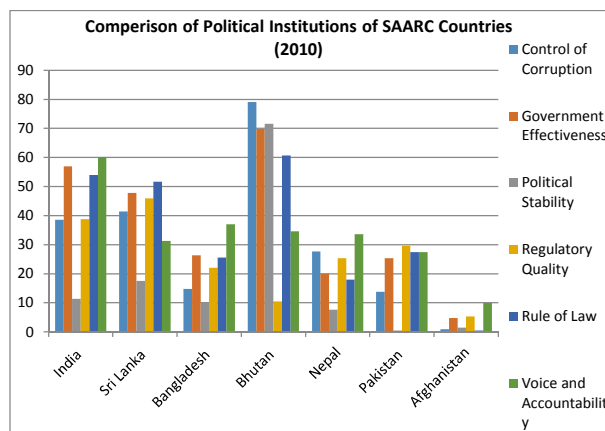
North (1981) was the first who focused that institution are major organizer of human capital in a society. These institutions enhance the economic activities via polishing human capital. In other words, little focus on institutions quality leads to slow pace of economic activities. This environment develops institutional politics in economic labor which cause low economic growth as well as economic activities [Murphy, Shleifer, and Vishny (1993)]. It means that quality institutions improves endorsing efficiency of labor and reduces vagueness behavior of economic agents. Higher the concentration on quality of institutions will lead the higher economic growth [North (1990)]. Production determination of input factors in a country depends upon quality of institutions (Hall and Jones (1999). Organized, well established and high moral institutions prepare the group of labor which can only be used productive purpose and can be avoided unproductive activities [North (1990)]. Technological advancement in inventions and innovations is the noteworthiness trend of quality institutions of a country. This technological progress promotes and upgrades development process of the country [Bernard and Jones (1996)].

Iqbal and Daly (2014) illustrates that weak institutions allow rent seeking activities which shift resources from productive sector to unproductive sector and cause a downfall of institutions with low pace of economic growth. While, strong institutions stuck of unfair activities which reduce the chances of shifting resources between productive and unproductive sectors and improve pace of economic growth and production of renewable factors. The paper further expresses that behavior of shifting and wastage of resources develops in these institutions which negatively affect growth activities of institutions. Activity of resource allocation, externalities and transaction activities may be increased cost of production. The weak institutional structure is established by inadequate rules and policies backward

infrastructure and unreformed property rights which may encourage rent seeking activities.

2.2: Political institutions and economic growth

Studies in Political institutions and growth show both positive and negative correlation. A dictatorship regime (autocratic) is more helpful for political institutions and enhances more production as compared to democratic regime (Glaeser, et al. 2004). Because dictators adopt tight economic policies that enhance the growth (De Long and Shleifer 1993), (Jones and Olken 2005). Some economists also pointed out that governance of coalitions of political powers is also not favor of positive correlation. According to Schweintz (1959), increase in investment in political regime will lead to high rate of consumption which restricts welfare and economic growth particularly in developing countries. In early stage, this compressed economic output will reduce the expectation of a large number of people and reliance on the governance. The high rate of consumption will curb labors and labor unions to provide labor and also investors to invest. Huntington and Dominguez (1975: 60) presented an idea that high savings and economic growth is the property of dictatorship.



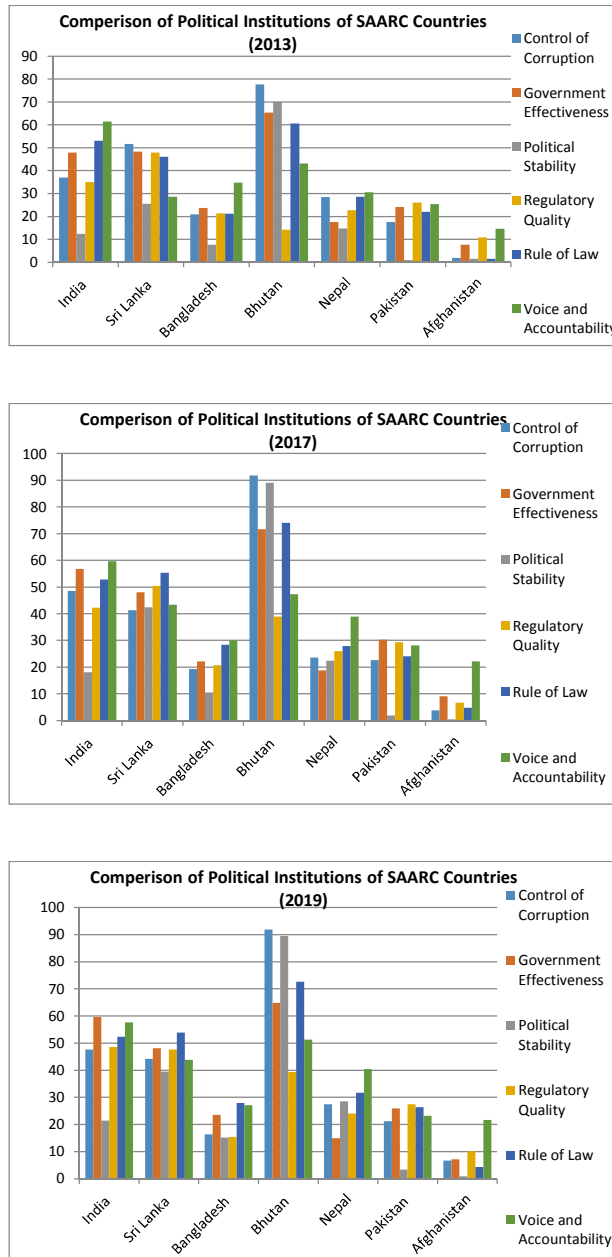


Figure 1. Comparison of Political Institutions of SAARC Countries Democracy Index 2010-2019 (Economic Intelligence Unit)

Furthermore, democratic government spread in vast the resources of country for investment which damage economic growth. Therefore dictatorship is best for saving and investment and in response economic growth. On the other side, followers of democracy prove that democracy performs better than dictatorship because it can better allocate resources in productive use, allow investors a long term to invest and protect property rights. As North (1990) suggests that democratic institutions can empower the society to act in general interest instead of self-interest. Hence, dictators involve inefficient and wasteful activities by undersupplying and oversupplying (Barro, 1996; Findlay 1990; Olson, 1991). Furthermore, democracy moves towards growth as quality of human capital accumulation improves and income inequality between rich and poor reduces which take in growth (Tavares and Wacziarg 2001). But Przeworski at al. (2000) argues in favor of both regimes. He expresses that factor of production may more foster in dictatorship where democracy may allow resources to use more efficiently. Because both work in opposite way, so growth rate they generate in their regimes may be equal to each other.

In contrast, Acemoglu (2009) insists that political equality in democracy regime is better than non-democracy because past data of different countries in democratic and non-democratic regimes show favor of democracy regime with positive economic decisions and growth. Acemoglu (2009) also rejected the idea of Przeworski at al. (2000) and Barro (1996) that is anarchical of democracy leads to disturbance and slowdown the economy, according to Acemoglu (2009) anarchic situation prevail in democracy only when elites and mainstream person interfere and pursue unfavorable economic policies due to favoritism and nepotism. So, relationship between democracy and economic growth depends on different situations, positive connection under certain conditions and negative under favoritism.

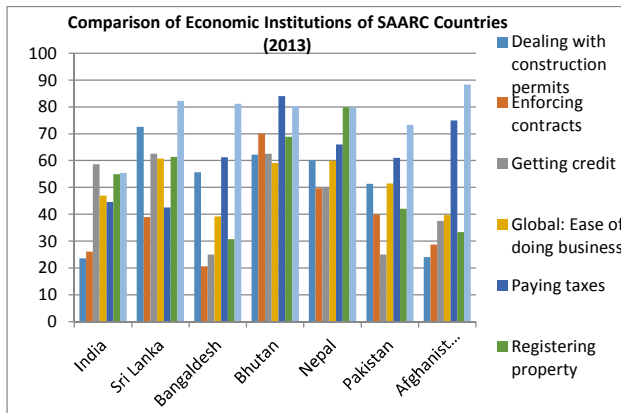
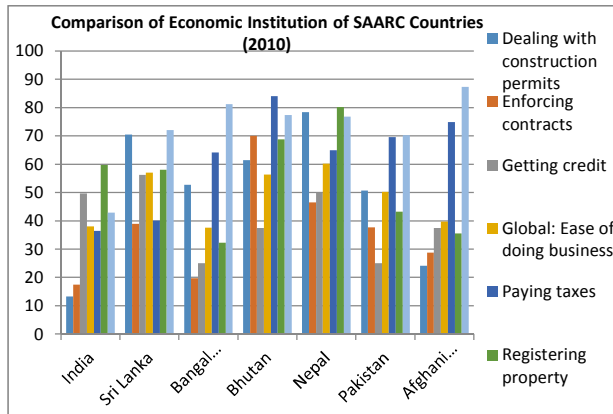
2.3. Economic institutions and Growth:

The empirical outcomes illustrate that institutions and economic growth correlate with each other (Lee and Kim, 2009) and (Law and Bany-Ariffin, 2008). Opinions are different in this domain. In case of low and middle income countries, impact is strong while weak in case of high income countries. Similarly, in cross-section data this causality runs strong basis as well as selection of countries in panel data. On the same line, full sample exploration not expresses different correlation forms but some countries institutions impact economic growth and reverse impact seems to other than those countries (Butkiewicz and Yanikkaya 2006). Time series data is more relevant because causality direction depends on increase and decrease the sample size but irrelevant due to unavailability of long-time data set on institutions (Law and Bany Ariffin, 2013).

A positive relationship between institutions and economic growth is shown in south Asian countries data set by Devangi, Perera and Lee (2013). They concluded that high corruption, less accountability and low bureaucratic quality leads to deteriorating the income distribution. Another study explains the positive relationship between both variables with Asian developing countries data set (Nabila, Shazia and Muhammad 2015). An empirical study on Turkish institutions and economic performance illustrates the positive impact of Turkish institutions. Authors used integrity of the law system, regulation of trade barriers, restriction of foreign investment and the share of private sector as institutional determinants (Yildirim and Gokalp 2016).

In West Africa, Corruption, government effectiveness and rule of law as determinants of institutions quality have positive impact on growth of Africa (Iheonu, Ihedimma and Onwuanaku, 2017). Same like that, Nigerian democratic institutions have negative impact on growth while foreign direct investment has positive impact on growth of Nigeria (Izilein and Mohammed, 2017). The direct relationship of Baltic States institutions quality in economic growth using GMM on a panel of 113 countries during

2006- 2016 is explained by (Radzeviča and Bulderberga, 2018). The panel study of 11 sub- Saharan African countries illustrates that institutional quality and economic freedom measures have positive and significant impact on structural transformation (Carraro and Karfakis, 2018).



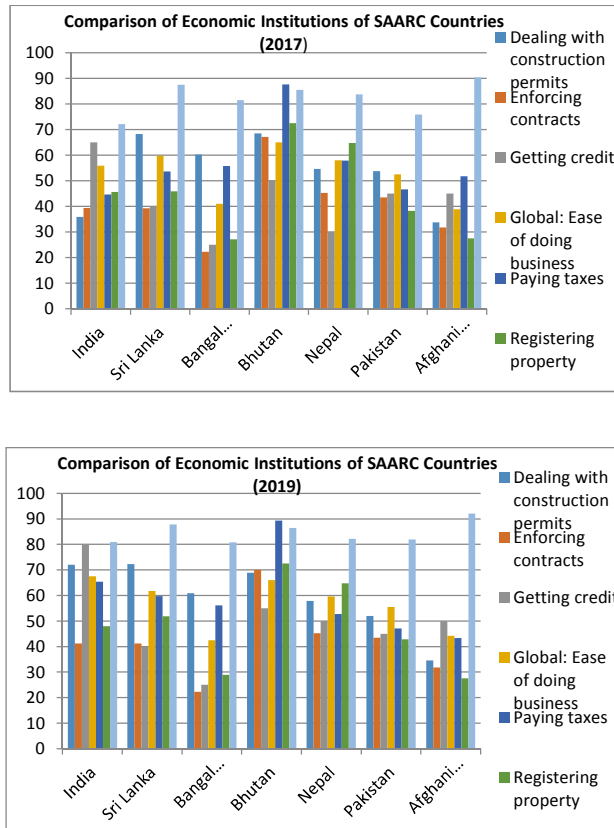


Figure 2. Comparison of Economic Institutions of SAARC Countries 2010-2019

3. Data and Methodology

The Generalized Methods of Moment (GMM), Fixed Effects (FE) and Random Effect (RE) are used in African study analysis by Epaphra and Kombe (2018). Authors have explained a direct relationship between institutions quality and economic growth. In the light of above literature, our priority is that the economic and political institutions are the key determinants of growth and also translate indirect impact of other factors of growth including governance and political institutions. Thus it is the matter of great interest to investigate the economic institutions and growth nexus after financial crises (2008-09) under novel confounding variables to

propose some sensible policy framework to enhance economic growth in SAARC countries particularly in Pakistan

Panel data set for six SAARC (South Asian Association for Regional Cooperation) countries is used to determine the quality of institutions and growth nexus over the period 2004-2020. Due to missing data, Maldives is not included. The data on political institutions and economic institutions is acquired by Worldwide Governance Indicators (WGI) and Doing Business (DB) respectively published by the World Bank. WGI captures the political situation through six dimensions including: (i) control of corruption, (ii) government effectiveness, (iii) political stability and absence of violence/terrorism, (iv) regulatory quality, (v) rule of law, and (vi) voice and accountability. The data variation range is between -2.5 to +2.5 where low value shows bad quality of institutions and high value indicates good quality of institutions. Doing business includes time and money spent on opening and closing a business, obtaining a construction permit, Getting credit, registering property, and tax burden. It measures the quality of economic institutions (R. V. Pyrma, S. V. Rastorguev (2019).

To avoid expected correlation among indicators of variables, institutional quality indexes are constructed using Principle Component Analysis (PCA) methodology. The PCA captures variance of a variable for a specific principle component. The eigenvalues derived by sample covariance matrix provide basis of principle component. Hence, political and economic institutions indexes are derived by these PC values.

$$y_{it} = \alpha + PI_{it} + EI_{it} + \varepsilon_{it} \quad (1)$$

Where “ y_{it} ” denotes GDP per capita of country “ I ” at time period “ t ”. PI indicates political institutional index and EI represents economic institutional index and “ ε ” denotes error term. The study holds panel data estimation technique to capture the quality of political and economic institutions and economic growth nexus. The technique contains cross section and time period analysis and allows consistent and robust results. It

is expected that endogeneity problem occurs between institutions and economic growth. As traditional empirical analysis contains endogeneity, measurement errors and omitted variables bias problems generally (Acemoglu, Johnson, Robinson, and Yared (2009). Generalized Method of Movement (GMM) evaporates the problems. GMM conveniences to tackle the expected errors and bias of model. The heteroscedasticity and serial dependent problem are resolve automatically by GMM. It also considers zero correlation between error term and lagged regressors. In addition, it captures non-observable counties specific effect and allows the the possibility that all explanatory variables are endogenous [Bond, Bowsher, and Windmeijer (2001); Caselli, Esquivel, and Lefort (1996)]. The panel time period of this study is restricted so the sample size becomes short. We cannot use instrumental method (Arellano and Bond (1991). System GMM provided by Arellano and Bond (1991), covers the additional moment's restrictions and provides a system of two equations: difference instrumented by lagged level and levels instrumented by lagged differences. The study follows the Arellano and Bond (1991) SYS-GMM method.

4. Empirical results and discussion

Components of economic and political institutions are converted into Principle Component Analysis to examine growth impact of seventeen years (2004-2020) for panel of SAARC countries using Fixed Effect Model. 2008-09 international financial has given shocks almost all. The world. Economic and political institutions are also hit by this crisis. To check the quality of institutions, data is divided into pre and post data sets.

Table 1. GMM Results (Political and Economic Institutions and Economic Growth) 2004-2020

Variables	Coefficient	Std. Error	t-Statistic	Prob
GDPPC(-1)	0.987300	0.002807	351.7824	0.0000
PI	12.73499	6.383808	1.994890	0.0462
EI	5.118168	4.444472	1.151581	0.2497
Mean dependent var	14.74282	S.D. dependent var		75.14894
S.E. of regression	40.22464	Sum squared resid		2470719.
J-statistic	1583.533	Instrument rank		122
Prob(J-statistic)	0.000000			

The whole panel of the countries is given in the table. Results show that institutions have positive impact on economic growth mostly political institutions. 1 percent increase in the quality of political institutions leads to 12 percent enhance in economic growth.

The results convenience to the hypothesis that institutions have long run growth effect. As most researchers argued that good quality institutions improve the ability to use modern techniques which enhance growth (Acemoglu, Johnson, Robinson, and Yared (2008)).

Although literature and post financial crisis of this study show significant and consistent impact of economic institutions on growth but estimated coefficient is not significant at conventional levels of testing.

Table 2. GMM Results (Political and Economic Institutions and Economic Growth) 2010-2020

Variables	Coefficient	Std. Error	t-Statistic	Prob
GDPPC(-1)	0.946065	0.006010	157.4117	0.0000
PI	79.74453	10.76607	7.407021	0.0000
EI	-27.68495	8.523782	-3.247966	0.0012
Mean dependent var	23.15301	S.D. dependent var	86.86065	
S.E. of regression	41.91460	Sum squared resid	1038289.	
J-statistic	563.9827	Instrument rank	47	
Prob(J-statistic)	0.000000			

Data is divided into pre and post crisis to capture the quality of both political and economic institutions but the data restriction since 2004, sample size is very small so pre impact of institutions is not in line with the literature. On the other side, post sample is adequate and presents clear picture of good quality of institutions which improve the basic structure that leads to productivity of factor inputs(North, 1990). Estimated value of economic institutions in post sample is significant. Negative sign illustrate that economic institutions in SAARC countries are weak.

Table 3. GMM Results (Political and Economic Institutions and Economic Growth 2004-2007

Variables	Coefficient	Std. Error	t-Statistic	Prob
GDPPC(-1)	1.335428	0.261321	5.110294	0.0000
PI	18.51294	14.55458	1.271966	0.2099
EI	40.29113	34.29142	1.174963	0.2462
Mean dependent var.	66.95606	S.D. dependent var.	174.2212	

S.E. of regression	96.88154	Sum squared resid.	422371.5
J-statistic	2.327690	Instrument rank	5
Prob.(J-statistic)	0.312283		

Fewer check and balance on politicians empower them to adopt rent seeking evil. This may bound the institutions to enhance the growth. Corruption is the main problem of weak democratic economies that not allow the improve efficiency in institutions (Drury, Kriekhaus, and Lusztig (2006); Iqbal and Daly (2014); Méndez and Sepúlveda (2006)). Furthermore, under developed countries adopt ancient framework and in the transition stage.

5. Conclusion

Institutions- growth nexus 2004-2020 shows positive and significant impact for panel of SAARC countries. We have used fixed effects and GMM techniques to estimate the relationship between quality of institutions and economic growth. Principle component analysis is applied to make quality of institutional index. Results suggest that political institutions up lift the economy's growth but economic institutions fail to improve the growth. Weak democratic system, traditional setup and rent seeking evil are the difficulties which stop the efficiency and quality of institutions. Control of corruption, ban on rent seeking activities and strong democratic system are the key factors that improve the institutions and economic growth.

Appendix:

Table 4. Descriptive Statistics (Components of Political Institutions)

	CC	GE	PS	RL	RQ	VA
Mean	-0.373502	-0.347443	-0.964808	-0.317527	-0.581850	-0.353525
Median	-0.557165	-0.399401	-1.140479	-0.326908	-0.625302	-0.441579
Maximum	1.878043	0.632625	1.283388	0.627532	-0.052958	0.462193
Minimum	-1.496538	-1.083143	-2.810035	-1.019970	-1.169393	-1.146816
Std. Dev.	0.740725	0.477580	1.080935	0.481292	0.295391	0.452014

	CC	GE	PS	RL	RQ	VA
Skewness	1.324555	0.327042	0.544775	0.221451	0.001478	0.362312
Kurtosis	4.006724	1.808254	2.567754	1.640807	2.006638	2.191608
Jarque-Bera	34.13292	7.854359	5.839315	8.685162	4.193803	5.008953
Probability	0.000000	0.019699	0.053952	0.013003	0.122836	0.081718
Sum	-38.09715	-35.43921	-98.41045	-32.38780	-59.34874	-36.05958
Sum Sq. Dev.	55.41597	23.03635	118.0105	23.39583	8.812826	20.63597
Observations	102	102	102	102	102	102

Table 5. Descriptive Statistics (Components of Economic Institutions)

	DC	GC	EDB	PT	RP	SB
Mean	52.62387	41.80928	51.73667	59.81976	54.46566	73.62791
Median	55.18720	40.33333	55.52428	59.88712	56.20721	76.70187
Maximum	74.84910	85.00000	70.68970	89.27850	81.08296	89.24977
Minimum	7.587620	20.00000	17.45431	22.35961	27.15354	32.82269
Std. Dev.	16.98642	15.53898	10.77515	15.38451	15.88386	12.61736
Skewness	-1.177760	0.331544	-0.974545	0.083016	0.039071	-1.645462
Kurtosis	3.744961	2.316317	3.502177	2.610129	1.931946	5.347299
Jarque-Bera	25.93963	3.855206	17.21732	0.763155	4.874089	69.44495
Probability	0.000002	0.145497	0.000183	0.682783	0.087419	0.000000
Sum	5367.635	4264.547	5277.140	6101.615	5555.498	7510.047
Sum Sq. Dev.	29142.39	24387.44	11726.48	23905.00	25482.01	16078.98
Observations	102	102	102	102	102	102

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