

Institutional Quality and Democracy: The Case of Bangladesh

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Bangladesh has passed quite some time as a democratic country. During this time it has also tried to develop its economic institutional quality. However, a direct relationship between these two parameters is yet to be established at either theoretical or empirical level. This current study investigates the influences of economic institutions on democracy. Using data of 2002-2014 and econometric methods of cointegration (based on Engle & Granger, 1987) we found that governance indicators such as voice accountability, political stability, corruption, and government effectiveness have significant impact on democracy. However corruption has in general a negative effect on democracy.

Keywords: Institutional quality, Democracy, Bangladesh

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1. Introduction

The term “institution” is commonly applied to important habits and customs within a society, as well as to particular forms in which government and bureaucracy are organized (Rhodes et al., 2006). The most widely used definition of institutions can be attributed to Douglas North, who defined institutions as formal and informal rules of game, and their enforcement characteristics (North, 1990, 2005). De Haan and Sturm (2003) show that democracy increases economic freedom in developing countries when measured as an aggregated index. Good institutions create an environment that promotes economic activities, creates opportunities and employment; generate growth and development and conversely bad institutions result in economic stagnation. Acemoglu et al. (2005) found that countries with stronger economic institutions, effective rule of law, a good business climate, more secure property rights and market-friendly social norms are more likely to attract investment, increase trade and utilize physical and human capitals more efficiently, resulting in a better growth over a long run. The quality of political institutions is widely held to be one of the most important determinants of quality of economic institutions (Adsera et al, 2003). Acemoglu et al. (2003) found that underlying institutional problems are the main cause of poor economic performance. Their view is that bad political institutions lead to distortionary policies, which ultimately reduce growth and increase volatility. Positive effects have been also found by Pitlik (2002), Berggren (2003), Gwartney et al. (2006), De Haan et al. (2006), Doucouliagos & Ulubasoglu (2006), Efendic et al. (2011) and Rode & Coll (2012).

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Farooqui & Rahman

There is a strong empirical trend that concludes that economic institutions in a society are positively correlated with prosperity and growth. Rodrik et al. (2002) found that institutional determinants “trump” others factors like geographic location and trade in explaining the differences in incomes. For such positive effects no new class of institutions are required but according to their argument well-functioning existing institutions will suffice. Economic institutions, for example, property rights systems, are molded by historical and socio-economic conditions (see La Porta et al, 2007; Levine, 2005).

Governance, broadly defined as the traditions and institutions that determine how authority is exercised in a country (Kaufmann et al. 2000), matters to economic development. Huther and Shah (1996) explicitly linked governance to the notion of institutions, defining it as “all aspects of the exercise of authority through formal and informal institutions in the management of the resource endowment of a state. Democracy is most probably the most popular political orientation in contemporary world. For one reason or other democracy is currently enjoying a walk over against its opponents. Studies have found that democracy is likely to have indirect positive effects on other parameters of an economy. It may foster economic growth through improved investment in human capital (Baum and Lake, 2003), can create better institutions such as property rights and economic freedom (Acemoglu et al., 2001; Doucouliagos et al., 2008) and can lower volatility of growth (Klomp and de Haan, 2009). Democratic countries are generally considered to be more politically stable and less prone to war (Hegre et al., 2001; Fosu, 2008). Gerring et al., (2005) argue that democracy has “historical” effects, meaning that they must be conceptualized over a long period. The accumulated democratic stock fosters growth by delivering better governance, for example, via efficient bureaucracies, opening up markets and institutions to previously excluded groups.

Bangladesh has recently been graduated to lower middle income cohort and now institutional development has become important more than ever. As a member of low middle income group a country enjoys some privileges and can enjoy temporary growth in some sectors. However to have sustainable growth and to enroll in the superhighway of development improved institutional regularities must be ensured. This current study investigates influences of democracy on various measures of economic institutions in the perspective of Bangladesh which is officially a democratic country. Using data of 2002-2014 and econometric methods of cointegration (based on Engle & Granger, 1987) we found that governance indicators such as voice accountability, political stability, corruption, government effectiveness have significant impact on democracy (measured by POLITY2 variable from the Polity IV database). Findings of this research are important for academicians as well as for policy makers. They can identify possible source of inefficiencies and thus can remove policy bottleneck. To the best of our knowledge there is no such prior study on Bangladesh and this research will fill in the gap in the literature. The paper is structured as follows. The next section discusses relevant literature which is followed by discussion on methodology. Discussion on data sources and definitions comes next. The subsequent section is dedicated for discussion on results obtained. Concluding remarks appears at the last section.

2. Literature Review

There is a sizable literature that investigates effects of democracy on different economic variables. In his pioneering work Lipset (1959) argued that democracy is more likely to

Farooqui & Rahman

occur in affluent and educated societies. Studies have found positive association between income and democracy (see Barro, 1999; Bollen, 1979; Epstein et al, 2006; Glaeser et al., 2007; Lipset, 1994; Londregan & Poole, 1996; Papaioannou & Siourounis, 2008 among others). Education attainment level has found to facilitate democracy (see Barro, 1999;Feng & Zak, 1999; Glaeser et al., 2007; Lutz et al, 2010; Papaioannou & Siourounis, 2008; Persson & Tabellini, 2009).

Several recent empirical studies indicate that an institutional environment more consistent with economic freedom enhances long-run growth. Butkiewicz & Yanikkaya (2006) found that maintenance of rule of law and democratic institutions increase real economic growth. They also found that effects of democracy are greatest for developing countries. Acemoglu et al. (2005) found that countries with stronger economic institutions, effective rule of law, a good business climate, more secure property rights and market-friendly social norms are more likely to attract investment, increase trade and utilize physical and human capitals more efficiently, resulting in better growth performance over the long run. The quality of political institutions is widely held to be one of the most important determinants of quality of economic institutions (Adsera et al, 2003). Acemoglu et al. (2003) found that underlying institutional problems are the main cause of poor economic performance. Their view is that bad political institutions lead to distortionary policies, which ultimately reduce growth and increase volatility. Positive effects have been also found by Pitlik (2002), Berggren (2003), Gwartney et al. (2006), De Haan et al. (2006), Doucouliagos & Ulubasoglu (2006), Efendic et al. (2011) and Rode & Coll (2012).

This theoretical argument is frequently undermined by the finding that democratic government can also generate elite (both political and economic) who can generate and extract economic rent and can effectively restrict policies that can threaten their rent seeking behavior even at the cost of wider economic growth. In his seminal work Tullock (1967) highlighted the potential for rent seeking activity by democratic governments in design and implementation of public policy, which benefitted few in society at the cost of others. Engerman & Sokoloff's (2002) documented such effects for American colonies. Savio et al (2010) surveyed current discourse on political economy of institutions and inequality and concluded market-economy institutions as a key to prosperity. Therefore, policy makers are unlikely to ignore these insights when designing institutional reforms in developing economies. Those who found negative relationship mostly argue in the vein that economic progress may generate conflict with political elites which may induce them to restrict growth.

In an interesting line Sen (1999) argued for existence of a tradeoff between economic institutions and innate freedoms exercised by individuals to enhance their well-being. Such conflict though not unexpected can undermine effectiveness of programs aimed to create benefit by introducing personal dissatisfaction and lower level of motivation. Such possibility is not overlooked in literature as it has been found that economic institutions can change distribution of wealth and income (Chong & Gradstein, 2007; Easaw & Savoia, 2009). However this stream is less cultured. Bauer (1997) argued that restricting individual economic freedoms stifles entrepreneurial processes that are necessary for creating prosperity. Stiglitz (2002), mentioned that "market friendly" institutions often usurp the dignity and well-being of laborers who are treated as pawns within the profit maximization calculus of society's elite capitalists. In this process political regime is very important. Autocratic regimes revolve around a dictator and thus have little responsibility towards the greater demand of the people, whereas a

Farooqui & Rahman

democratic regime due to its obligation towards its voters can show more responsibility towards general people.

Theoretical and cross country analyses do not give us any conclusive opinion regarding relationship between economic institutional quality and political freedom. This only indicates the need of country specific investigation. To the best of our knowledge there is no such study for Bangladesh. This exercise tries to fill this gap. A more democratic a nation is more improved (effective) institutions should result.

3. Methodology

We used a multivariate regression model, where the POLITY2 variable (as dependent variable) is explained by a set of institutional variables. We used POLITY 2 variable of POLITY IV database as a measure of democracy. Independent variables are: Control of corruption, Government Effectiveness, Voice accountability and Political stability. These are the standard set of institutional quality variables tracked by the World Bank. These are well accepted by both academic and practitioners as indicators of institutional quality (not to mention that this is the only set of standardized variables that are available across countries). Bollen (1990) argued that democracy should not be interpreted—and measured—as a dichotomous concept, so favoring multiple scale and continuous indices. Due to data availability we focused our attention between 2002 and 2014. Our final regression equation looks like (here the symbols have their usual meanings):

$$Polity2_t = \alpha + \beta_1(Corrupt_t) + \beta_2(GovtEff_t) + \beta_3(PolStab_t) + \beta_4(VAccount_t) + \varepsilon_t$$

First we ran unit root tests to find out if data series are stationary or not. Non-stationary data can give rise to spurious regression results. To make thing informationally inclusive we ran a group unit root test. Then cointegration test (in the spirit of Johansen) was performed to find out existence of any possible relationship between variables. Once the cointegration is established, the next step was to investigate direction of causality existing between the variables.

Cointegration test does not give the direction of relationship among variables so we took help of cointegrating regressions namely, Fully Modified Ordinary Least Square (FMOLS), Canonical Cointegration Regression (CCR), and Dynamic Ordinary Least Squares (DOLS). These are single equation regression based methods and are variations of OLS method to avoid some problems in error term that may arise in absence of full-fledged model. Fully modified ordinary least squares The FMOLS regression is designed to provide efficient estimates of cointegrating regressions. The method modifies least squares to account for serial correlation effects and for the endogeneity in the regressor that results from the existence of a cointegrating relationship. In the same vein, CCR and DOLS estimators deal with the problem of second-order asymptotic bias arising from serial correlation and endogeneity.

4. Data Source

POLITY2 is a product of polity project managed by Center for Systemic Peace (CSP). The dataset covers all major, independent states with a total population of 500,000 or more in the most recent year in the global system over the period 1800-2013. The

Farooqui & Rahman

variable captures this regime authority spectrum on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). Which is again subdivided as "autocracies" (-10 to -6), "anocracies" (-5 to +5 and three special values: -66, -77 and -88), and "democracies" (+6 to +10). "Anocracy" is a term used to describe a regime type that is characterized by inherent qualities of political instability and ineffectiveness, susceptible to outbreaks of armed conflict and unexpected or adverse changes in leadership.

Polity score is computed by subtracting the AUTO (a consolidated measure of institutionalized autocracy derived from variables constructed based on survey inputs, for details see Marshall et al, 2013) democracy score from the DEMOC (a similar consolidated measure of institutionalized democracy) score; resulting unified polity scale ranges from +10 (strongly democratic) to -10 (strongly autocratic). POLITY2 is a modified version of the polity variable added in order to facilitate the use of policy regime measure in time-series analyses. Control of corruption (CORRUP) captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate of governance ranges from approximately -2.5 (weak) to 2.5 (strong). Government Effectiveness (GOVEFF) captures perceptions of the quality of public services, the quality of the civil service 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. Voice accountability (VACCOUNT) captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Political Stability and Absence of Violence/Terrorism (POLSTAB) captures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.

The Corruption Perceptions Index (CPI) ranks countries/territories based on how corrupt their public sector is perceived to be. A country/territory's score indicates the perceived level of public sector corruption on a scale of 0 - 10, where 0 means that a country is perceived as highly corrupt and 10 means very clean. A country's rank indicates its position relative to the other countries/territories included in the index. Data for governance indicators are gathered from the Worldwide Governance Indicators (WGI), database managed by the World Bank. WGI summarizes the quality of governance provided by a large number of enterprise, citizen and expert survey respondents of respective countries. Data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms. CPI data is taken from Transparency International. GDP of Bangladesh data is taken from Bangladesh Bureau of Statistics (BBS).

5. Results Obtained and Discussion

We start proceedings with estimating correlation matrix of variables of interest. Results show that all correlation coefficients have expected signs. The matrix does not show existence of very high correlation among any two variables, therefore putting them in a certain regression is not expected to create multicollinearity problem.

Farooqui & Rahman

Table 1: Correlation matrix of variables used

	POLITY2	CORRUP	GOVEFF	POLSTAB	VACCOUNT
POLITY2	1.0000	-0.3109	-0.5098	0.0307	0.0219
CORRUP		1.0000	-0.0838	0.4143	0.4491
GOVEFF			1.0000	0.4651	-0.1203
POLSTAB				1.0000	-0.0742
VACCOUNT					1.0000

Results of group unit root test are given in table 2.

Table 2: Group unit root test

Group unit root test: Summary				
Series: POLITY2 , CORRUP, GOVEFF, POLSTAB, VACCOUNT				
Date: 12/21/15 Time: 12:34				
Sample: 2002 2014				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.13820	0.0000	5	53
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.61677	0.0001	5	53
ADF - Fisher Chi-square	30.1920	0.0008	5	53
PP - Fisher Chi-square	25.5198	0.0044	5	55

Results suggest that they have a long run relationship among them. Estimations of baseline regression model are given in the following table:

Table 3: Results of the baseline model Regression

Dependent Variable: POLITY2				
Sample: 2002 2014				
Included observations: 13				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CORRUP	-10.77444	2.398101	-4.492904	0.0020
GOVEFF	-77.14569	14.77287	-5.222120	0.0008
POLSTAB	15.74965	3.713826	4.240814	0.0028
VACCOUNT	13.73036	6.258085	2.194020	0.0595
C	-38.42034	10.21170	-3.762383	0.0055
R-squared	0.816286	F-statistic		8.886502
Adjusted R-squared	0.724429	Akaike info criterion		4.771715
S.E. of regression	2.282012	Durbin-Watson stat		2.346913
Sum squared resid	41.66062			

Results show that POLITY2 and corruption are inversely related, indicating with democratization corruption index is decreasing, this means corruption is increasing. With increase in POLITY2 government is becoming less effective, inversely related coefficient (Detailed results are available upon request). To check robustness we ran cointegration regressions of same specification. Fully modified ordinary Least Square

Farooqui & Rahman

qualitatively supports the findings of the Baseline model. Canonical Cointegrating Regression and Dynamic Ordinary Least Square regression conform the pattern.

Table 4: Results of the FMOLS Regression

Dependent Variable: POLITY2				
Method: Fully Modified Least Squares (FMOLS)				
Included observations: 12 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GOVEFF	-76.14171	8.548823	-8.906690	0.0000
CORRUP	-10.87450	1.555531	-6.990860	0.0002
VACCOUNT	13.09166	3.684741	3.552938	0.0093
POLSTAB	16.23054	2.439673	6.652751	0.0003
C	-37.48277	6.136521	-6.108147	0.0005
R-squared	0.807384	Durbin-Watson stat		2.373950
Adjusted R-squared	0.697318	Sum squared resid		42.16676
S.E. of regression	2.454348			

We did pairwise group unit root test, cointegration rank test, FMOLS and Canonical cointegration test for the variables CPI and Voice accountability, for CPI and Political stability and for CPI and government effectiveness. For this part we took Corruption Perception Index (CPI) as the measure of corruption to check robustness of our findings. We found results conforming with control of corruption as the measure. Summary of results are given in the following table:

Table 5: Econometric relationships between selected variables

Variables	Sample period	Nos. of cointegrating relationship (Johansen)	Direction of Causality (Granger)	Sign of relationship (FMOLS)
CPI and VACCOUNT	2004 - 2014	1 (one)	CPI causes VACCOUNT	Positive
CPI and Political Stability	2004 - 2014	1 (one)	CPI causes Political Stability	Negative
CPI and Government Effectiveness	2004 - 2014	1 (one)	CPI causes Government Effectiveness	Negative

Detailed results available upon request

However we could not find any strong (Granger) causality in these three cases, therefore, we ran weak causality tests by taking lagged error correction term in causality testing to get the above results. In that case the equation becomes:

$$\Delta x_t = \alpha + \sum_{i=1}^n \beta_i \Delta x_{t-i} + \sum_{i=1}^n \gamma_i \Delta y_{t-i} + \eta ECT_{t-1} + \varepsilon_t$$

$$\Delta y_t = \alpha + \sum_{i=1}^n \beta_i \Delta y_{t-i} + \sum_{i=1}^n \gamma_i \Delta x_{t-i} + \eta ECT_{t-1} + \varepsilon_t$$

Significance of F statistics of respective models indicates the non-precedence of the dependent variable. The coefficients are significant and justify the direction of the

Farooqui & Rahman

variables. Results show that with decrease of corruption voice accountability increases, but political stability and government effectiveness decreases. Combining these results with regression findings we can reach to following conclusions:

- a) As corruption increases the country becomes less democratic
- b) As corruption increases political stability increases and that helps country becoming more democratic
- c) As corruption increases government effectiveness increases and that undermines democratic value
- d) As corruption increases repetitiveness of general people in government decreases which makes the country less democratic.

Therefore on an average with increase of corruption country is more likely to become less democratic and in that process government consolidates its power. Economic institutions per se have mixed effect on democracy but when we include corruption in picture then that increases political concentration.

6. Conclusion

This simple minded exercise gives us following insights; with democratization government of Bangladesh is becoming less effective. However political stability increases with democracy such effect is most probably due to the definition of variable and this result may simply mean that with stronger democracy government is strengthening its foothold by increasing its control over the economy. We also found that corruption exerts a strong negative effect on overall democracy.

Although people's participation in political decision making is important but such effort becomes beneficial only when other economic institutions become active and operational. Since economic institutions are mostly social in nature as well therefore country specific studies are necessary to make specific decisions. This current study is likely to help Bangladeshi policy makers to understand what unwanted consequences are developing with flourishing democracy. With increasing corruption democracy cannot bring good to anybody. However, the current study did not investigate micro channels between government offices and corruption (especially monetary corruptions). While insights regarding such channels are available through studies done by Transparency International Bangladesh (TIB) and other organizations, an in depth through study will help us to improve governance.

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Farooqui & Rahman

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Farooqui & Rahman

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Farooqui & Rahman

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