

POLITICAL FREEDOM AND ECONOMIC WELL-BEING: A CAUSALITY ANALYSIS

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Since the seminal work of Lipset (1959), both political scientists and economists have long been puzzled about the link between democracy and economic growth. In Lipset's view, democracy depends on the level of economic development of a particular society: the more developed a society is economically, the greater will be its chance of sustaining democracy. Inspired by Lipset's work, Bilson (1982) and Pennar et al. (1993) have similar argumentation on the link between economic development and democratization. In Bilson's view, economic development enables the dynamic elements of the society to become independent of the government both economically and in terms of social status, thus promotes democracy. Similarly, Pennar et al. argue that economic development generates democracy. The reason is that as population becomes more educated as a result of economic well-being, people begin to demand democracy. Recent studies by Burkhart and Lewis-Back (1994), Londregan and Poole (1996) and Feng (1997) provide empirical support for the thesis that economic development promotes democracy.

Some researchers have taken the alternative approach of examining the link from democracy to economic growth. The literature includes both negative and positive views in this regard. To cite a few examples of the negative strain, one can mention Alesina and Rodrik (1994), Persson and Tabellini (1994), Olson (1982), and Nordhaus (1975). Alesina and Rodrik, and Persson and Tabellini argue that democracies may damage economic performance because they give voice to disadvantaged groups. Redistribution demands of these groups may divert resources from productive investment expenditures and thus harm economic growth. Similarly,

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Olson (1982) argues that rent-seeking behavior of interest groups in democracies may cause stagnation. Nordhaus predicts adverse effects of short run electoral manipulation on economic performance.

As to the positive views, one can cite, among others, Wittman (1989, 1995) and Baba (1997). These authors argue that democracy enables the development of institutions that guarantee the transparency of the policy-making process. Furthermore, they argue that institutions such as property rights that are critical to economic growth are present in democracies.

As in the theoretical argumentation, the empirical work on the link from democracy to economic growth has also produced conflicting results. Bardhan (1993); Barro (1993, 1994, 1996); Barro and Sala-i Martin (1995); Dasgupta (1990, 1993); Easterly and Pritchett (1993); Grier and Tullock (1989); Hanke and Walters (1997); Kormendi and Meguire (1985); Pennar et al.; Przeworski and Limongi (1993); Ryan (1994); and Scully (1988, 1992) have established the existence of a positive link from political freedom to growth. In contrast, Helliwell (1994) and Keefer and Knack (1997) have found a negative link from democracy to economic growth whereas Burkhart and Lewis-Back (1994) have found no link at all.

Most of the previous studies implicitly assumed that economic growth is exogenous and that the presence of democracy endogenous, or vice versa. However, as we have mentioned above, both cases are theoretically possible. Furthermore, previous studies themselves suggest that there may be a lagged relationship between democratization and economic growth. The Granger causality approach provides a plausible technique to consider both lagged and endogenous relationships. However, few studies have used this technique. Two recent works by Farr, Lord and Wolfenbarger (1998) and Uk Heo and Alexander C. Tan (2001) are among these

studies. Farr, Lord and Wolfenbarger have examined the direction of causation between measures of economic freedom, political freedom, and economic growth among both industrial and non-industrial countries. The authors have employed Granger-causality methodology using pooled cross-sectional time series data and have found that for both industrial and non-industrial countries, economic freedom (as one aspect of democracy) Granger-causes economic growth. In addition, their results indicate that there is also causality running from growth to economic freedom. Evidence is also found that growth Granger-causes political freedom (which could be viewed as the other aspect of democracy) while no reciprocating evidence exists. They have also found no relationship in either direction between economic freedom and political freedom.

In the study by Uk Heo and Alexander C. Tan, the authors have also used Granger causality analysis to investigate the causal direction between democracy and economic growth. The analysis is based on data for thirty-two developing countries for the period from 1948 to 1982. Their results indicate that the causal direction between democracy and economic growth can not be generalized in either direction. These results are doubtful given the erroneous application of the Granger causality test by the authors. There are two errors in their application: (i) lack of unit roots tests and (ii) absence of cointegration tests.

In this study we examine the relationships between economic well-being and political freedom using Granger causality analysis for 19 less developed countries (LDC) separately. Availability of data on indicators of political freedom from 1972 to 2001 for most of these countries enables us to conduct the analysis in this way. Unfortunately, data on economic freedom is very restricted in terms of time series component. That is why Granger causality analysis will solely concentrate on the

relationship between economic well-being and political freedom. The choice of 19 LDC has to do with the fact that those countries are the ones with higher variation in their political freedom indicator.

The study follows in three principal sections. We first introduce data and methodology used in the analysis. In a second section, we present and discuss empirical results. The third section concludes.

Data and Methodology

The two variables used in this study are real per capita GDP and an index of political freedom. Both variables are expressed in logs. The real per capita GDP series is derived for each country from International Financial Statistics Compact Disc, (IFS March 2002, CD-ROM) of the International Monetary Fund (IMF). Political freedom data is available at <http://www.freedomhouse.org/research/freeworld/FHSCORES.xls>. The Freedom House gathers political freedom data for each country. The data consist of two components that are averaged: political rights and civic liberties. Each is measured using an ordinal seven-point scale with 1 representing the highest level of political rights or civic liberties and 7 representing the lowest.

The 19 countries included in this study are Argentina, Bangladesh, Bolivia, Brazil, Chile, El Salvador, Guatemala, Korea (South), Malaysia, Nicaragua, Nigeria, Pakistan, Panama, Peru, Philippines, Thailand, Turkey, Uruguay, and Venezuela.

The methodology used in this study can be sketched as follows: Granger causality tests require that the time series be stationary. Otherwise, The F-statistics from the tests will follow nonstandard distributions, and the empirical results will be misleading (Sims et al., 1990). If the original series is nonstationary, they must be transformed into stationary series by differencing the series until they are stationary.

However, when two time series are cointegrated, there is a long-run equilibrium between the two series. Hence, in the presence of cointegration, the simple Granger causality tests can become inappropriate and should be modified, since only short-run effects will be captured when all the series are in first difference. Thus, standard Granger causality tests, augmented with error-correction terms (derived from the long-run cointegrating relationships), are used to examine the long-run effects. Such tests are carried out on $I(0)$ time series to guarantee that inferences made from the tests are valid. (Engle and Granger, 1987).

The methodology summarized above is made up of three steps. The first step is to test the time series for stationarity by applying the augmented Dickey-Fuller (ADF) test. Test results, not reported here, indicate that each time series for each country is integrated of the first order, $I(1)$, except political freedom variable for Bangladesh, Bolivia, and Thailand that is trend stationary and that of Guatemala which is $I(0)$.¹ Since the variables are found to be nonstationary of order one, it is of interest to examine if these variables are cointegrated for all countries (except Bangladesh, Bolivia, Thailand, and Guatemala). Thus, the second step is to test for cointegration in each of these 15 countries by using Johansen procedure.² This procedure is performed for both first and second order of vector auto-regression (VAR). The order of VAR is selected using the Akaike's information criterion (AIC) and Schwarz's Bayesian criterion (SBC). When these criteria indicate different orders of VAR, then the Johansen procedure is performed with both specifications of VAR. Proceeding in this way, there can be more certainty about the robustness of the estimated test results.

¹ The ADF tests are performed for both one year and two-year lags. In each case we obtained same results. Moreover, all the ADF equations are free of serial correlation. Detailed statistics of the ADF test results are available upon request from the author.

² This procedure is based on Johansen (1988) and Johansen and Juselius (1990).

The third step is to perform a standard Granger causality test, augmented with an appropriated error-correction term, taken from the appropriate cointegrating relationship. In the Granger causality tests, the order of lag is preset to three years.³ Selection of the Granger causality test specification is made using the procedure outlined above.

Empirical Results

Estimation results are summarized in the following table:⁴

Table about here

Granger causality column of the table indicates that for 14 countries out of 19, political freedom and economic freedom are not related to each other. Thus, Granger causality exists in only 5 countries, namely Bolivia, Malaysia, Korea, Panama, and Turkey. In Bolivia and Malaysia, causal relationship runs from political freedom to economic well-being. Since higher value of PF indicates lesser political freedom, in these countries more political freedom leads to higher economic growth. In Korea, Panama, and Turkey reverse causation seems to be valid, because Granger causality runs from economic well-being to political freedom. Put differently, in these countries higher economic growth leads to more political freedom.

Concluding Remarks

In this study, we examined the causal relationships between economic well-being and political freedom for 19 developing countries. Availability of political freedom data from 1972 to 2001 enabled us to conduct the analysis for each country

³ Presetting the order of lag to three years is due to the small size of the sample period.

separately. This study differs from previous ones with the use of the error-term augmented nature of the Granger causality tests.

Bearing in mind the shortcomings related to the relatively short sample period of about thirty years and the bivariate framework of the analysis, the results indicate no strong empirical evidence in support of the theories that predict a causal relationship between economic growth and political freedom. However, in Bolivia and Malaysia, more political freedom seems to generate higher economic growth, whereas in Korea, Panama, and Turkey higher economic growth seems to cause more political freedom.

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⁴ Detailed statistics of both the cointegration and the Granger causality tests are available upon request from the author.

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Table: Results of Cointegration and Granger Causality Tests

Countries	Cointegration	Granger causality
Argentina	No cointegration exists	PF → Y* : no causality exists Y → PF: no causality exists
Bangladesh	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Bolivia	No cointegration exists	PF → Y : causality exists (-)** Y → PF: no causality exists
Brasil	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Chile	Cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
El Salvador	Cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Guatemala	Cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Korea	Cointegration exists	PF → Y : no causality exists Y → PF: causality exists (-)
Malaysia	Cointegration exists	PF → Y : causality exists (-) Y → PF: no causality exists
Nicaragua	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Nigeria	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Pakistan	Cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Panama	No cointegration exists	PF → Y : no causality exists Y → PF: causality exists (-)
Peru	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Philippines	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Thailand	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Turkey	No cointegration exists	PF → Y : no causality exists Y → PF: causality exists (-)
Uruguay	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists
Venezuela	No cointegration exists	PF → Y : no causality exists Y → PF: no causality exists

*: PF (Political Freedom) → Y (Economic well-being): Granger causality running from PF to Y.

** : (-) indicates negative Granger causality.