Economic Growth, Economic Freedom, and Governance

Cebula, Richard and Ekstrom, Marcus

Jacksonville University, Armstrong Atlantic State University

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Richard J. Cebula
Marcus Ekstrom

Abstract. This study examines the impact of various forms of economic freedom and various dimensions of governance, as well as a number of economic factors, on economic growth among OECD nations. The study period runs from 2004 through 2007. Panel least squares estimation finds that the natural log of per capita purchasing-power-parity adjusted real GDP in OECD nations is positively impacted by business freedom, monetary freedom, trade freedom, and property rights security. Economic growth is found to be negatively affected by perceived government corruption while being positively impacted by both control of corruption and political stability. Other findings indicate that higher unemployment rates and higher long term nominal interest rates inhibit economic growth, while net export growth enhances economic growth.

Introduction

Numerous studies have been conducted to investigate the linkage between economic freedom and economic growth. Most of these studies conclude that there exists a positive impact of various measures of economic freedom on economic growth (Barro, 1997; De Haan and Siermann, 1998; De Haan and Sturm, 2000; Heckelman and Stroup, 2000). Other studies have found that governance influences economic growth (Akcay, 2006; Brito-Bigott, Faria, Rodriguez, and Sanchez, 2008).

This study focuses on the relationship between economic growth on the one hand and both good governance and economic freedom on the other hand in a somewhat different framework than most previous related studies. In particular, in light of the *de facto* global recession currently being experienced, the OECD is working with the world's governments and other organizations to get economies back on the path of economic expansion and stabilization. As a central part of this effort, the OECD strongly takes the position that governments must be cautious not to jeopardize economic freedom and/or good governance as they seek ways in which to get their economies healthy again. In other words, nations must continue to support and promote good governance and economic freedom (OECD, 2009). The concern in this context is that the abandonment of economic freedoms and/or good governance will result over time in *diminished* economic growth and thus lead to a deeper and longer world economic slowdown.

The purpose of this empirical study is to test the joint hypothesis that governance *and* economic freedom both influence real economic growth. The latter is measured in this study by natural log of the PPP (purchasing-power-parity)-adjusted per capita real GDP. Given that the OECD is expressly concerned over this issue, the framework for the study consists of the nations

that comprise the OECD. The PLS (panel least squares) estimation applies for the four-year period 2004 through 2007.

The Framework

This study focuses on economic growth among the OECD member countries for the period 2004-2007. Economic growth is measured as the natural log of per capita real GDP over the study period; log RPCY, made comparable across nations by PPP (purchasing power parity) adjustments. In turn, in principle following a number of studies focused upon economic growth (Cebula, 1978, 1995; Barro, 1997), it is hypothesized that economic growth depends upon (a) various forms of economic freedom (FREEDOM), (b) various forms of good governance (GOODGOV), as well as (c) a number of purely economic factors (ECON), such that:

$$\log RPCYppp_j = f(FREEDOM_j, GOODGOV_j, ECON_j) \tag{1}$$

where:
$\log RPCYppp_j$ = the natural log of the purchasing-power-parity adjusted per capita real GDP in OECD nation j;
$FREEDOM_j$ refers to values of economic freedom measures in nation j;
$GOODGOV_j$ refers to values of good (or bad) governance measures in nation j;
and $ECON_j$ refers to economic factors in nation j.

There are five forms of economic freedom considered in this analysis. The first considered here is *trade freedom*. Trade freedom (TF) reflects the openness of an economy to imports of goods and services from other nations as well as the ability of citizens to interact freely as sellers and buyers in the international marketplace. The second economic freedom considered in this study is *business freedom* (BF), which reflects the individual's right to freely conduct entrepreneurial activities, e.g., starting and operating a business firm without government interference. The third economic freedom studied here is *monetary freedom* (MF), which is illustrated by a stable currency and system of market-determined pricing. Citizens need a stable and reliable monetary system (currency) to serve as both a reliable medium of exchange and store of value (wealth). *Property rights* (PR), which is another form of economic freedom, constitute a moving force in the quest to accumulate private property in a market-driven environment. Secure property rights provide people the confidence to undertake entrepreneurial activities, to save, and to invest (Goldsmith, 1995; Heckelman, 2000). The fifth economic freedom measure considered here is GSF, government size freedom. The GSF index measures the extent to which the private sector of an economy is free from the burden of excessive government expenditures (which are often justified in terms of public goods provided allegedly more efficiently by the "state" rather than by the market or justified in terms of correcting alleged "market failures"). This dimension of government size is often associated with "crowding out" (Carlson and Spencer,

1975, Cebula, 1978). The GSF index also reflects the degree to which the private sector is insulated from government tax burdens. Following the related literature to date, it is expected (*ceteris paribus*) that economic growth is an increasing function of each one of these economic freedom measures:

$$f_{TF} > 0, f_{BF} > 0, f_{MF} > 0, f_{PR} > 0, f_{GSF} > 0 \tag{2}$$

There are three dimensions of governance included in this study. They are control of corruption (CORRCONTR), political stability and absence of violence/terrorism (POLSTAB), and perceived government corruption (PERCORR). To begin, it is observed that "corruption" is defined essentially in general terms as the *misuse of public power for private gain* (Akcay, 2006).

The CORRCONTR dimension of governance is an index measuring the extent to which government *limits* the exercise of power by *non-elected* government officials for personal gain, including both petty and grand forms of corruption, as well as control of state powers by private interests. The greater the degree in which corruption is controlled, the greater the incentive to invest and participate in private enterprise; hence the greater the extent of potential economic growth, *ceteris paribus*. The POLSTAB dimension of governance is an index indicating the likelihood that government will *not* be destabilized by unconstitutional or violent means, including acts of terrorism. The higher the value of this index, the greater the likelihood that the private sector investment will occur and that private enterprise will flourish, thereby resulting in greater economic growth, *ceteris paribus*. Finally, the PERCORR variable is an index reflecting the *perception* by the private sector that *elected* government officials are corrupt. This index is a separate measure of corruption, namely, corruption among *elected* government officials, and the degree to which governments, even democratic ones, continue to be corruptly controlled by same. Clearly, the greater the magnitude of this index, the less the incentive to assume risks of investment by the private sector; hence the slower should be the rate of economic growth, *ceteris paribus*. Based upon the arguments stated above, the following is to be expected:

$$f_{CORRCONTR} > 0, f_{POLSTAB} > 0, f_{PERCORR} < 0 \tag{3}$$

This analysis controls for purely economic determinants of economic growth by adopting three economic variables. These variables take the following forms: LR, the nominal long term interest rate; UR, the percentage unemployment rate of the labor force; and ΔNXY, growth of net exports, expressed as a percent of GDP (Cebula, 1995; Barro, 1997). Presumably, economic growth is a decreasing function of LR since a higher long term interest rate acts to discourage investment in new plant and equipment as well as new residential construction, *ceteris paribus*. Similarly, a higher UR implies a slower rate of economic growth because a higher percentage of the labor force is

unemployed. Finally, a higher ΔNXY implies a higher rate of real domestic production, *ceteris paribus*. Hence, it follows that:

$$f_{LR} < 0, f_{UR} < 0, f_{\Delta NXY} > 0 \tag{4}$$

Based on the variables identified above, equation (1) is rewritten as:

$$\log RPCYpppj = f(TF, BF, MF, PR, GSF, CORRCONTR, POLSTAB, PERCORR, LR, UR, \Delta NXY) \tag{5}$$

Empirical Results

Based on (5), the following semi-log model is to be estimated:

$$\log RPCYpppjt = a_0 + a_1 TFjt + a_2 BFjt + a_3 MFjt + a_4 PRjt + a_5 GSFjt$$
$$+ a_6 CORRCONTRjt + a_7 POLSTABjt + a_8 PERCORRjt + a_9 LRjt + a_{10} URjt$$
$$+ a_{11} \Delta NXYjt + u \tag{6}$$

where
$\log RPCYpppjt$ = the natural log of the purchasing-power-parity adjusted real per capita GDP in nation j;
a_0 = constant;
$TFjt$= the value the trade freedom index in nation j, year t;
$BFjt$= the value of the business freedom index in nation j, year t;
$MFjt$ = the value of the monetary freedom index in nation j, year t;
$PRjt$ = the value of the property rights index in nation j, year t;
$GSFjt$ = the value of the freedom from excessive government index in nation j, year t;
$CORRCONTRjt$ = the value of the control of corruption index among government officials in nation j, year t;
$POLSTABjt$ = the value of the index of political stability in nation j, year t;
$PERCORRjt$ = the value of the index of perceived corruption of elected government officials in nation j, year t;
$LRjt$ = the percentage nominal long run interest rate in nation j, year t;
$URjt$ = the percentage unemployment rate of the civilian labor force in nation j, year t;
$\Delta NXYjt$ = the growth of the ratio of net exports to the GDP in nation j, year t;
u = stochastic error term;
where t = 2004, 2005, 2006, 2007 and j =1,…30.

The data sources for the variables in the analysis are, as follows:
$\log RPCYpppjt$, IMF (2008); freedom indices, TF,BF, MF, PR, GSF, Heritage Foundation (2008); governance indices, CORRCONTR, POLSTAB, PERCORR, World Bank (2009); and explanatory economic variables, LR, UR, and NXY, OECD (2008).

The PLS (panel least squares) estimate of equation (6) using the White (1980) heteroskedasticity correction, is provided by equation (7):

$$\log RPCYppp_{jt} = 1.6 + 0.011\ TF_{jt} + 0.007\ BF_{jt} + 0.026\ MF_{jt} + 0.012\ PR_{jt}$$
$$\qquad\qquad (+2.48) \qquad (+2.34) \qquad (+2.54) \qquad (+2.28)$$

$$+\ 0.002\ GSF_{jt} + 0.467\ CORRCONTR_{jt} + 0.167\ POLSTAB_{jt} - 0.25\ PERCORR_{jt}$$
$$(+1.20) \qquad\quad (+2.13) \qquad\qquad\qquad\quad (+2.08) \qquad\qquad (-2.63)$$

$$-\ 0.11\ LR_{jt} - 0.031\ UR_{jt} + 0.545\ \Delta NXY_{jt},$$
$$(-3.14) \qquad (-2.47) \qquad (+2.88)$$

$$R^2 = 0.84,\ adjR^2 = 0.82,\ F = 48.98 \tag{7}$$

where terms in parentheses are t-values. In equation (7), the estimated coefficients on all 11 of the explanatory variables exhibit the expected signs, and ten are statistically significant at beyond the five percent level. The R^2 is 0.84, so that the model explains approximately five-sixths of the variation in the dependent variable. The F-statistic is statistically significant at the one percent level, attesting to the overall strength of the model.

Based on the PLS results in equation (7), the economic growth rate (as measured) in OECD nations over the 2004 through 2007 study period is an increasing function of TF, BF, MF, PR, CORRCONTR, POLSTAB, and ΔNXY, while being a decreasing function of PERCORR, LR and UR. Only the coefficient on the variable GSF fails to be statistically significant at the ten percent level.

Thus, economic growth in these nations over the study period was positively a function of economic freedom, as measured by TF, BF, MR, and PR. Accordingly, economic growth is greater with higher levels of trade freedom, business freedom, monetary freedom, and a more secure system of property rights protection. These findings are consistent with nearly all of the existing literature on the relationship between economic growth and economic freedom (Barro, 1997; De Haan and Siermann, 1998; De Haan and Sturm, 2000; Heckelman and Stroup, 2000).

Economic growth also is found to beneficially impacted by "positive" forms of governance in the forms of control of corruption (CORRCONTR) and political stability (POLSTAB). Not surprisingly, the perception of greater corruption of elected government officials acts to retard economic growth. Clearly, the PLS findings summarized in equation (7) indicate that in addition to traditionally recognized forms of economic freedom, governance effectiveness vis-à-vis free markets promotes economic growth.

Naturally, economic influences play a significant role in economic growth. According to equation (7), economic growth in this grouping of nations was negatively impacted by both higher nominal long term interest rates (LR) and

higher unemployment rates (UR), while being positively impacted by export growth (∆NXY). These latter findings are compatible with previous research (Cebula, 1995; Barro, 1997).

Of these findings, the result for variable TF may be of particular relevance to the policy concerns of the IMF (2009). In particular, the OECD Secretary-General Angel Gurria (OECD, 2009) has recently stressed that "We must ensure that today's policies to manage the crisis not be the source of tomorrow's problems…Governments must resist protectionism and keep markets open to competition as they seek ways to get their economies going again." In other words, the findings in this empirical study confirm that trade freedom is an important source of economic growth and thus should not be abandoned.

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