

Economic Freedom, Exchange Rates stability and FDI in South Asia

Zafar Mueen Nasir & Arshad Hassan

Abstract: This study empirically examines the role of economic freedom, market size and exchange rates in attracting foreign direct investment in south Asian countries for the period 1995-2008 by employing panel data analysis in fixed effect setting. Results clearly indicate the presence of significant positive relationship between economic freedom and FDI inflows in South Asian countries during the period of study. The real effective exchange rate was having negative association with it indicating that depreciation in host country currency negatively influences the inflow of FDI to that country. Therefore, monetary policy should focus on providing stability to currencies of host countries. The model explains approximately 90% of total variation in FDI. The paper concludes that South Asian countries should make concerted efforts in devising policies that improve level of economic freedom. In other words, they should provide more investment friendly climate, trade openness, efficient monetary and fiscal policies and freedom from corruption. This can help to attract more foreign direct investment in the South Asian countries.

Economic Freedom, Exchange Rates stability and FDI in South Asia

Zafar Mueen Nasir¹

&

Arshad Hassan

I. INTRODUCTION

Foreign direct investment (FDI) plays an important role in the economic development by enhancing growth and bringing foreign funds, new technology and skills to the host country. The FDI also shows a long-term interest in a local entity by an investor operating in another country. Flow of FDI to specific country is based upon macroeconomic factors, government policies, and long term corporate strategies of multinational corporations. Empirical research provides evidence that size of market, legislative and incentive structure, availability of human capital, reliability and efficiency of financial system, natural resources, macroeconomic environment, governance perception, law and order situation, and physical infrastructure are the some basic determinant for attracting FDI. Economic and fiscal environment are also critical factors for attracting FDI along with a favorable business and investment milieu based on political and legal framework. Considering the importance of these factors the Heritage Foundation developed the Economic Freedom Index (EFI) based on these policy parameters. They included business freedom, investment climate, trade openness, monetary and fiscal environment in the index. This index is widely used by investors in selecting the destination for their investment decisions.

Heritage Foundation defines Economic Freedom as “aspect of human liberty that is concerned with the material autonomy of the individual in relation to the state and other organized groups. The highest form of economic freedom provides an absolute right of property ownership, fully realized freedoms of movement for labor, capital, and goods, and an absolute absence of coercion or constraint of economic liberty beyond the extent necessary for citizens to protect and maintain liberty itself.” Gwartney et al (1996) defined economic freedom for individuals to acquire property without the use of power, fraud or theft and protected from physical invasion by others. The owners of the property

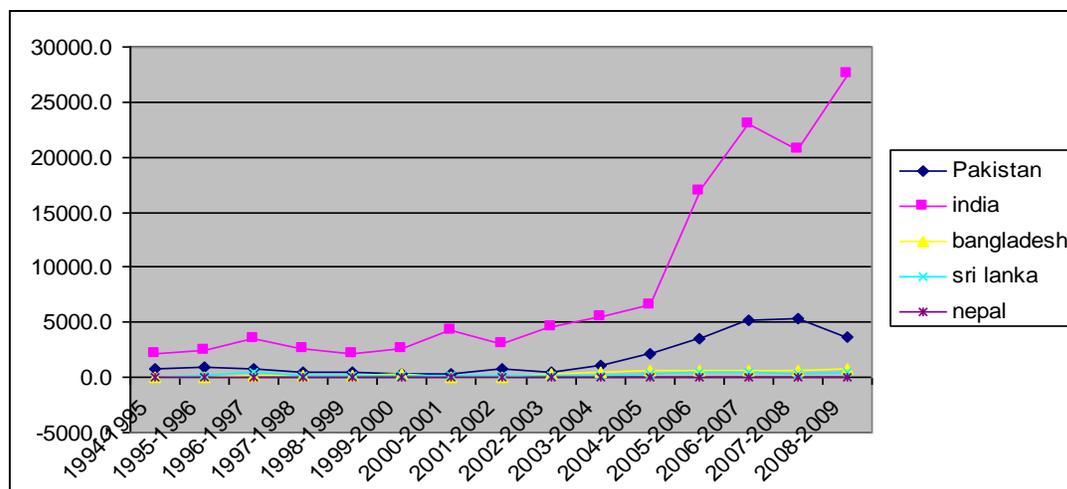
¹ The authors are Chief of Research at PIDE and Head of Business Department at Muhammad Ali Jinnah, Islamabad, Pakistan, respectively.

are free to use, trade, or offer their belongings as long as their actions do not infringe the same privileges of others. Economic freedom is considered as antithesis of centralized planning and governmental control mechanism. It is replication of democratic political pluralism in economic world. It is a philosophy that promotes entrepreneurship and decentralizes economic power and decision making across the economy.

South Asian countries recognize that FDI is potential source of much needed capital, knowledge, technology and access of international markets. To facilitate greater inflows of FDI, many countries in the region have taken important steps to create a more favorable investment climate. Genesis of change can be traced back to late 1970s. In 1977, Sri Lanka started the process of liberalization and other south Asian countries follow the suit. Pakistan's efforts to attract FDI can be traced back to the advent of deregulation, privatization, and liberalization policies initiated at the end of the 1980s. However, this liberalization process is found uneven across countries and can be termed as hesitant liberalization. This process is accelerated in the region in early 1990s with the initiation of liberalization process in India.

FDI to south Asian economies increases from US\$ 204 million in 1980 to US\$ 3 billion in 1995 and around US\$ 9.8 billion in 2005. The increase in FDI inflow, however, is insignificant and share of south Asia in global FDI inflows in 2005 is observed as just 1.1 percent. By 2008, FDI inflows to South Asian economies has crossed US\$30 billion mark, however it was still around one percent of the global FDI inflows. Historical patterns of FDI to South Asian region are shown in Figure 1.1.

Figure 1.1: Trends in FDI in South Asia



The FDI flows in Pakistan have increased from mere US\$250 million in 1990 to US\$5.2 billion in 2008.² However, track record of FDI inflows to Pakistan is not attractive. Number of factors can be identified that contributed in discouraging the foreign investors in investing in the country. These include law and order conditions, power shortage, poor governance, political instability, inefficient fiscal and monetary policies, corruption in higher echelons of government, trade barriers, inconsistency in economic policies etc.

It is worth mentioning that despite market liberalization process, South Asian countries are not fully realizing their latent growth potential. It may be due to the fact that South Asia is still one of the overregulated regions for multinational corporations. These trade restrictions limit potential trade, inflow of FDI and economic growth. In order to accelerate growth and attract FDI to bridge the resource gap, South Asian nations are required to integrate into world economy through liberalization, privatization and deregulation to achieve competitiveness. This means more economic freedom is needed to promote investment. The international experience suggests that economic freedom is prime vehicle for attracting FDI and achieving sustainable growth. Specially, freedom of trade, business and investment accelerate the process of domestic and foreign investment in the country and stimulate the process of sustainable economic growth.

Most of the empirical work on relationship between economic freedom and economic growth is focused on developed markets and no significant study on relationship between economic freedom and FDI in south Asian region is available. Similarly, number of studies exist that explore the role of various variables independently and jointly. However no study captures the joint effect of these policy parameters through an index. The present study is an effort to bridge this gap. The study has the following objectives;

- To study the role of market size and exchange rate in attracting FDI inflows in South Asian countries,
- To explore the role of economic freedom in attracting FDI inflows in South Asia,
- To provide policy guideline for designing effective macroeconomic policies.

² Besides attractive incentive structure for investment, privatization of public sector corporations contributed to higher FDI flows in the country.

This study will help the economic managers of South Asian nations to identify the factors and design policies that are vital for attracting FDI in the region/countries. The paper is organized as follows. Section II provides an overview of literature on the relationship among variables of interest. Section III discusses data and methodological issues. Section IV presents empirical results and the conclusions are provided in the last section.

II. LITERATURE REVIEW

A number of studies focusing on the determinants of countries' attractiveness to FDI inflow highlighted the role of democracy, governance and unwavering macroeconomic environment. For example, Hines (1995) studied the dynamics of US FDI in foreign countries and found that US FDI to corrupt countries declined over time. However, the relationship between corruption and FDI was found insignificant. Okeahalam and Bah (1998) confirmed the results by examining the relationship between corruption and FDI flows. Ayal and Georgios (1998) examined the impact of components of economic freedom on growth rate, output and investment by using OLS method. Results indicated that economic freedom accelerated economic growth through accelerating capital accumulation process. Further, these factors contributed positively in enhancing total factor productivity. El-Naggar (1990) and Collier and Gunning (1999) focused on the role of institutions. This study emphasized that efficient tax regime, property rights and rule of law were some major factors in mobilizing foreign as well as and domestic investment.

Wheeler and Mody (1992) explored relationship between host country risk factor and FDI but no significant relationship was observed. Chakrabarti (2001) found that size of market, cost of inputs, trade and non trade barriers, trade openness, growth rate, stability of foreign exchange were major determinants of FDI. Lipsey (1999) included size of market, growth rate, real per capita GDP, a distance variable and a measure of tax rates to examine the determinants of the location of US affiliates in Asia. His findings were in line with Chakrabarti (2001).

Wei (2000) investigated the dynamics of bilateral FDI flows between 12 investing countries and 45 host countries. Results indicated that corruption was significantly negatively related to the volume of FDI. Similarly, Bengoa and Sanchez-Robles (2003) found significantly positive relationship between economic freedom and FDI in Latin American countries. Harms and Ursprung (2001) explored the relationship of political rights and civil liberties with FDI and concluded that significant positive relationship exists among these variables. Adkins, Moomaw and Savvides (2002) concluded that higher economic freedom leads to improved economic performance and that augmented economic freedom had helped countries to move closer to the production frontier. Asiedu (2002) reports that infrastructure development, rate of return, trade openness and country risk factors were important determinant of FDI inflows.

Janicki and Wunnava (2004) found significant role of economic growth, political risk, trade openness and labor cost to explain the flow of FDI to Central and Eastern European countries. Kyrkilis and Pantelidis (2003) examined the determinants of FDI in developing and developed countries and discovered that real GNP, effective exchange rate, and human capital were important determinants of FDI flows. However, openness was found insignificantly related to FDI. Bengoa, Marta, and Sanchez-Robles (2003) examined the relationship between economic freedom and foreign direct investment for 18 Latin American countries for the period 1970 to 1999 by employing panel data analysis. Results showed that economic freedom contributed positively towards inflow of FDI. The economic growth was also found positively related with FDI. Study suggested that human capital, economic stability and liberalized markets may be helpful in attracting long-term capital flows.

Cole (2003) compared various theories of economic growth and analyzed the impact of economic freedom on economic growth by employing economic freedom index. He found the relationship significant and robust under different diversified theoretical framework. Similarly, Scully (2002) examined the contribution of economic freedom in determining economic growth and in the distribution of market income by employing structural models. Study analyzed the role of government policy in advancing economic progress and effect of economic progress on the distribution of market income. Results revealed that economic freedom promotes economic growth as well as equity. He

also found a positive trade-off between economic growth and income inequality. However, this trade off was found small and insignificant in magnitude. Gordillo, Manuel, and Álvarez (2003) investigated the dynamic causal relationship economic freedom, political freedom, democracy and economic growth by employing Kiviet method. Results suggested that economic freedom fostered economic growth but impact of political freedoms on economic growth was insignificant. Similarly, study concluded that democracy accelerates economic growth and economic freedom and in response economic prosperity supports democratization process.

Chan and Gemayel (2004) reported that economic, financial, political risks and instability related with each risk were critical determinants of FDI in the Middle East. Sekkat and Veganzones-Varoudakis (2007) found that trade openness and investment climate had significant impact on FDI flows to Middle East. This study also found that GDP and GDP growth rate were insignificant in determining FDI inflows to developing countries, including the Middle East. Doucouliagos and Ulubasoglu (2006) studied the interplay of economic freedom and economic growth through a comprehensive literature review of 45 different studies conducted during in recent past. Study revealed that significant positive association exist between economic freedom and economic growth and studies of economic growth that do not include economic freedom as determinant of economic growth are bound to arrive at biased results. Study also suggest that physical investment also influences the explanatory power of economic freedom as exclusion of a measure of investment in physical capital augments the anticipated effect of economic freedom on economic growth.

The review of the literature clearly indicates that economic freedom along with other macroeconomic variables does play a role in attracting FDI flows. This merits investigation of economic freedom's role in attracting FDI in South Asian countries. In the following section, the framework of the study is explained along with the description of the data.

III. DATA DESCRIPTION AND METHODOLOGY

This study examines the relationship among FDI inflows, market size and index of economic freedom for the period 1995-2008 by employing annual time series data.

Market size is measured by using GDP. Index of Economic freedom reported by heritage foundation is used as measure of economic freedom. Index of Economic Freedom comprises of a comprehensive set of measures of policy parameters like business freedom, trade freedom, fiscal freedom, government size, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption and labor freedom. Each component of economic is ranked on 0-100 scale. Highest score may be 100 which is an indicator of most conducive environment for economic freedom. Index of Economic freedom is an equally weighted index of above components. Equal weights are used to avoid biased behavior toward any specific policy parameter.

3.1 Methodology and Econometric Model

This study employs multivariate regression analysis in a panel data framework to explore the dependence of foreign direct investment on economic freedom and other factors like market size, investment climate and foreign exchange rate. The panel data analysis helps to explore of cross-sectional and time series data simultaneously. Panel data analysis has been used with assumption of constant coefficients as well as in fixed and random effect setting.

Constant coefficient model assumes that the intercept and slope terms are constant and there are no differences among the data matrices of the cross sectional dimensions. The model of the study is presented in the following equation.

$$\text{LNFDI}_{i,t} = \beta_0 + \beta_1 \text{LNEF}_{i,t} + \beta_2 \text{LNGDP}_{i,t} + \beta_3 \text{REER}_{i,t} + \mu_t$$

Where $\text{LNFDI}_{i,t}$ is natural logarithm of foreign direct investment in country “i” for the year “t” and $\text{LNEF}_{i,t}$ is natural logarithm of index of economic freedom for country “i” for the year “t”. REER is real effective exchange rate and LNGDP captures the market size. The μ_t represents the error term.

Common constant method is quite restrictive so more insight can be achieved through inclusion of fixed and random effects in the method of estimation. In the fixed effect method the constant is treated as section-specific so fixed effect model allows for different constants for each section. The applicability of fixed effect model has been

tested by using Standard F test. The null hypothesis is that all the constants are same and therefore common constant model can be used.

$$F = \frac{(R^2_{FE} - R^2_{CC}) / (N-1)}{\{(1 - R^2_{FE}) / (NT - N - K)\}}$$

If calculated value is greater than F critical value, we reject the hypothesis that all constants are same. In fixed effect model the cross sectional effect is captured through dummy D_i which represents the countries.

$$\text{LNFDI}_{i,t} = \beta_0 + \beta_1 \text{LNEF}_{i,t} + \beta_2 \text{LNGDP}_{i,t} + \beta_3 \text{REER}_{i,t} + \sum D_i + \mu_t$$

An alternative method of estimation is random effect model which assumes that the constants for each section are not fixed but are random. Fixed effect model assumes that each country differs in its intercept term whereas random effect model assumes that each country differs in error term.

$$\text{LNFDI}_{i,t} = \beta_0 + \beta_1 \text{LNEF}_{i,t} + \beta_2 \text{LNGDP}_{i,t} + \beta_3 \text{REER}_{i,t} + (v_i + \mu_t)$$

The choice between fixed effect and random effect model is made through Hausman Test (1978). That is based on the idea that under the hypothesis of no correlation, both OLS and GLS are consistent and OLS is inefficient, while under the alternative, OLS is consistent but GLS is not.

$$H = (\beta^{FE} - \beta^{RE})' [(\text{Var}(\beta^{FE}) - \text{Var}(\beta^{RE}))^{-1} (\beta^{FE} - \beta^{RE})] \sim \chi^2(k)$$

If the value of H statistic is large, the difference between estimates is significant, so null hypothesis that random effect model is consistent is rejected and fixed effect estimators are used. If the value of H statistics is small then random effect estimators is more appropriate.

IV. EMPIRICAL RESULTS

Table 4.1 exhibits the statistical properties of time series data. Descriptive statistics indicates that India attracts highest average foreign direct investment during 1995-2009 which is more than \$7154 million. Average foreign direct investment in Pakistan during said period is \$1630 billion and Bangladesh remains at third position with \$312 million per year. In 2007-2008 south Asian countries receive highest FDI inflows, India crossed \$ 22950 million and Pakistan touched \$ 5409 million which is the highest level in its history.

Table 4.1: Descriptive Statistics
(For the period 1995-2008)

	Mean	Median	Std Deviation	Minimum	Maximum
Pakistan					
FDI	1629.88	772.80	1765.73	308.00	5409.80
Econ Freedom	55.74	55.89	1.73	53.02	58.42
GDP	89732.00	69430.90	44097.04	52201.09	185429.3
REER	57.33	57.13	7.01	45.02	69.94
India					
FDI	7154.24	3955.65	7275.17	2143.60	22950.00
Econ Freedom	50.49	50.70	2.70	45.09	54.20
GDP	471572.8	380772.6	215594.5	281122.5	960297.0
REER	45.37	45.64	3.31	39.03	50.28
Bangladesh					
FDI	312.78	235.05	259.51	1.90	692.00
Econ Freedom	48.88	49.92	3.73	38.72	52.90
GDP	47668.33	42174.95	13588.91	34120.60	76931.36
REER	59.97	60.52	4.76	52.16	66.66
Sri Lanka					
FDI	258.43	231.00	136.63	56.00	529.00
Econ Freedom	62.28	62.49	2.44	58.41	66.00

GDP	17495.90	14339.91	7366.27	10172.61	36368.41
REER	100.00	99.60	10.22	76.54	113.33

With reference to economic freedom, Sri Lanka ranks the highest with an average score of 62 and Pakistan stands second with 55.9. Bangladesh is placed at last position in the region. India is also found comparatively over regulated market in the region as its index of economic freedom is lower than average of South Asian region. With reference to size, India is the largest market whereas Sri Lanka is the smallest market.

Results of common effect model are reported in Table 4.2 which indicates that LNEF, LNGDP and REER can explain 43.8% of the total variation in FDI inflow.

**Table 4.2: Panel Data Analysis
Common Effect Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
	34.059	7.205	4.727	0.000
LNEF_?	-6.592	1.616	-4.079	0.000
LNGDP_?	0.240	0.200	1.199	0.236
REER_?	-0.034	0.013	-2.638	0.011
Adjusted R²	0.4384			
F statistics	13.5318			
F significance	0.0000			

As Common Constant Method is quite restrictive so Fixed and Random Effects models have also been tested. The null hypothesis is that all the constants are same is tested by using Standard F-test. Here calculated value of F =70.53 is greater than F-critical value at 95% confidence level so null hypothesis is rejected. Therefore Fixed effect model is better model.

Finally, In order to make a choice between Fixed Effect Model and Random Effect Model, Hausman test has been applied and results are reported in Table 4.3 below.

Table 4.3: Correlated Random Effects**Hausman Test**

		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
H Statistics		271.8767	3	0
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
LNEF_?	2.4837	-6.5915	1.0502	0
LNGDP_?	2.8869	0.2397	0.0787	0
REER_?	-0.0288	-0.0341	0.0001	0.52

Above table shows that the value of H statistics is high which indicates that difference between estimates is significant at $\alpha=0.05$. Therefore null hypothesis that random effect model is consistent is rejected and fixed effect estimators are considered most appropriate. Results of fixed effect model are reported in Table 4.4

Table 4.4: Panel Data Analysis**Fixed Effect Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEF_?	2.4837	1.2138	2.0461	0.046
LNGDP_?	2.8869	0.2920	9.8868	0.000
REER_?	-0.0288	0.0097	-2.9601	0.005
BAN—C	-9.8881	4.6029	-2.1482	0.037
IND—C	-12.7837	4.7577	-2.6869	0.010
PAK—C	-20.2733	5.0310	-4.0296	0.000
SLK—C	-14.0955	4.9576	-2.8431	0.006

Adjusted R²	0.9142
F statistics	87.0632

F significance	0.0000
-----------------------	--------

Results clearly indicate the presence of significant positive relationship between economic freedom and FDI inflows in south Asian countries during period of study. This relationship has economic rationale as economic freedom captures the impact of components like business freedom, trade freedom, fiscal freedom, government size, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption and labor freedom for a country. Therefore a country that offers the right to create, operate, and close an enterprise without interference from the state and permits individuals and businesses to keep and control their income and wealth for their own benefit and use will definitely attract the foreign direct investment. Similarly, trade openness and low corruption levels also provide confidence to foreign investors and effect their decision regarding location of business. LNGDP is also significantly positively associated with foreign direct investment at 95% confidence interval which shows that large markets attract more FDI. Therefore, in South Asia, India attracts maximum FDI followed by Pakistan, Bangladesh and Sri Lanka. Real effective exchange rate is found significantly negatively related to FDI indicating that depreciation in host country currency negatively influences the inflow of FDI to that country. As above studied variables are able to capture most of the important dimensions of decision parameters of investors regarding FDI so above model is able explain approximately 90% of total variation in FDI.

V. CONCLUSION

The magnitude of FDI in South Asia remains relatively low. The region despite a supportive macroeconomic environment and financial sector stability has attracted very low amount of FDI inflows. Its share in the world inflows as well as proportion of its GDP is negligible. The reasons are many but in my opinion one major reason is limited Economic Freedom.

In south Asian countries, economic freedom is found significantly positively related to FDI. As Economic Freedom is an important catalyst in attracting FDI in the region, so through Freedom of trade, business and investment these countries can

accelerate the process of domestic and foreign investment in the country and stimulate the process of sustainable economic growth. These countries should also improve governance mechanism and control corruption which is necessary to improve Economic Freedom in the country. Therefore, key policy implications for South Asian countries attempting to attract FDI are to create a better investment climate by improving Economic Freedom. The real effective exchange rate (REER) is found statistically significant and negatively related to FDI indicating that these countries should design and develop such policies that provide stability to their currencies. The significant positive relationship between Market Size and FDI inflows is quite logical and indicative of the fact that large markets have more attraction and potential for foreign investment.

The main conclusion of the paper is that by providing a stable, consistent, and transparent regulatory framework along with stable macroeconomic environment, these countries can attract more FDI inflows. It is worth noted that these countries should focus not only on policies to attract FDI but also on the policies that are necessary for FDI to generate a positive development impact in the recipient country.

REFERENCES

- Adkins, Lee C., Ronald L. Moomaw, and Andreas Savvides (2002). "Institutions, Freedom, and Technical Efficiency." *Southern Economic Journal* 69 (July): 92–108.
- Ali, Abdiweli M. (1997). "Economic Freedom, Democracy and Growth." *Journal of Private Enterprise* 13 (Fall): 1–20.
- Adkins, Lee C., Ronald L. Moomaw, and Andreas Savvides (2002). "Institutions, Freedom, and Technical Efficiency." *Southern Economic Journal* 69 (July): 92–108.
- Ali, Abdiweli M. (1997). "Economic Freedom, Democracy and Growth" *Journal of Private Enterprise* 13 (Fall): 1–20.
- Ali, Abdiweli M., and W. Mark Crain (2002). "Institutional Distortions, Economic Freedom, and Growth" *Cato Journal* 21, 3 (winter): 415–26.
- Ali, Abdiweli M. (2003). "Institutional Differences as Sources of Growth Differences" *Atlantic Economic Journal* 31, 4 (December): 348–62.
- Ayal, Eliezer B., and Karras Georgios (1998). "Components of Economic Freedom and Growth: An Empirical Study." *Journal of Developing Areas* 32 (spring): 327–38.
- Bengoa, Marta, and Blanca Sanchez Robles (2003). "Foreign Direct Investment, Economic Freedom and Growth: New Evidence from Latin America." *European Journal of Political Economy* 19, 3: 529–45.
- Carlsson, F., and S. Lundstrom (2002). "Economic Freedom and Growth: Decomposing the Effects." *Public Choice* 112, 3–4 (September): 335–44.
- Cole, Julio H. (2003). "The Contribution of Economic Freedom to World Economic Growth, 1980–99." *Cato Journal* 23, 2 (Fall): 189–98.
- De Haan, Jakob, and Jan-Egbert Sturm (2000). "On the Relationship between Economic Freedom and Economic Growth." *European Journal of Political Economy* 16: 215–41.
- Doucouliafos, Chris, and Mehmet Ali Ulubasoglu (2006). "Economic Freedom and Economic Growth: Does Specification Make a Difference?" *European Journal of Political Economy* 22, 1: 60–81.
- Farr, W. Ken, Richard A. Lord, and J. Larry Wolfenbarger (1998). "Economic Freedom, Political Freedom and Economic Well-Being: A Causality Analysis." *Cato Journal* 18, 2 (Fall): 247–62.

Gwartney J. , Robert Lawson, and Randall Holcombe (1999). “Economic Freedom and the Environment for Economic Growth ” *Journal of Institutional and Theoretical Economics* 155, 4: 1–21.

Scully, G.W. (2002). “Economic Freedom, Government Policy and the Trade-Off between Equity and Economic Growth.” *Public Choice* 113, 1–2 (October): 77–96.

Vega-Gordillo, Manuel, and José L. Álvarez-Arce (2003). “Economic Growth and Freedom: A Causality Study.” *Cato Journal* 23, 2 (Fall): 199–215.