Appendix 2: Selected Publications Using Ratings from *Economic Freedom of the World*

The following are some of the publications that have used the economic freedom ratings from *Economic Freedom of the World*. In most cases, a brief abstract of the article is provided. Those interested in doing further research using the Economic Freedom index are invited to retrieve the data set from the website of the Economic Freedom Network, <http://www.freetheworld.com>. The most up-to-date information on articles using the index of *Economic Freedom of the World* can be found at <http://www.freetheworld.com/papers.html>.

Adkins, Lee C., Ronald L. Moomaw, and Andreas Savvides (2002). Institutions, Freedom, and Technical Efficiency. *Southern Economic Journal* 69 (July): 92–108.

The authors conclude that increases in economic freedom are associated with improved economic performance in that increases in economic freedom move countries closer to the production frontier.

Ali, Abdiweli M. (1997). Economic Freedom, Democracy and Growth. *Journal of Private Enterprise* 13 (Fall): 1–20.

"This paper takes advantage of newly constructed measures of economic freedom to show the importance of economic freedom on growth. I find that economic freedom is a more robust determinant of growth than political freedom and civil liberty."

Ali, Abdiweli M. (2003). Institutional Differences as Sources of Growth Differences. *Atlantic Economic Journal* 31, 4 (December): 348–62.

"Until very recently most of the studies investigating the determinants of growth fail to incorporate the importance of institutions into their empirical analysis. This paper highlights the importance of institutions on growth and development, and evaluates the empirical results on the effect of institutions on growth and investment. It provides ample evidence that the institutional environment in which an economic activity takes place is an important determinant of economic growth. This paper uses alternative measures of institutional quality to capture the role of institutions in explaining growth differences across countries. When these institutional variables are incorporated into the core regression equations as additional explanatory variables in two different sample periods; both samples yield similar results. The empirical results reveal that countries with high levels of economic growth are characterized by high levels of economic freedom and judicial efficiency; low levels of corruption, effective bureaucracy and protected private property."

Ali, Abdiweli M., and W. Mark Crain (2002). Institutional Distortions, Economic Freedom, and Growth. *Cato Journal* 21, 3 (Winter): 415–26.

This paper examines the robustness of economic freedom as a predictor of growth and investment compared to political rights and civil liberties. It also examines the relation between economic freedom and input-price distortions and institutional quality.

Ali, Abdiweli M., and Hodan Said Isse (2003). Determinants of Economic Corruption: A Cross Country Comparison. *Cato Journal* 22, 3 (Winter): 449–66.

In this paper, the authors looked at what factors determine the level of corruption across nations. They used education, judicial efficiency, the size of government, political and economic freedom, foreign aid, ethnicity, and the type of the political regime to explain cross-country differences in corruption. They concluded that "[c]orruption is found to be negatively and significantly correlated with the level of education, judicial efficiency, and economic freedom. It is positively and significantly correlated with foreign aid and the size of government" (p. 461).

Ayal, Eliezer B., and Karras Georgios (1998). Components of Economic Freedom and Growth: An Empirical Study. *Journal of Developing Areas* 32 (Spring): 327–38.

The paper uses regression analysis to examine the effect of the components of economic freedom on growth, output and investment and finds that "economic freedom enhances growth both via increasing total factor productivity and via enhancing capital accumulation." It also identifies components that have the highest statistical effects on these variables, with the aim of informing policy makers.

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.

"This paper explores the interplay between economic freedom, foreign direct investment (FDI) and economic growth using panel data analysis for a sample of 18 Latin American countries for 1970–1999. We find that economic freedom in the host country is a positive determinant of FDI inflows. Our results also suggest that foreign direct investment is positively correlated with economic growth in the host countries. The host country requires, however, adequate human capital, economic stability and liberalized markets to benefit from long-term capital flows."

Berggren, Niclas (1999). Economic Freedom and Equality: Friends or Foes? *Public Choice* 100, 3/4 (September): 203–23.

This paper describes a theoretical model of the relationship between economic freedom and income distribution, and investigates empirical results. The results indicate that "sustained and gradual increases in economic freedom influence equality measures positively … [but] the absolute level of economic freedom appears to be negatively related to equality in some cases."

Berggren, Niclas, and Henrik Jordahl (2005). Does Free Trade Really Reduce Growth? Further Testing Using the Economic Freedom Index. *Public Choice* 22, 1–2: 99–114.

"While studies of the relationship between economic freedom and economic growth have shown it to be positive, significant and robust, it has rightly been argued that different areas of economic freedom may have quite different effects on growth. Along that line, Carlsson and Lundström (2002) present the surprising result that 'International exchange: Freedom to trade with foreigners' is detrimental for growth. We find that 'Taxes on international trade' seems to drive this result. However, using newer data and a more extensive sensitivity analysis, we find that it is not robust. Least Trimmed Squares-based estimation in fact renders the coefficient positive."

Berggren, Niclas and Jordahl, Henrik (2006). Free to Trust: Economic Freedom and Social Capital. *Kyklos* 59 (May): 141–69.

"We present new evidence on how generalized trust is formed. Unlike previous studies, we look at the explanatory power of economic institutions, use newer data, incorporate more countries, and use instrumental variables in an attempt to handle the causality problem. A central result is that legal structure and security of property rights (area 2 of the Economic Freedom Index) increase trust. The idea is that a market economy, building on voluntary transactions and interactions with both friends and strangers within the predictability provided by the rule of law, entails both incentives and mechanisms for trust to emerge between people."

Boockmann, Bernhard, and Axel Dreher (2003). The Contribution of the IMF and the World Bank to Economic Freedom. *European Journal of Political Economy* 19, 3: 633–49.

"We analyse the effect of IMF and World Bank policies on the composite index of economic freedom by Gwartney et al. (2000) as well as its sub-indexes, using a panel of 85 countries observed between 1970 and 1997. With respect to the Bank, we find that the number of projects has a positive impact on overall economic freedom, while the effect of the amount of World Bank credits appears to be negative. These effects are stronger during the 1990s than in earlier periods. There is no clear relationship between credits and programmes of the IMF and economic freedom as measured by the index."

Carlsson, F., and S. Lundstrom (2002). Economic Freedom and Growth: Decomposing the Effects. *Public Choice* 112, 3–4 (September): 335–44.

"Most studies of the relation between economic freedom and growth of GDP have found a positive relation. In this paper we investigate what specific types of economic freedom measures that are important for growth. The results show that economic freedom does matter for growth. This does not mean that increasing economic freedom, defined in general terms, is good for economic growth since some of the categories in the index are insignificant and some of the significant variables have negative effects."

Chafuen, Alejandro (1998). Estado y Corrupción. In Alejandro Chafuen and Eugenio Guzmán, *Corrupción y Gobierno* (Santiago, Chile: Fundación Libertad y Desarrollo): 45–98.

Finds that corruption is negatively related to economic freedom.

Cole, Julio H. (2003). The Contribution of Economic Freedom to World Economic Growth, 1980–99. *Cato Journal* 23, 2 (Fall): 189–98.

"The purpose of this study is not to compare different theories of economic growth, but to evaluate the impact of economic freedom on economic growth under alternative theoretical frameworks. The particular measure of economic freedom employed –the EFW index—was found to be quite robust and with respect to major changes in the model specifications. We conclude that economic freedom is significant factor in economic growth, regardless of the basic theoretical framework."

Dawson, John W. (1998). Institutions, Investment, and Growth: New Cross-Country and Panel Data Evidence. *Economic Inquiry* 36 (October): 603–19.

"This paper outlines the alternative channels through which institutions affect growth, and studies the empirical relationship between institutions, investment, and growth. The empirical results indicate that (i) free-market institutions have a positive effect on growth; (ii) economic freedom affects growth through both a direct effect on total factor productivity and an indirect effect on investment; (iii) political and civil liberties may stimulate investment; (iv) an important interaction exists between freedom and human capital investment; (v) Milton Friedman's conjectures on the relation between political and economic freedom are correct; (vi) promoting economic freedom is an effective policy toward facilitating growth and other types of freedom."

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.

"It is often maintained that economic freedom underlies high levels of economic growth. This paper compares various indicators for economic freedom. We conclude that, although these measures differ somewhat in their coverage, they show similar rankings for the countries covered. Some elements in these measures are, however, questionable. Our main conclusion is that greater economic freedom fosters economic growth. The level of economic freedom is, however, not related to growth."

De Haan, Jakob, and Jan-Egbert Sturm (2003). Does More Democracy Lead to Greater Economic Freedom? New Evidence for Developing Countries. *European Journal of Political Economy* 19, 3 (September): 547–63.

"This paper examines the relationship between economic and political freedom, focusing on developing countries. We conclude that increases in economic freedom between 1975 and 1990 are to some extent caused by the level of political freedom. This result shows up for all measures of political freedom that we employ."

de Vanssay, Xavier, Vincent Hildebrand, and Zane A. Spindler (2005). Constitutional Foundations of Economic Freedom: A Time-Series Cross-Section Analysis. *Constitutional Political Economy* 16, 4 (December): 327–46.

"Using time-series cross-section analysis, we provide additional empirical validation for the principal-agent model developed by Adserà et al. (2003). In our innovation, efficient economic policy is proxied by 'economic freedom' from the Fraser Institute database and constitutional 'political institutions' are proxied by variables

from the Database of Political Institutions. Our results suggest that the more credible the threat of removal from office, the more government officials will pursue efficient economic policies."

DiRienzo, Cassandra E., Das Jayoti, Kathryn T. Cort, and John Burbridge, Jr. (2007). Corruption and the Role of Information. *Journal of International Business Studies* 38: 320–32.

"The purpose of this research is to investigate whether access to information can affect the level of corruption within a country, while controlling for several variables to prevent model mis-specification. The major empirical finding of this research shows that greater access to information significantly lowers corruption levels across nations. This is an important finding, as bridging the digital disparity across countries can serve to lessen national corruption levels and improve the conduct of international business by lowering global transaction costs. This study also affirms previous research that countries that have lower levels of masculinity and high levels of economic development and freedom exhibit lower corruption levels."

Doucouliagos, 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.

The study analyzes the literature on the impact of economic freedom on economic growth. The authors analyzed the results of 45 different studies published over the last decade and concluded that "regardless of the sample of countries, the measure of economic freedom and the level of aggregation, there is a solid finding of a direct positive association between economic freedom and growth" (p. 19). Furthermore, they noted that studies of economic growth that fail to include a measure of economic freedom in their analysis will produce biased results. The authors also highlight the importance of including a measure of physical investment when estimating the impact of economic freedom on economic growth. They found that the exclusion of a measure of investment in physical capital increases the estimated effect economic freedom has on economic growth.

Dreher, Axel, and Sarah M. Rupprecht (2007). IMF Programs and Reforms—Inhibition or Encouragement? *Economics Letters* 95, 3 (June): 320–26.

"We analyze the impact of International Monetary Fund (IMF) programs on market-oriented reforms [as measured by economic freedom]. Employing panel data for 116 countries over the period 1970–2000 we find that the net effect of IMF programs on reforms is negative."

Easton, Steven T., and Michael A. Walker (1997). Income, Growth, and Economic Freedom. *American Economic Review* 87, 2 (May): 328–32.

This paper finds that economic freedom is an important explanatory variable for steady-state levels of income. The addition of a variable for economic freedom is also shown to increase the explanatory power of a neo-classical growth model. ◆ *Economic Freedom of the World: 1975–1995* is the main data source for institutional variables.

Esposto, Alfredo, and Peter Zaleski (1999). Economic Freedom and the Quality of Life. *Constitutional Political Economy* 10: 185–97.

"Previous empirical research on the social and economic impact of freedom has tended to focus on the link between freedom and economic growth rates. Only a few studies have looked at freedom's effect on the quality of life, and these generally focused on the effect of political freedom. Here, we attempt to bridge this gap by analyzing the effect of economic freedom on the quality of life. Taking advantage of newly developed measures of economic freedom, we analyze the impact of economic freedom on life expectancy and literacy rates. We find that greater economic freedom enhances the quality of life both across nations and increases the improvements in the quality of life over time."

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.

The paper uses Granger causality analysis to demonstrate that economic freedom "causes" economic well-being and economic well-being "causes" economic freedom. Additionally, the authors argue that economic well-being causes political freedom but that there is no causation flowing from political freedom to economic well-being. The paper also finds no evidence of a causal relationship in either direction between economic freedom and political freedom. Indirectly economic freedom causes political freedom through its effect on economic well-being. ◈ *Economic Freedom of the World: 1975–1995* and the Freedom House index of political rights and civil liberties are the main data sources for institutional variables.

Feldmann, Horst (2007). Economic Freedom and Unemployment around the World. *Southern Economic Journal* 74, 1: 158–76.

"Using data from 87 countries and the years 1980–2003, this paper empirically analyzes whether and to what extent economic freedom affects unemployment. According to the regression results, economic freedom is likely to substantially reduce unemployment, especially among women and young people. A small government sector and a legal system characterized by an independent judiciary, impartial courts, and an effective protection of property rights most clearly seem to have beneficial effects. In addition, there are indications that freedom to trade across national boundaries and a light regulatory burden may also lower unemployment, though apparently in the long term only."

Graeff, P., and G. Mehlkop (2003). The Impact of Economic Freedom on Corruption: Different Patterns for Rich and Poor Countries. *European Journal of Political Economy* 19, 3 (September): 605–20.

"This paper investigates the impact of various components of economic freedom on corruption. Some aspects of economic freedom appear to deter corruption while others do not. We identify a stable pattern of aspects of economic freedom influencing corruption that differs depending on whether countries are rich or poor. This implies that there is a strong relation between economic freedom and corruption. This relation depends on a country's level of development. Contrary to expectations, we find that some types of regulation reduce corruption."

Green, Sam, Andrew Melnyk, and Dennis Powers (2002). Is Economic Freedom Necessary for Technology Diffusion? *Applied Economics Letters* 9, 14 (November): 907–10 .

"Benhabib and Spiegel (1996) argue that human capital increases technological diffusion and, as a result, has a positive effect on economic growth. When human capital is accounted for in this way they find that other institutional variables do not affect growth. Their findings are re-examined by considering the effects of economic freedom on technology spillovers, hence on growth, and it is found that the greater the economic freedom in a country, the greater the amount of technological diffusion. More generally, this research suggests that institutional variables which are captured by economic freedom do indeed have an impact on growth, but only through technological diffusion. However, after accounting for the effects of economic freedom on technological diffusion, there is only weak evidence that human capital has a positive effect on technological diffusion."

Grubel, Herbert G. (1998). Economic Freedom and Human Welfare: Some Empirical Findings. *Cato Journal* 18, 2 (Fall): 287–304.

The paper compares economic freedom to income, growth, unemployment in the OECD, the UN Human Development Index, life expectancy, literacy, poverty, and income distribution. It finds that "economic freedom does not have a cost in terms of income levels, income growth, unemployment rates, and human development."

Gwartney, D. James, Randall G. Holcombe, and Robert A. Lawson (2006). Institutions and the Impact of Investment on Growth. *Kyklos* 59, 2: 255–73.

This paper investigates the effects of institutions on economic growth through the impact of economic institutions on both the levels and productivity of investment. That is, the authors looked at both the indirect and direct effects of economic freedom on economic growth. They found, using data for 94 countries from 1980 to 2000, that countries that have high-quality institutions, as measured by The Fraser Institute's report, *Economic Freedom of the World*, have not only higher levels of private investment, but also higher productivity with that investment. Specifically, it was found that the productivity of private investment, measured as the impact of investment on growth, was 74% greater in countries with high-quality institutions. In addition, the authors found that a one-unit increase in institutional quality, i.e., economic freedom, increases the long-term economic growth by about 1.5 percentage points when both direct and indirect effects are included, compared to 1.0 percentage point when only the direct affect of institutions are included.

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

This study examines the relationship between economic freedom and economic growth. The authors find that economic freedom is a "significant determinant of economic growth, even when human and physical capital, and demographics are taken into account." The authors also test for causality. They find that increases in economic freedom lead to higher economic growth but not that higher economic growth leads to higher economic freedom.

Hanke, Steve H., and Stephen J.K. Walters (1997). Economic Freedom, Prosperity, and Equality: A Survey. *Cato Journal* 17, 2 (Fall): 117–46.

The article compares several institutional indexes for content and explanatory power: Gerald Scully's studies, The Fraser Institute's *Economic Freedom of the World*, Freedom House's *Economic Freedom Indicators*, The Heritage Foundation's *Indices of Economic Freedom*, The International Institute for Management Development's *World Competitiveness Yearbook 1996* and The World Forum's *Global Competitiveness Report 1996*. Compares liberty and prosperity, equality and foreign policy implications. They find that economic freedom is positively correlated with GNP per capita.

International Monetary Fund (2005). *World Economic Outlook: Building Institutions*. Washington, DC: International Monetary Fund.

The book uses *Economic Freedom of the World: 2004 Annual Report* as the key measure of good institutions.

Johnson, James P., and Tomasz Lenartowicz (1998). Culture, Freedom and Economic Growth: Do Cultural Values Explain Economic Growth? *Journal of World Business* 33, 4: 332–56.

The paper discusses which cultural values are associated with economic freedom, drawing on two international quantitative cultural indexes.

Knack, Stephen, and Jac Heckelman (2005). *Foreign Aid and Market-Liberalizing Reform*. World Bank Policy Research Working Paper 3557 (April). Washington, DC: World Bank.

Market-oriented economic policies—reflected in limited economic activity by government, protection of private property rights, a sound monetary policy, outward orientation regarding trade and efficient tax and regulatory policy—have been strongly linked to faster rates of economic growth. Foreign aid is often provided in the belief that it encourages liberalizing reforms in these areas. This paper analyzes the impact of aid on market-liberalizing policy reform, correcting for the possible endogeneity of aid. Results indicate that higher aid slowed reform over the period from 1980 to 2000, as measured by a broad index of policies. Disaggregating policy into five areas, aid is significantly linked to slower reform in some policy areas but not in others. Disaggregating by decade, aid's adverse impact on policy reform is much more pronounced for the 1980s than for the 1990s. The Economic Freedom of the World: 2004 Annual Report as the key measure of market oriented policies.

Ludovic, Comeau (2003). The Political Economy of Growth in Latin America and East Asia: Some Empirical Evidence. *Contemporary Economic Policy* 21, 4 (October): 476–89.

"This article examines the historical records of poor economic performance of Latin America compared to East Asia's relative success in the 1970s and 1980s. This study shows that the respective sociopolitical and institutional environment of the two regions was also an important factor contributing to their economic outcomes. Using data for selected countries in both regions, the results confirm the hypothesis of a negative direct (efficiency)

effect of sociopolitical instability on growth, with an additional indirect (accumulation) effect through investment, irrespective of a country's location. Policies adopted by governments, particularly to control inflation and foreign indebtedness and to enhance economic freedom and human capital accumulation, appear crucial for stability. Such policies influenced economic performance through both the direct and the indirect channels."

Mahoney, P.G. (2001). The Common Law and Economic Growth: Hayek Might Be Right. *Journal of Legal Studies* 30 (June): 503–25.

"Recent finance scholarship finds that countries with legal systems based on the common law have more developed financial markets than civil-law countries. The present paper argues that finance is not the sole, or principal, channel through which legal origin affects growth. Instead, following Hayek, I focus on the common law's association with limited government. I present evidence that common-law countries experienced faster economic growth than civil-law countries during the period 1960-92 and then present instrumental variables results that suggest that the common law produces faster growth through greater security of property and contract rights."

Mbaku, John Mukum (1998). Constitutional Engineering and the Transition to Democracy in Post-Cold War Africa. *The Independent Review* 2, 4 (Spring): 501–17.

Discusses the constitutional guarantees necessary to secure economic freedom and why such guarantees are important. Focuses on Africa.

Mbaku, John Mukum, ed. (1999). *Preparing Africa for the Twenty-First Century: Strategies for Peaceful Coexistence and Sustainable Development*. Aldershot, UK and Brookfield, VT: Ashgage.

Chapter 6, "A Balance Sheet of Structural Adjustment in Africa: Towards a Sustainable Development Agenda" (John Mukum Mbaku) and chapter 12, "Making the State Relevant to African Societies" (John Mukum Mbaku) emphasize the constitutional guarantee of economic freedoms as the single most important way both to generate the wealth that Africans need to meet the challenges of the new century and to deal more effectively with the continent's colossal debt.

Nelson, Michael A., and Ram D. Singh, (1998). Democracy, Economic Freedom, Fiscal Policy and Growth in LDCs: A Fresh Look. *Economic Development and Cultural Change* 46, 4 (July): 677–96.

The study examines the effect of democracy on economic growth after controlling for a number of variables for the size of government and institutions and finds that it is not the redistributive policies of democratic governments that hinder development in developing countries but the lack of economic freedom.

Norton, Seth W. (1998). Poverty, Property Rights, and Human Well-Being: A Cross-National Study. *Cato Journal* 18, 2 (Fall): 233–45.

The paper compares property rights to indicators of development and determines that the "well-being of the world's poorest inhabitants [is] sensitive to the cross-national specification of property rights." The paper shows that well-specified property rights enhance the well-being of the world's most impoverished.

Norton, Seth W. (1998). Property Rights, the Environment, and Economic Well-Being. In Peter J. Hill and Roger E. Meiners (eds.), *Who Owns the Environment* (Rowman & Littlefield): 37–54.

Investigates whether countries with better property rights have better performance on environmental measures.

Norton, Seth W. (2003). Economic Institutions and Human Well-Being: A Cross-National Analysis. *Eastern Economic Journal* 29, 1 (Winter): 23–40.

"Economic institutions are widely thought to be important in enhancing human well-being. Other scholars emphasize geography in determining economic deprivation and development. This paper examines both types of factors and finds that property rights and economic freedom substantially reduce poverty and enhance economic development."

Ovaska, Tomi, and Ryo Takashima (2006). Economic Policy and the Level of Self-perceived Well-being: An International Comparison. *Journal of Socio-Economics* 35: 308–25.

This study examines whether economic policies and their outcomes have an effect on people's self-perceived level of well-being. The authors used two different measures of well being, happiness and life satisfaction, both of which come from survey database managed by the Erasmus University in The Netherlands. Using data for 68 countries during the 1990s, Ovaska and Takashima found that economic freedom, as measured by The Fraser Institute, and health, as measured by life expectancy, have consistently turned out to be statistically significant in determining people's level of well-being. That is, both longer life expectancy and the freedom to make choices that are consistent with personal preferences increases one's self-perceived level of well being and happiness.

Paldam, Martin (2003). Economic Freedom and the Success of the Asian Tigers. An Essay on Controversy. *European Journal of Political Economy* 19, 3 (September): 453–77.

"The term 'tigers' refers to a group of four to five East Asian countries that joined the rich Western countries after less than 50 years of 'miraculous' growth. Controversies surround the attempt to explain how the successes were achieved. This paper surveys the discussion and uses the index published in *Economic Freedom of the World* to address the main controversy, which is the role of the state in the rapid growth that took place. After a discussion of likely biases, the data are considered. Three of the five countries have a level of regulation much like other rich countries while two have been as close to *laissez faire* as any country in the world. All are much more 'market-friendly' than the LDCs that they left behind. The extent of *laissez faire* can, however, be only one aspect of the miracle."

Park, Walter G., and Juan Carlos Ginarte (1997). Intellectual Property Rights and Economic Growth. *Contemporary Economic Policy* 15 (July): 51–61.

The authors have compiled an index of intellectual property rights (IPRs), and examine its effects on growth and the factors of production (investment, schooling, and R&D). "The paper finds that IPRs affect economic growth indirectly by stimulating the accumulation of factor inputs like R&D and physical capital."

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.

"This study investigates the role that economic freedom plays in economic growth and in the distribution of market income, the role of government policy in advancing economic progress and in promoting income equality, and the effect that the rate of economic progress has on the distribution of market income. Structural and reduced form models are estimated that reveal that economic freedom promotes both economic growth and equity, and that there is a positive but relatively small trade-off between growth and income inequality."

Spindler, Z. A., and X. de Vanssay (2002). Constitutions and Economic Freedom: An International Comparison. South African Journal of Economics 70, 6 (September): 1135–47.

"The effects of *de jure* constitution enumerations and the number of *de facto* veto players in a polity on economic freedom are empirically explored with the result that only a few constitutional characteristics, such as a bicameral legislature, religious freedom and the *de facto* veto players, seem to matter."

Stocker, L. Marshall (2005). Equity Returns and Economic Freedom. *Cato Journal* 25, 3 (Fall): 583–94.

"This article views existing research on economic freedom and investigates the relationship between equity returns and economic freedom. Results show that cross-country equity returns are directly related to increases in economic freedom. For investors seeking superior investment returns, countries likely to experience an increase in economic freedom should be selected for investment."

Stroup, D. Michael (2007). Economic Freedom, Democracy, and the Quality of Life. *World Development* 35, 1, 52–66.

"Many empirical studies indicate that economic freedom in society is positively correlated with prosperity and growth, while democracy exhibits mixed correlations. However, these studies do not control for the possible interaction of these two types of freedoms or their respective influences on social welfare. This empirical analysis examines the interaction of economic freedom and democracy on measures of health, education, and disease prevention in society. The results imply that greater economic freedom consistently enhances these welfare measures, even among more democratic countries. Democracy has a smaller positive influence that disappears for many welfare measures in countries with more economic freedoms."

Sturm, J.E., and J. De Haan (2001). How Robust Is the Relationship between Economic Freedom and Economic Growth? *Applied Economics* 33, 7 (June): 839–44.

"Using various indicators for economic freedom, it is shown that increases in economic freedom are robustly related to economic growth. This conclusion holds even if the impact of outlying observations is taken into account. The level of economic freedom is not related to growth."

Thompson, G. Herbert, Jr., and Christopher Garbacz (2007). Mobile, Fixed Line and Internet Service Effects on Global Productive Efficiency. *Information Economics and Policy* 19: 189–214.

"Since the pioneering work of Hardy [Hardy, Andrew P. (1980). The Role of the Telephone in Economic Development. *Telecommunications Policy* (December): 278–86.], Saunders et al. [Saunders, R.J., J.J. Warford, and B. Wellenius (1983). *Telecommunications and Economic Development*. World Bank; Johns Hopkins University Press.] and Leff [Leff, N.H. (1984). Externalities, Information Costs, and Social Benefit-Cost Analysis for Economic Development: An Example from Telecommunications. *Economic Development and Cultural Change* 32: 255–76.], researchers have strived to measure the link between communication technologies and economic development. Waverman in his current [Waverman, L., M. Meschi, and M. Fuss (2005). The Impact of Telecoms on Economic Growth in Developing Countries. In *Africa: The Impact of Mobile Phones*, Vodafone Policy Paper Series No. 2 (March): 10–24.] and past [Roller, L., and L. Waverman (2001). Telecommunications Infrastructure and Economic Development: A Simultaneous Approach. *American Economic Review* 74: 909–23.] efforts has demonstrated the positive link between telecommunications infrastructure investments and economic growth. Jorgenson and Vu [Jorgenson, D., and K. Vu (2005). Information Technology and the World Economy. *Scandinavian Journal of Economics* 12: 631–50] explore a similar link.

Our approach focuses explicitly on information networks and the effect they have on business transactions costs, information dissemination and organizational efficiency. Using a stochastic-frontier production function approach, we separate the factors responsible for determining frontier production for subsets of countries while simultaneously exploring the impact of communication networks and economic reform on economies below the frontier. We find institutional reforms and the growth in information networks appear to benefit the world as a whole, but particularly its poorest nations, by improving the efficiency of how these and other resources are used. Finally, only in Asia we find that education is an important factor in shifting the production frontier out. Our findings suggest that expanded communication networks work in conjunction with economic reforms to improve business and government relations."

Tures, John A. (2003). Economic Freedom and Conflict Reduction: Evidence from the 1970s, 1980s, and 1990s. *Cato Journal* 22, 3 (Winter): 533–42.

This paper examines the impact of economic freedom on the reduction of conflict. The author concluded that "[t]he major lesson from our study is that economic freedom promotes peace. Consequently, the more a government erodes economic liberties, the greater the likelihood that a severe crisis or war will erupt" (p. 542).

Vamvakidis, Athanasios (1998). Explaining Investment in the WAEMU [West African Economic and Monetary Union]. Working paper WP/98/99. International Monetary Fund.

Relates differences in investment as a share of GDP within the West African Economic and Monetary Union to differences in economic freedom using fixed and random-effects models across time.

Vásquez, Ian (1998). Official Assistance, Economic Freedom, and Policy Change: Is Foreign Aid Like Champagne? *Cato Journal* 18, 2 (Fall): 275–86.

In this article, Mr. Vásquez argues that foreign aid is propping up countries that are not economically free. Mr Vásquez also tests the notion that aid agencies target pro-growth policies. He finds that for the countries where economic freedom declines or does not improve, foreign aid actually increases (19 of 20 cases). As well, in over one half of these countries GDP per capita declines.

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

"The dynamic relationships estimated strongly suggest that economic freedom fosters economic growth. The impact of political freedoms on economic growth is much less clear. However, based on the evidence, it is plausible to say that political freedoms do not have to be postponed. Furthermore, the dynamic relationships estimated with the Kiviet method indicate that intensified democracy may result in faster growth and greater economic freedom. They also indicate that economic prosperity makes democratization easier. Our findings, therefore, are closer to Friedman's belief than to Lipset's: freedom is a key component in any attempt to improve economic and social well-being."

Voigt, Stefan (1998). Making Constitutions Work: Conditions for Maintaining the Rule of Law. *Cato Journal* 18, 2 (Fall): 191–208.

Makes reference to the general conclusions of *Economic Freedom of the World: 1975–1995* regarding economic freedom and income and growth and discusses conditions under which the rule of law can be maintained.

Weede, Erich, and Sebastian Kampf (2002). The Impact of Intelligence and Institutional Improvements on Economic Growth. *Kyklos* 55, 3: 361–80.

"Standard indicators of human capital endowment—like literacy, school enrollment ratios or years of schooling—suffer from a number of defects. They are crude. Mostly, they refer to input rather than output measures of human capital formation. Occasionally, they produce implausible effects. They are not robustly significant determinants of growth. Here, they are replaced by average intelligence. This variable consistently outperforms the other human capital indicators in spite of suffering from severe defects of its own. The immediate impact of institutional improvements, i.e., more government tolerance of private enterprise or economic freedom, on growth is in the same order of magnitude as intelligence effects are."

Wu, Wenbo, and Otto A. Davis (1999). The Two Freedoms in a Growth Model. *Journal of Private Enterprise* 14, 2: 115–43.

The paper develops a theoretical model describing the impact that economic and political freedoms might have upon economic growth, then estimates the relative impact of the two on growth in the world as a whole and for subsets of developing and developed nations.

Wu, Wenbo, and Otto A. Davis (1999). Two Freedoms, Economic Growth and Development: An Empirical Study. *Public Choice* 100: 39–64.

"The main results are: given economic freedom, the rate of economic growth is independent of political freedom and the level of income; given the level of income, political freedom is independent of economic freedom and the growth rate. The analysis suggests the fundamental effects of economic freedom in fostering economic growth and a high level of income as the condition of a high degree of political freedom." The article also uses principle component analysis to weight the results published in *Economic Freedom of the World*.