WHAT HAVE WE LEARNED FROM THE ECONOMIC FREEDOM OF THE WORLD INDEX?

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Beginning in 1986, Nobel laureate Milton Friedman and Fraser Institute President Michael Walker invited a number of leading scholars to a series of conferences that focused on a single objective: the development of a well-designed measure of economic freedom. Six conferences were held throughout the 1986–94 period and eventually led to the publication in 1996 of the *Economic Freedom of the World* (EFW) index. The EFW index is now published annually by a network of institutes located in 60 countries.

After much discussion, a consensus developed concerning the definition and core elements of economic freedom. The proceedings of those conferences held during 1986–1994 reflected the view that economic freedom was about (1) private ownership, (2) personal choice, (3) voluntary exchange, and (4) free entry into markets. The EFW index is designed to measure the degree to which a nation's institutions and policies are consistent with these four cornerstones.

I. EFW Index: An Overview

As Table 1 of the Appendix shows, the index now contains 38 components (and sub-components) that are divided into five major areas: (1) size of government, (2) legal structure and security of property rights, (3) access to sound money, (4) exchange with foreigners, and (5) regulation of credit, labor, and business. Country ratings for each of the 38 components are derived on a zero-to-ten scale and then used to derive the summary and area ratings for the 123 countries covered by the index. (For additional details, see Gwartney and Lawson (2003) or web site: www.freetheworld.com.)

The structure of the EFW index is consistent with Olson's (2000) idea of market-augmenting government. In order to achieve a high EFW rating a country must do some things while refraining from doing others. The country's legal institutions must protect the property

rights of owners and enforce contracts. Access must also be provided to money of sound value. But governments must also refrain from actions that interfere with voluntary exchange, limit entry into labor, capital, and product markets, and substitute taxes and political spending for market organization. Thus, lower EFW ratings result when government spending is large, state-owned enterprises and government regulations are widespread, tariffs and quotas are high, and exchange rates, interest rates, and other forms of price controls are widely imposed.

Several attributes of the EFW index make it attractive as a tool for the analysis of the linkage between economic policy and the growth process. First, it is a comprehensive measure of institutional quality and the general attributes of economic policy. It includes many factors that economists have historically argued would facilitate economic activity and enhance growth. Second, most of the components are policy variables rather than proxies for such variables. Thus, the index provides some direction for policymakers. Perhaps most important, the data are available at five year intervals over a fairly lengthy time period for a large number of countries. This makes it particularly suitable for the systematic analysis of how cross-country differences in economic freedom and changes in that freedom influence the long-run growth process.

Economic theory indicates that creation of an environment conducive for rapid economic growth is a little bit like an athletic team: success involves the working together of several interrelated elements. For example, free trade policies may be less effective if a country's legal structure is unsound and/or its monetary policies highly unstable. Similarly, high taxes and restrictive price controls may undermine the growth promoting aspects of a sound monetary policy. Put another way, an environment conducive for growth and prosperity may well reflect the contribution of numerous factors including private ownership of enterprises and resources, open markets, low taxes, a sound legal structure, stable monetary policy, freedom to trade with

foreigners, and minimal regulation. Moreover, many of these key elements are interrelated; the presence of one may increase the effectiveness and re-enforce the maintenance of others. As a result, their "joint contribution" may be greater than the sum of the individual parts. All of this suggests the usefulness of a comprehensive measure like the EFW as a tool that will help researchers better understand the contribution of institutions and policies to the growth process.

II. What Have We Learned about Economic Freedom and Long-term Growth

Persistent growth over a lengthy time period is necessary for the achievement of high-income levels. Growth over short periods is often a misleading indicator of long-term growth. When only short time periods are considered, the linkage between economic freedom and growth may be weakened by other factors such as business cycle conditions and changes in the world price of important import or export items. Moreover, credibility is important and it will take time for it to be earned. Before decision-makers will be willing to make major behavioral changes, they must be convinced that a change in policy direction is permanent rather than temporary. Even after they are convinced that a change is permanent, additional time will be required for decision makers to adjust their behavior fully to the new institutional environment. Thus, when considering the relationship between economic freedom and growth, it is important to focus on a lengthy time period.

The results presented here will focus on the 1980-2000 period. They will highlight what I believe to be five of the most important things we have learned about economic freedom and the growth process. Because we are interested in isolating the impact of long-term economic freedom, comparisons will often be made among countries with average EFW ratings during 1980-2000 of more than 7.0, between 5.0 and 7.0, and less than 5.0. In order to achieve an

average rating of more than 7.0, a country would have had to register persistently high ratings throughout the two decades. In contrast, countries with an average EFW rating of less than 5.0 must have registered low ratings throughout most, if not all, of the period. Thus, the "persistently free" economies will dominate the top group (EFW greater than 7.0), while those that are "persistently unfree" will comprise the bottom group (EFW less than 5.0). Of course, the middle group will fall between these two extremes.

1. An institutional and policy environment consistent with economic freedom leads to more investment. Countries that adopt institutions and follow policies more consistent with economic freedom have substantially higher investment rates than their less free counterparts. As Exhibit 1 shows, economies with average 1980-2000 EFW ratings of less than 5.0 attracted only $845 of investment per worker annually during 1980-2000, compared to $3319 for those with average EFW ratings between 5.0 and 7.0 and a whopping $10,871 for those with EFW ratings of more than 7.0. Thus, the annual investment rate per worker of the persistently free economies was more than 12 times the figure for the least free group.

Even though this total investment gap is huge, it understates the impact of economic freedom on private investment per worker. The total investment figures include investments undertaken by government agencies and enterprises. Such government investment activities will comprise a larger share of total investment in economies that are less free. Foreign direct investment is mostly undertaken by private investors and therefore it is a better indicator of how institutional quality influences the choices of private decision makers. As Exhibit 1 shows, the average annual rate of foreign direct investment per worker in the persistently free economies was $3117 compared to $444 for the middle group and only $68 for the least free group.

Astonishingly, the foreign direct investment per worker of the persistently free economies was approximately 45 times the figure for the persistently unfree group!

Exhibit 2 considers the impact of economic freedom on investment as a share of GDP. During 1980-2000, total investment averaged 22.8 percent of GDP in the persistently free economies compared to only 18.6 percent for the economies with low EFW ratings during the two decades. When only private investment is considered, the difference between the persistently free and the persistently unfree economies is even more striking. During the two decades, private investment averaged 18 percent of GDP in countries with EFW ratings of more than 7, but only 14.2 percent for the middle group and 9.6 percent for the least free group. Thus, the private investment rate of the economically free economies was almost twice that of the least economically free group. More detailed analysis indicates that the positive and significant relation between EFW and investment as a share of GDP continues to hold even after the effects of initial income level, changes in human capital, and geographic and locational factors are taken into account. Given the importance of equipment and other capital assets (and the modern technology they incorporate), there can be little doubt that the huge investment gap between the persistently free and persistently unfree economies is a major source of the growth and income differences between the two groups.

2. Economic freedom enhances the productivity of resources. Economic freedom not only influences the rate of investment, it also influences its productivity. Exhibit 3 illustrates the impact of a one-percentage point change in investment as a share of GDP on long-term economic growth for each of the three EFW groupings. Holding initial per capita GDP, tropical location, coastal population, change in human capital, and public investment constant, a one percentage point increase in the I/GDP ratio increased the growth of per capita GDP during 1980-2000 by

0.33 percent in countries with EFW ratings of more than 7.0. But in countries with EFW ratings between 5.0 in 7.0, a percentage point increase in the I/GDP ratio enhanced growth by only 0.27 percent and in the least free group growth was enhanced by only 0.19 percent. Thus, the productivity of investment – the impact of a unit change on growth – was more than 70 percent higher in the more free economies than for the group with the least economic freedom. Further, as Exhibit 3 shows, virtually identical results were obtained when only LDCs were considered in the analysis. (See Appendix, Table 2 for the regressions underlying the estimates presented in Exhibit 3.)

Interestingly, a one percentage point increase in government investment as a share of GDP enhanced long-term growth by only 0.17 of a percentage point. This estimate was identical for both the combined and LDCs only groupings. Thus, the estimated productivity of government investment was about half the productivity of private investment in countries with EFW ratings of more than 7.0 and even less than the productivity of private investment in countries with little economic freedom.

3. Free economies grow more rapidly. Given the sizable impact of economic freedom on both the level and productivity of investment, the positive impact of economic freedom on growth is hardly surprising. As Exhibit 4 shows, the average growth of per capita GDP of countries with an EFW rating of more than 7, was 2.81, compared to 1.41 for the middle group and only 0.1 for the least free group. While this graphic illustrates only the simple relationship between economic freedom on the one hand and income and growth on the other, more detailed analysis indicates that similar differentials exist even after the effects of cross-country differences in initial income level, changes in human capital, tropical location, and percentage of the population residing near an ocean coastline are taken into account. Moreover, the strong

positive relationship between long-term economic freedom and the long-term growth of real GDP also holds when only LDCs are considered in the analysis. As Exhibit 3 shows, LDCs with EFW ratings of more than 7.0 grew at an annual rate of 5.0 percent during 1980-2000, compared to 1.32 percent for the middle group and 0.1 percent for the least free group.

4. Changes in economic freedom exert a substantial impact on long-term growth. A regression model was developed in order to isolate more fully the independent effects of both the initial level and changes in EFW. The dependent variable of the model was the annual growth rate of per capita GDP, while the initial (1980) EFW rating, and changes in EFW ratings during the 1980s and 1990s were independent variables. In order to control for the potential effects of other factors, the initial per capita GDP, tropical location, coastal population, private investment as a share of GDP, government investment as a share of GDP, and change in human capital were also included as independent variables. (See regression 1 of the Appendix, Table 3.)

This straightforward model explained 58.5 percent of the cross-country variation in growth rates during 1980-2000. With the exception of the share of population located near an ocean coastline, all of the independent variables were significant and had the expected sign. Confirming the positive relation between level of EFW and growth of per capita GDP, the coefficient on the initial EFW rating was positive 1.00. This indicates that, holding the other variables of the model constant, a one-unit increase in the initial level of economic freedom was associated with one percentage point higher growth during the two decades.

What about changes in economic freedom? Did countries that improved their EFW rating during the 1980s and/or 1990s achieve a payoff in the form of more rapid growth? The coefficient on the change in EFW during the 1980s was 1.28. This indicates that a one-unit improvement in EFW during the 1980s was associated with a 1.28 percentage point increase in

growth over the two decades. A one-unit increase in EFW during the 1990s enhanced growth by an estimated 0.58 percentage points. Even after controlling for the other factors included in the model, both the level and changes in EFW exerted a significant (95 percent level of confidence) positive impact on long-term growth.

Even though they are substantial, the estimates of regression 1 (Appendix, Table 3) clearly understate the total impact of economic freedom on long-term growth. Private investment as a share of GDP is included as a "control" variable in this model. Thus, the estimated impact of the EFW variables on growth will be after the effects of cross-country differences in private investment have been taken into account. In essence, they will reflect only the direct effects of EFW – those operating through the productivity of resource use. They will fail to reflect the fact that, as we have already shown, cross-country differences in EFW will also influence the rate of private investment.[1]

How can we capture the total impact of EFW, including its impact through investment? One way of doing so would be to estimate the impact of EFW on private investment and then use the residuals from this equation (rather than the actual investment figures) as an independent variable in a model like that of regression 1. Regressions 2 and 3 (Appendix, Table 3) illustrate this approach. Regression 2 estimates the impact of the initial EFW level and changes in EFW during the 1980s and 1990s on private investment as a share of GDP, holding tropical location and coastal population constant. This simple model explains more than half of the cross-country variation in the I/GDP ratio during 1980-2000. Confirming our earlier findings, economic freedom (both the initial level and changes during the 1980s and 1990s) exerts a strong positive impact on private investment as a share of GDP.

Regression 3 (Appendix, Table 3) substitutes the residuals from regression 2 for the Private Investment/GDP variable. The logic of doing this is that the residuals from regression 2 represent the variation across countries in private investment that is not correlated with EFW, so by using these residuals, the variation in private investment that is associated with cross-country differences in EFW will be captured in the EFW coefficients. Thus, the EFW coefficients in Equation 3 will reflect both the direct effect of institutions via improvements in the efficiency of resource use and their indirect effect via the attraction of a higher level of investment. The coefficients for the EFW variables in regression 3 indicate that a one unit increase in the initial EFW rating enhances growth by 1.52 percentage points, while a unit increase in EFW during the 1980s or during the 1990s was associated with 1.90 and 0.82 percentage point increases in long-term growth, respectively.

Exhibit 5 summarizes both the direct and indirect effects of economic freedom on long-term growth. The direct effect will reflect only the impact of economic freedom via its impact on the productivity of resource use. Our results indicate that an increase in a country's initial EFW rating enhanced growth during 1980-2000 by 1 percentage point and that an increase in EFW during the 1980s enhanced growth by an additional 1.28 percentage points. The total estimates will reflect the impact of economic freedom through both productivity increases and higher rates of investment. When the effects of EFW through investment are also included, a one unit increase in the initial EFW rating enhances growth by an estimated 1.52 percentage points, while an increase in economic freedom during the 1980s pushes growth during the two decades upward by 1.90 percentage points. Note that the total estimates are nearly 50 percent greater than the direct estimates. Clearly, the omission of the "investment effect" results in a substantial understatement of the impact of economic freedom on long-term growth.

Is the estimated impact of a change in EFW large enough to make much difference? Consider the implications for countries like India and Pakistan with EFW ratings of around five throughout most of this period. Our analysis suggests that if these countries adopted and maintained policies consistent with EFW ratings of around seven, approximately the rating of Spain, they could increase their long-term growth of per capita GDP by 2.5 to 3.8 percentage points. Over a period of 20 or 30 years, increases in growth of this magnitude imply a per capita GDP of twice the level that will otherwise be achieved. Clearly, gains of this magnitude would make a major difference.

5. A sound legal system is vitally important for the achievement of high per capita income levels. The work of Douglass C. North and Fredrich Hayek explains why this is true. Our modern living standards are largely the result of what Prof. North calls "depersonalized exchange," that is trade between parties that do not know each other and will probably never meet. These exchanges are coordinated by what Hayek refers to as the "extension of the market" from the local town or village to the region, nation, and indeed to the far corners of the world. Almost everything that households in North America, Europe, and other parts of the developed world consume is the result of gains from depersonalized exchange and extension of the market. Without these gains, high levels of per capita income and modern living standards would be impossible. But these gains from de-personalized trade and expansion in the size of the market cannot be realized without a legal system that protects property rights and enforces contracts in an evenhanded manner. The failure of a country's legal system to perform these functions places a tight constraint on its prosperity.

The findings of the Economic Freedom Project are highly consistent with this view. The Legal System Area of the EFW index indicates the consistency of a nation's legal structure with

protection of property rights, unbiased enforcement of contracts, independence of the judiciary, and rule of law principles. Among the approximately 100 countries for which data were available throughout the 1980-2000 period, 24 countries had an average legal system area rating of 7.0 or more. As Table 4 of the appendix shows, these 24 countries had an average per capita GDP in 2000 of $25,716 and an average annual real growth rate of 2.5 percent over the two-decade period. The lowest per capita income among these 24 countries was approximately $12,000. Perhaps even more important, all 24 of the countries with sound legal systems achieved positive real growth of per capita GDP over the two decades.

At the other end of the spectrum, there were 21 countries with an average 1980-2000 Legal System Area rating of less than 4.0. Among these countries, the average 2000 per capita GDP was $3094 and the average growth rate during 1980-2000 was 0.33 percent (see Appendix, Table 5). Both of these figures were approximately one-eighth of the parallel levels for the countries with sound legal systems. The highest 2000 per capita GDP among the 21 countries with a low quality legal system was Colombia's $7010. None of the 21 countries with low quality legal systems were able to achieve both a 2000 per capita income of more than $3400 and a growth rate during 1980-2000 of more than 1.1 percent. Thus, none of the countries with unsound legal systems were able to sustain a solid rate of growth once income levels rose above the $3500 range!

III. Conclusion

Following the collapse of communism, most Western economists advised the political leaders of the former centrally planned economies to focus on privatization.[2] Even though the work of world renowned economists like Douglass C. North, Frederich Hayek, and Peter Bauer

highlighted the importance of institutions, little heed was paid to the potential importance of legal arrangements and other institutional factors prior to the last decade.

The EFW index incorporates legal and monetary arrangements supportive of market exchange, as well as a wide range of expenditure and regulatory factors. Thus, it provides a more comprehensive measure of the consistency of a nation's institutions and policies with those of an idealized market economy than has heretofore been available. The EFW measure makes it possible for researchers to analyze directly the relationship between institutional quality (and changes in that quality) and economic performance. This research indicates that institutions and policies are far more important than is generally believed. When countries adopt institutions and policies consistent with economic freedom, they attract investment, grow more rapidly, and achieve higher income levels. In contrast, countries stagnate when their institutions stifle trade and erode the incentive to engage in productive activities. The key to economic progress is to get the institutions and policies right.

References

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Endnotes

[1] In contrast with the physical capital investment rate, the linkage between EFW (and change in EFW) and changes in human capital were unrelated. Thus, there is no evidence that EFW exerts an indirect impact on growth through investment in human capital.

[2] The following statement of Milton Friedman (2002) at the annual meeting of the EFW network, both illustrates the initial advice and the changes in perspective that have occurred during the last few years.

> *We have learned about the importance of private property and the rule of law as a basis for economic freedom. Just after the Berlin Wall fell and the Soviet Union collapsed, I used to be asked a lot: What do these ex-communist states have to do in order to become market economies? And I used to say: You can describe that in three words: privatize, privatize, privatize. But I was wrong. That wasn't enough. The example of Russia shows that. Russia privatized, but in a way that essentially created private monopolies, private centralized economic controls, and replaced government-centralized controls. It turns out that the rule of law is probably more basic than privatization. Privatization is meaningless if you don't have the rule of law.*