

ECONOMIC FREEDOM AND DEVELOPMENT: NEW CALCULATIONS AND INTERPRETATIONS

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For some time there has been a debate about the effect of economic freedom on economic growth and development (Beach and Davis 1999: 10; de Haan and Siermann 1998; de Haan and Sturm 2000; Edwards 1998; Goldsmith 1997; Gwartney, Lawson, and Block 1996: 109; Knack and Keefer 1995; Pitlik 2002; Scully 1992; Torstensson 1994; Weede and Kämpf 2002). Although there is wide agreement about the stylized fact that economically free societies are richer than other societies, there is less agreement about the impact of economic freedom on growth rates. Some writers contend that the level of economic freedom affects growth, whereas others, in particular de Haan and his associates, dispute the robustness of this claim and find only a relationship between improvements in economic freedom and growth.

The most recently published research on the effects of economic freedom on growth (Gwartney and Lawson 2004; Gwartney, Holcombe, and Lawson 2006) reaffirms that there are strong and beneficial effects of the level of economic freedom and of its improvement on growth rates. Looking at the published literature as well as at the work in progress by one of my doctoral students (Liu 2007), my impression is that there are two ways to strengthen the effects of the level of economic freedom on growth: first, choose a longer rather than shorter period of growth observation; second, and more important, use an average measure of the level of economic freedom rather than a single time point measure of economic freedom that refers only to the first year of growth observation. If one compares, say, de Haan and Sturm's (2000) study with Gwartney, Holcombe, and Lawson's (2006), then one finds that the former study uses a

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somewhat shorter period of growth observation, but both of them use the level of economic freedom at the beginning of the growth period to be explained.¹ Whereas de Haan and Sturm (2000) find *no* significant and robust effect of the *level* of economic freedom on growth, Gwartney, Holcombe, and Lawson (2006) arrive at the opposite conclusion: The level of economic freedom does promote growth.²

The purpose of this article is to discover whether one should believe in the results reported by Gwartney, Holcombe, and Lawson (2006). My approach is straightforward and simple. Neither extreme bounds analysis, nor Bayesian averaging shall be applied. But, of course, a study of robustness requires that one should not follow the example of Gwartney, Holcombe, and Lawson (2006) in every respect. I work with a research design that is similar to theirs (and inspired by it), but I do change some of their procedures. For the purposes of a robustness check, one does not necessarily need to claim superiority of one's own design. It is sufficient to claim that one's design is about as defensible or reasonable as the other one. Robust findings should be supportable by a variety of approaches.

Research Design

For a start, the period of growth observation, 1980 to 2000, is identical to Gwartney, Holcombe, and Lawson's (2006). But I expand the data set from 94 to 102 cases which, of course, is related to a different choice of control variables or other presumed determinants of growth. The sample expansion is not great, but better than nothing. Since all of us have to rely on accidental instead of random samples,³ the effects of sample extensions tend to be unpredictable. Whereas Gwartney, Holcombe, and Lawson (2006) rely on the economic freedom ratings in 1980, I prefer to average ratings from Gwartney and Lawson (2005) for the 1980 to 1995 period. The later the measure of economic freedom within the period of growth observation, the less likely it is to affect the growth rate.⁴ Whereas Gwartney, Holcombe, and Lawson (2006) generate two change in economic freedom

¹In reading the Gwartney, Holcombe, and Lawson (2006) study, my first impression was that they also used average levels of freedom to explain growth rates, but an e-mail from Gwartney (July 3, 2006) asserted that they relied on the 1980 level of economic freedom.

²I shall sidestep the disagreement between these authors and their associates in related publications about the impact of economic freedom on investment, and thereby indirectly on growth.

³In general, we lack data for autocratic, poor, and small countries.

⁴But Gwartney, Holcombe, and Lawson (2006) took great care to refute the idea of reverse causation, according to which growth might lead to economic freedom instead of vice versa.

variables, which separately refer to the 1980s and 1990s, I rely on a single change or improvement in economic freedom variable.

Like them, I use the level of economic development in 1980 as a control variable, but from a different source (Bhalla 2002). I also apply the control variables tropical location and coastal population from the same source. According to Sachs (2005), geography should matter more than institutions or policies. By contrast to Gwartney, Holcombe, and Lawson (2006), I neglect the impact of investment and replace their growth measure of human capital formation by a level measure of it. In my view (Weede and Kämpf 2002; Weede 2004), all standard measures of human capital suffer from being based on the input to human capital formation, such as years of schooling or some related measure. Frequently, schooling input-based measures of human capital do not significantly affect growth rates (e.g., DeLong and Summers 1991; Hegre, Gissinger, and Gleditsch 2003; Pitlik 2002; Plümper and Martin 2003). Inspired by Pritchett (2006), one could also point to the difficulty of reconciling the divergence of growth rates between many Asian or rich countries on the one hand and many non-Asian developing economies on the other hand with globally converging levels in schooling. The World Bank (2005: 68) even admitted that “education is not translating into human capital and that the rise in per worker schooling explains only a small part of the growth in output per worker.”

By contrast, the intelligence quotient (IQ) always does consistently and robustly improve economic growth rates (Lynn and Vanhanen 2002; Weede and Kämpf 2002; Weede 2004; Jones and Schneider 2006). Moreover, it always outperforms standard measures of human capital by a wide margin. Since this article neither necessitates a specific assumption about the genetic and environmental components of intelligence, nor sheds light on this issue, one should regard IQs as scores on an achievement test. Although they do not necessarily say much about cognitive potentials, average IQs assess the current level of human capital availability within nations.

After these changes in the research design, one gets the results of column 1 in Table 1 where the economic growth rate⁵ from 1980 to 2000 is regressed on the level of economic development to assess the opportunities of backwardness or the catch-up effect, on the national IQ to estimate the human capital effect, on coastal population and tropical location to estimate the impact of geographic advantages or

⁵More exactly, the dependent variable is the difference between the natural logarithms of per capita incomes in 2000 and 1980. This operationalization affects only the constant.

TABLE 1
REGRESSIONS OF ECONOMIC GROWTH RATES ON ECONOMIC FREEDOM AND OTHER VARIABLES

	(1)	(2)	(3)	(4)
Constant	-0.071	-0.892	-0.726	-0.301
Average economic freedom	0.130***	0.124***	0.142***	0.168***
	0.346	0.328	0.379	0.361
	0.003	0.004	0.000	0.001
Improvement in economic freedom	0.061*	0.069*	0.078*	0.074*
	0.125	0.141	0.161	0.152
	0.100	0.071	0.093	0.068
Level of economic development (In per capita income 1980)	-0.378***	-0.285***		-0.303***
	-0.858	-0.723		-0.582
	0.000	0.000		0.000
IQ	0.027***	0.032***		0.025***
	0.722	0.847		0.562
	0.000	0.000		0.000
Coastal population	0.225**			0.244**
	0.196			0.198
	0.015			0.046
Tropical location	-0.208**			-0.283***
	-0.226			-0.267
	0.022			0.006
Adjusted R ²	0.547	0.515	0.126	0.574

NOTES: First entries are unstandardized regression coefficients, second entries are standardized regression coefficients, and third entries are significance levels in two-tailed tests. N is 102 in the first three columns and 78 in the fourth column where nations with a per capita income greater than \$15,000 in 1980 have been eliminated. A single asterisk denotes that coefficients pass the 10 percent threshold in significance tests, double asterisks the 5 percent threshold, and triple asterisks the 1 percent threshold.

disadvantages, and on average economic freedom (1980 to 1995) and the change or improvement of it (between 1980 and 2000). All of the coefficients are significant at least at the 10 percent level in two-tailed tests, which corresponds to the 5 percent level in one-tailed tests. The control variables perform as expected. The higher the level of economic development, the lower the economic growth rate in the following two decades is. The higher the IQ, the faster the economy grows. As can be seen from the standardized regression coefficients, these two effects are much stronger than the other effects. Tropical location does some harm. An ice-free coast and much of the population close to it helps. The main concern of this study, however, is economic freedom or capitalism. The average level of economic freedom is the third strongest determinant of economic growth, doing better than the two geographical variables. The economic freedom effect is significant at the three per thousand level. By contrast, the effects of improvements in economic freedom are much weaker. Only in one-tailed tests the 5 percent threshold is just met. With an adjusted R square of 0.55, explanatory success is acceptable and in a similar order of magnitude as reported by Gwartney, Holcombe, and Lawson (2006).

Since the geographical variables performed rather poorly in the first equation, they have been omitted in the second one. The change in economic freedom is retained despite its weak performance in the first equation, because economic freedom effects constitute the focus of this article. R square goes down to 0.52. IQ and the level of economic development change places in column 2 compared with column 1 as the most important determinant of growth. The level of economic freedom remains a much stronger determinant of growth rates than the change or improvement in economic freedom. But the latter variable improves its significance level in the absence of the geographical variables.

Column 3 demonstrates that the better performance of the average level of economic freedom than of changes in economic freedom does not depend on the inclusion of control variables. By itself, however, the level and change of economic freedom explain only about one eighth of the variation in growth rates. The last column reports a regression without rich countries, where the cut-off point is a per capita income of \$15,000 in 1980. The focus on poor countries marginally strengthens the economic freedom and tropical location variables, but hardly affects the impacts of the other variables. Given the focus of this article, one may summarize the findings of Table 1 by saying that the impact of the level of economic freedom looks quite robust, and—in contrast to the claims advanced by de Haan and his

associates—certainly stronger than improvement effects, though of lesser importance than the potential advantages of backwardness (level of economic development) or human capital formation (IQ).

Issues of Interpretation

Although my regressions do support the contentions of Gwartney and Lawson (2004) and Gwartney, Holcombe, and Lawson (2006) that economic freedom and its improvement lead to better growth rates, and that the level of economic freedom is even more important than its improvement, looking at the standardized regression coefficients seems to imply some disappointment. These coefficients tell us something about the degree of importance of independent variables within equations and data sets. Here, the message is clear: Although economic freedom and its improvement matter, their effects are dominated by the level of economic development and human capital formation or intelligence. Do these findings imply that defenders of capitalism and economic freedom exaggerate their case? I think not.

Take the least controversial independent variable first, the level of economic development that assesses potential advantages of backwardness. Discussions among economists (Barro and Sala-i-Martin 1995; Baumol 1994; Olson 1996) are dominated by the reasons for the existence of these potential advantages: Less developed economies can borrow technologies, business models, and marketing procedures from more advanced economies. Imitation may be easier and faster than innovation on which the leading economies have to rely. Plausibly, these advantages are greater at moderate levels of backwardness where the level of human capital formation permits the exploitation of the opportunities of backwardness. Or, less developed economies have more scope for reallocating labor from less productive work in agriculture to more productive work in industry or services. Or, it is probably easier to find profitable investments in developing countries—say, in transport infrastructure—than in highly developed economies where many of the obvious investments have already been made. I do not want to join the debate about the relative merit of these arguments. Nor do I want to add arguments from other social sciences according to which the process of economic development implies value changes that feed back to undermine later economic growth prospects (Inglehart 1997).

Instead, I want to underline the obvious, which nevertheless tends to be forgotten: Advantages of backwardness for some developing countries presuppose the existence of advanced countries. If advanced countries—say, the United States, Europe, and Japan—had

not existed, the early East Asian tigers (South Korea, Taiwan, Hong Kong, and Singapore) could never have grown as fast as they did, nor could China and India do so today. Before the mid-20th century and its previously unknown income differentials between Western industrial societies and less developed countries, no major country ever grew as rapidly as South Korea and Taiwan did during the 1960s or 1970s, or China did since the 1980s, and India and Vietnam also do now (Maddison 2002). Thus, international *inequality* is an essential part of the advantages of backwardness. This inequality benefits those backward countries that grasp the available opportunities.⁶

The advanced and relatively free countries are essential ingredients in generating the opportunities of backwardness. They provide a model, a source of technology, and a market for low-wage products. If the advanced countries became rich ahead of other countries because they established safe property rights for merchants and producers earlier than others, because they benefited from limited government earlier than others, because they invented capitalism and benefited from economic freedom first (Jones 1981; Landes 1998; North 1990; Pipes 1999; Rosenberg and Birdzell 1986; Weede 2000), then the advantages of backwardness are a kind of economic freedom or capitalism effect.

Unfortunately, a lack of quantitative data prevents us from analyzing the impact of economic freedom on growth rates in the long-run. But it is plausible to base a claim on qualitative data or narratives according to which the long-run impact of economic freedom would look much stronger than it did in Table 1. Since Westerners tend to score lower than East Asians on intelligence tests, but nevertheless established capitalism first and overcame mass poverty before East Asians could do it, the long-run impact of economic freedom seems even to dominate intelligence effects. Of course, advantages of backwardness must have been small before the establishment of capitalism because most major civilizations (comprising tens of millions of people) then still had rather similar per capita incomes (Maddison 2002).⁷

Thus, the advantages of backwardness merit a Hayekian (1960: 32)

⁶One of the early writers who recognized international inequality as good rather than evil and who did not bemoan it in the fashionable way has been Herman Kahn (1979: 60ff.) who is most famous for his work on thermonuclear war. Possibly, such a topic helps one to overcome moralizing and political correctness.

⁷Although Acemoglu, Johnson and Robinson (2002) did not explicitly focus on limited government and economic freedom, they do argue that institutions dominate geography as a determinant of economic growth over centuries and they provide some quantitative evidence from the last five centuries to support their view.

interpretation: “The benefits of freedom are therefore not confined to the free. . . . There can be no doubt that in history unfree majorities have benefited from the existence of free minorities and that today unfree societies benefit from what they obtain and learn from free societies.” This statement fits the current relationship between the People’s Republic of China and the West, as if it had been written yesterday and with exactly this example in mind. That the benefits of economic freedom in the United States and other Western countries extend to statist societies was also pointed out by Nau (1995: 47) concerning Japan and other earlier Asian developmental states, such as Taiwan and South Korea:

The Asian model of development celebrated by strategic trade theorists works only in the context of Anglo-American model of freer trade. No one has shown that Japan or any other Asian country would have succeeded in its trade and economic strategies, whatever the degrees of government intervention, if it had not had access to world markets, particularly the American market. To attribute such success to a superior development model, to domestic industrial, technology, and trade policy intervention, therefore, is at best a half-truth.

So, it looks as if economic freedom in the global economy, the existence of dominant and pioneering free economies is of paramount importance in improving growth rates everywhere. Moreover, economic freedom within nations, or the improvement of it, helps those who practice it.

Recognition of the fact of international inequality also has led to quite different evaluations. Recently, the World Bank (2005: 206) bemoaned that “there are huge inequities in the world. Even better-off citizens in most of the developing world face worse opportunities than the poor in rich countries. The fact that the country of birth is a key determinant of people’s opportunities runs counter to our view of equity.”⁸ From such a perspective, it is only a small step to demand more development aid from rich countries to poor countries (Sachs 2005).

Unfortunately, econometric studies do not demonstrate a robust relationship between receiving a lot of aid and growing more rapidly (Brumm 2003; Burnside and Dollar 2000; Doucouliagos and Paldam

⁸Since rich countries tend to be economically free—the correlation between average economic freedom and average incomes varies between 0.70 and 0.75 for the 102 nations and the 1980 to 2000 period analyzed in Table 1—acceptance of this statement should lead one to praise economic freedom and capitalism. But the World Bank resisted this temptation.

2006; Easterly, Levine and Roodman 2003; Hansen and Tarp 2000; Jensen and Paldam 2004; Ovaska 2003). Although some results suggest that aid is effective in an appropriate institutional and policy environment, such effects are not robust and easily replicable. Moreover, aid-giving countries are not always careful about targeting aid to deserving recipients. Some studies even suggest that too much aid may be harmful. Conceivably, rich countries do more for poor countries if they dismantle obstacles to their own growth—which generates advantages of backwardness and opportunities to catch-up for poor countries—than if their governments (in contrast to private entrepreneurs) transfer capital to poor countries.

These findings fit well with arguments against development aid that were made decades ago by Bauer (1981) and, more recently, expanded by Easterly (2001, 2006). One should not overestimate the contribution of investment to growth and simultaneously underestimate the necessity of proper incentives. Although aid may reduce capital scarcity, it almost never improves incentives. By reinforcing the power of governments (which get the aid) over people, aid provides incentives for political action and distributional struggles rather than for productive work. As Olson (1987) has argued, most poor countries suffer from a lack of efficient and honest administrations. Therefore, state dependent development strategies look even more ill-advised for most poor countries than elsewhere. Governmental and administrative efficiency is not their comparative advantage. By contrast, a focus on economic freedom would limit the responsibilities and burdens of poor country governments and minimize the cost of government failure.

Then there is the powerful effect of human capital formation or IQs in Table 1. It is compatible with economic theory as well as with common sense. It says that some nations perform well because they enjoy a better qualified workforce than others. Such a statement should be politically acceptable. But if qualification is measured by IQ, then connotations creep in and political correctness raises its pernicious head. The starting point of misleading connotations is even true. Many, if not most psychometricians claim that individual differences in intelligence are largely heritable or genetic. A typical estimate of heritability is 0.75 for adults (Neisser et al. 1996: 85). But this estimate has been generated from the analysis of data in modern Western societies. It should *not* be extrapolated to previous and less egalitarian Western societies. Almost certainly, traditional Western society has had lower heritabilities than contemporary Western societies. Where almost all children receive adequate nutrition and schooling, the impact of environmental differences has to go down,

but the impact of inherited differences remains, and thereby becomes comparatively more important.

For similar reasons, one should expect that the (by and large unknown) heritabilities of IQ in developing countries are much lower than in Western societies. Since inequality between human beings still arises to a much larger degree from international differences in per capita incomes than from intranational differences in per capita incomes (Firebaugh 1999; Goesling 2001; World Bank 2005: 65), one should also expect that international differences in IQ are less heritable than differences within wealthy Western societies. Probably, the unknown international heritability would be lower than 0.50 (Vernon 1979: 204). Certainly, the well-known heritabilities reported for Western societies do not apply to cross-national comparisons.

Another misleading connotation is that high heritability implies that environmental cures for intellectual deficiencies cannot exist.⁹ There is one (admittedly, rare) metabolic disease, abbreviated PKU, which leads to mental defects if untreated. The most important part of the treatment is a proper diet for children (Jencks 1980). Actually, it has been estimated (Lynn 2006: 148, 185) that about half of the gap between Africans and Europeans in IQ might be due to better nutrition in Europe than in Africa or that the gap between East Asians and Europeans, which already favors East Asians (in tests produced by whites), might grow once the Chinese consume higher quality food as they become richer. Possibly, this focus on food shall be modified by future research, but I cannot see what is politically incorrect in taking food—especially for children—as seriously as schooling.

Finally, there is the Flynn effect (Dickens and Flynn 2001; Meisenberg et al. 2005). This effect implies that IQs tend to grow from generation to generation, sometimes up to a full standard deviation, which implies that five out of six persons score better than the average of their parental generation. Most of the research has again been done on whites. But recently, two interesting findings have been reported. Possibly, the Flynn effect will soon be exhausted in Western societies. And it might apply to non-Western peoples, too (Meisenberg et al. 2005). It has been demonstrated for an Afro-Caribbean population on the island of Domenica. There might be some convergence between black and white IQs.¹⁰ Possibly, the current IQ gap has arisen because Western nations first established economic freedom

⁹A related error is the facile assumption that environmental defects are easily remedied. Since we still know very little about how exactly the environment (or, even schools) affect IQs (Neisser et al. 1996: 97), this is simply not true.

¹⁰According to Meisenberg (2003: 199), it might also help Africans to catch up with whites

and capitalism which led to better nutrition and higher IQs that, in a virtuous circle, further promote growth. But once the biological limits of improving IQs are reached, then other peoples stand a chance to catch up. Although capitalism, or economic freedom, is not the cause of low IQs anywhere, it might well be a determinant of high IQs in rich Western countries—via prosperity and nutrition. Moreover, capitalism and economic freedom promise to improve the IQs in non-Western societies in the future—again via prosperity, nutrition, and the associated Flynn-effect.

Conclusion

The preceding econometric analysis seems to say that the initial level of economic development, or the advantages of backwardness, and human capital endowments promote economic growth to a greater degree than economic freedom or capitalism. Such an interpretation, however, is too narrowly focused on variable labels as well as on the short run. A full interpretation of the econometric results has to take into account that advantages of backwardness for less developed countries have been created by the previous capitalist development of Western societies. Without a long history of limited government and economic freedom in the West, there would be no advantages of backwardness that China, Vietnam, and India currently exploit. Without a history of economic freedom and the prosperity it brought to the West, Western human capital endowments would be poorer than they are. By preserving and expanding its economic freedom, by promoting the health of their own economies, Western societies simultaneously promote the chances of still poor societies to overcome abject poverty. If plans for assisting poor countries necessitate some restriction of economic freedom in rich capitalist economies, then such plans are less likely to work than to backfire and to contribute to the perpetuation of poverty. The most efficient way to help the poor is the perfection and promotion of economic freedom and global capitalism. Economic freedom serves not only those who enjoy it. It also helps at least some of those who still lack it.

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that the more intelligent among them tend to have more children than the others, whereas among Caucasians or whites less intelligent people tend to have more children than others.

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