The Primacy of Institutions

(and what this does and does not mean)

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EXPLAINING the huge difference in average incomes between the world's richest and poorest nations is one of the most fundamental issues in development economics. How did this vast gulf emerge, and can anything be done to reduce it?

To answer these questions, we can seek guidance from three strands of thought. First, there is a long and distinguished line of theorizing that assigns a preeminent role to *geography*. Geography is the key determinant of climate and of natural resource endowments, and it can also play a fundamental role in the disease burden, transport costs, and extent of diffusion of technology from more advanced areas that societies experience. It therefore exerts a strong influence on agricultural productivity and the quality of human resources. Recent writings by Jared Diamond and Jeffrey Sachs (see page 38 in this issue) are among the more notable works in this tradition.

A second view emphasizes the role of international trade as a driver of productivity change and income growth. We call this the *integration* view because it gives participation in the larger global economy—and impediments to participation—a starring role in fostering economic convergence between rich and poor regions of the world. The globalization debate, of course, is to a large extent about the merits of this integration view.

Finally, a third view centers on *institutions*—in particular, the role of property rights and the rule of law. In this view, what matters are the rules of the game in a society, as defined by prevailing explicit and implicit behavioral norms and their ability to create appropriate incentives for desirable economic behavior. This view, associated perhaps most strongly with Nobel Prize winner Douglass North, has recently been the subject of a number of econometric studies, in particular by Daron Acemoglu (see page 27 in this issue), Simon Johnson, and James Robinson.

The idea that one, or even all, of the above deep determinants can adequately explain the large variations in income levels between countries may seem, on the face of it, preposterous. But economists like parsimony, and we were keen to see how these theories would fare when tested simultaneously against each other. Using regression analysis, we came up with some sharp and striking results that have broad implications for development conditionality, discussed below. Our results indicate that the quality of institutions overrides everything else. Controlling for institutions, geography has, at best, weak direct effects on incomes, although it has a strong indirect effect through institutions by influencing their quality. Similarly, trade has a significant effect on institutional quality, but it has no direct positive effect on income. How did we arrive at these findings?

Complex causality

Devising a reasonable empirical strategy for ascertaining how much of the variation in income levels between countries these three deep determinants can explain and whether they are all equally important is not straightforward. The difficulty lies in disentangling the complex web of causality involving these factors and income levels, as Chart 1 illustrates.

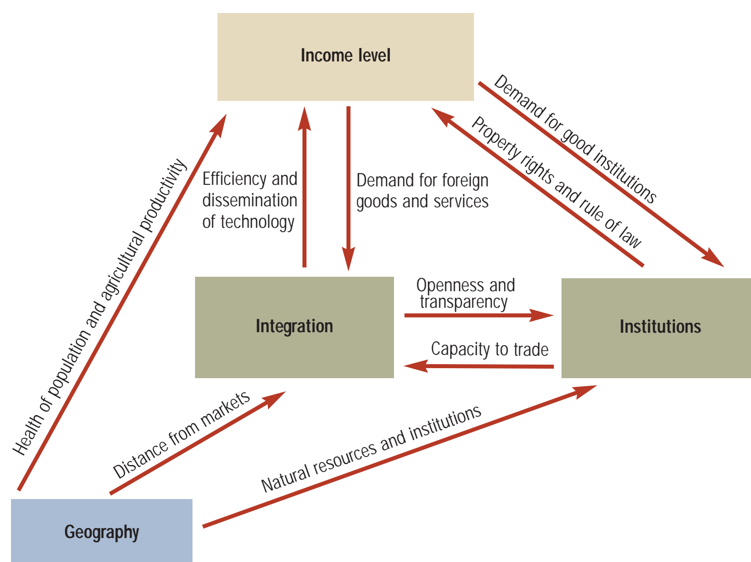
Geography is the only one of these deep determinants that can be treated as exogenous or not influenced by income. As Chart 1 shows, geography can affect income directly (by determining, say, agricultural productivity) as well as indirectly, through its impact on the extent of market integration or on the quality of institutions. With trade integration and institutions, however, causality can run both ways. Integration can raise incomes, but it is equally possible for trade to be the result of increased productivity in an economy. And, while better institutions and better protection of property rights increase investment and foster technological progress, thereby raising income levels, better institutions can also be the outcome of economic development, not least because the demand for better institutions rises as countries and their citizens become wealthier.

In our research, we adopted a simple yet general research strategy that allowed us to estimate the elements shown in Chart 1 simultaneously while taking account of the complex structure of causality. In econometric terms, using an instrumental variables approach, we estimated a series of

Chart 1

The "deep determinants" of income

Development and its determinants are related in multiple and complex ways, making the task of determining and quantifying causality difficult.



regressions relating income levels to measures of geography, integration, and institutions. In particular, we employed instruments for the two endogenous determinants—institutions and integration—drawing upon the 2001 work of Acemoglu, Johnson, and Robinson and the 1999 study by Jeffrey Frankel and David Romer, respectively. These instruments allow us to capture the variation in the determinant that is exogenous.

Our results, illustrated in Chart 2, show that the quality of institutions (as measured by a composite indicator of a number of elements that capture the protection afforded to property rights as well as the strength of the rule of law) is the only positive and significant determinant of income levels. Once institutions are controlled for, integration has no direct effect on incomes, while geography has at best weak direct effects. These results are very robust. They remain unchanged within a large range of reasonable alterations in our core econometric specification (different samples, alternative measures of geography and integration, different instruments, and additional covariates, among other things).

On the relationship between the determinants, we found that institutional quality always has a positive and significant effect on integration, while integration also has a (positive) impact on institutional quality—suggesting that trade can have an indirect effect on incomes by improving institutional quality. Our results also tend to confirm the 2002 findings of William Easterly and Ross Levine, who found geography to be an important determinant of the quality of institutions.

By how much can good institutions boost incomes? Our estimates indicate that an increase in institutional quality can produce large increases in income per capita. For example, in statistical terms, the difference between the quality of institutions measured in Bolivia and Korea is equivalent to one standard deviation, or a 6.4-fold difference. In other words, if Bolivia were somehow to acquire institutions of the quality of Korea's, its GDP would be close to $18,000 rather than its current level of $2,700. Not coincidentally, this is roughly the income difference between the two countries.

Functions of institutions

Most of the recent work on institutions and economic growth has focused on the importance of a particular set of institutions, namely, those that protect property rights and ensure that contracts are enforced. We might call them *market-creating* institutions since, in their absence, markets either do not exist or perform very poorly. But long-run economic development requires more than just a boost to investment and entrepreneurship. It also requires effort to build three other types of institutions to sustain the growth momentum, build resilience to shocks, and facilitate socially acceptable burden sharing in response to such shocks. These institutions might be called

- *market regulating*—namely, those that deal with externalities, economies of scale, and imperfect information. Examples include regulatory agencies in telecommunications, transport, and financial services.
- *market stabilizing*—namely, those that ensure low inflation, minimize macroeconomic volatility, and avert financial crises. Examples include central banks, exchange rate regimes, and budgetary and fiscal rules.
- *market legitimizing*—namely, those that provide social protection and insurance, involve redistribution, and manage conflict. Examples include pension systems, unemployment insurance schemes, and other social funds.

Evidence of some of the stabilizing and legitimizing functions of institutions comes from a study, published by Rodrik in 1999, of the experiences of a number of sub-Saharan African countries. No fewer than 15 such countries grew at rates exceeding 2.5 percent a year before 1973. But, because of weak domestic institutions, few of them, if any, were able to withstand the effects of the oil price increases and other macroeconomic shocks in the 1970s, so growth declined sharply in the subsequent period. Macroeconomic responses to such shocks entail serious distributional implications. For example, in response to a balance of payments crisis, countries need to reduce aggregate demand by tightening fiscal policies. But which ones, and how? Should fiscal tightening take the form of tax increases or expenditure reductions? If the latter, should spending cuts fall on defense, capital, health, or education? Robust domestic institutions, especially those that provide for wide participation, allow these conflicts to be handled at the least possible cost and prevent

domestic social and political conflicts from magnifying the initial economic shock.

But form doesn't follow function

Institutions are thus critical to the development process. But for each of the functions performed by institutions, there is an array of choices about their specific form. What type of legal regime should a country adopt—common law, civil law, or some hybrid? What is the right balance between competition and regulation in overcoming some of the standard market failures? What is the appropriate size of the public sector? How much discretion and how much flexibility should there be in arrangements for the conduct of fiscal, monetary, and exchange rate policies?

Unfortunately, economic analysis provides surprisingly little guidance in answering these questions. Indeed, there is growing evidence that desirable institutional arrangements have a large element of context specificity arising from differences in historical trajectories, geography, political economy, and other initial conditions. This could help explain why successful developing countries have almost always combined unorthodox elements with orthodox policies. East Asia combined outward orientation with industrial intervention. China grafted a market system on a planned economy rather than eliminate central planning altogether. Mauritius carved out export-processing zones rather than liberalize across the board. Even Chile combined capital controls with otherwise quite orthodox economic arrangements. Such variations could also account for why major institutional differences—in the role of the public sector, the nature of the legal systems, corporate governance, financial markets, labor markets, and social insurance mechanisms, among others—persist among the advanced countries of North America, Western Europe, and Japan. Moreover, institutional solutions that perform well in one setting may be inappropriate in a setting without the supporting norms and complementary institutions. In other words, institutional innovations do not necessarily travel well.

How then should institutional choices be made? While economic analysis can help by identifying the incentive effects of alternative arrangements and the relevant trade-offs, there is a very large role for public deliberation and collective choice within societies. In fact, political democracy can be thought of as a metainstitution that helps societies make choices about the institutions they want. Indeed, while measures of democracy do not always explain which countries grow faster or slower over selected periods of time, they do explain long-term income levels. That is, while it is possible that growth spurts can be achieved with different political institutional arrangements, as the experience after World War II confirms, it appears that sustaining such spurts and transforming them into consistently higher standards of living are facilitated by democracy.

Are development outcomes predetermined?

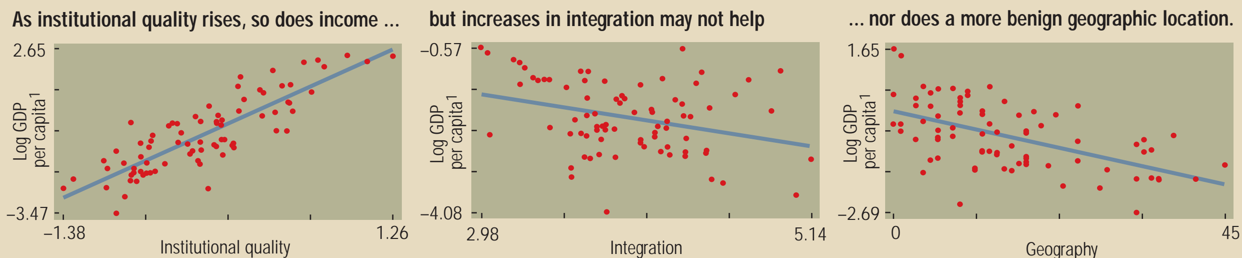
Does the strong role of history and geography in shaping institutions mean that current policies have little impact and the trajectory of human development is predetermined? Some researchers say yes. Easterly and Levine, for example, insist that policies have no impact on income levels once institutions are controlled for. But nothing in our work lends support to such a predestinarian view. Indeed, we would argue that the framework employed in recent published research is not really appropriate for testing whether or not policies have an impact. What is explained—levels of income—is a very long term phenomenon, the result of cumulative actions for centuries or longer. To expect that policies, measured over shorter periods, could explain such a long-term phenomenon is unreasonable.

Moreover, although institutions change slowly, they do change. For example, between the 1970s and the 1990s, there were some notable changes in the quality of institutions. One indicator of institutional quality is the index measuring the constraint on the executive branch of government. Twenty countries improved their institutional quality ratings by more than 40 percent. Of course, how institutional change

Chart 2

Institutional quality scores high

Institutional quality can boost income significantly, while global integration and geography, on their own, do not.



Source: Authors

Note: The graphs capture the causal impact of each of the determinants on income, after controlling for the impact of the others. The indicators of integration and geography used are the ratio of trade to GDP and distance from the equator, respectively. For further details, see Rodrik, Subramanian, and Trebbi (2002).

[1]Expressed in terms of purchasing power parity, 1995.

can be effected is a difficult question—perhaps at the core of many current debates about growth and development—but that institutions can change and that they have a lasting impact on development should not be in doubt.

Implications for development lending

Our findings should raise serious questions about how the IMF and the World Bank set conditions for loans, so-called conditionality. If institutional change is slow, the time horizons for structural adjustment programs need to reflect this. Adjustment that would sustainably improve development prospects simply cannot happen over three or five years—the typical duration of these programs. To believe and plan otherwise risks the near certainty of expectations being unrealized.

Less obviously, if institutions are indeed the deep determinants of development, then we cannot evaluate traditional policies—fiscal, monetary, exchange rates, structural reforms—simply by looking at their intended effects. When the underlying institutions are not being changed in the appropriate way, conditionality on policies is often ineffective. Therefore, the exclusive focus in conditionality on getting policies right needs to be rethought. Take Nigeria, where the policy exhortation to prudently save oil revenues has been systematically ignored. Was it ever realistic to expect Nigeria to meet fiscal policy targets involving the smoothing of expenditure of oil revenues?

The norm in conditionality over the years has been to set what might be called micro targets relating to policies and outcomes. But in countries where the institutional preconditions were missing, conditionality was less likely to succeed. And where the institutional underpinnings existed, micro-conditionality was, in principle, superfluous. It is this recognition of the need to find the right institutional preconditions rather than to micromanage outcomes that is reflected in the recent move—exemplified by the United States' Millennium Challenge account and, to some extent, by the IMF's poverty reduction strategy paper (PRSP) process—of exploring new ways of achieving aid effectiveness.

The need is to find the right institutional preconditions rather than to micromanage outcomes.

A shift from current conditionality would have other advantages. Micro, outcome-based conditionality can be inconsistent with the spirit of ownership, which, properly defined, necessarily involves allowing countries a certain measure of freedom to find their own institutional and policy solutions to development problems.

Of course, identifying the appropriate institutional preconditions to ensure the effectiveness of development assistance is challenging. One possibility is to create a list of countries that would be certified as eligible for development assistance based on their fulfilling the requirements for a basic institutional framework: rule of law, independent judiciary, free press, and participatory politics. But such a list would raise a number of difficult questions. How should these requirements be measured? Can they be reasonably objective? What about countries that fail some of these requirements—as Chile, China, Korea, and Uganda would surely have done in the early stages of their growth? Then there is the converse problem. Would today's Nigeria and Indonesia, which would formally meet the requirements of a basic institutional framework, really provide assurances that development assistance would be well spent? Recent cross-country studies on the determinants of development are just a beginning that point us in the right direction, and a wide open and exciting area of research lies ahead. ■

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This article draws upon "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development," by Dani Rodrik, Arvind Subramanian, and Francesco Trebbi, NBER Working Paper 9305, October 2002 (Cambridge, Massachusetts: National Bureau of Economic Research).

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