

How Countries Get Rich

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In his address to the Economic History Association in 1980, Richard Easterlin famously asked “Why isn’t the whole world developed?” Easterlin’s question was provoked by frustration with economic theorists and their models of perfect markets. These models were populated by completely informed economic agents, and these agents drove an economic growth process that would instantly bring all citizens to wealth levels determined only by their willingness to learn and work. In such a theoretical world, people remain poor because the markets they deal in are not “perfect.”

Easterlin rejected this view and its implied development strategy—focus on improving markets. His narrow answer focused on differences in educational levels across countries, but the broad thrust of his address was to stress the importance to the development process of institutions and historical path dependency. From this perspective, economic history provides the key lessons on “how countries get rich.”

Economics as a scientific discipline emerged to address this issue. The first modern economics treatise, *An Inquiry into the Nature and Causes of the Wealth of Nations*, was published by Adam Smith in 1776. In a lecture to a Glasgow audience in 1775, Smith put forward his model of economic growth in an especially succinct fashion. It was based on his understanding of European, Asian and New World economic history:

“Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism than peace, easy taxes, and tolerable administration of justice; all the rest being brought about by the natural course of things.” (cited by E.L. Jones, 1981, p. 235).

Smith was making several points about how countries get rich. The unit of observation is the state because it is the crucial decision-maker in Smith’s world. The state provides, when it chooses to do so, what are now considered key elements of good economic governance—the “Smithian conditions.” Democracy is not mentioned in Smith’s list. As the *political* mechanism to ensure good economic governance, democracy comes much later. Smith’s final point is also among the most controversial: economic growth will be “the natural course of things” because of how people behave and the pressures of competition from the “invisible hand.” No state involvement is needed in this private domain other than to ensure against monopolies.

The human behavior that led Smith to make these observations seems to be wired very deeply in our brains (Jared Diamond, 1997; E. L. Jones, 1988). From this behavioral (and historical) perspective, development is seen as a long-run sequence of decisions by economic agents, acting in their own self interest, that culminate in rising investment levels and higher labor

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productivity. The “miracle” of getting rich lies in a durable set of institutions—some public, some private—that encourage these decisions for very long periods of time (Jones, 1981). At a growth rate of just two percent per capita per year, an income of \$1,000 becomes \$8,000 in a century, and \$64,000 after two centuries. That, in essence, is how the United States and Europe became rich—at two percent a year.

Alternative Paths to Riches

Partly because it is so long, the path to riches can be convoluted, sometimes leading into dead ends or worse. Reversals of fortune are surprisingly common, and long ascents sometimes drop off of steep cliffs. The Kingdom of Angkor, centered in northwest Cambodia, was one of the world’s richest and most densely settled civilizations a millennium ago. Now peasants not connected to the tourism industry make less than a dollar a day growing rice. Argentina had one of the world’s highest standards of living a century ago, based on agricultural exports, and centered in a great European-style city. In 1900, its poverty rate was lower than Spain’s. By the same measure of poverty, Spain had eliminated it by 2000, whereas nearly a fifth of Argentina’s population remains below that poverty line. Argentina may be richer now than it was in 1900, but it is no longer a rich country. And just a decade ago Zimbabwe was one of the best hopes for economic success in Sub-Saharan Africa, as it exported food crops to the entire region. Now its people are starving. Whatever the path to riches, it is neither smooth nor irreversible.

There are, however, some remarkable success stories. A millennium ago Northern Europe was a cold and muddy backwater to civilizations centered on the Mediterranean and in Asia. Now Northern Europe is rich. In 1800, Germany was a cacophony of warring states with desperately poor peasants. Now it is the economic engine (for better or worse) of Europe. Just 50 years ago South Korea was poorer than Indonesia, and received massive foreign aid from the United States for the next two decades. Now South Korea’s per capita income is more than four times higher than Indonesia’s (which itself is four times higher than at mid-century), it has joined the OECD and has become an aid donor.

Two of the most illustrative paths to riches are those of Brunei and Singapore, two small countries in Southeast Asia. Brunei is a rich country because of “inherited” wealth; it sits on vast natural resources (relative to the size of its population)—oil

and gas, to be specific. Singapore got rich the “old-fashioned way,” by hard work and trading on its location and skills. It is an island state virtually devoid of natural resources—it even imports its water from Malaysia. Both Brunei and Singapore are rich by modern economic standards and both have life expectancies about the same as in the United States.

But the lessons from the two success stories are surprising. One obvious lesson is that a country need not have vast natural resources in order to become rich. Indeed, Adam Smith did not even mention them in his formula. The counter intuitive fact, actually, is that an abundance of natural resources, especially

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those concentrated in a single location such as mineral deposits or oil and gas fields, have made the development process harder, not easier. Explanations for this “natural resource curse” vary, from the narrowly technical—the “easy” foreign exchange earned makes it hard to develop export-competitive agricultural and industrial sectors—to the blatantly political—fights to control the riches undermine good governance and lead to continuous domestic conflict. Whatever the explanation, access to natural resources has not been a reliable path to riches. Despite high oil prices, Brunei is deeply worried about how to sustain its high standard of living. No one will invest in the non-oil sectors of the Brunei economy because only the oil sector offers attractive opportunities (Barta, 2005).

So a key lesson from Brunei and Singapore is that the main sustainable path to riches has been to “create value” through trade. This can be done by enlarging markets, reaping economies of scale in manufacturing, and making knowledge and skills more useful and valuable. In fact, economists have conceptualized the process of economic growth around these three basic ideas: specialization and trade; investment in machines; and increasing returns to knowledge. All these approaches make workers more productive.

The Evolution of Thinking on Economic Growth

Much of classical economics was devoted to understanding the process of economic growth. As noted, Adam Smith was highly optimistic about the prospects for higher living standards. These could be achieved by the higher labor

productivity that resulted from specialization and the division of labor. Smith's famous example was the pin factory, where each worker specialized in a single minute task, just one of the many tasks involved in pin making. Such specialization could only succeed through trade—how else can a worker who does nothing all day but sharpen pins get food to eat? The process of raising labor productivity was then limited by the size of the market.

By lowering trade barriers—artificially imposed by governments or naturally caused by long distances or difficult terrain—larger markets became accessible to manufacturers. Competition (Smith's "invisible hand") would force them to more and more specialized forms of production, thus raising labor productivity and living standards. To be successful, this trade-intensive strategy of economic growth required many transactions, increasingly at long distance. The regional centers that figured this out and capitalized on the potential—the Low Countries, Venice and Genoa, Portugal, for example—became the wealthiest regions of their day.

As a result of this experience, the institutions defending property rights and lowering transactions costs, such as rule of law, came to be seen as the foundation of a market economy.

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That is, *economic governance* has long been seen as an essential foundation for the economic growth process, not something that is tacked on in mid-stream. But again, there are historical dimensions to economic governance. Complex western-style institutions are not needed in the early stages of the growth process. Some key government agencies that are effective—especially the finance ministry and central bank, and workable, predictable property rights—seem enough to get modern economic growth underway.

Smith's emphasis on the division of labor and need for trade pre-dated the rapid technological changes in British agriculture and industry that were just getting started as he wrote. The visible success in the 19th century of the Industrial Revolution, first in Britain and then in France and Germany, changed how economists thought about the growth process. Technological change, created by a new scientific

enterprise and embodied in machines that made workers more productive, became the driving force of development (Landes, 1969, 1990, 1998).

Not all countries could invent and produce their own machines, but all were free to import them and reproduce the factory system that was making Europe so rich and powerful (an early example of a global public good in the form of technology spillovers). A "capital fundamentalism" emerged that stressed the accumulation of savings to be used to invest in machines that embodied the latest technologies, the origins of which were not under the control of or influenced by the day-to-day activities of factory managers or national economic planners.

The "machine model" seemed open to countries in a hurry to catch up with their rich neighbors or distant trading partners. Many of the institutional elements of Adam Smith's "trade model" that took decades, even centuries, to develop could be circumvented, or substitutes found, if the investment and production process did not have to rely on the profit motive of private investors. Instead, they could rely directly on decisions of national planners, if they could be insulated from the corruptive forces of politically connected rent-seekers. Early German industrialization was just such a "deliberate act of policy" (Cole and Deane, 1965) and it changed the balance of both economic and military power in Europe by the end of the 19th century. The forced pace of Soviet industrialization that was centrally planned and implemented changed the balance of power again during the middle third of the 20th century.

But as the pace of scientific innovation accelerated in the advanced countries, and productivity growth relied increasingly on decentralized knowledge rather than on technology embodied in machines that produced what the plan dictated, the machine model and central planning stumbled in country after country. In those countries with technocratic bureaucracies, nascent institutions and educational levels to support low-cost trade and absorption of western knowledge rather than just imported machines, such as Korea, Taiwan, Israel and Brazil, the transition to export-led growth was feasible if not always smooth. In countries without these institutions, with "patrimonial" bureaucracies and political systems, and with very low levels of human capital, including nearly all of Africa and most of the Islamic world, the failure of economic governance and the virtual absence of investment by the private sector led to rapidly failing economies. After years, even decades, of steady economic growth, they have slipped back into economic decline and rising levels of

Is China an exception?

Not yet. China's rapid economic growth over the past quarter century has been remarkable, but it is clearly not sustainable. China's growth has come at the expense of horrific damage to the environment and has been kept afloat by a system of "bureaucratic entrepreneurship" that badly misallocates capital. The stresses in this system are already visible, as demonstrated by the shooting of peasants protesting land seizures, without legally mandated compensation, in early December in Shanwei, Guangdong Province (Friedman, 2005).

No one denies the farmers' claims to the land, but no one acts to compensate them. The laborers go from being small farmers to being destitute. This is a critical process at the heart of Chinese industrialization. The purchase of land, including forced sale, is considered necessary for Chinese economic development. However, Chinese economic development is driven as much by corruption as by land. The government in Beijing has no particular desire to see the farmers dispossessed; on the contrary, the money is made available for delivery to the farmers. But the diversion of funds is

hard-wired into the process. It is one of the primary means of capital formation in China (Friedman, 2005, p.1).

Mao's great genius in holding together China was not that he *united* peasants and workers, but that he *separated* them. The stability provided by the Maoist system has come undone by the new growth model. "The flashpoint is the interface between the rapidly spreading industrial plants and the farmers who own the land. The bureaucratic entrepreneurs need not only the land, but the money that is legally due to the farmers" (Friedman, 2005, p. 2). The political and social tensions that are now coming to the surface in China suggest a serious challenge is now facing China's leaders, as they know the history of revolutions as well as anyone.

Whatever the outcome from the current crisis, there can be no doubt that China's long-run economic growth will depend on institutional developments and a capacity for knowledge generation that other "exceptions"—Germany, Russia, Japan, and Korea had to face as well. Check back in 25 years...

poverty. A number of these countries have slipped even further, into chaos and conflict.

The new model of economic growth that explains this performance is based on a special characteristic of knowledge—its increasing returns (Romer, 1986). Unlike machines, where the productivity of each new machine falls as more and more identical machines are used for a given labor force, the productivity of knowledge actually *increases* with greater use because it costs virtually nothing to provide the knowledge to additional users, who in turn raise their own productivity. Large economic payoffs from new knowledge, especially in the early years of application when patent rights provide market power, encourage economic entrepreneurs to develop it, using the fundamental science produced in modern research universities and corporate research centers.

Thus economic growth, instead of depending on technical change that seemed like "manna from heaven" during the machine age, is now seen to be a self-generated, internal process of knowledge development. Technical change itself is responsive to incentives throughout the entire economic system. Incentives affect more than just the level of firm investments or consumer decision making. Their impact is economy-wide and dynamic (Easterly, 2001). The modern concern for enforcing intellectual property rights as well as

property rights for land, goods and financial assets is easy to understand from the perspective of this "knowledge model." A failure to defend intellectual property rights will slow the search for useful new knowledge, and hence the rate of economic growth in those countries which generate most of the new knowledge. Countries that "borrow" this new knowledge cheaply (by ignoring intellectual property rights) can grow quickly as they catch up with the leaders, but they risk not developing their own capacity to generate knowledge.

Thus this model of internally generated economic growth presents a problem for the countries that are still poor. The creation of knowledge and development of sophisticated human capital to use it depend at least as strongly on the "foundation institutions" that ensure property rights and low transaction costs as does the Smithian "specialization and trade" model that gave rise to them. The long time needed for each society to evolve its own such institutions and investments gave rise to a search for substitutes that could speed the economic growth process (Gerschenkron). But, this search largely failed outside of East and Southeast Asia. There is an uneasy sense in the development profession that for most of Africa, Central Asia and substantial parts of South Asia, we are back to square one (Landes, 1990; Easterly, 2001). As William Easterly reminds us, the "quest for growth" is quite elusive in a world where economic

productivity is based on generating and using knowledge rather than natural resources or even machines.

How Can Poor Countries Become Rich?

In a world where a country's own institutions and history determine the quality of political and economic governance, what can be done to reduce poverty and improve the standard of living, from Afghanistan to Zambia? There are two parts to the answer. The first focuses on what countries themselves need to do to establish the "Smithian conditions" for sustainable economic growth. No country has gotten rich, *and stayed that way*, without establishing these conditions. The positive dimensions of succeeding at this task are accountability, property rights and rule of law, which in combination provide low transactions costs so that markets can work effectively and efficiently. When these conditions are absent, a society faces corruption, instability and poor human rights. Investors, including domestic investors, flee such settings. Over two centuries ago, Adam Smith had this part right.

The second part of the answer focuses on investing in the human skills needed to use modern technology and eventually for a country to develop its own. From this perspective,

"Countries need to establish the Smithian conditions—accountability, property rights, and rule of law."

its long-run development. Less than half of the rise in living standards since 1960 in industrial countries has been due to savings and investments from its citizens. These investments earn a return through increasing division of labor that is the basis of the Smithian approach. The rest of the increase has been due to rising educational levels and to improvements in technology that raise factor productivity across the board (Bosworth and Collins, 2004). Adam Smith missed this crucial role of technology and innovation as an equally important driver of progress in living standards.

Both parts of the recipe for getting rich—good economic governance and investments in human capital—are primarily the responsibility of poor countries themselves (new knowledge and technology only become a sustainable ingredient in the growth process with these ingredients in place). But the rich

world can help, in four basic ways. First, do no harm. Food aid dumped in poor countries to reduce farm surpluses in rich

"The Smithian conditions, in addition to a country's education system, is their key to long-run development."

countries, trade barriers to the products poor countries need to produce and export in order to develop their agriculture and manufacturing sectors, and infringements on the global commons, especially with respect to climate change, serve narrow and short-sighted political interests in developed countries at the direct expense of poor countries.

Second, use foreign assistance where it can make a difference. Typically, this is when a country seizes a window of opportunity for political and economic reform, and needs resources to make the reforms work quickly and visibly on behalf of a broad constituency of citizens. Taiwan and South Korea in the 1950s and 1960s, Indonesia and Thailand in the 1970s, Botswana in the 1980s, and Poland in the 1990s are all examples of such opportunistic foreign assistance. There is a real danger that "results based" foreign assistance will miss such opportunities.

Third, provide international public goods in health and agricultural research and in basic sciences that have transformed information and communications technology. These public goods are expensive to produce because they require world-class scientific laboratories and expertise. In many cases, few of the economic returns can be appropriated by the inventors, because of the knowledge spillovers. That is why they are *public* goods rather than *private* goods, and why public investments by rich countries are needed to provide them at optimal levels (Birdsall, Rodrik and Subramanian, 2005). Rich countries benefit from this research as well, but many problems facing poor countries are ill-addressed by research priorities of rich countries. These priorities can be changed with enough money, as the Gates Foundation is seeking to demonstrate.

Finally, encourage global openness through actions, not just words. This is partly a matter of trade and investment policies, as noted above, and there is concern that despite the rhetoric, the Doha Round of WTO negotiations will make little progress on behalf of a development agenda. But openness is also a matter of people and ideas. An insular and defensive rich world will find it difficult to sustain its own standard of living, much less help poor countries reach their economic goals.

References

- Barta, Patrick. 2005. "In Tiny Sultanate, Days of Easy Living May Be Numbered," *Wall Street Journal*, October 25, 2005, pp. A1 and A10.
- Birdsall, Nancy, Dani Rodrik, and Arvind Subramanian. 2005. "How to Help Poor Countries." *Foreign Affairs*, July/August.
- Bosworth, Barry, and Susan M. Collins. 2003. "The Empirics of Growth: An Update," (September 22), The Brookings Institution, Washington, DC.
- Cole, W. A., and Phyllis Deane, 1965. "The Growth of National Incomes," in Habakkuk and Postan, eds., *The Cambridge Economic History of Europe, vol. 6: The Industrial Revolution and After (Part I)*, Cambridge, UK: Cambridge University Press, pp 1-55.
- Diamond, Jared. 1997. *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years*. Vintage Books, Random House, London.
- Easterlin, Richard A. 1981. "Why Isn't the Whole World Developed?" *Journal of Economic History*, Vol. XLI, no. 1, (March), pp. 1-19.
- Easterly, William. 2001. *The Elusive Quest for Economic Growth*. Cambridge, MA: MIT Press.
- Friedman, George. 2005. "The Shanwei Shootings and China's Situation." December 13, 2005. Available at Stratfor.com.
- Gerschenkron, Alexander. 1962. *Economic Backwardness in Historical Perspective*. Cambridge, MA: Harvard University Press.
- Jones, E. L. 1981. *The European Miracle: Environments, Economics and Geopolitics in the History of Europe and Asia*. Cambridge, UK: Cambridge University Press.
- Jones, E. L. 1988. *Growth Recurring: Economic Change in World History*. Oxford, UK: Clarendon Press.
- Landes, David. 1969. *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*. Cambridge, UK: Cambridge University Press.
- Landes, David. 1990. "Why Are We So Rich and They So Poor?" *American Economic Review*. Vol 80, No. 2 (May), pp. 1-13.
- Landes, David. 1998. *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor*. New York, NY: W. W. Norton and Co.
- Romer, Paul M. 1986. "Increasing Returns and Long Run Growth," *Journal of Political Economy*, Vol. 94, No. 5, (October), pp. 1002-1037.

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