



# Topping the Charts

*Prakash Loungani profiles*

*Harvard macroeconomist* **Robert Barro**

**M**OST scholarly articles fall without making a sound in the academic forest. Not ones by Robert Barro. A recent list of the 146 most influential articles in economics since 1970 has Barro sitting atop the charts with six hits—an honor he shares with only two others (Eugene Fama and Joseph Stiglitz). It would have been difficult to predict this outcome from the title of Barro's first publication in 1970: "The Crystal Structure of a Dimeric Cobalt Compound Containing a Chloro Bridge."

What happened? "Blame it on Richard Feynman," says Barro, who had been headed for a career in the physical sciences at Caltech. "Feynman was a great inspiration, but what he taught was often way above my head. It

made me realize I wouldn't be close to the top in those fields." Instead Barro turned to economics, motivated by the possibility of using his "technical and math background to address social problems" and by the example of an older brother who had majored in economics.

Barro's career as a macroeconomist has been notable for two other turns. The first occurred during the 1970s, when he turned his back on the Keynesian macroeconomics he had learned as a graduate student at Harvard and became one of the ringleaders of the Chicago School-led revolution that supplanted it. Keynes had popularized the idea that government policies could smooth out ups and downs in income, also known as business cycles. Over the 1970s, scholars and



policymakers reconsidered a government's ability to do so. Four of Barro's six hits, along with a textbook he wrote on macroeconomics, were part of the body of work that turned the tide of academic opinion in favor of a more modest role for government.

The second turn in Barro's career occurred in the 1980s, when the field of macroeconomics itself made a course correction. From about the mid-1940s until the mid-1980s, the field, by and large, was focused on understanding what caused the temporary fluctuations in income associated with business cycles. During these decades, questions about what propelled incomes upward, albeit at different rates in different decades, or why there were such large differences in incomes across countries had not been center stage. But—spurred again by theoretical advances coming out of the University of Chicago—macroeconomists turned to these questions from the mid-1980s onward. Barro caught the tide early and wrote two hit papers that “jumpstarted the empirical exploration” of the answers, according to IMF chief econ-

omist Simon Johnson, himself a notable contributor to the study of economic growth.

### **Build it and they will come**

The idea behind Barro's first hit paper on economic growth—a 1991 article in the *Quarterly Journal of Economics*—was breathtakingly simple. He assembled a data set of incomes for nearly one hundred countries since 1960. He also collated data on a long list of variables that, according to theorists, influence growth in incomes. The list included school enrollment rates (a proxy for what economists call “human capital”), private investment, and the size and nature of government activities. It also included measures of the economic system in place, government-induced distortions of markets, and political instability.

Barro examined the statistical associations between income growth and this list of variables. He found that “poor countries tend to catch up with rich countries if the poor countries

have high human capital . . . but not otherwise.” He also found that investments by governments did little to trigger growth and that other government spending actually detracted from growth. Political instability and market distortions tended to lower growth.

There is a simple fact about a data set and scholars: build it and they will come. That is what happened with the data set that Barro built—it attracted macroeconomists to the study of economic growth. Indeed, the long list of possible determinants that he had put together became known as “Barro variables” in the literature that his 1991 article spawned. Some of the conclusions of his paper have held up better than others. But, says Johnson, what Barro did was essential to giving an empirical grounding to a literature that might otherwise have gone off into the theoretical stratosphere.

In fact, Barro's work on growth has been so influential that younger macroeconomists, those now in their thirties, are more likely to identify him with his 1990s work than with his earlier work on business cycles.

### **Catch me if you can**

The main result of Barro's other hit paper on economic growth—a 1992 article in the *Journal of Political Economy*, coauthored with Xavier Sala-i-Martin—has stood the test of time so well, in fact, that his Harvard colleague Larry Summers has dubbed it the “iron law of convergence.” As with Barro's 1991 article, the idea was simple and involved bringing in new data: the trick this time was to use data for regions within a country. The advantage of this was that many of the “Barro variables” could plausibly be assumed to be the same for all regions within a country—the economic system or measures of political instability, for instance.

Not having to worry about the measurement of these variables offered a cleaner way to focus on one particular question: do regions that are initially poor catch up with richer regions? For the U.S. states, the answer was yes. In the aftermath of the American Civil War, the southern states were generally poorer than other states. But Barro and Sala-i-Martin showed that, in the one hundred or so years following 1880, the states that were initially poor grew faster. There was catch-up, or—in the jargon of economists—“convergence.” The rate at which the poor states caught up to the rich was not particularly fast though, only about 2–3 percent a year.

This estimate led Barro to caution, in the pages of *The Wall Street Journal* in 1991, against hoping that incomes in East Germany would quickly catch up with those in West Germany after the unification of the country. “The forces of convergence are powerful eventually,” he wrote, “but anything approaching parity between the east and the west of Germany is unimaginable in the short run.” In the event, after an initial spurt, East German productivity levels have stagnated at about 75 percent of the level in the West despite massive attempts by the government to speed up the process.

### **For richer or poorer**

In scholarly articles and in his columns in *The Wall Street Journal* and *BusinessWeek*, Barro has continued to explore the

question of why some countries are rich and others poor. To Barro, the evidence shows that poor countries can raise their incomes by maintaining secure property rights, promoting the rule of law, fostering free domestic markets, and opening up to international trade. Macroeconomic stability helps, as do investments in education, health, and some types of infrastructure.

What does not help are policies that Barro refers to as “soft”—promotion of democracy, education directed specifically at women, and environmental protection; elimination of income inequality; and promotion of civic organizations and social capital. As Barro noted in his 2002 book of essays, *Nothing Is Sacred*, his views are not shared by all: “The 1998 Nobel Prize in economics to my colleague Amartya Sen was viewed by some commentators as an endorsement of the softer road to development,” he wrote.

But while acknowledging that, “for many people, these soft issues represent goals that are inherently desirable,” Barro sticks to his guns, noting that his claim is rooted in his detailed studies of whether these soft factors do indeed further income growth. Indeed, in recent years, Barro and his wife, Rachel McCleary, a fellow professor at Harvard, have done some of the most detailed work to date on how religion—perhaps the ultimate soft factor—matters for income growth (see box).

### Let it be

Given the tenor of Barro’s work on growth, it’s no surprise that he believes, as he stated in his 1996 collection of essays, *Getting It Right*, that governments should perform only “a limited range of functions” to promote it. He writes that he used to be a liberal during his undergraduate years at Caltech: “For any social problem that came up, I had no doubt that the cure involved government intervention.” But now he feels quite the opposite; he describes his present philosophy as “libertarian (or classical liberal) rather than conservative or Republican.”

### Can religion boost growth?

The sociologist Max Weber famously argued that religion can influence economic performance through its effect on character traits such as the work ethic. Barro and McCleary subject this view to a rigorous test. As with Barro’s earlier work on growth, the unique aspect of this research is the painstaking assembly of a new data set, in this case the data on religious beliefs and attendance at formal religious services drawn from six international surveys covering about fifty countries.

Barro and McCleary find that countries in which people have stronger religious beliefs, as reflected in a stronger belief in heaven and hell, have higher economic growth—a finding consistent with Weber’s thesis. However, once the impact of religious beliefs on economic growth is accounted for, greater attendance at formal religious services lowers growth. So attendance matters to the extent that it influences beliefs, but beyond that it uses up time and resources that detract from growth.

In keeping with libertarian views, Barro thinks the key function of government is “to define and protect property rights.” Other activities for government could consist of “ensuring (but not producing) a baseline level of education, providing a minimal welfare net, and participating in a narrow range of infrastructure investments, such as highways and airports.” Expanding government control of the economy beyond these functions is detrimental to growth, he says.

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Barro sees the experience of China—his association with a Chinese university now takes him to the country quite frequently—as bearing out these views. The country’s experience under communism, he says, is a “testament to how badly governments can mess things up” when they try to exercise influence over all aspects of the economy. But now, he adds, he is struck by the “very capitalistic and pro-business” attitudes of government officials and of many of the people he encounters. “One of the universities there even has a statue of Adam Smith on campus. There would be mass protests at Harvard if we tried to do that,” he jokes.

Barro’s libertarian beliefs perhaps also explain in part why, unlike many other famous macroeconomists, he has not been a prominent policy advisor to the U.S. or other governments. It’s difficult to “be popular with governments” when advocating that many of their functions ought to fade away, he says. In any event, he has not been very influential in his rare forays into giving advice to governments, as he candidly admitted in *Nothing Is Sacred*. In one essay in that book, he describes being whisked away to Moscow from his Cape Cod vacation in the summer of 1998; his advice to the Russian government that it set up a currency board was not taken. Nor was the South Korean government receptive to his advice to adopt the dollar as its currency and to abandon its resistance to foreign ownership of the country’s banks.

### No “money for nothing”

Barro’s reputation as a preeminent macroeconomist would have been secure even without his 1990s papers on economic growth. In the 1970s and early 1980s, he had already made a splash with papers that argued that governments should take a laissez-faire approach to smoothing out fluctuations in income.

Barro’s work was part of the so-called rational expectations revolution that supplanted the dominant Keynesian view of the time that governments should use macroeconomic policies actively to tame the business cycle. During the 1960s, belief in government’s ability to do so was at an all-time high, bolstered by what appeared to be a stable statistical relationship known as the Phillips curve. The experience of the 1960s suggested that the government could put

people in jobs (reduce the unemployment rate) simply by printing more money (raising the inflation rate). In the jargon of economists, the Phillips curve seemed to imply that monetary policy could have real effects.

To conservative economists such as Milton Friedman, the Phillips curve made no sense: it seemed to suggest that a government could achieve something real—create jobs—by doing something that was fairly costless—printing money. It was as though one could make people taller merely by measuring them with a ruler marked in centimeters rather than inches. Friedman was ridiculed for his views at the time but, according to Barro, “even before I left Harvard in the summer of 1968, I recognized that the attacks on Milton were empty and a sign of envy.”

Inspired by the work of Friedman, and by that of Robert Lucas—also of the University of Chicago—Barro wrote a paper, which appeared in the *American Economic Review* in 1977, presenting evidence that activist monetary policy had reduced U.S. unemployment only when central banks had succeeded in surprising people about the amount of inflation they were going to generate. He followed this up with two other papers, written with David Gordon, a graduate of Chicago now at Clemson University. The first of the papers showed that when people realize that central banks may be out to surprise them, society ends up at a bad equilibrium: inflation is excessive but unemployment is no lower than it would otherwise be. The second paper described a way out of this bad equilibrium. If the central bank could commit to a rule governing its behavior, the inflation rate would be less excessive than if it could not commit. The central bank would still have an incentive to try to generate surprise inflation, but this incentive would be tempered by the ensuing loss of credibility.

The papers by Barro and Gordon have been part of a movement that has changed how central banks behave. Modern central banks are more likely to follow rules that keep them from generating excessive inflation, to guard their credibility as inflation-fighters. And many—far from trying to surprise people about their inflation goals—are now quite likely to have either an explicit or an implicit inflation target.

### **Surely you're joking, Mr. Barro!**

Barro's attack on the foundations of Keynesian monetary policy, which was carried out with a group of other prominent macroeconomists, was preceded by an attack on Keynesian fiscal policy and it was carried out single-handedly. The Keynesian view on fiscal policy, again, was one of activism: governments should use budget deficits to smooth out fluctuations in private income. When the private economy stalls, governments should attempt to boost private spending by running larger budget deficits, financing these deficits by borrowing rather than by raising taxes.

In a 1974 paper in the *Journal of Political Economy*, Barro made the case that the choice of financing, whether through borrowing or taxing, did not matter. If the government borrowed to run deficits, people would realize that it would have to raise taxes in the future to pay back what it had bor-

rowed. They would therefore simply raise their savings today to be able to pay back those future taxes. The government's attempts to boost private spending through its own borrowing would thus be nullified. But what if those future taxes were essentially passed on to future generations? Would people today then not feel richer as a result of government borrowing? Not, Barro argued in his paper, if today's generation cared not only about their own spending but about how their children would have to spend. If they cared about their children, they would simply save more to leave them the extra money to pay for the future taxes. Once again, the government's ability to get today's generation to spend more by running budget deficits would be nullified.

The reaction to Barro's argument was one of disbelief. As a 1990 “Schools Brief” in *The Economist* put it: “The idea of the infinitely forward-looking, altruistic parent seems crazy. At first, even economists struggled not to laugh.” But over time, Barro's model became standard, so that even its critics were forced to use it as the starting point for their own models. *The Economist* concluded that, as a result of the influence of Barro's work, “few expect as much from the active use of fiscal policy as they used to.”

### **The hits keep coming?**

Boston University's Robert King, a former colleague of Barro, calls him “the most influential applied macroeconomist of his generation,” but tells *F&D* that this influence stems not from a single contribution but from the fact that “in virtually every major area of the field you have to contend with a paper by Barro.”

In recent years, Barro has been working on a possible resolution to a long-standing puzzle in macroeconomics and finance, the so-called equity premium puzzle—a reference to the fact that stocks have historically earned a much larger return than government bonds. Of course, that stocks are riskier than bonds accounts for some of this difference in returns. But the difference is so high that it suggests a degree of risk aversion on the part of investors that economists regard as implausible. Barro argues, however, that rare disasters, such as the Great Depression or 9/11, even though they are low-probability events, can keep investor demand for safe assets such as government bonds high relative to that for stocks.

Whether or not this work joins his other papers on the hit parade, there is no doubt that Barro intends to keep on trying. In a 1999 essay in *Nothing Is Sacred*, he wrote: “I have never really understood the big attraction of going out while still on top,” and he wondered why New York Yankees hitter Joe DiMaggio retired in 1951 and why “the Beatles and Simon and Garfunkel disbanded while at their best. The main consequence was that the public missed out on many years of fine, even if not the greatest, performance.” Barro's many fans will take delight in his implicit promise that, in his case at least, the hits will keep on coming. ■

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