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**Debt, Growth and the Austerity Debate**

**By CARMEN M. REINHART and KENNETH S. ROGOFF**

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IN May 2010, we published an academic paper, [“Growth in a Time of Debt.”](http://scholar.harvard.edu/files/rogoff/files/growth_in_time_debt_aer.pdf) Its main finding, drawing on data from 44 countries over 200 years, was that in both rich and developing countries, high levels of government debt — specifically, gross public debt equaling 90 percent or more of the nation’s annual economic output — was associated with notably lower rates of growth.

Given debates occurring across the industrialized world, from Washington to London to Brussels to Tokyo, about the best way to recover from the Great Recession, that paper, along with other research we have published, has frequently been cited — and, often, exaggerated or misrepresented — by politicians, commentators and activists across the political spectrum.

Last week, three economists at the University of Massachusetts, Amherst, released a [paper](http://www.peri.umass.edu/236/hash/31e2ff374b6377b2ddec04deaa6388b1/publication/566/) criticizing our findings. They correctly identified a spreadsheet coding error that led us to miscalculate the growth rates of highly indebted countries since World War II. But they also accused us of “serious errors” stemming from “selective exclusion” of relevant data and “unconventional weighting” of statistics — charges that we vehemently dispute. (In an [online-only appendix accompanying this essay](http://www.nytimes.com/2013/04/26/opinion/reinhart-and-rogoff-responding-to-our-critics.html), we explain the methodological and technical issues that are in dispute.)

Our research, and even our credentials and integrity, have been furiously attacked in [newspapers](http://www.nytimes.com/2013/04/19/opinion/krugman-the-excel-depression.html) and on [television](http://tv.msnbc.com/2013/04/24/debunked-the-harvard-study-that-republicans-used-to-push-austerity/). Each of us has received hate-filled, even threatening, e-mail messages, some of them blaming us for layoffs of public employees, cutbacks in government services and tax increases. As career academic economists (our only senior public service has been in the research department at the International Monetary Fund) we find these attacks a sad commentary on the politicization of social science research. But our feelings are not what’s important here.

The authors of the paper released last week — Thomas Herndon, Michael Ash and Robert Pollin — say our “findings have served as an intellectual bulwark in support of austerity politics” and urge policy makers to “reassess the austerity agenda itself in both Europe and the United States.”

A sober reassessment of austerity is the responsible course for policy makers, but not for the reasons these authors suggest. Their [conclusions](http://www.ft.com/intl/cms/s/0/9e5107f8-a75c-11e2-9fbe-00144feabdc0.html#axzz2RVSaldzD) are less dramatic than they would have you believe. Our 2010 paper found that, over the long term, growth is about 1 percentage point lower when debt is 90 percent or more of [gross domestic product](http://topics.nytimes.com/top/reference/timestopics/subjects/u/united_states_economy/gross_domestic_product/index.html?inline=nyt-classifier). The University of Massachusetts researchers do not overturn this fundamental finding, which several researchers have elaborated upon.

The academic literature on debt and growth has for some time been focused on identifying causality. Does high debt merely reflect weaker tax revenues and slower growth? Or does high debt undermine growth?

Our view has always been that causality runs in both directions, and that there is no rule that applies across all times and places. In a [paper](http://online.wsj.com/public/resources/documents/JEP0413.pdf) published last year with Vincent R. Reinhart, we looked at virtually all episodes of sustained high debt in the advanced economies since 1800. Nowhere did we assert that 90 percent was a magic threshold that transforms outcomes, as conservative politicians have suggested.

We did find that episodes of high debt (90 percent or more) were rare, long and costly. There were just 26 cases where the ratio of debt to G.D.P. exceeded 90 percent for five years or more; the average high-debt spell was 23 years. In 23 of the 26 cases, average growth was slower during the high-debt period than in periods of lower debt levels. Indeed, economies grew at an average annual rate of roughly 3.5 percent, when the ratio was under 90 percent, but at only a 2.3 percent rate, on average, at higher relative debt levels.

(In 2012, the ratio of debt to gross domestic product was 106 percent in the United States, 82 percent in Germany and 90 percent in Britain — in Japan, the figure is 238 percent, but Japan is somewhat exceptional because its debt is held almost entirely by domestic residents and it is a creditor to the rest of the world.)

The fact that high-debt episodes last so long suggests that they are not, as some liberal economists contend, simply a matter of downturns in the business cycle.

In “This Time Is Different,” our 2009 history of financial crises over eight centuries, we found that when sovereign debt reached unsustainable levels, so did the cost of borrowing, if it was even possible at all. The current situation confronting Italy and Greece, whose debts date from the early 1990s, long before the 2007-8 global financial crisis, support this view.

The politically charged discussion, especially sharp in the past week or so, has falsely equated our finding of a negative association between debt and growth with an unambiguous call for austerity.

We agree that growth is an elusive goal at times of high debt. We know that cutting spending and raising taxes is tough in a slow-growth economy with persistent unemployment. Austerity seldom works without structural reforms — for example, changes in taxes, regulations and labor market policies — and if poorly designed, can disproportionately hit the poor and middle class. Our consistent advice has been to avoid withdrawing fiscal stimulus too quickly, a position identical to that of most mainstream economists.

In some cases, we have favored more radical proposals, including debt restructuring (a polite term for partial default) of public and private debts. Such restructurings helped deal with the debt buildup during World War I and the Depression. We have long favored write-downs of sovereign debt and senior bank debt in the European periphery (Greece, Portugal, Ireland, Spain) to unlock growth.

In the United States, we support reducing mortgage principal on homes that are underwater (where the mortgage is higher than the value of the home). We have also written about plausible solutions that involve moderately higher inflation and “financial repression” — pushing down inflation-adjusted interest rates, which effectively amounts to a tax on bondholders. This strategy contributed to the significant debt reductions that followed World War II.

In short: many countries around the world have extraordinarily high public debts by historical standards, especially when medical and old-age support programs are taken into account. Resolving these debt burdens usually involves a transfer, often painful, from savers to borrowers. This time is no different, and the latest academic kerfuffle should not divert our attention from that fact.

[Carmen M. Reinhart](http://www.carmenreinhart.com/) is a professor of the international financial system, and [Kenneth S. Rogoff](http://scholar.harvard.edu/rogoff) is a professor of public policy and economics, both at Harvard.

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**Debt and Growth: A Response to Reinhart and Rogoff**

**By ROBERT POLLIN and MICHAEL ASH**

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THE debate over government debt and its relationship to economic growth is at the forefront of policy debates across the industrialized world. The role of the economics profession in shaping the debate has always come under scrutiny.

In particular, attention has focused on the findings of the Harvard economists Carmen M. Reinhart and Kenneth S. Rogoff, whose 2009 book, “This Time Is Different: Eight Centuries of Financial Folly,” received acclaim for its use of hard-to-find historical data to draw conclusions about the origins and nature of financial crises and how long it takes to recover from them.

Ms. Reinhart and Mr. Rogoff have published several other papers, including a 2010 academic [article](http://scholar.harvard.edu/files/rogoff/files/growth_in_time_debt_aer.pdf), “Growth in a Time of Debt.” It found that economic growth was notably lower when a country’s gross public debt equaled or exceeded 90 percent of its gross domestic product.

Earlier this month, we posted a [working paper](http://www.peri.umass.edu/236/hash/31e2ff374b6377b2ddec04deaa6388b1/publication/566/), co-written with Thomas Herndon, finding fault with this conclusion. We identified a spreadsheet coding error — which Ms. Reinhart and Mr. Rogoff promptly [acknowledged](http://www.nytimes.com/interactive/2013/04/17/business/17economix-response.html) — that affected their calculations of growth rates for big economies since World War II. We also asserted that the two of them erred by omitting some data and improperly weighting other statistics. In an [Op-Ed essay](http://www.nytimes.com/2013/04/26/opinion/debt-growth-and-the-austerity-debate.html) and [appendix](http://www.nytimes.com/2013/04/26/opinion/reinhart-and-rogoff-responding-to-our-critics.html) last week, Ms. Reinhart and Mr. Rogoff denied those accusations.

They referred to this debate as an “academic kerfuffle,” but we believe the debate has been constructive, because it has brought greater clarity over the ideas shaping austerity policies in both the United States and Europe.

The most important insight for anyone following this debate, and one that Ms. Reinhart and Mr. Rogoff acknowledge, is that there is no evidence supporting the claim that countries will consistently experience a sharp decline in economic growth once public debt levels exceed 90 percent of G.D.P. Although the two of them partly backed away from that claim in a 2012 [paper](http://www.aeaweb.org/articles.php?doi=10.1257/jep.26.3.69) in The Journal of Economic Perspectives, they have now done so more definitively, saying the 90 percent figure is not “a magic threshold that transforms outcomes, as conservative politicians have suggested.”

However, Ms. Reinhart and Mr. Rogoff stubbornly maintain that “growth is about 1 percentage point lower when debt is 90 percent or more of gross domestic product,” a core finding of their 2010 paper.

There are serious problems with this claim. The most obvious is that the median growth figures they reported in the 2010 paper are distorted by the same coding error and partial exclusion of data from Australia, Canada and New Zealand that tainted their average growth figures. When we corrected for these errors, the difference in median economic growth rates was only 0.4 percentage points between countries whose public-debt-to-G.D.P. ratio was between 60 percent and 90 percent, and those where the ratio was over 90 percent (2.9 percent median growth, versus 2.5 percent). The difference between 0.4 percent and 1 percent is quite substantial when we’re talking about national economic growth.

(Ms. Reinhart and Mr. Rogoff have substantial disagreements with us about the proper selection and weighting of data. They elaborated on these points in their [Op-Ed appendix](http://www.nytimes.com/2013/04/26/opinion/reinhart-and-rogoff-responding-to-our-critics.html). We have presented all our data, calculations and methodological arguments on the [Web site](http://www.peri.umass.edu/) of the Political Economy Research Institute at the University of Massachusetts, Amherst, where we teach.)

Our critique of Ms. Reinhart and Mr. Rogoff — one they have not adequately rebutted — emphasizes the fact that the relationship between public debt levels and G.D.P. growth varies substantially by country and over time.

Especially significant here is the pattern for the most recent decade in their postwar data set: 2000 to 2009. There is no evidence in these most recent years for any drop-off at all in economic growth when public debt exceeds 90 percent of G.D.P. While Ms. Reinhart and Mr. Rogoff have been commended for tracking down historic economic records going back centuries, we believe that the correlation between debt and growth over the last decade is more informative and useful for assessing present-day policy concerns than data from the post-World War II era or, say, the Industrial Revolution.

We agree with Ms. Reinhart and Mr. Rogoff that the United States and Europe face extremely difficult challenges in trying to recover from the 2007-8 financial crisis and the Great Recession that followed. Sadly, in our view, they abetted, or at least failed to stop, the use of their scholarship by politicians who latched on to their findings — in particular the now discredited 90 percent figure — to call for severe cuts in government budgets and services, layoffs of public-sector employees and tax increases.

What this debate has demonstrated is that policy makers cannot defend these austerity measures on the grounds that public debt exceeding 90 percent of G.D.P. will consistently produce sharp declines in economic growth.

History suggests that there is some threshold beyond which piling on public debt definitively yields lower economic growth, but there is no consensus on what that threshold is, and the evidence suggests, in any event, that the United States and Europe are not anywhere close to it.

Responsible policy makers must balance the relative costs and benefits of austerity at a time when high unemployment is exacerbating rising inequality, and threatening the social fabric of advanced industrial democracies around the world.

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