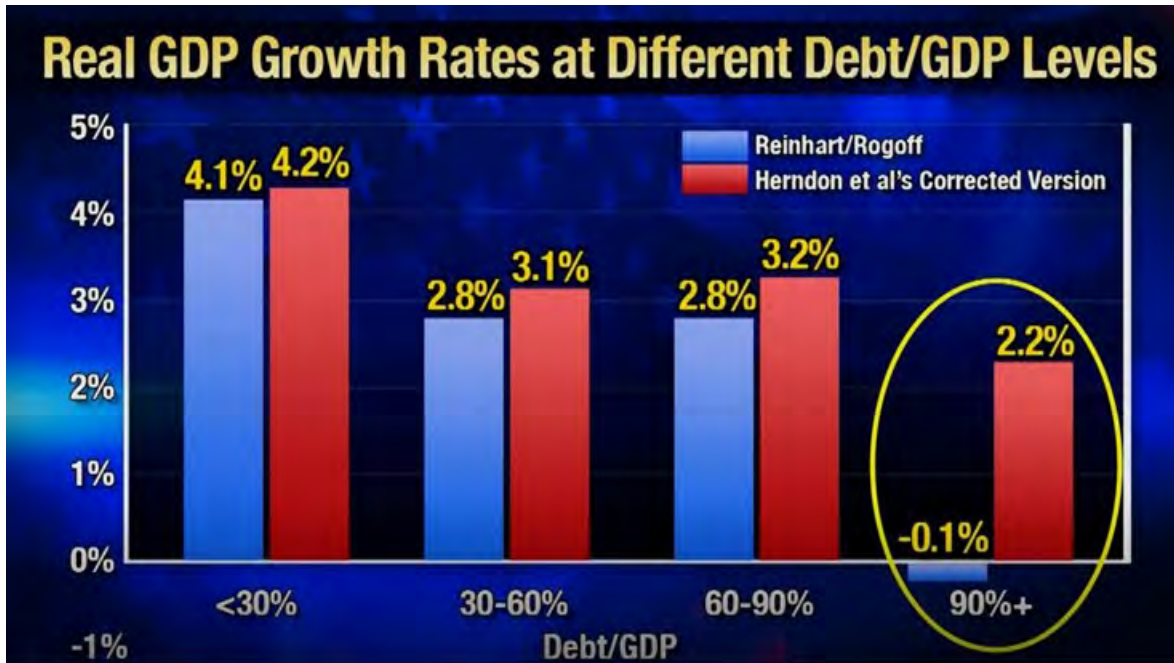


As discussed in the monetary approach to [the BoP handout](#) stabilization programs had three components, devaluation, structural adjustment and stabilization (fiscal and monetary contraction). In principle private investment and consumption could continue to grow but in practice the typical outcome was “overkill” or a sharp recession putting all of the short term adjustment on the demand side (aka “austerity”). After a series of sharp contractions, even in the most dynamic Asian economies during the late 1990s, countries took a new approach, including two exchange rate insurance policies (in some cases three) as well as measures to create fiscal space and protect social spending. This new attitude toward austerity also involves shifts in the role of the Bretton Woods organization and a much better understanding of the roots of contagion. First, many countries abandoned the exchange rate pegs leftover from the Bretton woods era, managed floating became the norm with additional insurance in the form of large reserves and or swap lines with friendly Central Banks (see Sach’s comments). The IMF also became more open to capital controls, at least in the short run, and a few countries with the most problematic banking sectors imported banking services (Argentina and Mexico for example). Imported banks shifted some of the lender of last resort function to the OECD central banks which also became more aware of contagion. Central Banks in emerging market nations, with a few exceptions, gained enough credibility to target inflation. Inflation targeting has the potential to replace the nominal exchange rate as a nominal anchor, freeing countries from the impossible trinity (and giving them the capacity to use counter-cyclical monetary policy. Finally countries learned the hard way that sharp deep recessions like that of Venezuela in 1989 could have long term consequences. More important, IMF riots over food and energy price changes could be tempered with direct transfers (though this does not always work).

Even more video [Austerity’s Spreadsheet Error, The Colbert Report, 2013](#) Thomas Herndon [U. Mass Graduate Student replication](#) interview (late night TV, a bit crude, sorry for the ads, but great to meet Thomas Herndon, see his [corrections to and comment on](#) Reinhart and Rogoff’s famous 2010 NBER paper, Growth in a Time of Debt (cited 2500 times as of 1-2018) This Figure is from the Steven Colbert show in 2013. Thomas Herndon finished his PhD and is now an assistant Professor at [Bellarmine College in Los Angeles](#).



Traditionally developing countries IMF programs relied heavily on stabilization policy or demand management to adjust to shortages of dollars. While in principle these programs need not lead to severe recessions, in practice they did: “overkill” was common as sharp recessions reduced the demand for imports and allowed countries to exceed reserve targets. Developed countries on the other hand, generally countered recessions with expansionary monetary and fiscal policies. Since 2000 many developing countries have “graduated” meaning they can use monetary and/or

fiscal policy to counter adverse shocks. However, in the literature on stabilization policy in emerging market or developing economies “graduation” and “redemption” have different meanings and contexts, though all uses of the term have a common theme:

1. **Exchange rate flexibility (monetary policy):** Overcoming “fear of floating” many countries have managed to let their nominal exchange rates fluctuate sharply to temper booms and busts. Nigeria for example let the Naira appreciate during the 2005 to 2007 run up in oil prices, only to let it depreciate by in 2008. Other countries including Poland and India let their currencies depreciate during the Euro crises as well as during the recent Taper Tantrum episodes (see Australia, India and Indonesia). A nominal exchange rate appreciation reduces inflation (and the need for deflation) while a real depreciation leads to expenditure switching that tempers negative shocks (sudden capital outflows for example). While inflation and competitive devaluation are a potential side effect of currency depreciation, for smaller countries these concerns are limited (especially during a global trend toward recession and deflation). On the pre-2000 “fear of floating” see Calvo and Reinhart (2002).
2. **Countercyclical Fiscal Policy:** Frenkel et al. 2013 argue countries “graduate” when they can *counter cyclical fiscal and monetary policies* as opposed to the typical boom and bust pro-cyclical spending policies often associated with emerging and frontier market economies. Typically if a country runs out of reserves the IMF demands limits on domestic credit and government spending (to restore reserves and hang on to the IMF loans). Resource exporting countries are particularly prone to spending booms when commodity prices are high (leading also to greater capital inflows) exacerbating the Dutch Disease. Especially important from UNICEF’s perspective is maintaining social spending during downturns, this is the ‘adjustment with a human face’ argument (see Ortiz et al., 2011). Fortunately a number of countries have recently “graduated” according to Frenkel et al., 2013 including Algeria, Bahrain, Bolivia, Botswana, Brazil, Chile, Costa Rica, Côte d’Ivoire, El Salvador, Germany, Hong Kong, Indonesia, Libya, Malaysia, Morocco, Nigeria, Norway, Oman, Paraguay, Philippines, Saudi Arabia, Syrian Arab Rep., Turkey, Uganda, United Arab Emirates, and Zambia (see Figure 4 notes below).
3. **High Sovereign Credit Ratings:** In *This Time is Different* Reinhart and Rogoff 2010 focus on access to international capital markets as a sign of “graduation” arguing this represents a significant upgrade from the low sovereign credit ratings of “serial defaulters” (Argentina for example). Commodity exporters in particular need access to international credit markets to smooth exogenous booms and busts. Often credit access is primitive, simply holding excess reserves or setting up a commodity stabilization fund (e.g. Chile’s sovereign wealth fund).
4. **Redemption from Original Sin:** Surprisingly few countries are able to borrow externally in their own currency (what Eichengreen Hausmann, and Panizza (2002) call “original sin”). Mexico was the first among the emerging market is able to borrow externally in pesos, other countries have followed. This provided additional fiscal space and complements #1 by reducing the adverse effects of currency mismatches during devaluation.
5. Excess reserves or swap lines* or Sovereign Wealth Funds (held abroad) give countries additional latitude especially when combined with a fiscal rule, as in Chile. On how well swap lines worked in Korea and Mexico, see Sachs comments at the [2013 IMF Presentation of Kirsten Forbes... pdf](#)

Terms like “graduation”, “fear of floating” and “original sin” seem frivolous and a little pejorative, until we appreciate what is at stake. During the 1980s and 1990s Latin American and Asia during the endured severe crises and painful adjustment episodes supervised by the IMF. The 2008 Global Financial crisis (GFC) reminds us, however, that financial crises are endemic to all capitalist economies. The difference is that “advanced” or OECD governments are generally able to employ the tools of modern macroeconomic policy to mitigate rather than exacerbate financial and debt crises. Modern policy tools include fiscal and monetary policy, exchange rate policy and external borrowing (preferably in one’s own currency to mitigate balance sheet risk). For emerging or frontier market and ODA countries the typical situation is just the opposite: if a developing country runs out of reserves the IMF demands fiscal and monetary policy contraction (but often devaluation) in return for short term loans (known as “conditionality”). Fiscal policy and capital inflows are also “pro-cyclical” making booms larger and downturns sharper and longer. Hence one useful working definition of graduation is not having to go the IMF during a financial crisis (or what is almost the same thing, getting a flexible credit line or a swap line with a large Central bank).

If adjustment and stabilization policy works, as institutions and global capital markets improve more and more countries should graduate, that is be able to use macroeconomic policies to defend themselves against arbitrary shifts in capital flows, sudden stops, taper tantrums and the like. Unfortunately, some countries find themselves “going back to school” graduating by some criteria but the regressing for some reason. Greece and Sweden (strange bedfellows) are examples, with respect to fiscal policy, see Frenkel et al. 2013, Figure 4 reproduced below.

Frenkel et al. (2013) emphasize escaping the fiscal policy “procyclicality trap,”

Chile is undoubtedly the poster child of this graduation movement. As discussed in Frankel (2012), since 2001 Chile has followed a .scal rule that has a structural (i.e., cyclically-adjusted) .scal balance as its target. By construction, such a rule ensures that temporarily high fiscal revenues are saved rather than spent. But, as we will show below, Chile is not the only country that seems to have escaped the procyclicality trap.

Our analysis confirms previous findings in the literature regarding the role of increased financial integration and lower output volatility in reducing fiscal procyclicality. The papers main focus, however, is on the role played by the quality of institutions. We argue that the quality of institutions seems to be a key determinant of a country’s ability to graduate and show evidence that as the quality of institutions increases over time, the level of procyclicality falls.

Reinhart and Rogoff (2011) stress access to credit markets,

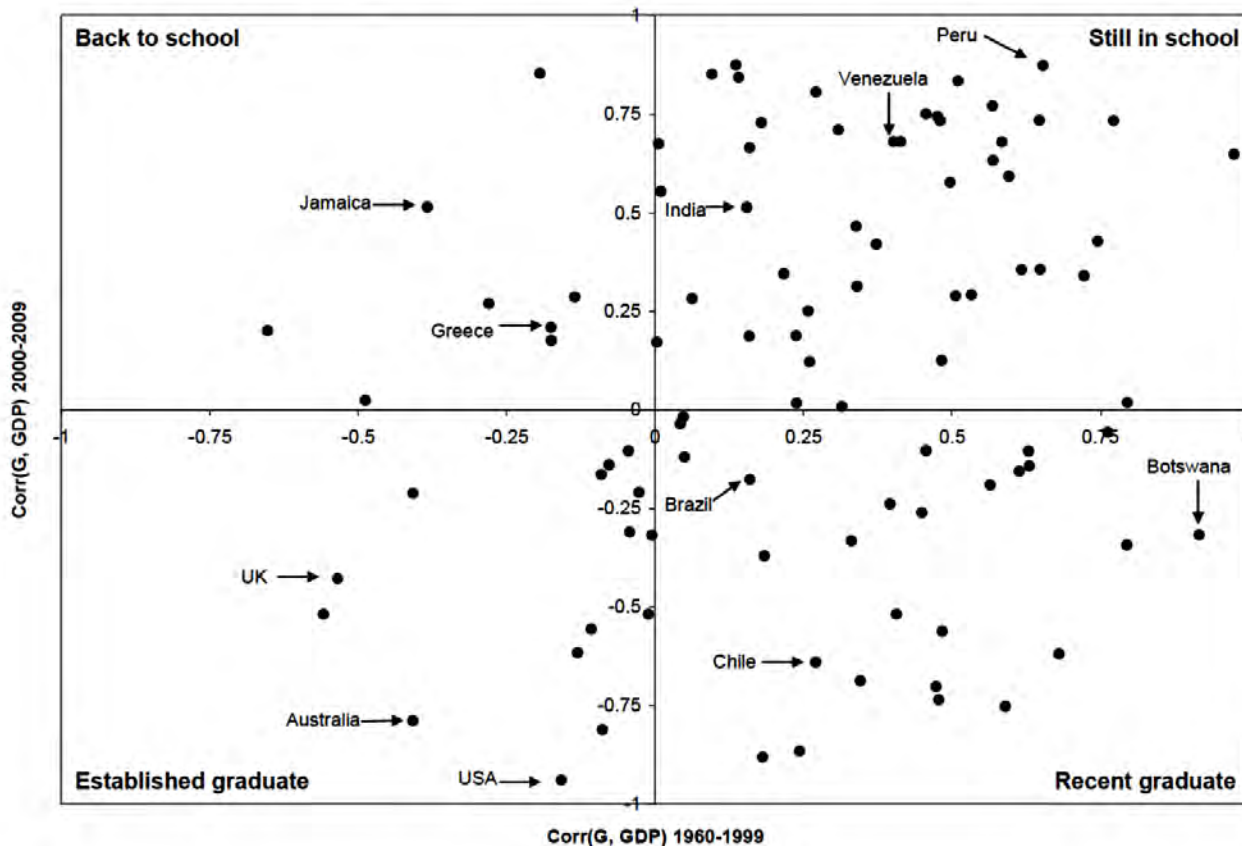
The transition from "emerging market" to "advanced" economy status does not come with a diploma or a well-defined set of criteria to mark the upgrade. As Qian and Reinhart highlight, graduation can be as the attainment and subsequent maintenance of international investment-grade status; the emphasis here is on the maintenance part. Another way of describing this criterion for graduation would be to say that the country has significantly and credibly reduced it’s of defaulting on its sovereign debt obligations. If it ever was a serial defaulter, it no longer is, and investors recognize it as such. Gaining access to capital markets is no longer a stop-and-go process. Graduation may also be denned as the achievement of some minimum threshold in terms of income per capita, a significant reduction in macroeconomic volatility, and the capacity to conduct countercyclical fiscal and monetary policies or, at a minimum move away from the destabilizing pro-cyclical policies that plague most emerging markets. Obviously, these milestones are not unrelated.

If graduation were taken to mean total avoidance of financial crises of any kind, we would be left with no graduating class. As we have noted earlier, countries may "graduate" from serial default on sovereign debt and recurrent episodes of very high inflation, as the cases of Austria, France, Spain, and others illustrate. History tells us however, that graduation from recurrent banking and financial crises is much more elusive.
(Reinhart and Rogoff, 2011, *This Time is Different*, [Chapter 17](#), page 283)

Rong Qian, Carmen M. Reinhart, Kenneth S. Rogoff (2011) [On Graduation from Default, Inflation and Banking Crises: Elusive or Illusion?.](#) in NBER Macroeconomics Annual 2010, Volume 25, Acemoglu and Woodford. 2011, or see [NBER Working Paper No. 16168](#).

Figures 3 and 4 are from Frankel, Jeffrey A. & Vegh, Carlos A. & Vuletin, Guillermo, 2013. "On graduation from fiscal procyclicality," Journal of Development Economics, Elsevier, vol. 100(1), pages 32-47 (see also NBER Paper 17618 www.nber.org/papers/w17619 which is also here in [pdf](http://class.povertylectures.com/FrankelVeghVuletinNBER_2011OnFiscalPolicyGraduation.pdf).
http://class.povertylectures.com/FrankelVeghVuletinNBER_2011OnFiscalPolicyGraduation.pdf

Figure 4. Country correlations between the cyclical components of real government expenditure and real GDP. 1960-1999 vs. 2000-2009



Notes: The cyclical components have been estimated using the Hodrick-Prescott Filter. A positive (negative) correlation indicates procyclical (countercyclical) fiscal policy. Real government expenditure is defined as central government expenditure and net lending deflated by the GDP deflator. See Appendix 2 for correlation values for each country.

Established graduates: Australia, Austria, Belgium, Canada, Denmark, Finland, Ireland, Italy, Japan, Korea, Netherlands, Spain, United Kingdom, United States, and Yemen.

Never graduated: Angola, Argentina, Azerbaijan, Bangladesh, Cameroon, China, Colombia, Rep. of Congo, Dominican Rep., Ecuador, Egypt, Gabon, Gambia, Ghana, Guatemala, Haiti, Honduras, India, Iran, Jordan, Kenya, Madagascar, Mali, Mexico, Mozambique, Myanmar, New Zealand, Nicaragua, Niger, Pakistan, Panama, Peru, Portugal, Qatar, Senegal, Sierra Leone, South Africa, Sri Lanka, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Uruguay, and Venezuela.

Back to school: Dem. Rep. of Congo, France, Greece, Jamaica, Kuwait, Sudan, Sweden, and Switzerland.

Recent graduates: Algeria, Bahrain, Bolivia, Botswana, Brazil, Chile, Costa Rica, Côte d'Ivoire, El Salvador, Germany, Hong Kong, Indonesia, Libya, Malaysia, Morocco, Nigeria, Norway, Oman, Paraguay, Philippines, Saudi Arabia, Syrian Arab Rep., Turkey, Uganda, United Arab Emirates, and Zambia.

Data: World Economic Outlook and International Financial Statistics (IMF).

Figure 4 and the above note is from Frankel, Jeffrey A. & Vegh, Carlos A. & Vuletin, Guillermo, 2013. "On graduation from fiscal procyclicality," *Journal of Development Economics*, Elsevier, vol. 100(1), pages 32-47 (see also NBER Paper 17618 www.nber.org/papers/w17619 which is also here in [pdf](#)).

Earlier version of thsi handout: http://class.povertylectures.com/ECON5450_OnGraduationHandout.pdf

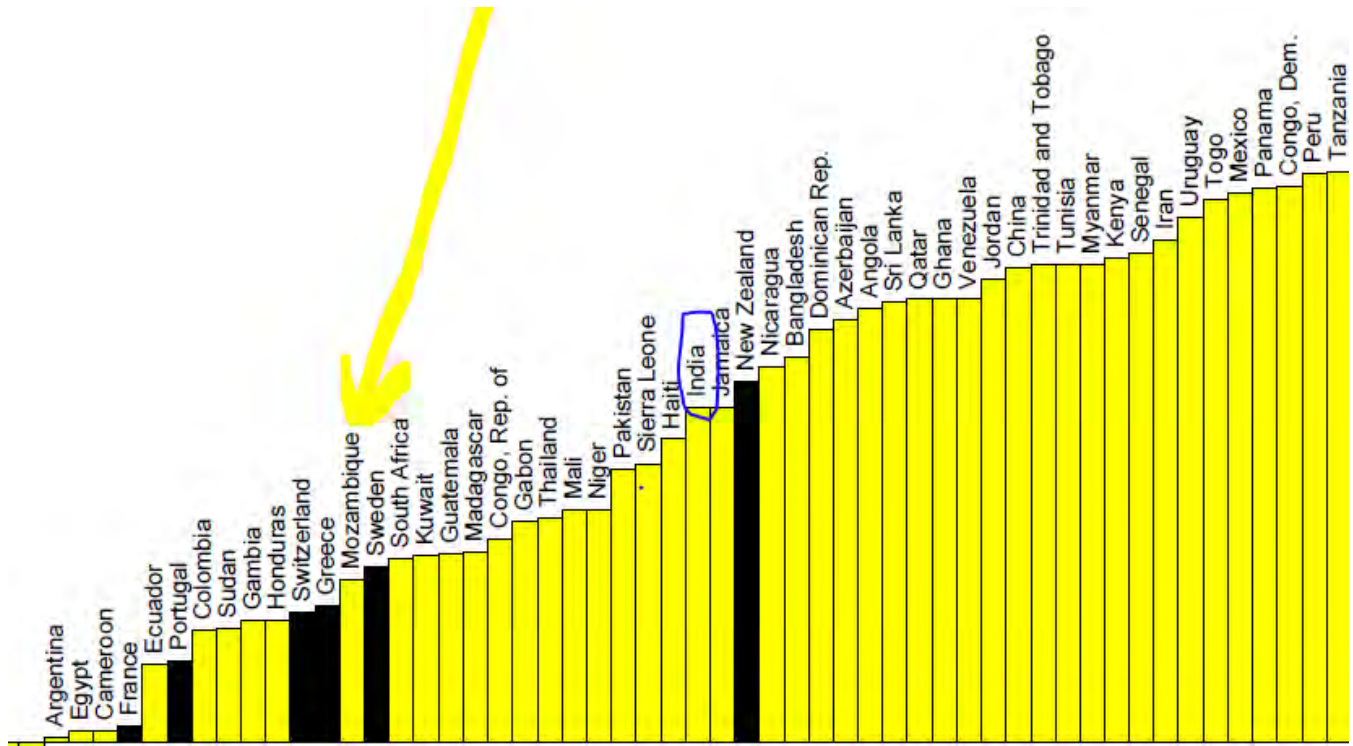
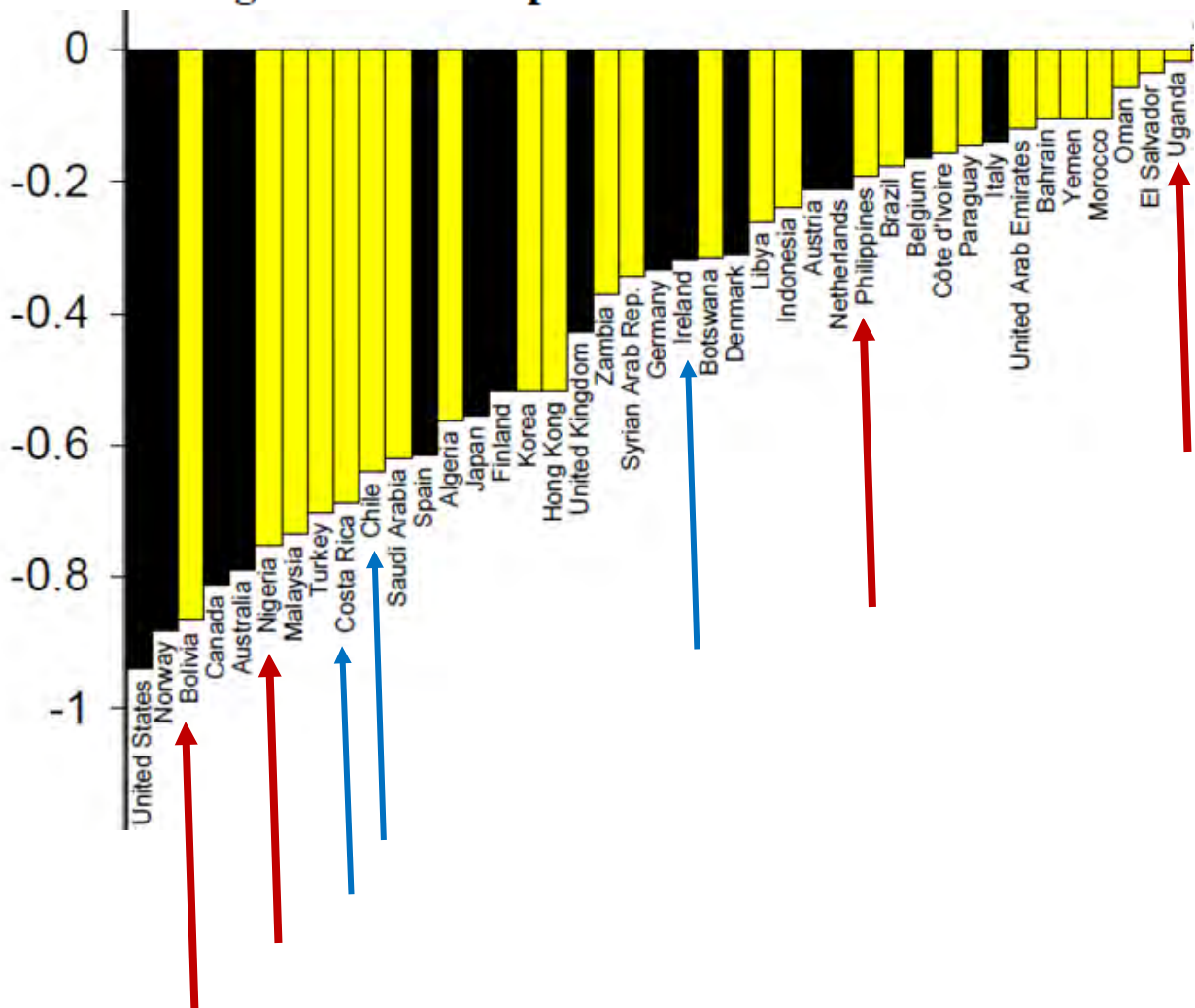


Figure 3. Country correlations between the cyclical components of the real government expenditure and real GDP, 2000-2009



Figures 3 and 4 are from Frankel, Jeffrey A. & Vegh, Carlos A. & Vuletin, Guillermo, 2013. "On graduation from fiscal procyclicality," Journal of Development Economics, Elsevier, vol. 100(1), pages 32-47 (see also NBER Paper 17618 www.nber.org/papers/w17619 which is also here in [pdf](#)).

http://class.povertylectures.com/FrankelVeghVuletinNBER_2011OnFiscalPolicyGraduation.pdf

	Table 3 from Annex A of Age of Austerity...			Gov Spending Trend	
	Change in Fiscal Spending as % of GDP			% of GDP	
	2008-9 vs 2005-7	2010-12 vs 2008-9	Cyclicality During vs. Post GFC	Average Change 2005-12	Cummulative Change 2005-12
Chile	3.7	0.4	3.3	0.4	3.1
Mexico	2.9	0.1	2.8	0.6	4.6
Nigeria	2.5	1.1	1.4	-0.1	-0.4
Malaysia	3.1	-1.2	4.3	0.0	0
Indonesia	0.0	-0.9	0.9	0.0	-0.1
Venezuela	-2.8	7.5	-10	1.6	12.6

This version of Table 3 can be edited, the version above is a picture, linked to this [spreadsheet](#).

Source: Ortiz and Cummings (2013) Annex A: The Age of Austerity, Policy Dialogue, http://policydialogue.org/files/publications/Age_of_Austerity_Ortiz_and_Cummins.pdf

<http://class.povertylectures.com/FiscalSpaceIndicators.xlsx>

Table 1
Estimated Size of Largest Sovereign Wealth Funds

Country	Fund Name	Assets (US\$bn)	Inception Year	Source of Funds
UAE	Abu Dhabi Investment Authority	875	1976	Oil
Norway	Government Pension Fund	380	1996	Oil
Singapore	Government Investment Corp.	330	1981	Non-commodity
Saudi Arabia	Saudi Arabian funds (Various)	300	n.a.	Oil
Kuwait	Kuwait Investment Authority	250	1953	Oil
China	China Investment Corp.	200	2007	Non-commodity
Singapore	Temasek Holdings	159.2	1974	Non-commodity
Russia	Stabilization Fund	127	2004	Oil
Australia	Future Fund	54	2006	Non-commodity
Qatar	Qatar Investment Authority	50	2005	Oil
Libya	Oil Reserve Fund	50	2005	Oil
Algeria	Revenue Regulation Fund	42.6	2000	Oil
US (Alaska)	Permanent Fund Corp.	38	1976	Oil
Brunei	Brunei General Reserve Fund	30	1983	Oil
South Korea	Korea Investment Corp.	20	2005	Non-commodity
Malaysia	Khazanah Nasional	18	1993	Non-commodity
Kazakhstan	Kazakhstan National Fund	18	2000	Oil
Canada	Alberta Heritage Fund	16	1976	Oil
Taiwan	National Stabilisation Fund	15.2	n.a.	Non-commodity
Venezuela	National Development Fund	15	2005	Oil
Iran	Oil Stabilization Fund	13	1999	Oil
New Zealand	Superannuation Fund	11	2001	Non-commodity
Chile	Economic and Social Stabilization Fund	9.8	2006	Copper
UAE	Isthmar	8	2003	Oil
Oman	State General RF	6	n.a.	Oil
UAE	Dubai International Capital	6	2004	Oil
Bahrain	Unknown	6	1980	Oil
Chile	Pension Reserve Fund	1.4	2006	Copper
Total		3049.2		

Source: Morgan Stanley; Standard Chartered

Source: Griffith-Jones, S. and José Antonio Ocampo (2010) [Sovereign Wealth Funds](#): A Developing Country Perspective, paper presented at CAF SWF workshop, 2008, for an updated list see, www.swfinstitute.org/fund-rankings/

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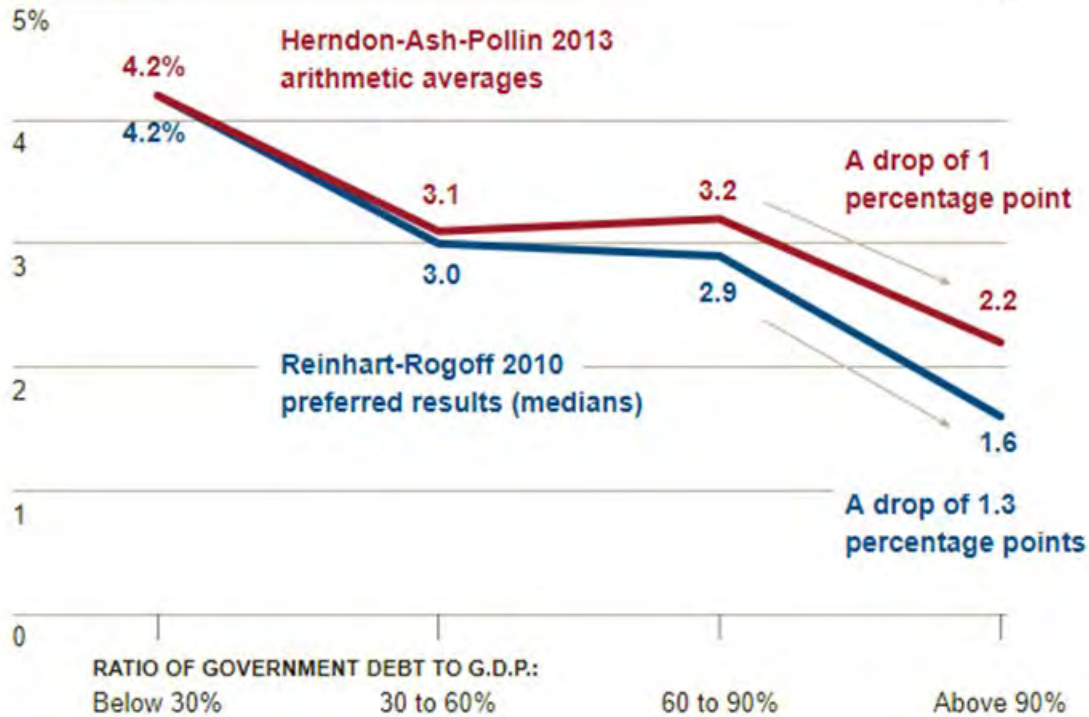
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Comparing the Two Analyses

A comparison of the analyses of the association between debt and growth by Reinhart-Rogoff and Herndon-Ash-Pollin. [Related Article »](#)

AVERAGE
G.D.P. GROWTH:



The Data

1945–2009 RATIO OF DEBT TO G.D.P.	Reinhart-Rogoff (2010)		Herndon-Ash-Pollin (2013)	
	MEAN	MEDIAN (CHARTED ABOVE)	MEAN (ABOVE)	MEDIAN
Below 30%	4.1%	4.2%	4.2%	n.a.
30 to 60%	2.8	3.0	3.1	n.a.
60 to 90%	2.8	2.9	3.2	n.a.
Above 90%	-0.1	1.6	2.2	n.a.

**1800–2009
RATIO OF
DEBT TO G.D.P.** **Reinhart-Rogoff (2010, Table 1)**

	MEAN	MEDIAN (CHARTED ABOVE)
Below 30%	3.7	3.9
30 to 60%	3.0	3.1
60 to 90%	3.4	2.8
Above 90%	1.7	1.9

**1800–2011
RATIO OF
DEBT TO G.D.P.** **Reinhart-Reinhart-Rogoff (2012)**

	MEAN
Below 90%	3.5
Above 90%	2.3

By THE NEW YORK TIMES

Carmen M. Reinhart and Kenneth S. Rogoff, "Growth in a Time of Debt," January 18, 2010; Thomas Herndon, Michael Ash and Robert Pollin, "Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff," April 2013; Cyniconomics

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