China and Latin America:

Economic Impacts

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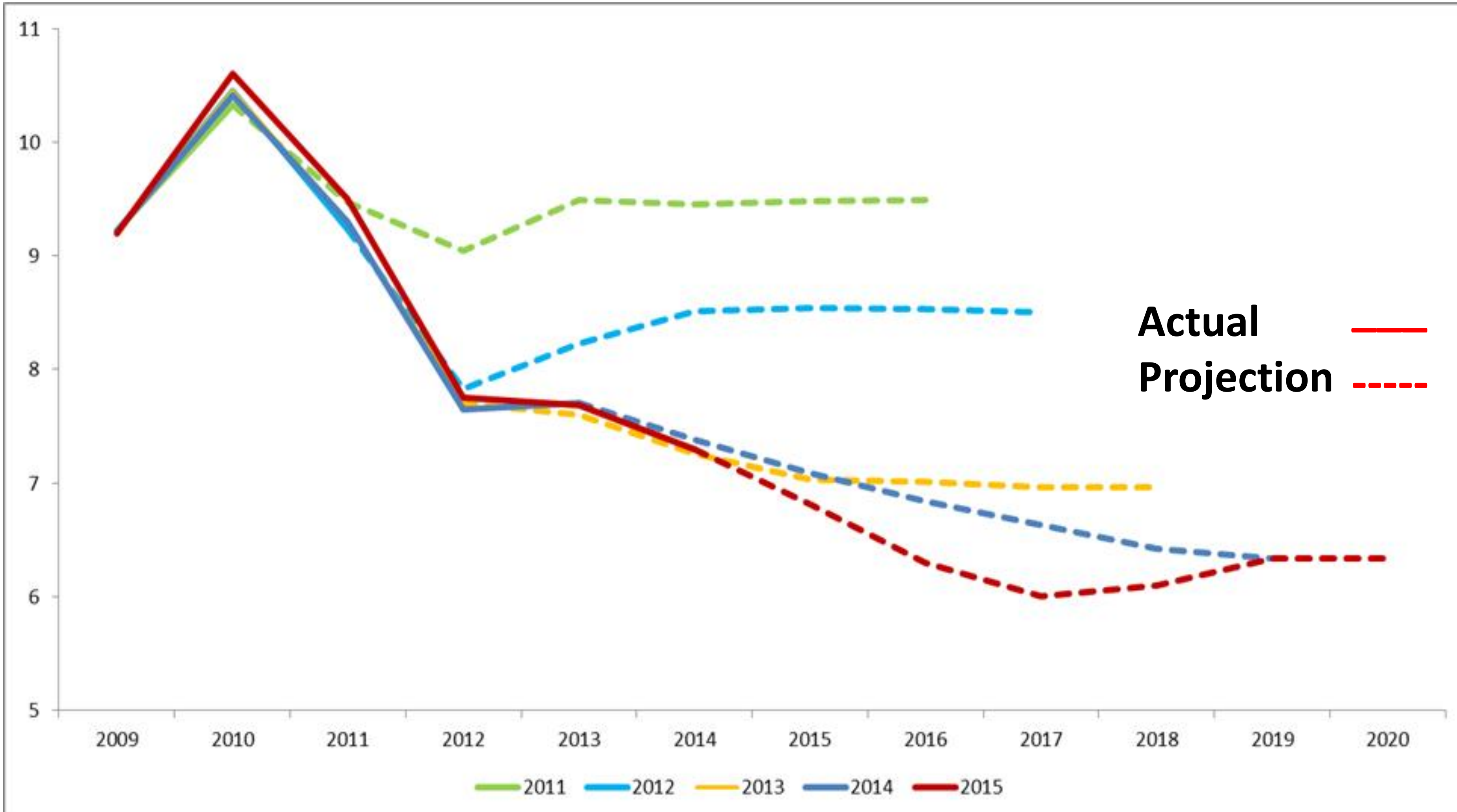
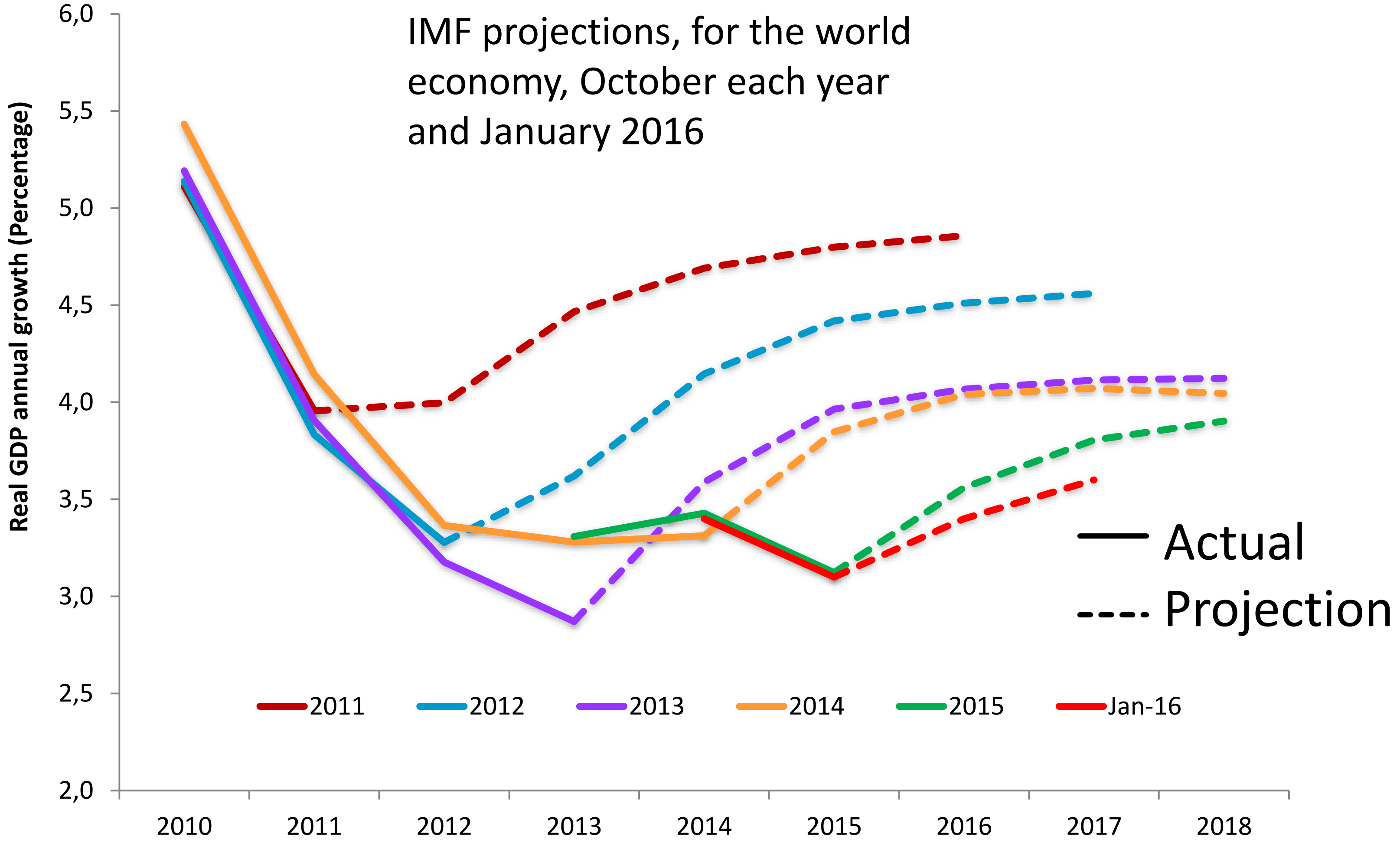
1. The China growth slowdown



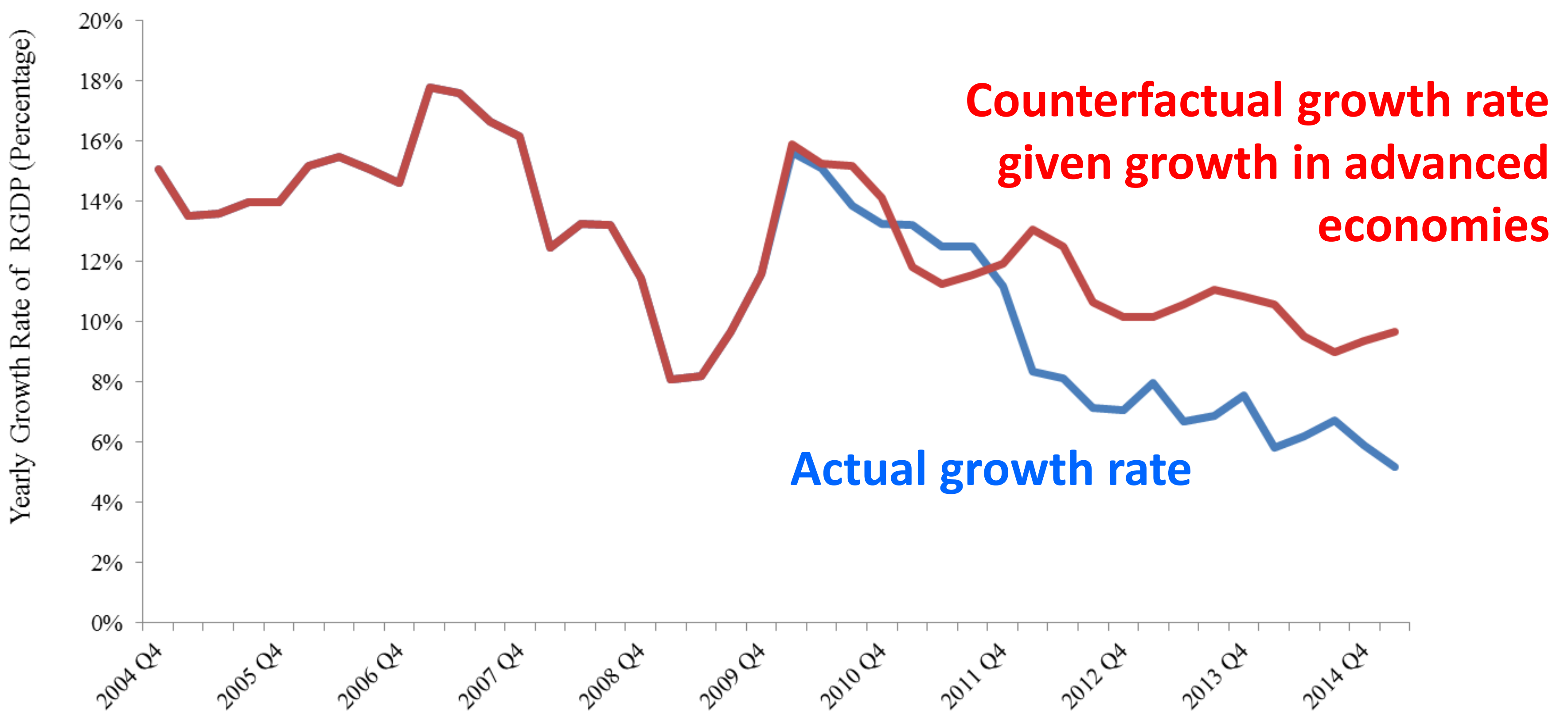
… 2011 to 2015 IMF Projections for Chinese growth

And the global recovery continues to disappoint…



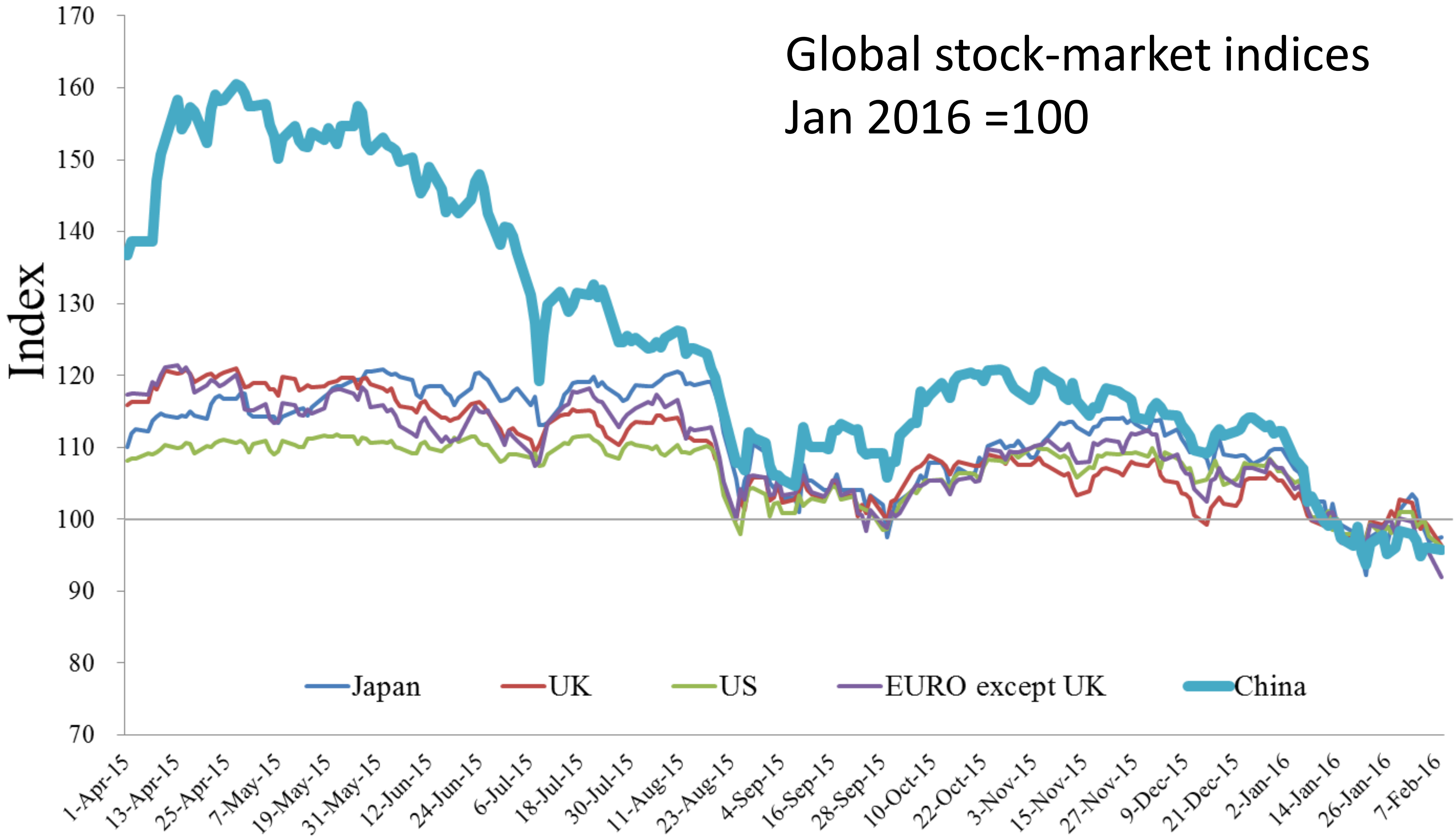
…and there are risks of yet further delay

The China slowdown is mostly idiosyncratic…



Results from a Global-VAR (GVAR) model of the world economy developed at the IDB. See Cesa-Bianchi et al (2011), Powell (2016)

And China large enough to provoke global volatility



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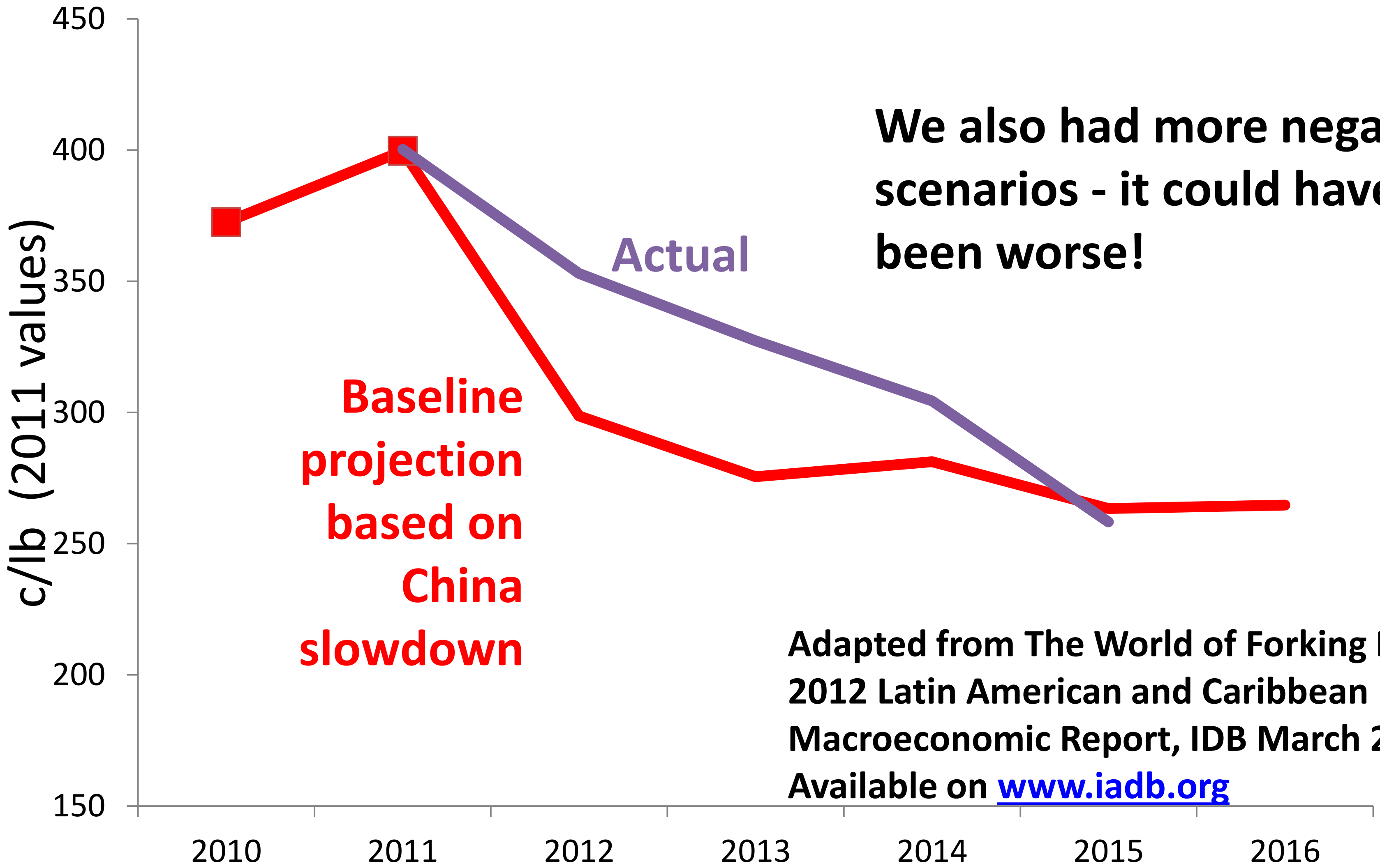
2. China and Commodity Prices

- In 2012, IDB analysis concluded a China slowdown would have impacts on commodity prices
- China boomed at growth rates of more than 10% for 10 years (2002-2011), this was not sustainable
- As China rebalanced (lower investment as a percentage of GDP) and slowed this would be a double-whammy for metals' prices
- With some but less of an impact on food prices

Example: China and Copper Prices

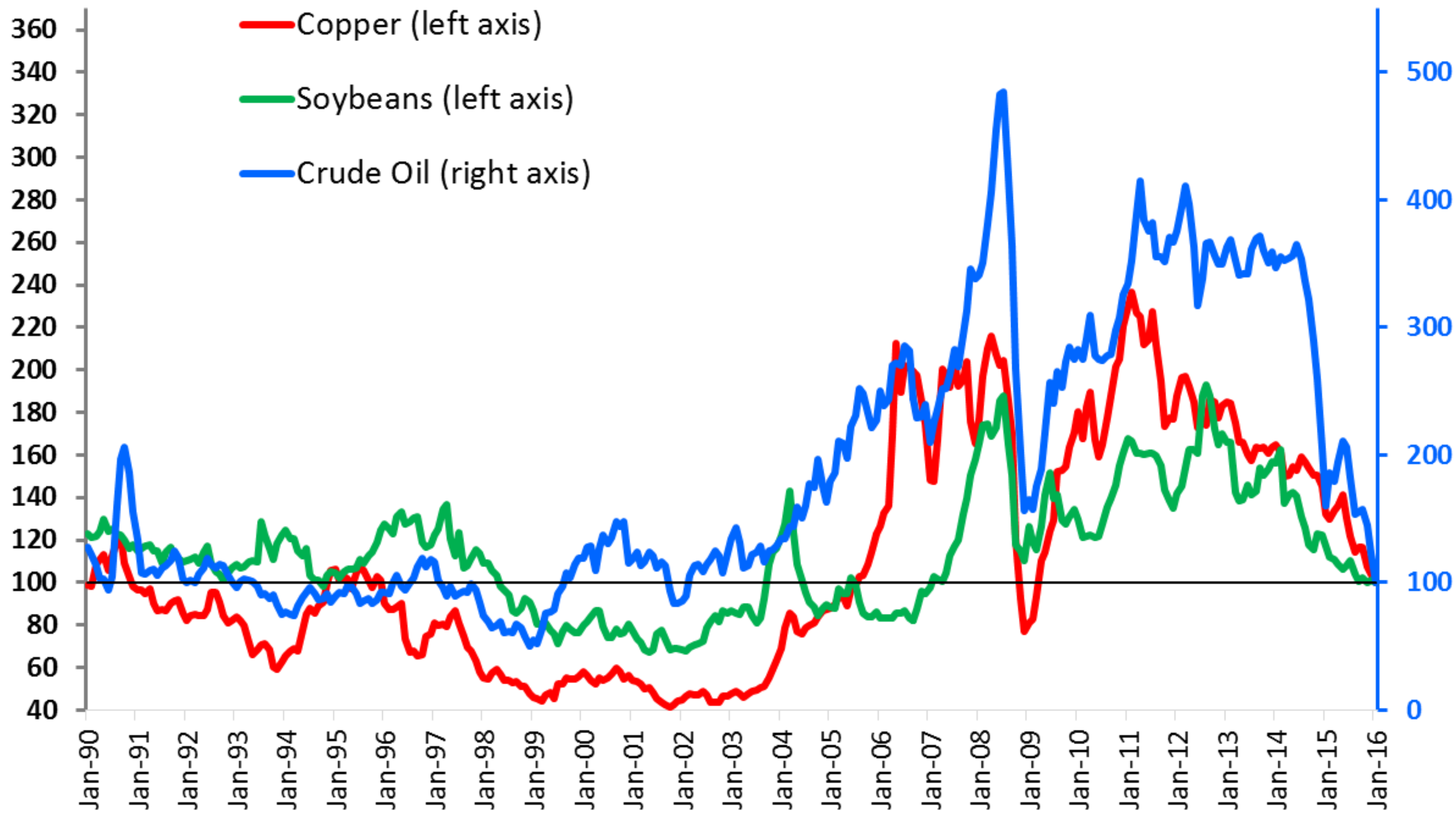


We also had more negative scenarios - it could have been worse!

Adapted from The World of Forking Paths: 2012 Latin American and Caribbean Macroeconomic Report, IDB March 2012. Available on www.iadb.org

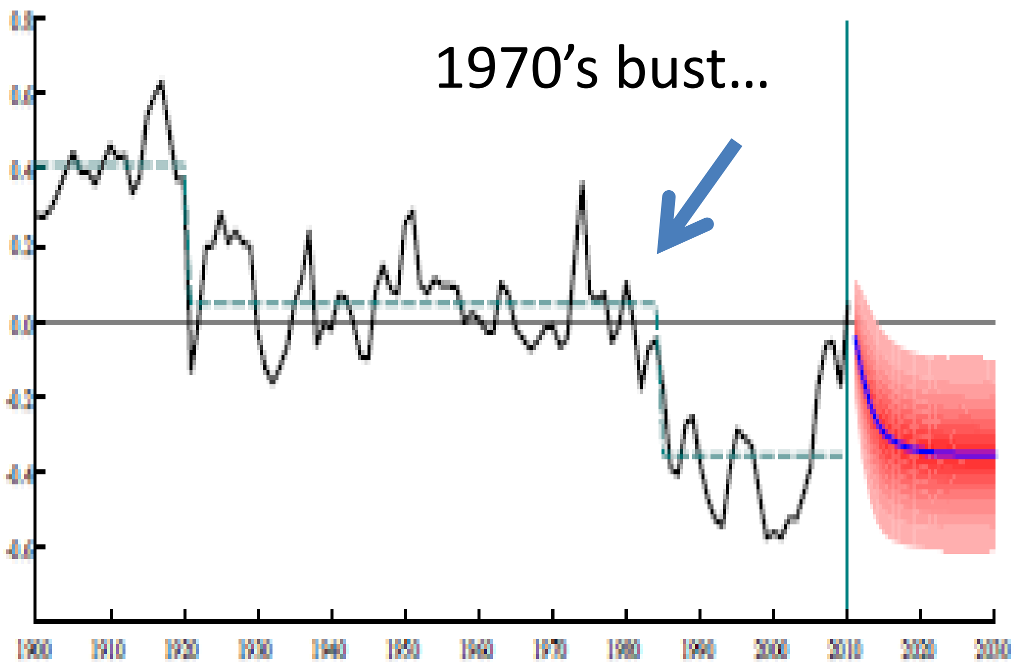
Real commodity prices now back to 1990's levels

Index January 2016 = 100



Note: Constant US$ (December 2015)

A Longer Term Perspective:
110 Years of Commodity Price Booms and Busts

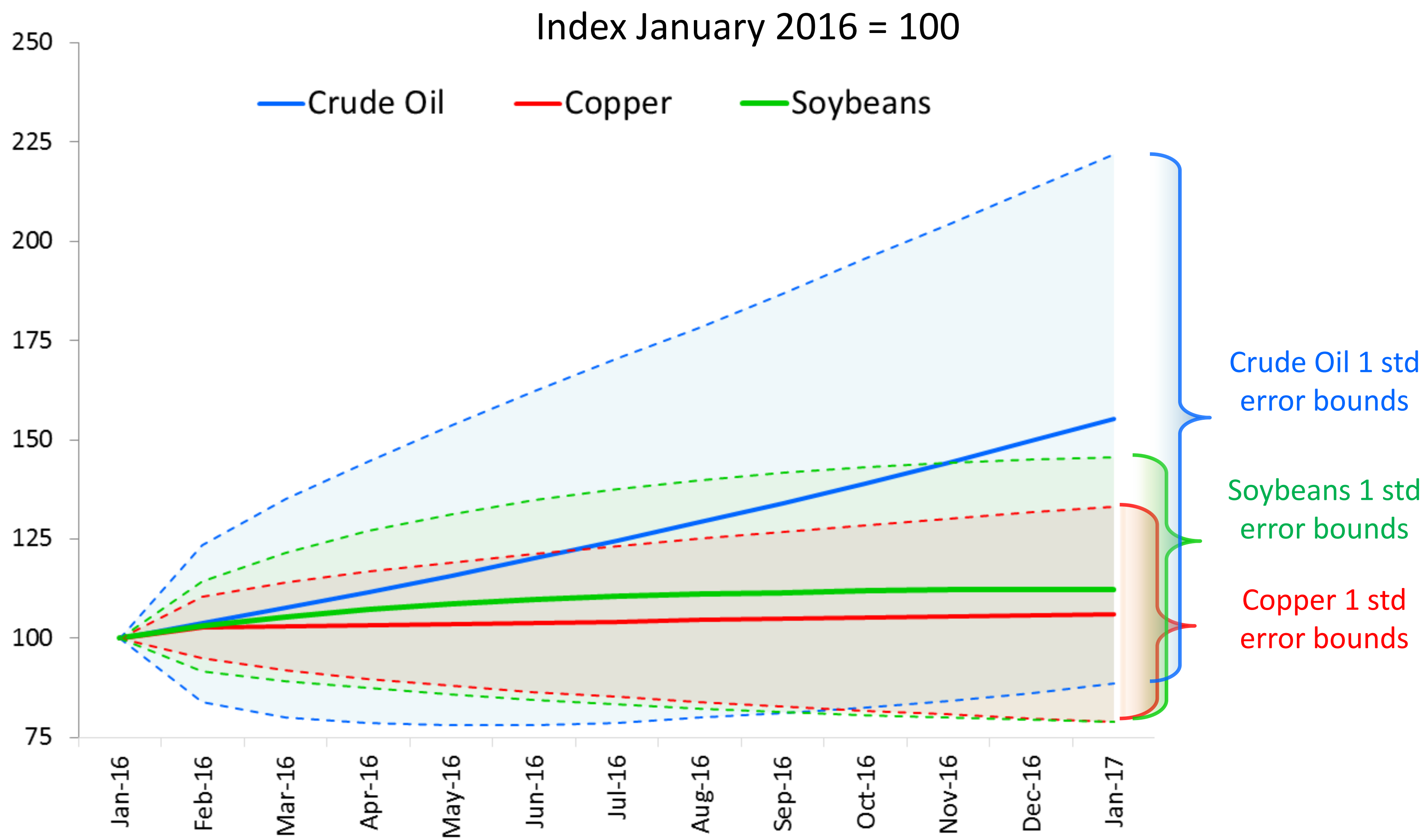


Note: Updated Grilli and Yang Index deflated by manufacturing export unit values, using data from Pfaffenzeller, Newbold, and Rayner (2007).
Dynamic forecast for 20 years ahead, confidence fan chart for 2 standard deviations.

Source: Mariscal and Powell (2014)

- Source: Mariscal and Powell (2014) - prices returning to pre China boom levels
- Commodity prices declined through two/three major negative breaks
- Powell (1991) suggested innovation in booms lowers long run prices
- Will this happen again?

Only moderate increases projected, subject to substantial uncertainty



Note: central projections from World Bank, confidence bounds calculated from the implied volatilities of traded, at-the-money call options with various expiry dates (source: DataStream), lines constructed using interpolations where necessary.

On Commodity Prices

- Predicting long term commodity prices almost impossible – and good reasons for this
- Better to think how to manage the risks than try to do the impossible – predict prices
- Hedging next year budget commitments (as Mexico has done) plus a longer term stabilization fund (as Chile has done) seem like reasonable approaches
- Commodity exporting countries should set up stabilization funds now and oil importers should hedge with out-of- the-money call options

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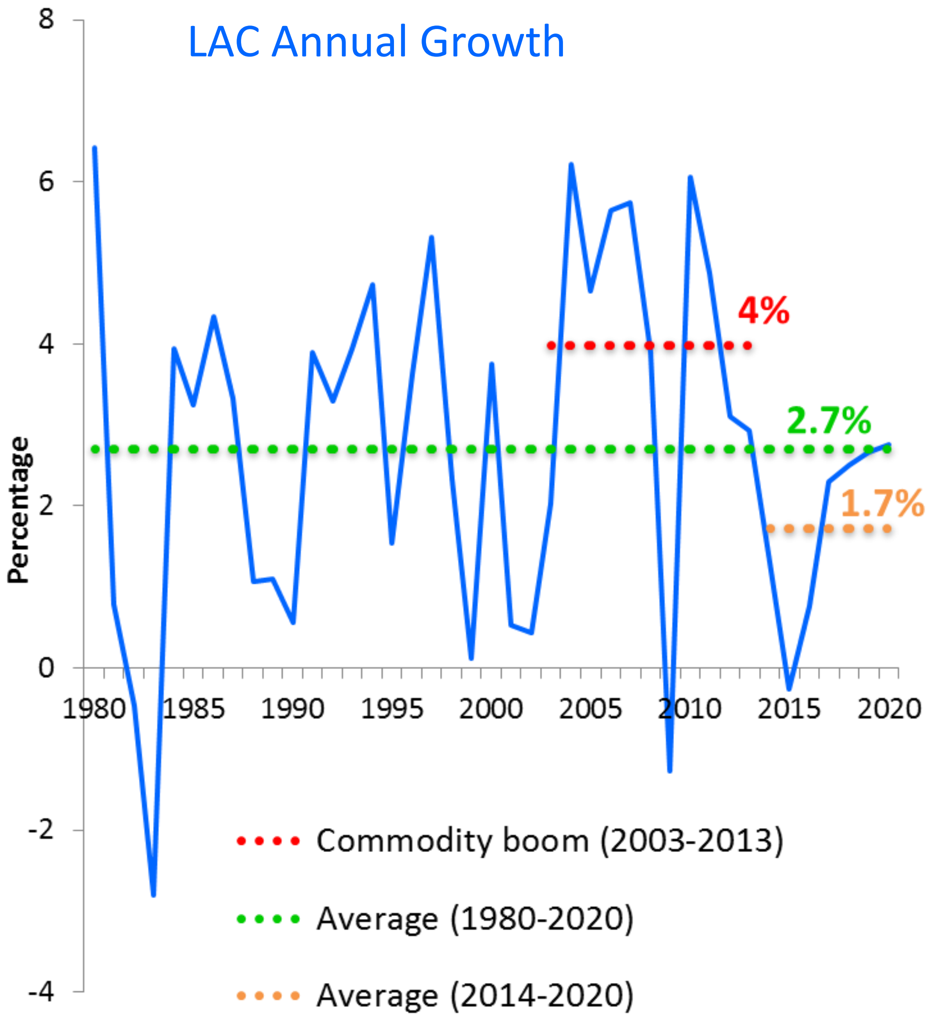
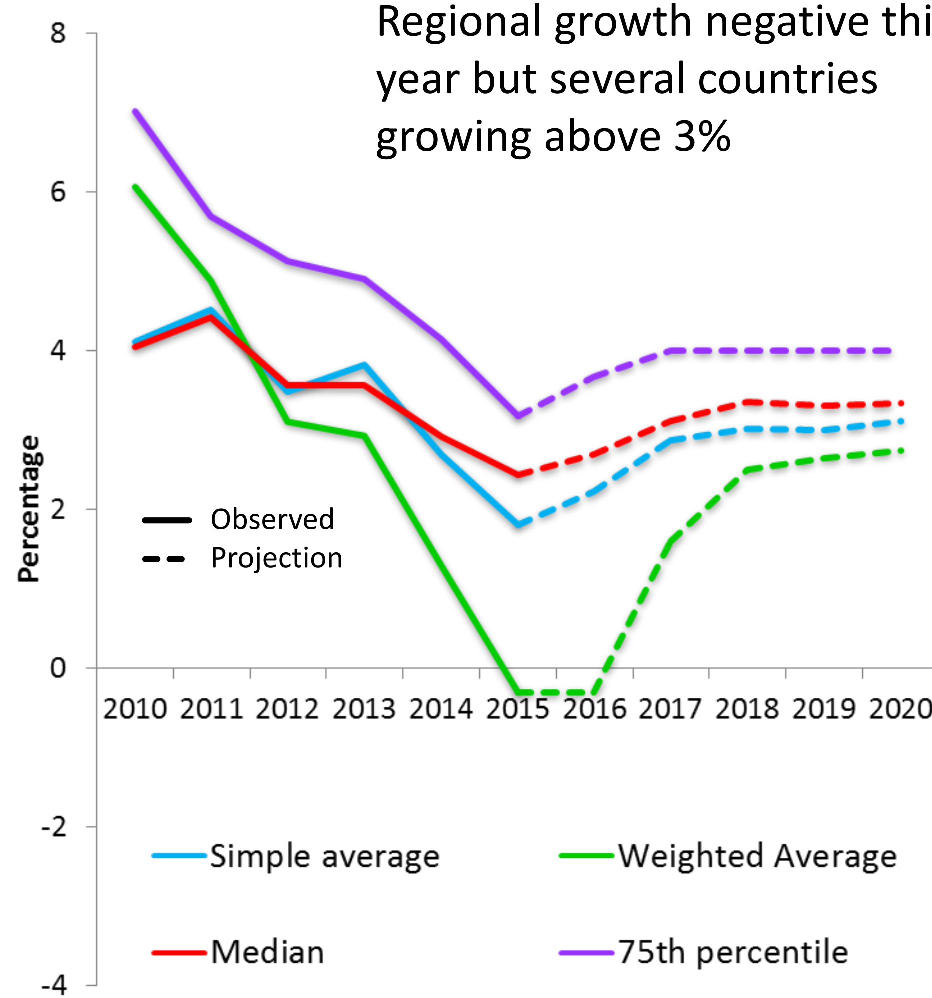
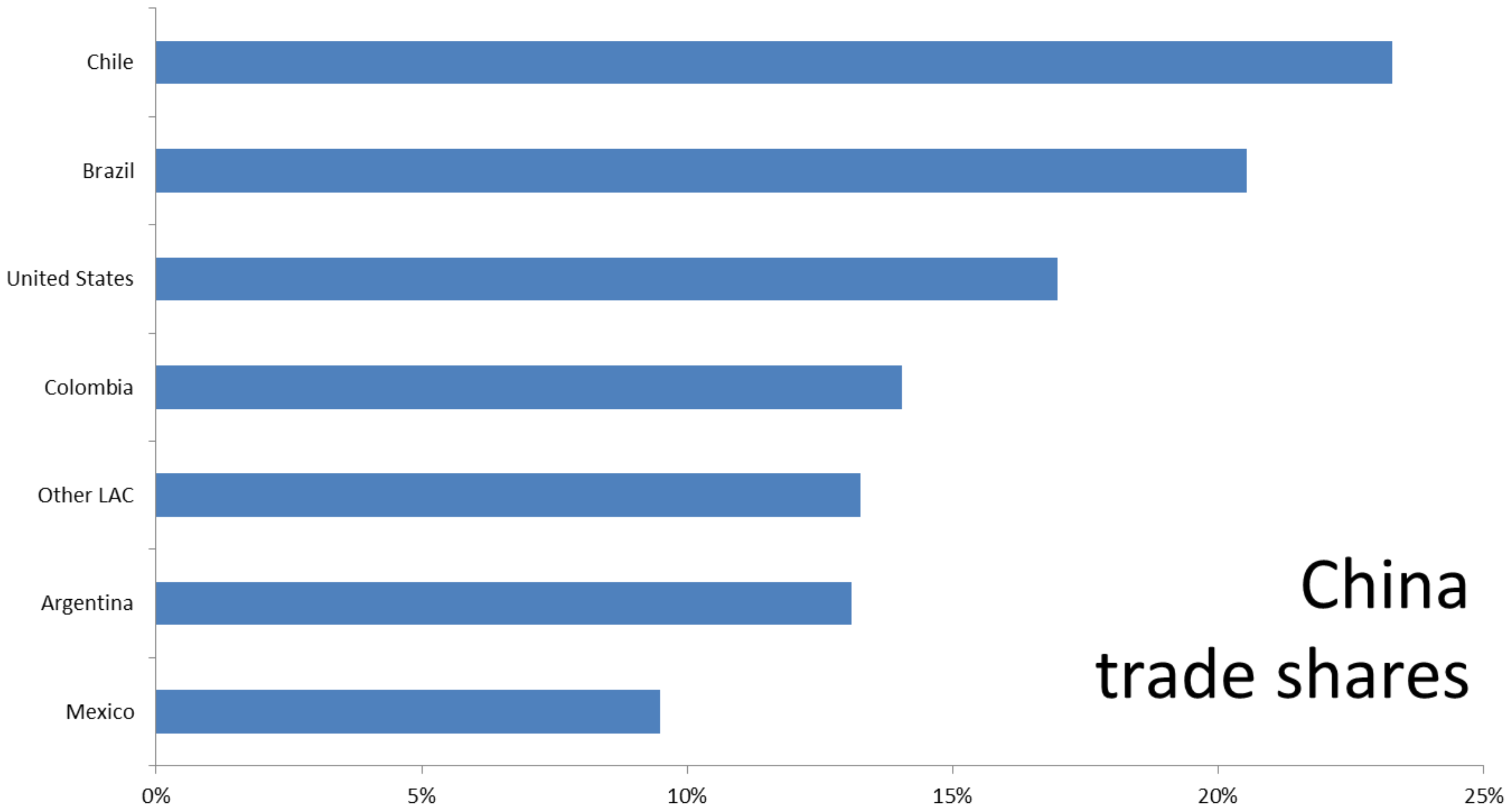
3. What does all this mean for Latin America? Lower growth but significant differentiation



Regional growth negative this year but several countries growing above 3%

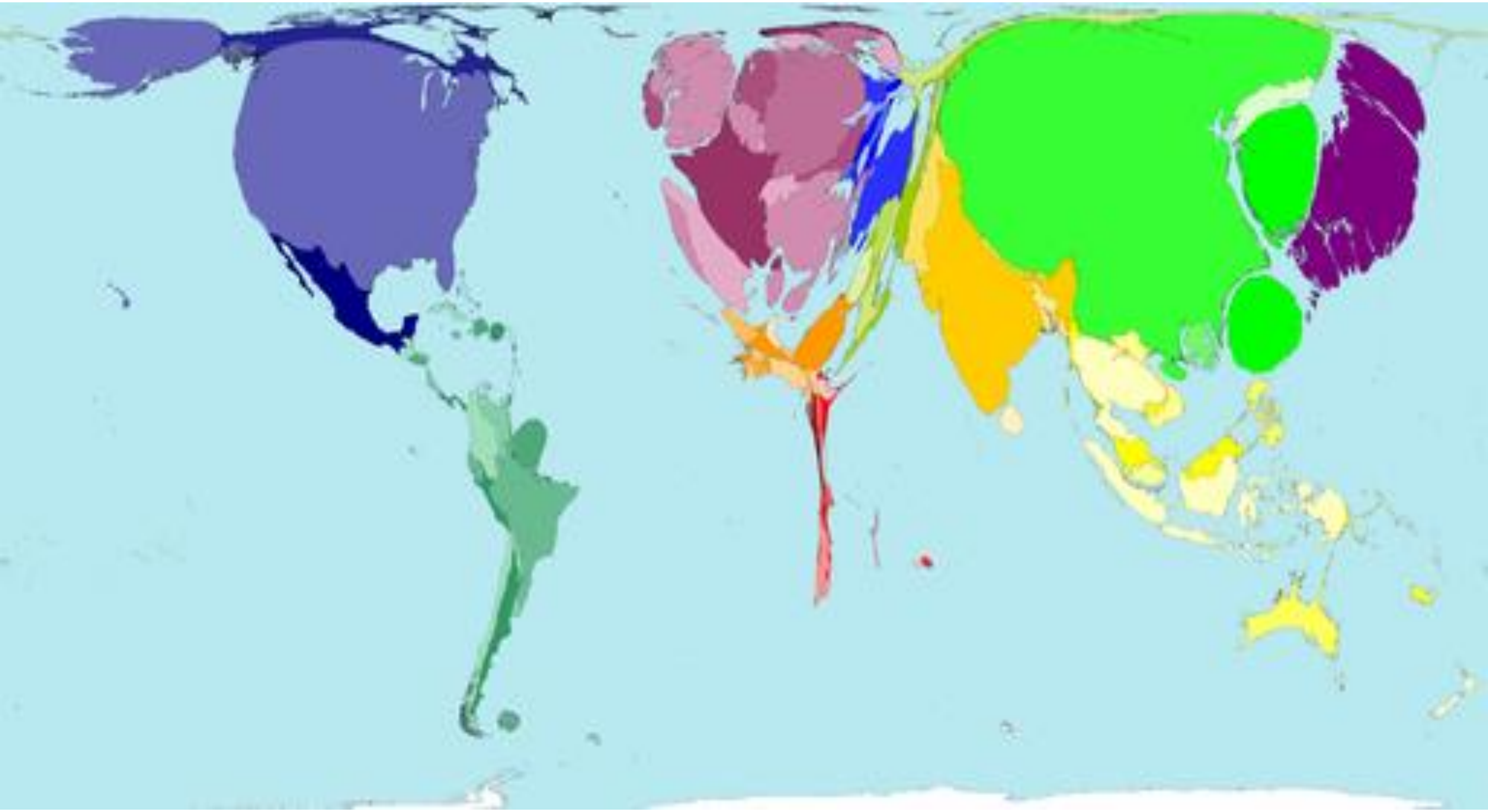


China Effect: Trade



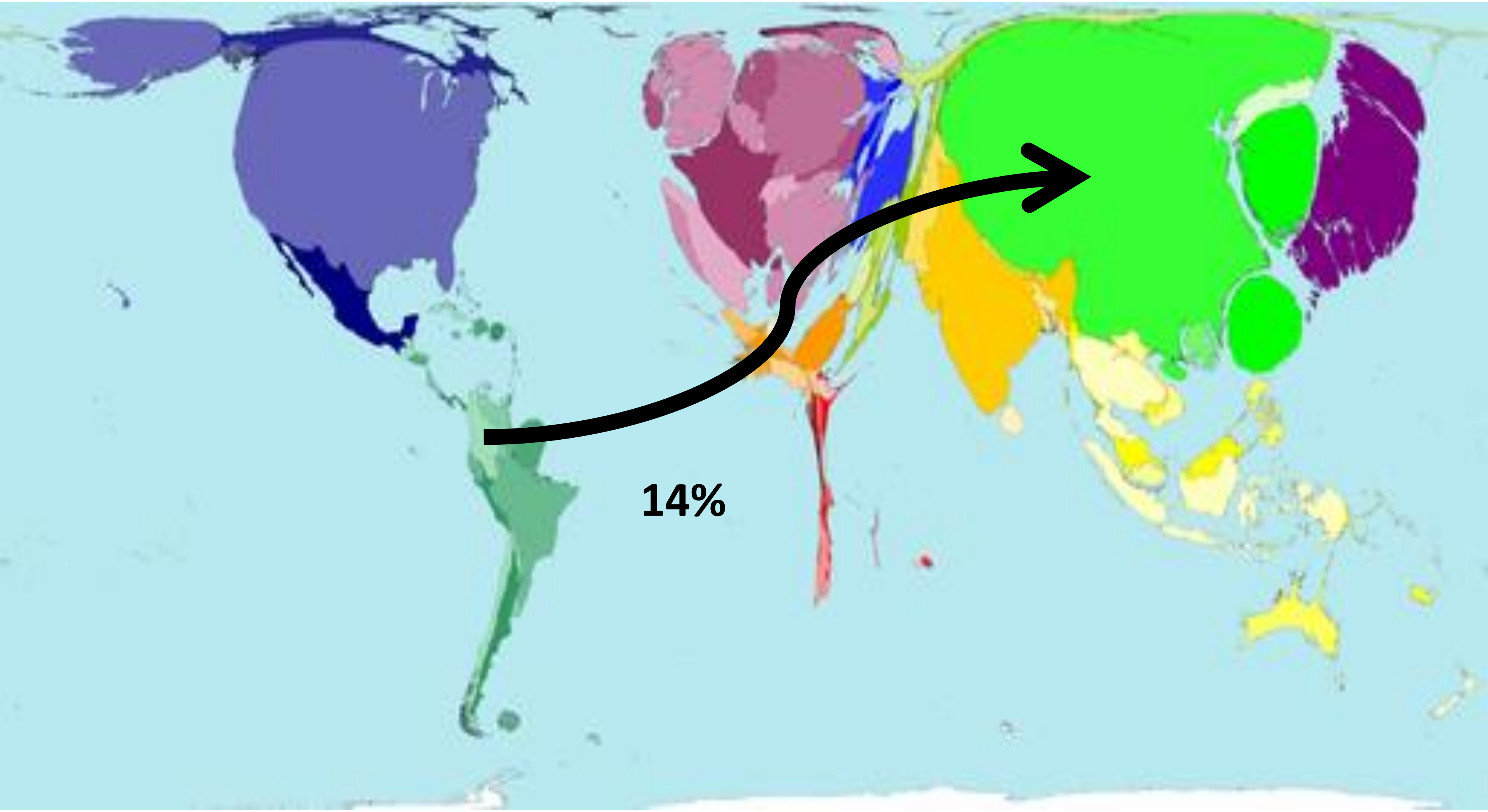
Note: average of exports plus imports, 2011-2014. Source: IMF DOTS. Export weights are generally greater than import weights

The World Wealth Map
Country Size, 2015 GDP



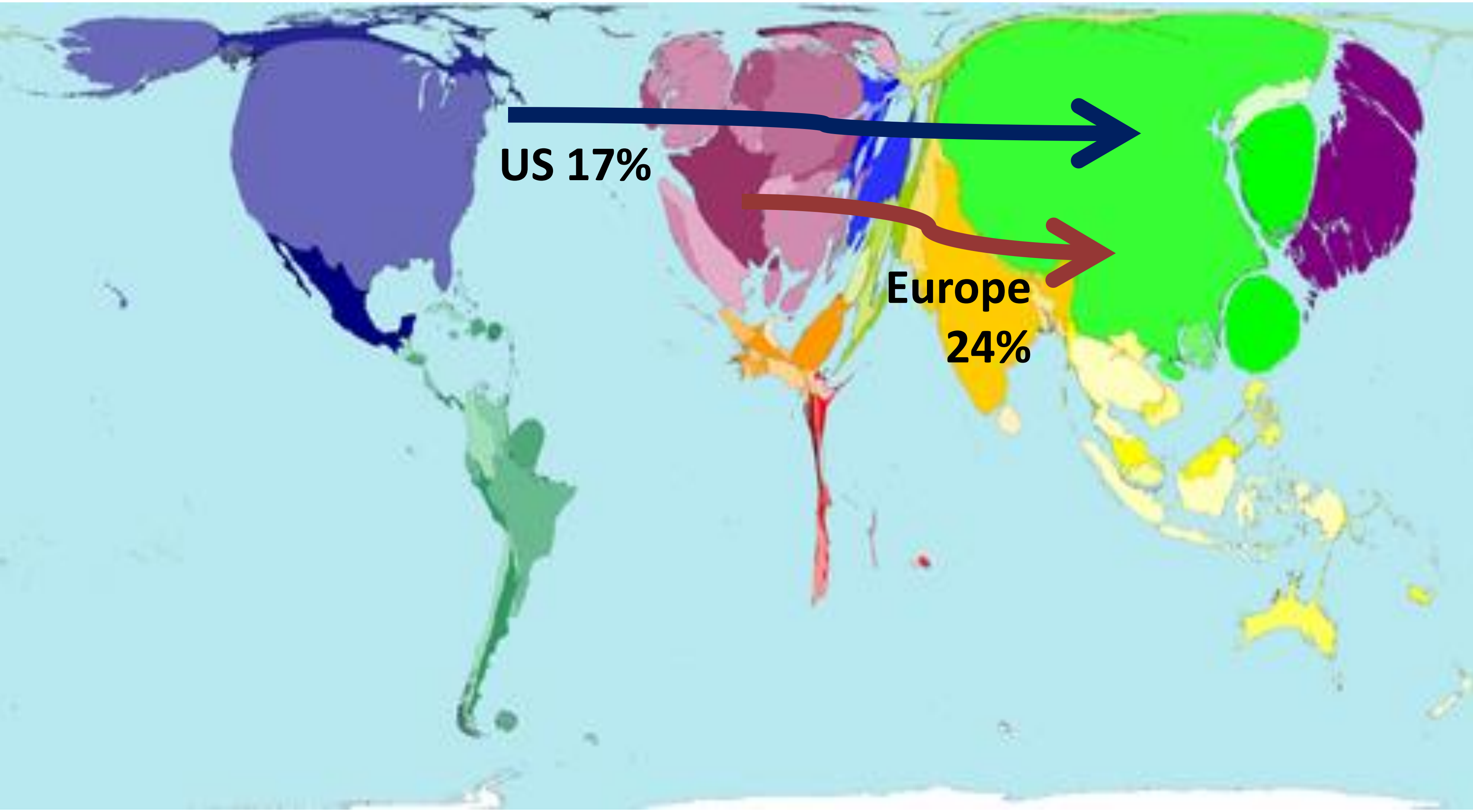
Source: Worldmapper Limited (www.worldmapper.org)

Around 14% of Colombian trade is with China



Source: Worldmapper Limited (www.worldmapper.org) and IMF (DOTS), trade is average of exports and imports 2011-2014

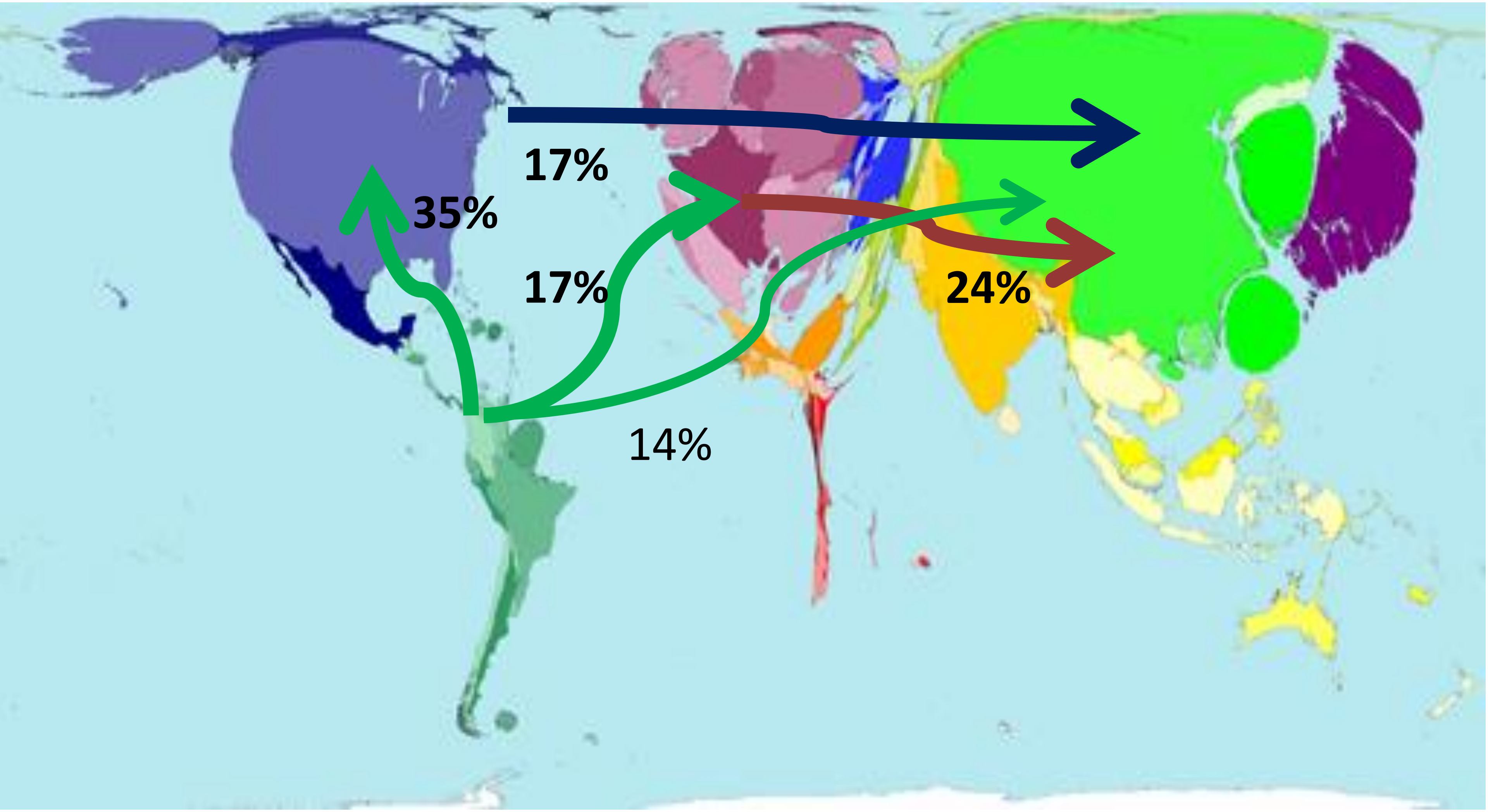
A significant amount of US and European trade also now with China…



Source: Worldmapper Limited (www.worldmapper.org) and IMF (DOTS) average of exports and imports 2011-2014

And 35% of Colombian trade with the US!

China not only affects Colombia directly but also through the US, Europe and others…



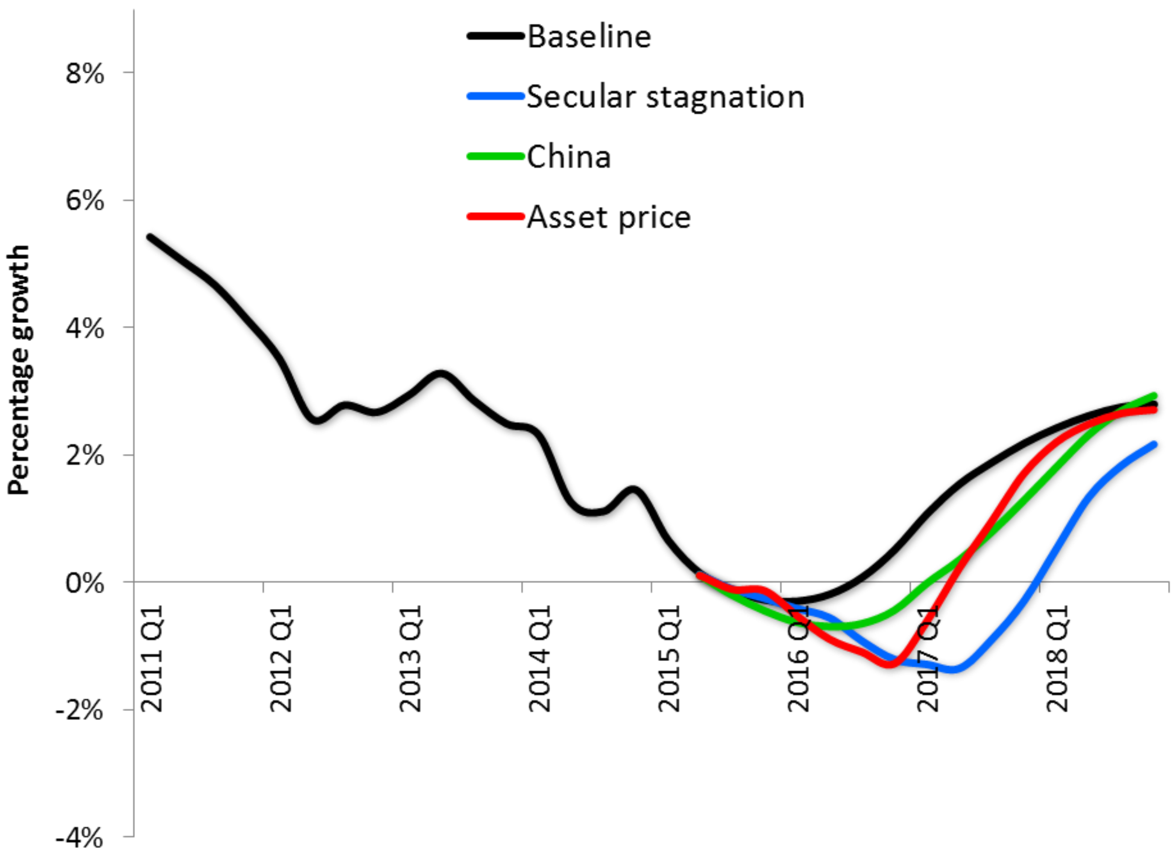
Source: Worldmapper Limited (www.worldmapper.org) and IMF (DOTS) averages of exports and imports 2011-2014

Global Vector Auto-Regression Model (GVAR Model)

- To sort out the direct and indirect effects, a model is useful
- The IDB has developed a statistical model (G-VAR – see Cesa Bianchi and Rebucci (2011), following Pesaran and Smith..)
- Includes real activity (GDP), fiscal and monetary policy, exchange rates, financial asset and commodity prices
- We tend use an IMF (World Economic Outlook) baseline and then consider the impact of various shocks

The China effect on LAC growth

Latin America and the Caribbean growth rate



Note: estimated employing a statistical model of the world economy (a Global Vector Auto-Regression or G-VAR) developed at the IDB and including 14 countries in the region.

- **Baseline growth for the region**
- **Secular stagnation scenario: ½ std. dev. shock to growth in the US, the Euro Area and Japan**
- **China shock scenario: 1 std. dev. shock to growth**
- **Asset price shock scenario: ½ std. dev. shock to global asset prices**

LAC Growth Sensitive to the China and asset prices

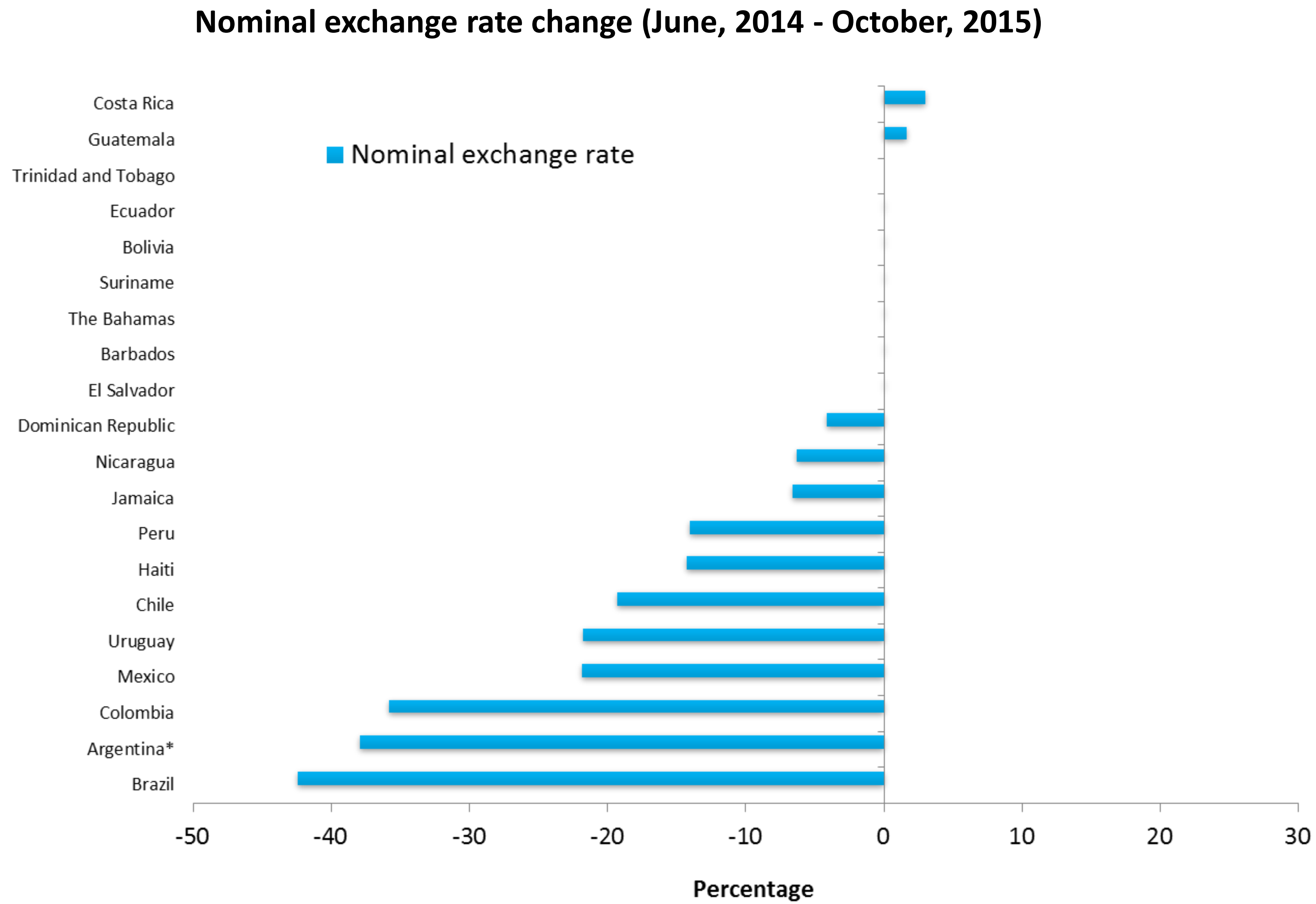
Annual Averages for 2016-2018

Country / Region	Baseline growth (%)	Secular Stagnation	Shock to China growth rate	Asset Prices shock	China and Asset Shocks
Brazil	**-0.4%**	-1.2	-0.5	-0.5	-1.0
Mexico	**2.9%**	-2.0	-0.7	-1.1	-1.9
Southern Cone (ex. Brazil)	**0.8%**	-1.8	-0.8	-0.7	-1.5
Andean Region	**3.4%**	-1.4	-0.6	-0.8	-1.4
Central America	**2.9%**	-0.5	-0.2	-0.4	-0.5
Caribbean	**2.4%**	-0.4	-0.1	-0.1	-0.2
Latin America and the Caribbean	**1.5%**	**-1.5**	**-0.6**	**-0.7**	**-1.4**

Annualized impact of a shock to China growth

A total shock of 3% to Chinese growth would leads to a loss of 1.8% of LAC GDP and for the Andean region over 3 years, which rises to 4.2% if combined with a 10% fall in global equity prices.

Another link: exchange rates.
Given fall in commodity prices, large depreciations



Note: Negative values are depreciations.* For Argentina, the nominal depreciation is to Dec 31st 2015.

But dollar bilateral exchange rates are not a good measure of competitiveness

Colombia → United States ← Ecuador

1 Colombia exports cut flowers to the US

2 ....as does Ecuador

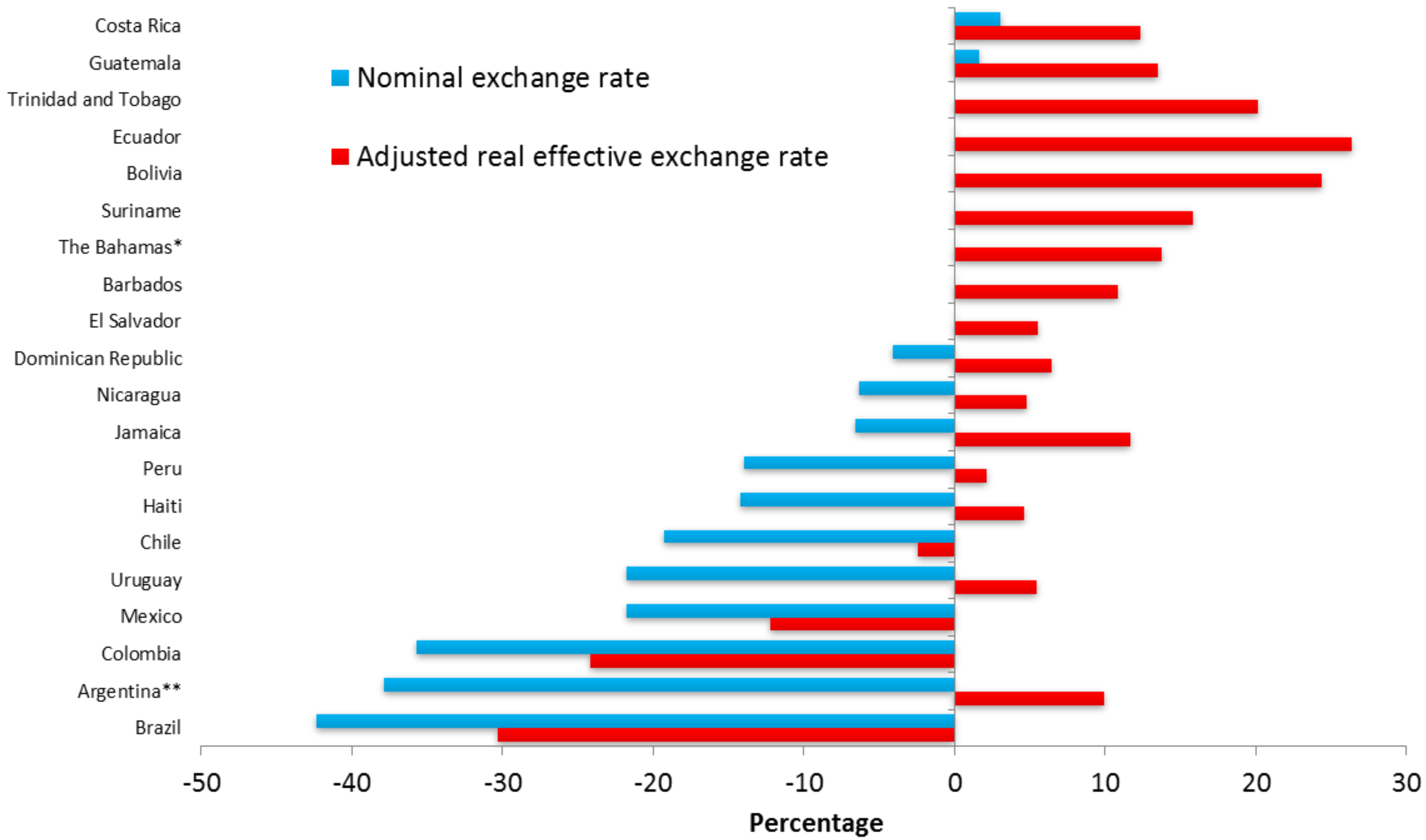
The Netherlands

3 If Colombia depreciates, this implies a real appreciation for Ecuador…

4 …and if the Euro depreciates this harms the competitiveness of both Colombia and Ecuador

Despite significant nominal depreciations, Adjusted Real Effective Exchange Rates (AREER) have mostly appreciated

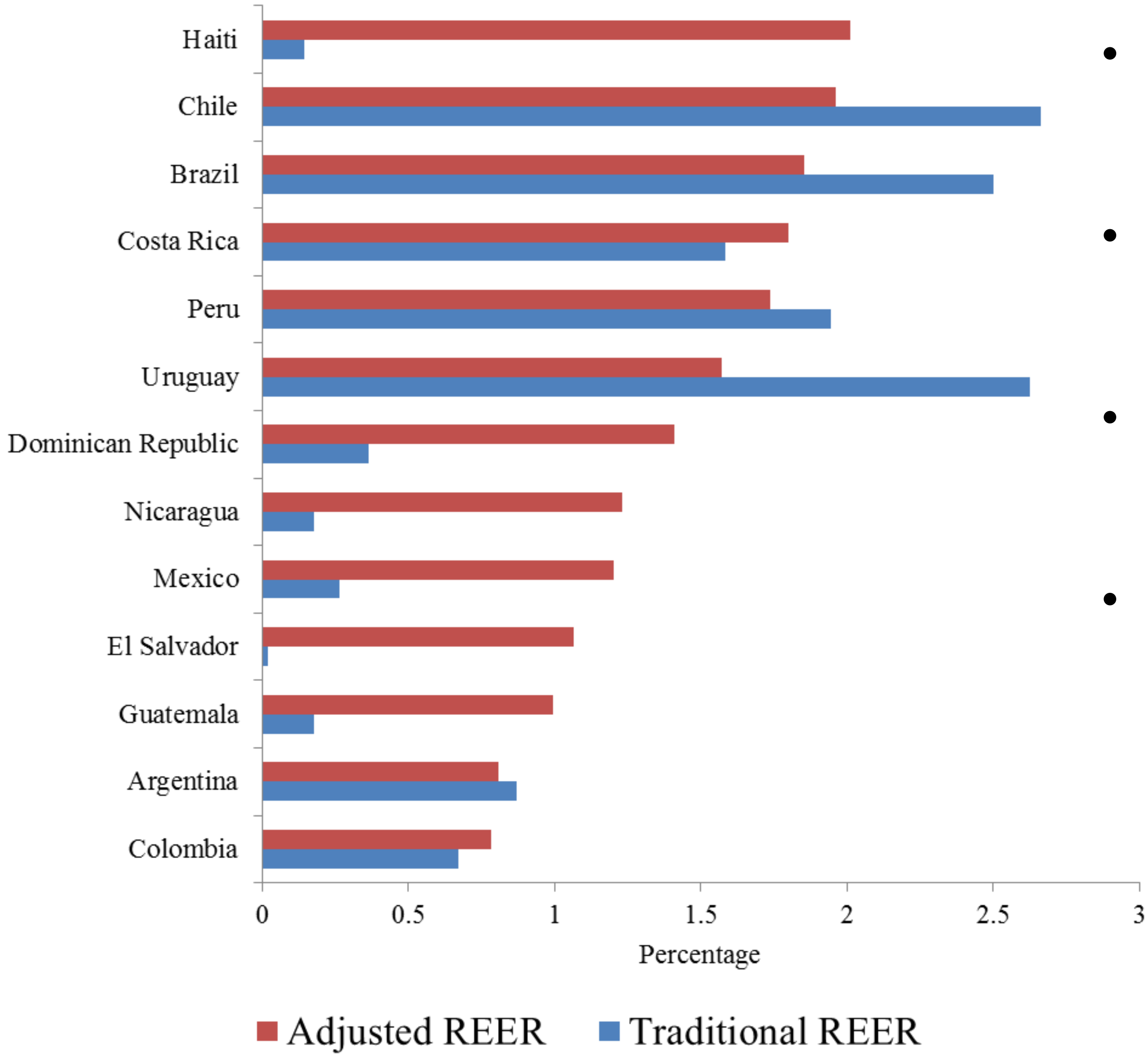
Nominal and AREER change (June, 2014 - October, 2015)



Nominal exchange rate depreciations have only resulted in significantly improved competitiveness for three countries

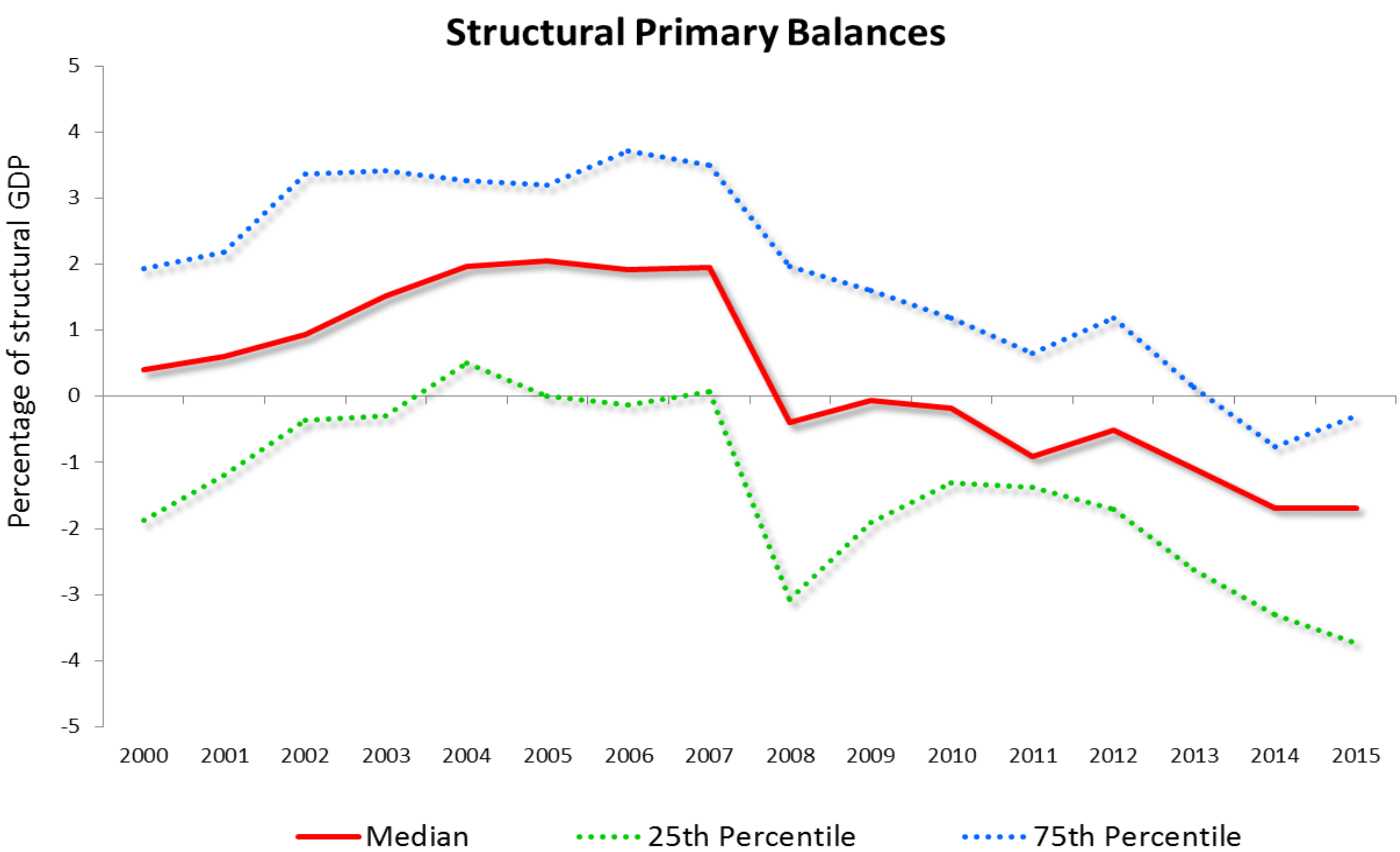
Note: Negative values are depreciations. * For The Bahamas calculations are to June, 2015 ** For Argentina, calculations are to Dec 31st 2015.

And a Chinese depreciation also has impacts on competitiveness in the region



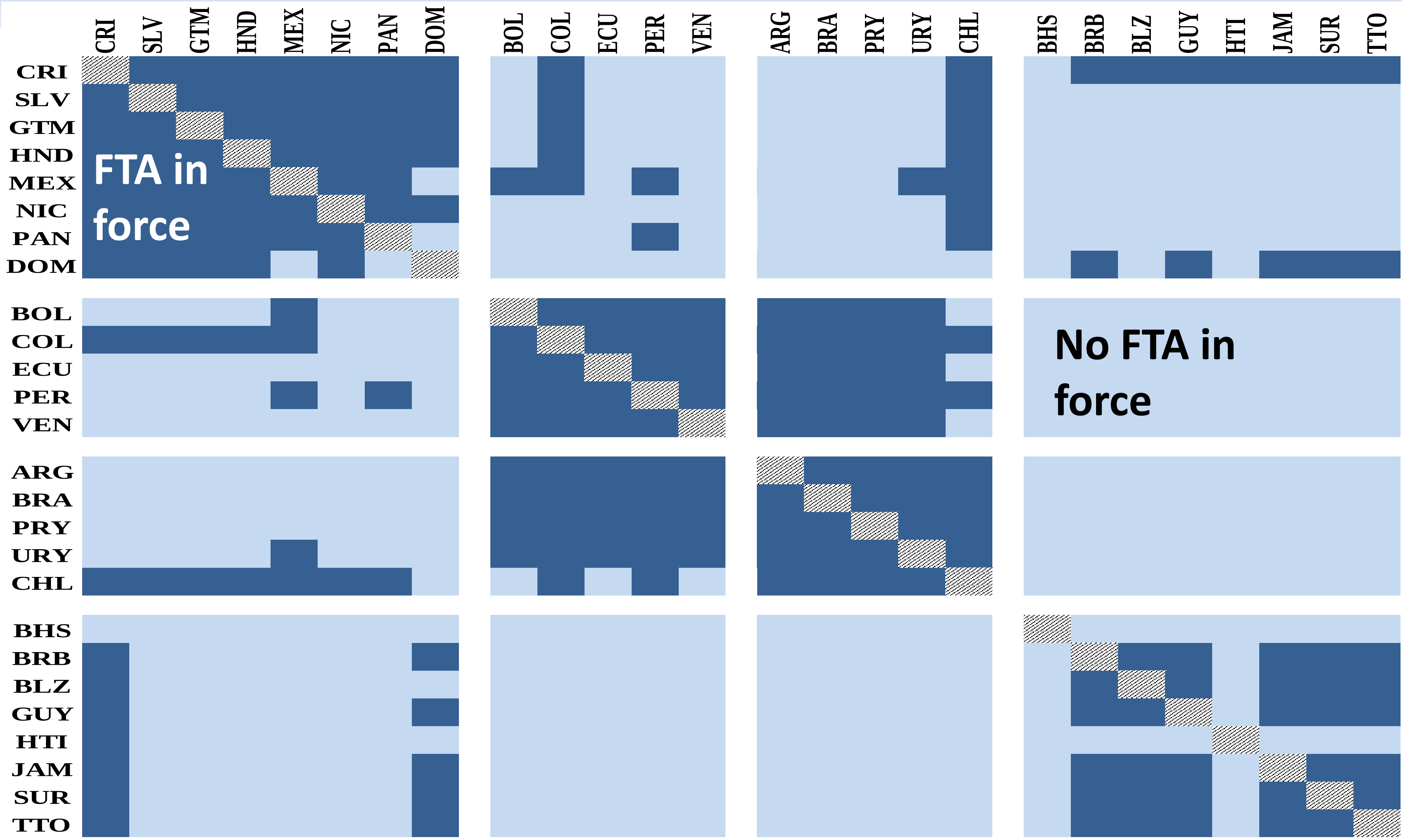
- Impact of a 10% Chinese depreciation
- On Real Effective Exchange Rates ("Traditional REER")
- And on competition "Adjusted REER's"
- Source: 2016 Latin American and Caribbean Macroeconomic Report at www.iadb.org/macroreport

And fiscal policy space now more limited



So less flexibility to respond to any negative shock, need “smart adjustmennt”- see 2016 Latin Amercian Macroeconmic Report

…and need Integrate to Compete



Source: Authors' calculation based on data from IDB INTrade.
Note: Dark cells represent agreements in force.

Time to Act

Latin America and the Caribbean Facing Strong Challenges

2016 Latin American and Caribbean Macroeconomic Report, 57th Meeting of the Board of Governors of the Inter-American Development Bank, Nassau, The Bahamas, April 10th, 2016.

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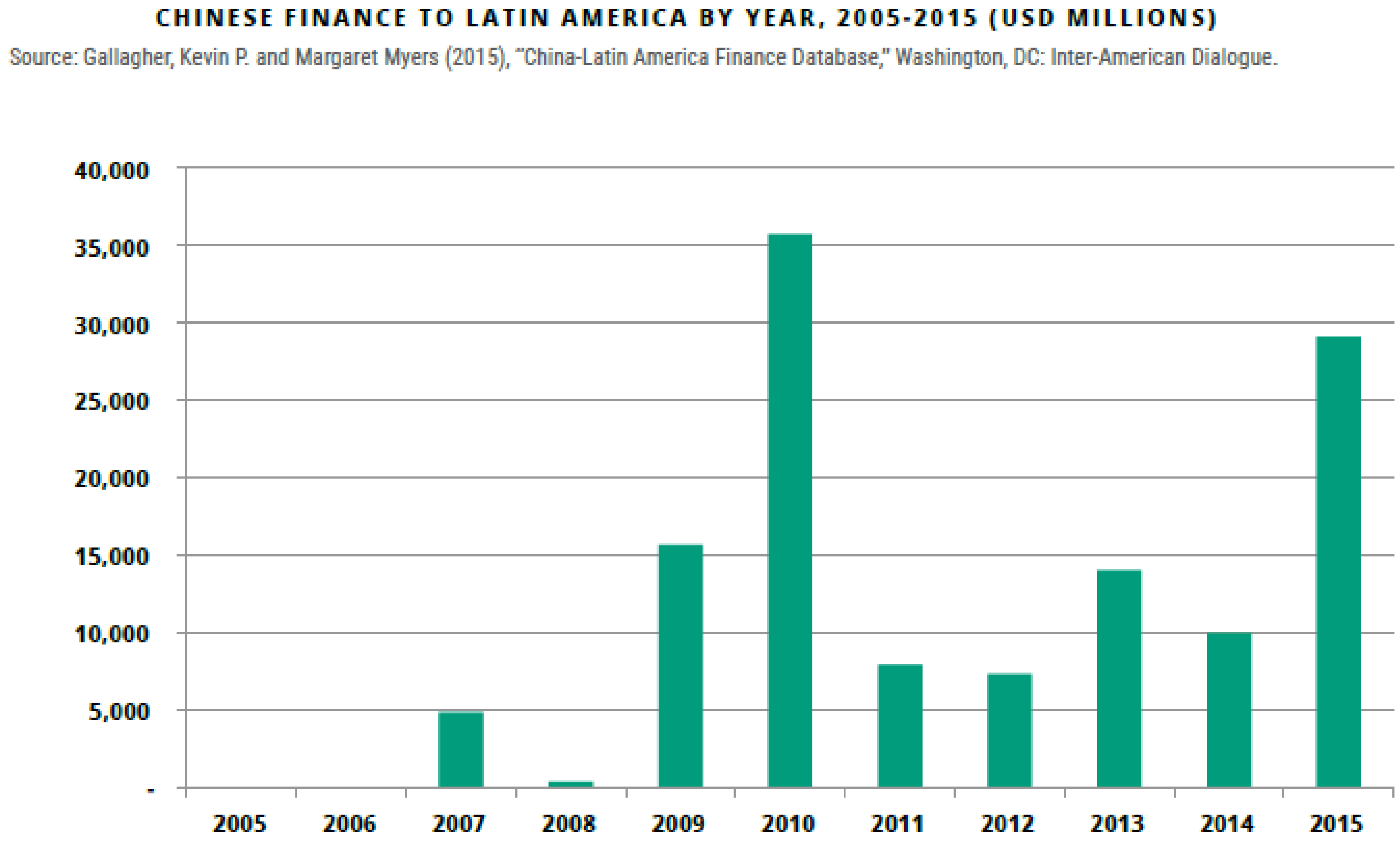
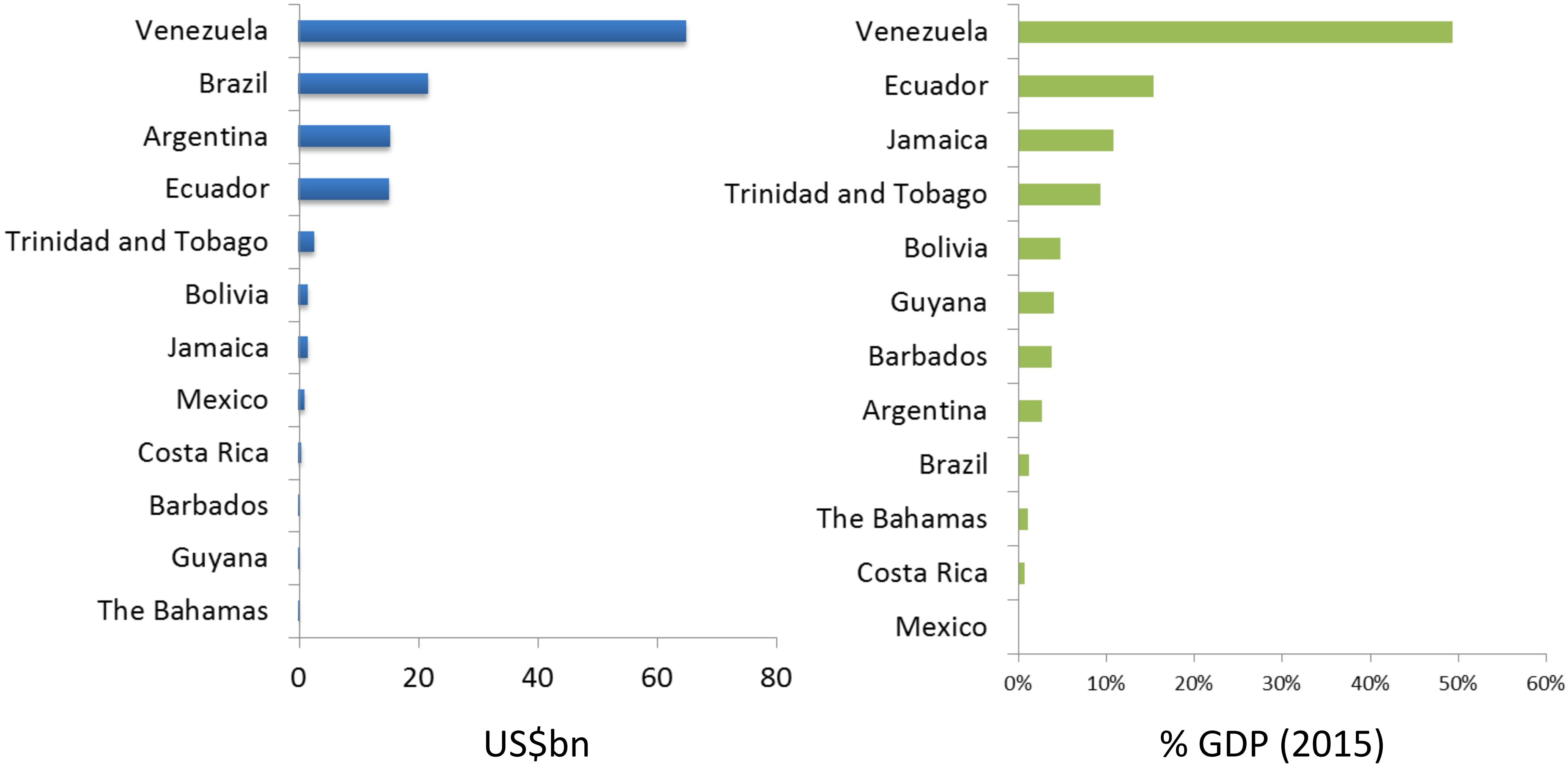
4. Apart from trade, Chinese investment has now become important for the region



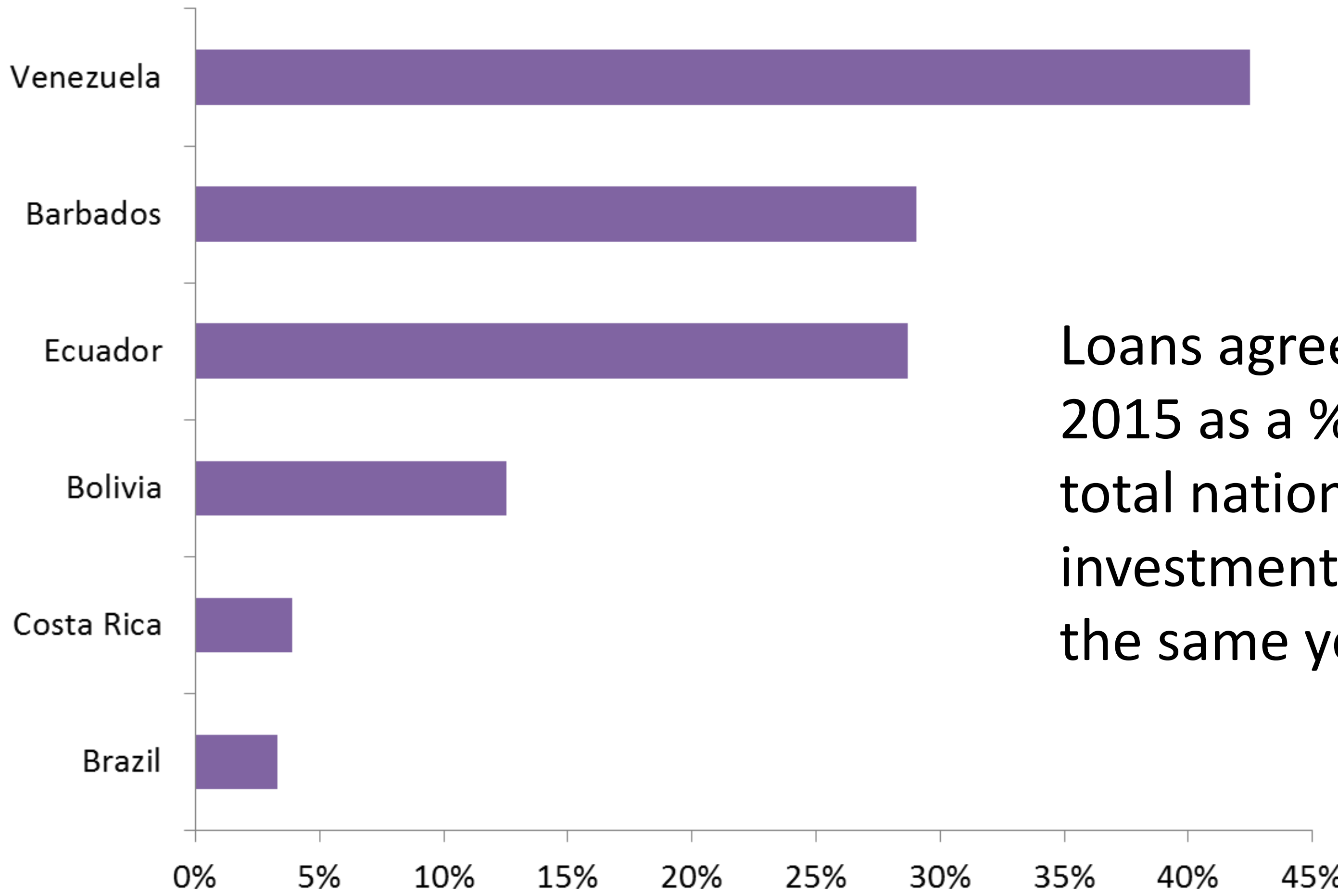
Loans from Chinese official policy banks. Source: Inter-American Dialogue

Total loans agreed (from 2005) with Chinese official (policy) banks very significant in some cases



Loans agreed with China official banks. Source: Inter-American Dialogue database on Chinese Policy Bank Finance and IMF

And as a % of Total National Investment



Loans agreed in 2015 as a % of total national investment for the same year

Loans from China official banks. Source: Inter-American Dialogue database on Chinese Policy Bank Finance and IMF.

5. The China Effect: Conclusions

- As the second largest economy in the world and likely to be the largest in the future, China is very important for LAC
- Direct and indirect trade effects are both significant as are linkages through commodity prices
- Significant China investment in LAC and anecdotal evidence of LAC FDI in China
- This implies risks but also many opportunities
- Further research required!

Thank you

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