



International Monetary Fund

April 2016 Fiscal Monitor

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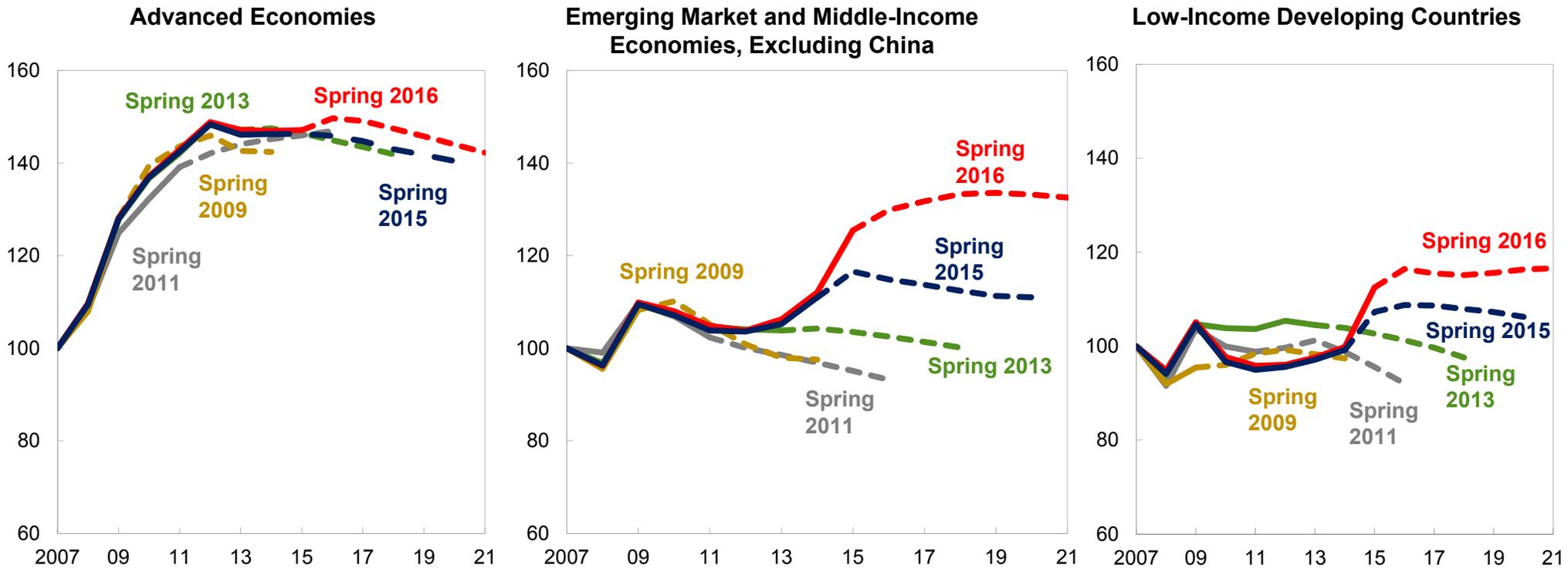
Outline

- **Highlights from recent fiscal developments and risks (chapter 1)**
- **Adapting to new realities: no one size fits all (chapter 1)**
- **Fiscal policies for innovation and growth (chapter 2)**

Recent Fiscal Developments and Risks

Fiscal positions have worsened in the past year

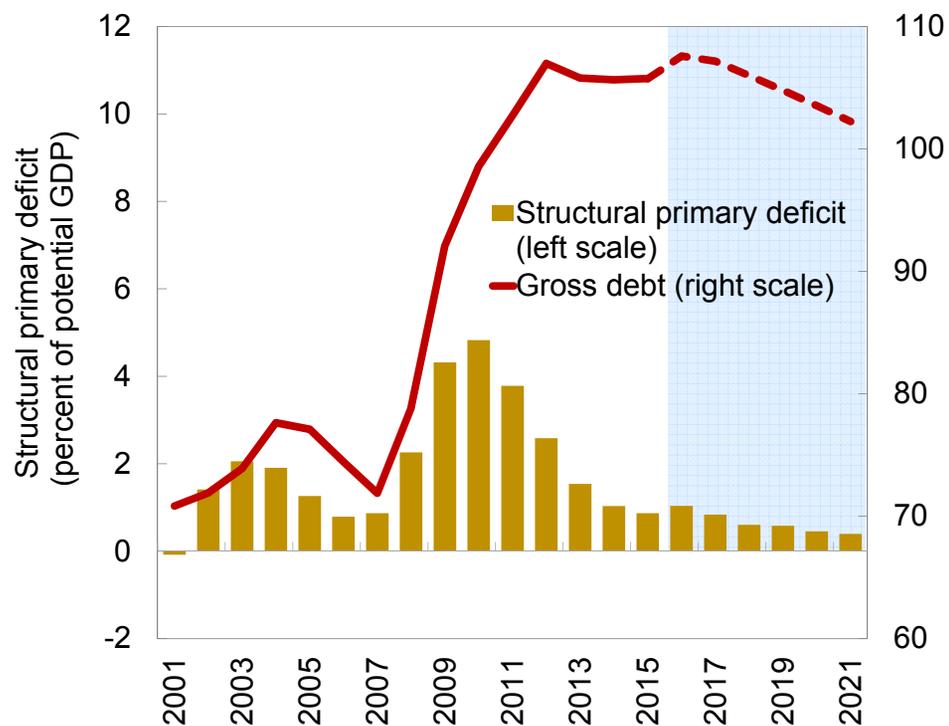
Revisions to General Government Gross Debt-to-GDP Ratio, 2007–21
(Rebased debt ratio, index 2007 = 100)



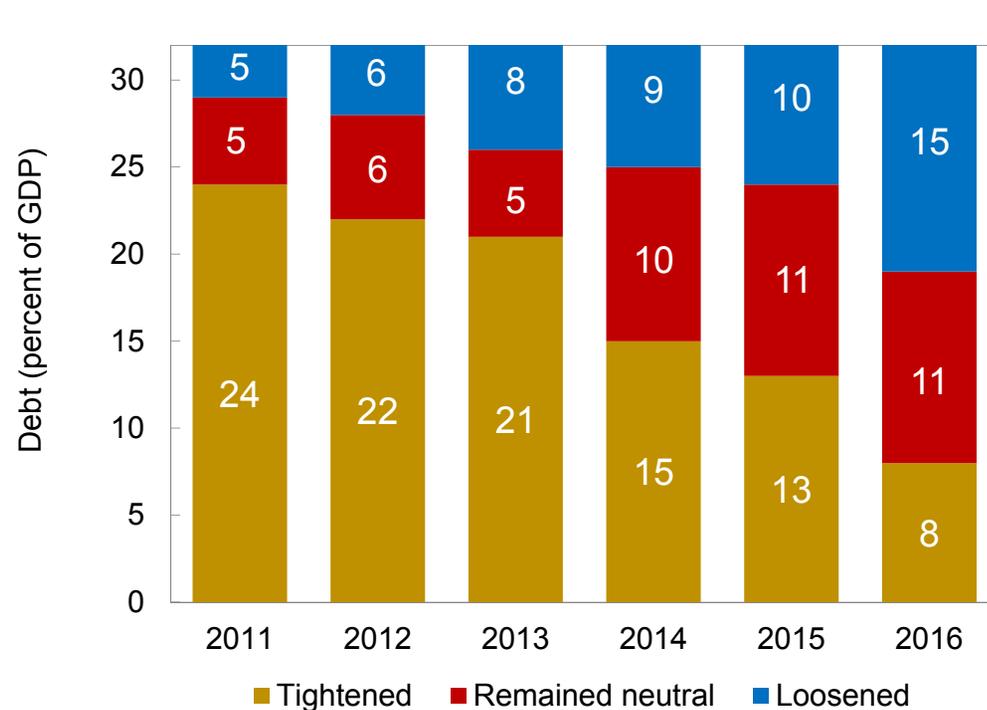
Source: IMF staff estimates.

Advanced economies: Divergences in the fiscal stance

General Government Debt and Deficit, 2001–21



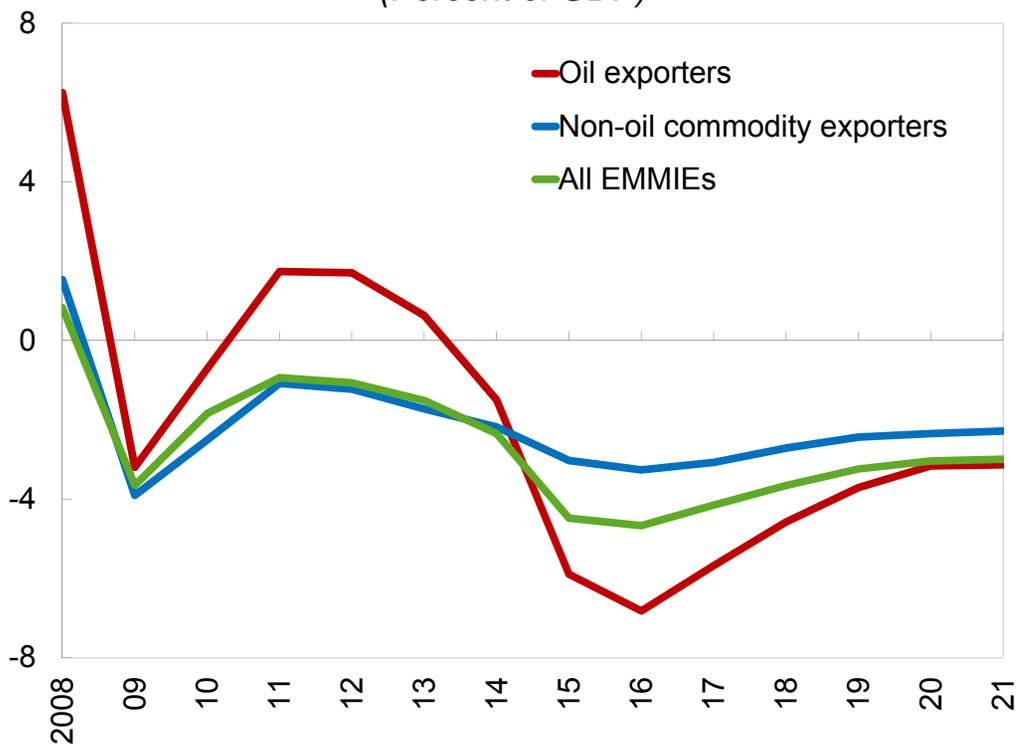
Number of Countries in Which the Fiscal Stance Was Tightened, Loosened, or Remained Neutral, 2011–16



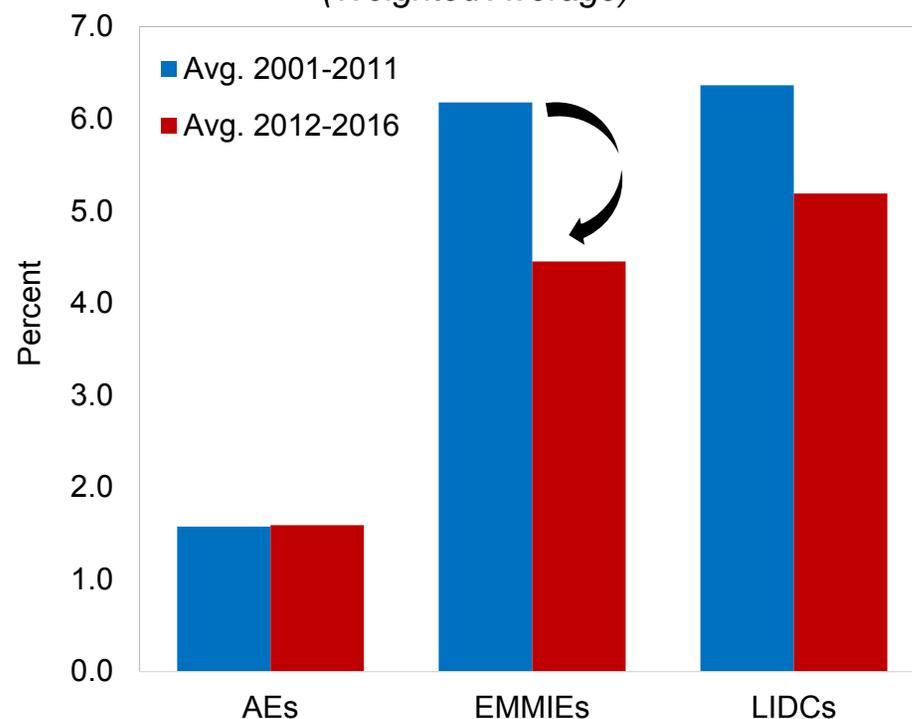
Source: IMF staff estimates.

Emerging markets: Deterioration driven by oil price and growth decline

General Government Overall Balance, 2008–21
(Percent of GDP)



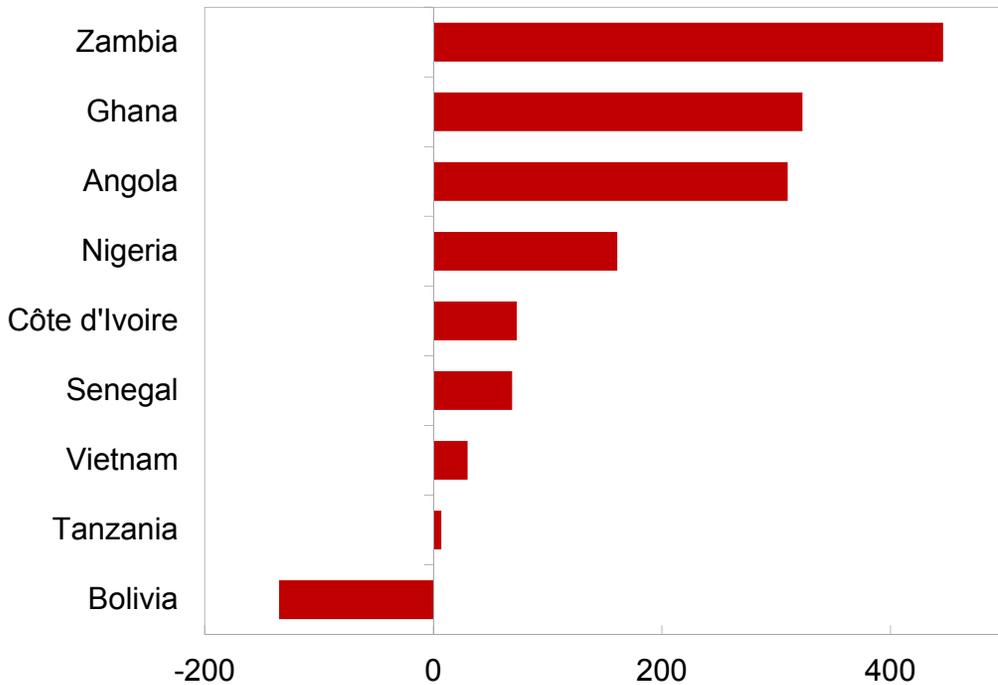
Average Real GDP Growth: 2001–11 vs 2012–16
(Weighted Average)



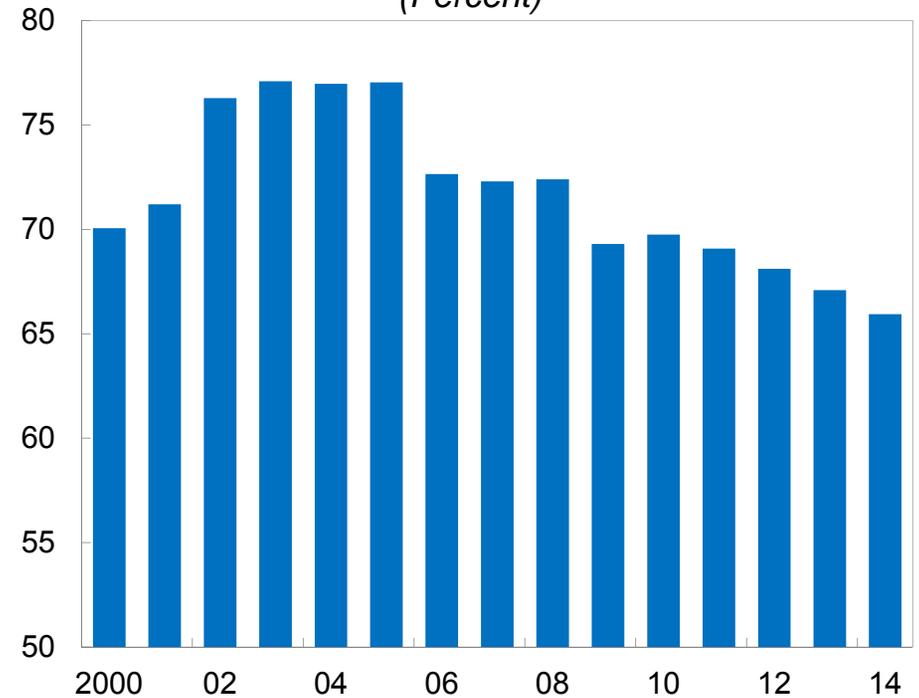
Source: IMF staff estimates.

Low-income countries: Tighter financing conditions

Sovereign Spreads¹
(Basis points, change since April 2015)



Low-Income Developing Countries: Share of Concessional Debt in Total External Debt, 2000–14
(Percent)



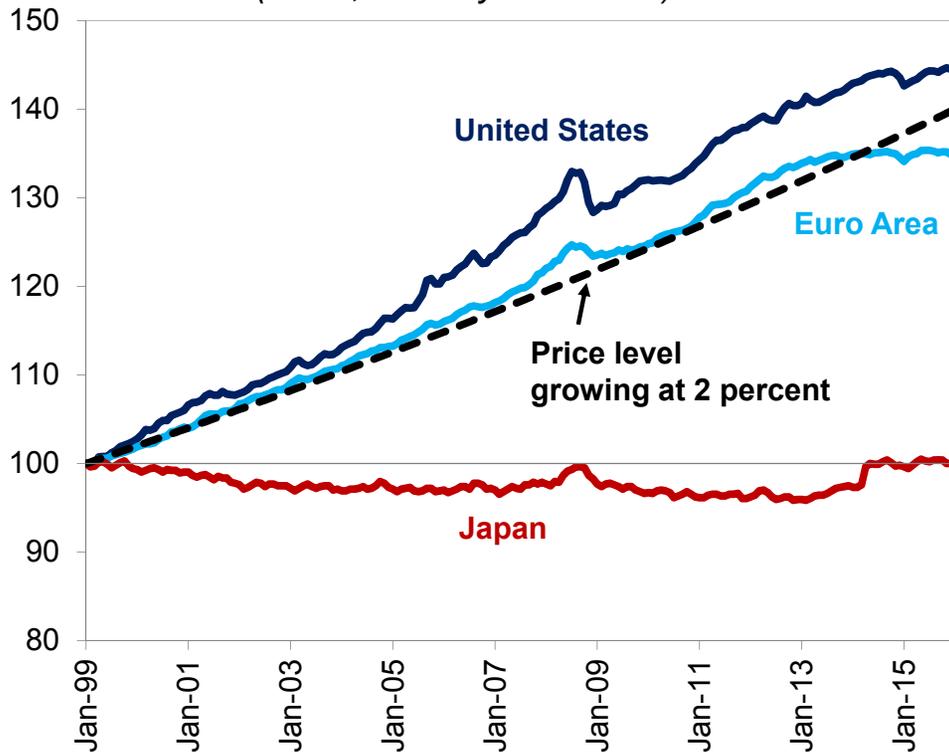
Sources: DataStream; World Bank; and IMF staff estimates.

¹ Sovereign spreads refer to J.P. Morgan EMBI global stripped spread. Data are from April 1, 2015 through March 23, 2016.

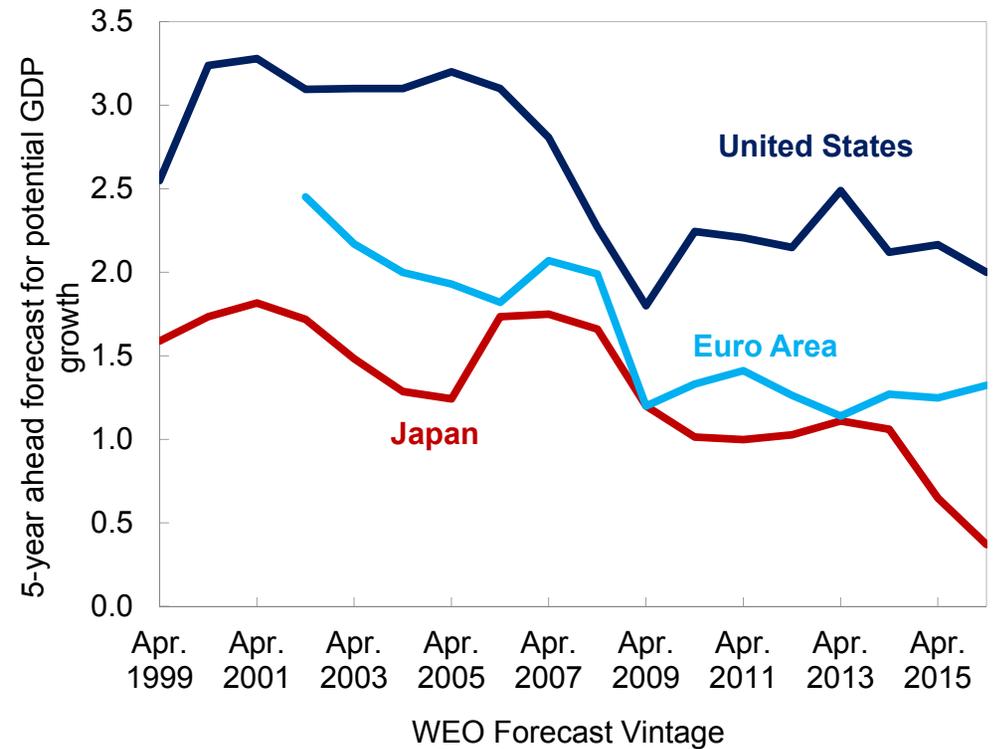
**Adapting to new realities:
no one size fits all**

Advanced economies: Low growth-low inflation-high debt

Price Level Path, Jan 1999–Feb 2016
(Index, January 1990=100)



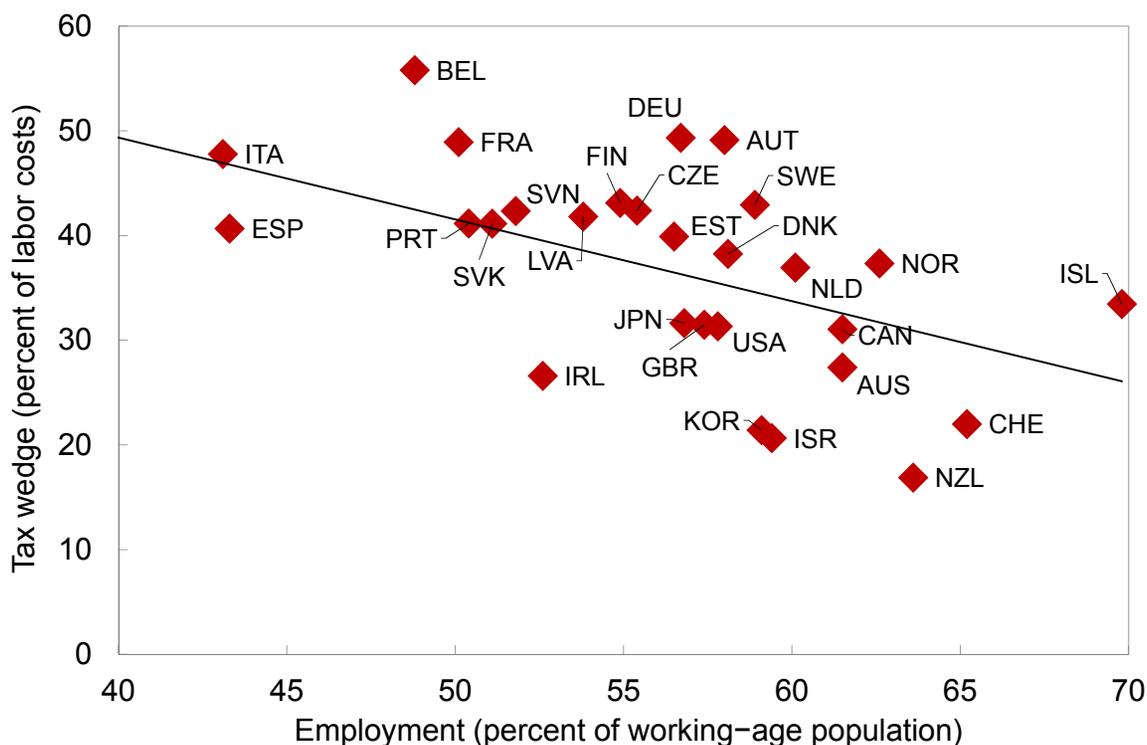
5 year ahead forecast for potential GDP growth



Sources: Haver Analytics; and IMF *World Economic Outlook*.

Advanced economies: Better coordination of fiscal policy and structural reforms can boost MT growth

Advanced Economies: Tax Wedge and Employment Rate, 2013

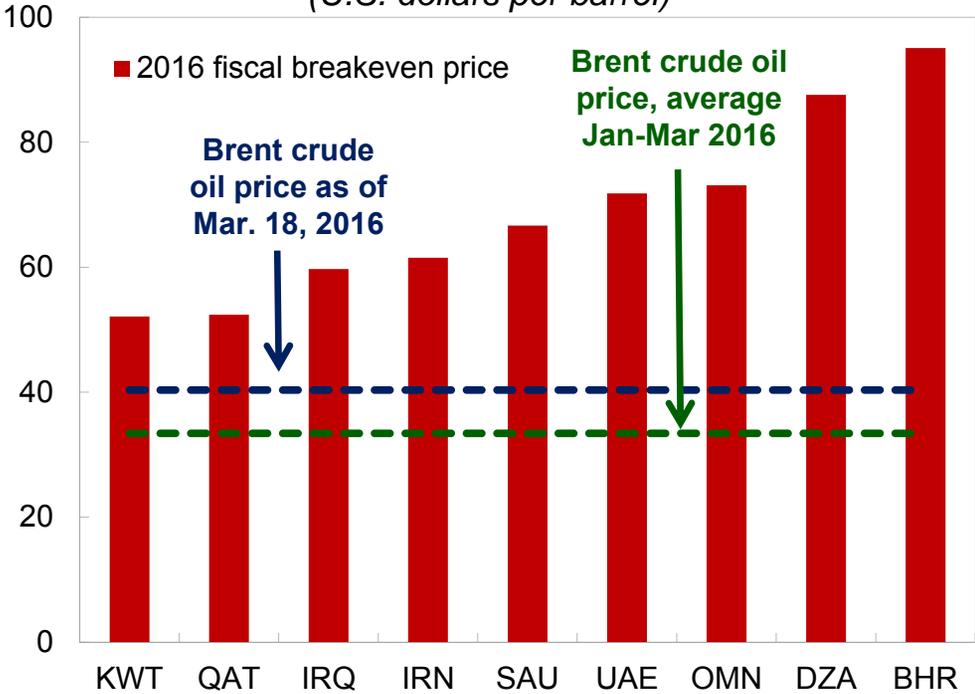


Sources: Institute for the Study of Labor; Organisation for Economic Co-operation and Development; October 2014 *Fiscal Monitor*; and IMF staff estimates.

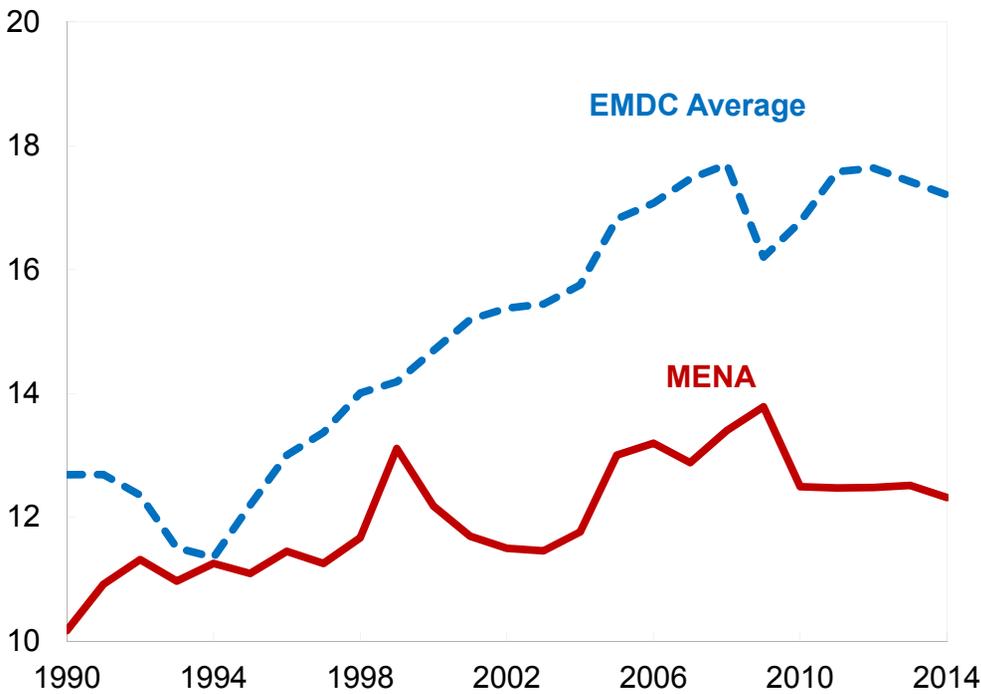
Oil exporters: Need to adjust to lower revenues

MENA Oil Exporters: Current and Fiscal Breakeven Oil Prices¹

(U.S. dollars per barrel)



Non-Oil Tax Revenue²
(percentage of Non-Oil GDP)



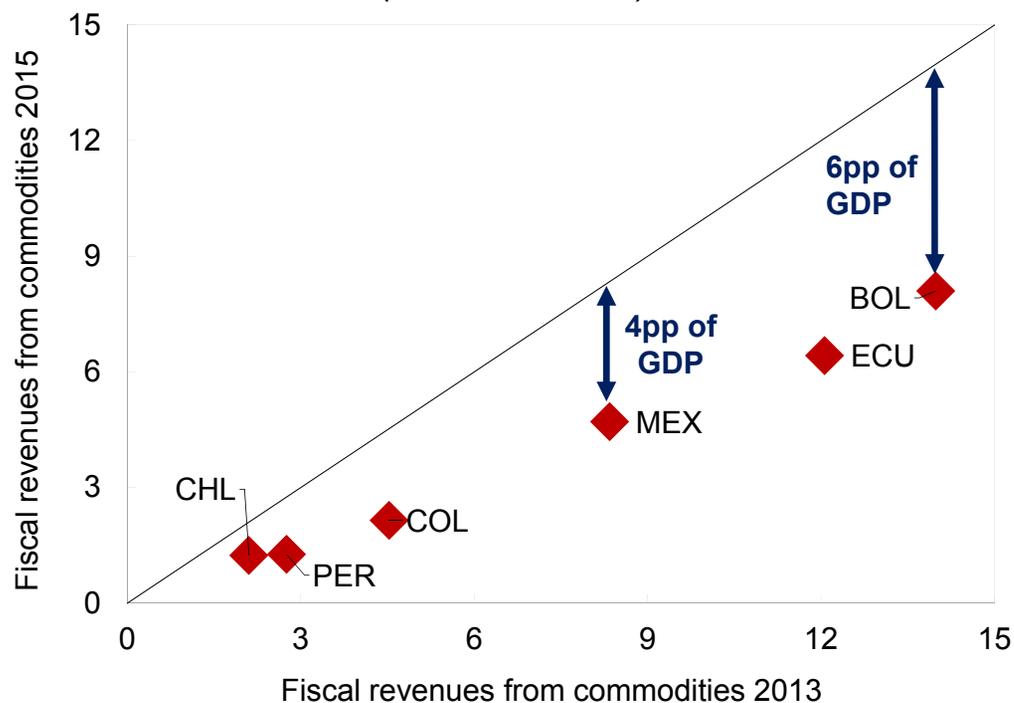
Sources: DataStream; October 2015 Middle East and Central Asia *Regional Economic Outlook*; National authorities; and IMF staff calculations.

¹ The fiscal breakeven oil price is the oil price that balances the government budget.

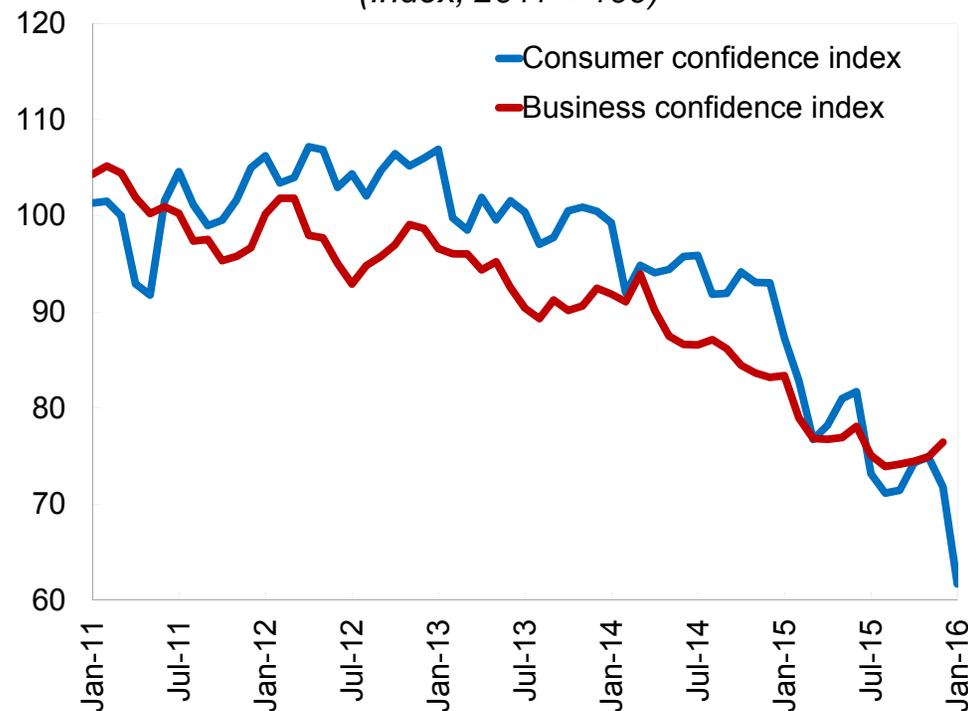
² MENA excludes GCC, IRQ, LBY, and SDN.

Latin America: Fiscal adjustment to restore confidence

Latin America: Fiscal Revenues from Commodities
(Percent of GDP)



Latin America: Monthly Confidence Indices¹
(Index, 2011 = 100)



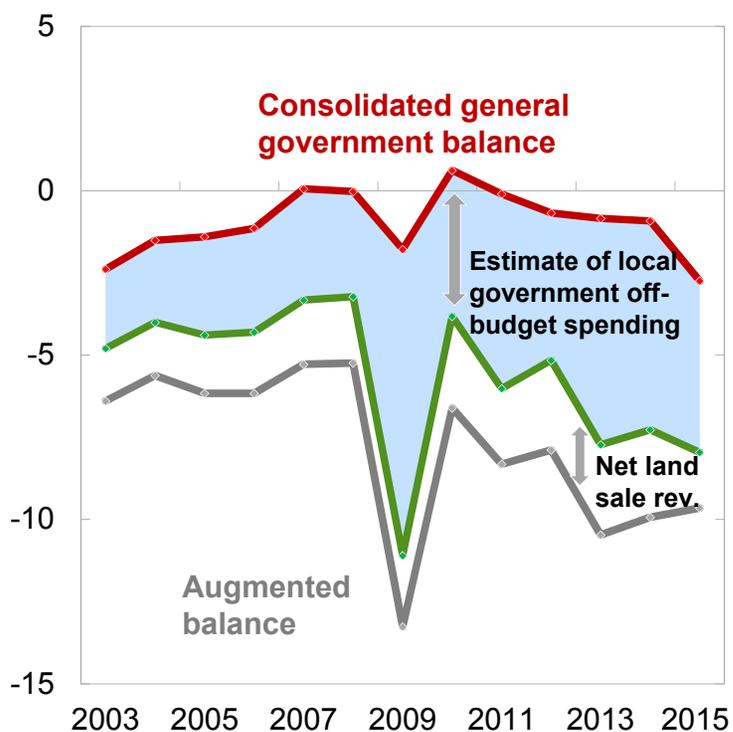
Sources: National authorities; April 2016 Western Hemisphere *Regional Economic Outlook*; and IMF staff estimates.

¹ Consumer confidence index uses purchasing power parity GDP-weighted average of Brazil, Chile, Colombia, and Mexico.

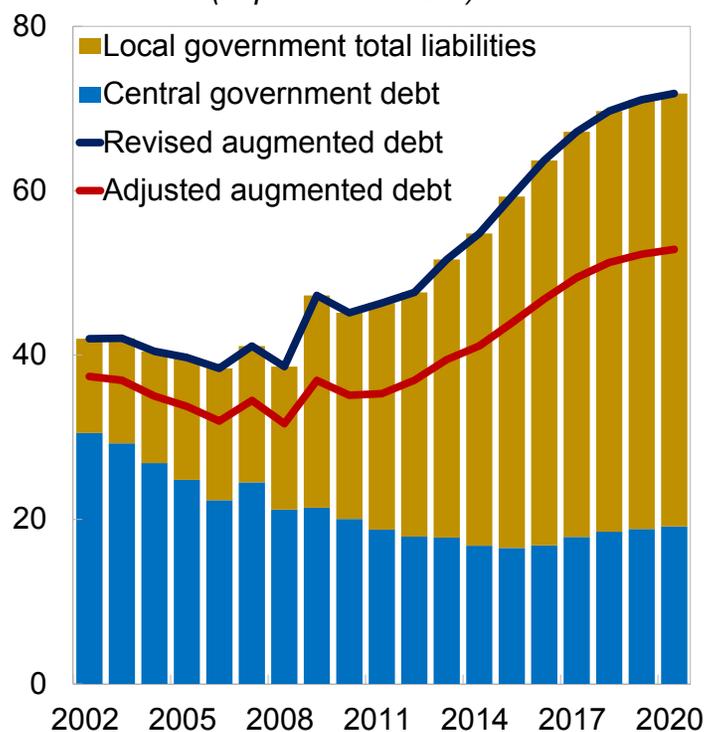
Business confidence index uses purchasing power parity GDP-weighted average of Brazil, Chile, Colombia, Mexico, and Peru.

China: Enhance transparency and address fiscal risks

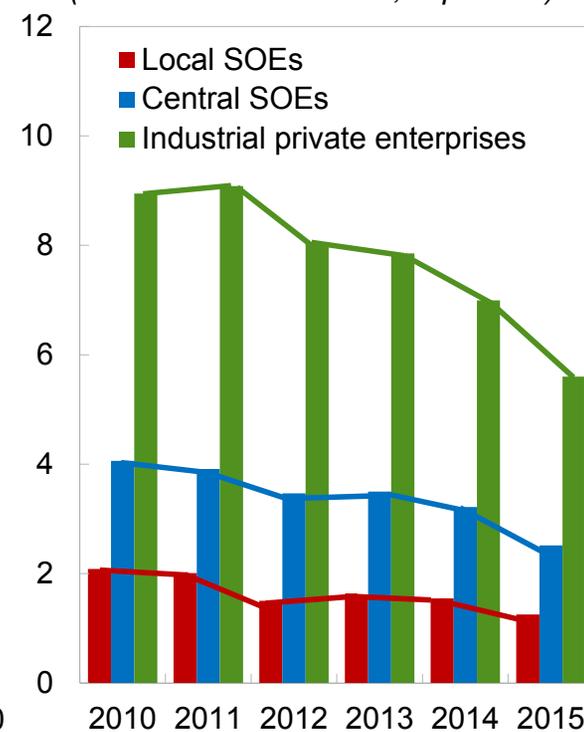
China: Augmented Fiscal Balance
(Percent of GDP)



China General Government Debt: Augmented Measure and NAO Audit
(In percent of GDP)



China State-Owned Enterprises: Weak and Deteriorating Profitability
(Returns on total assets; in percent)

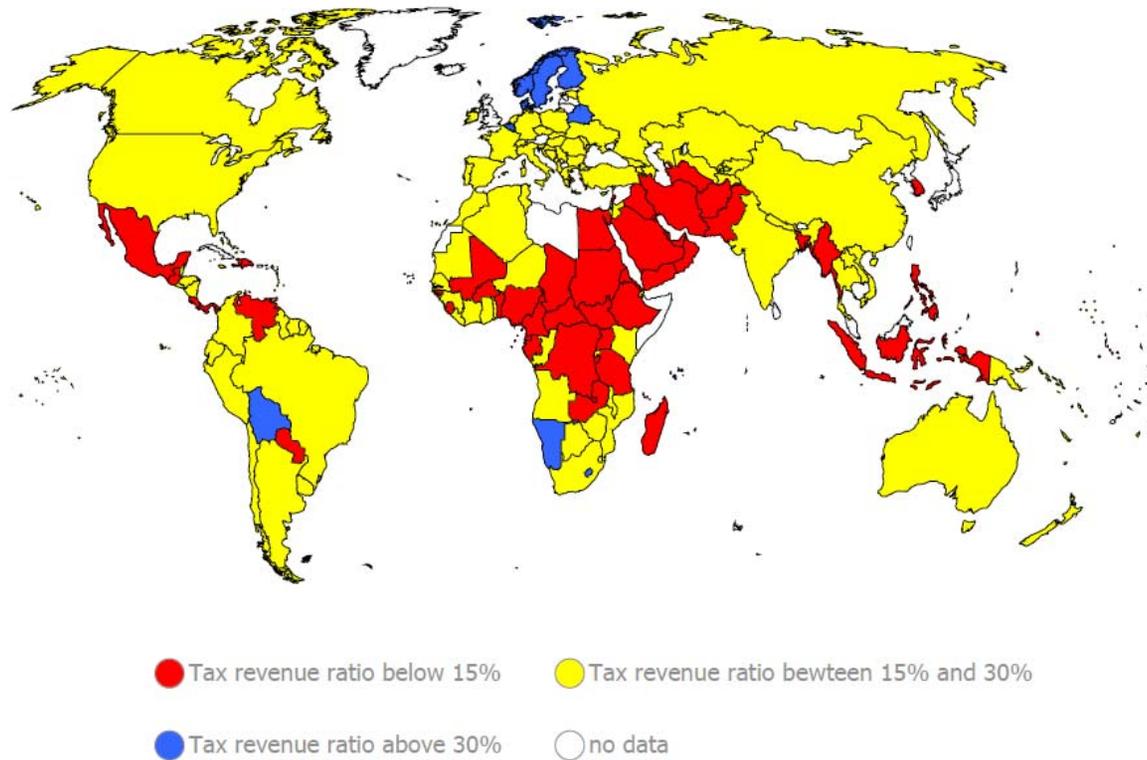


Sources: CEIC Data Company Ltd; WIND; NAO; National authorities; and IMF staff estimates.

Note: SOEs = State-Owned Enterprises.

Low-income countries: Build a minimum tax capacity

General Government Tax Revenue-to-GDP Ratio, 2015
(Percent of GDP)



Lessons from Chapter 1: a roadmap for fiscal policy

- Risks are elevated
- **In the short-term**, appropriate policy responses differ across countries. There is no “one size fits all” solution
- **In the medium to long-term**, all countries should pursue two main objectives:
 - Enhance the resilience of public finances
 - Promote sustainable growth

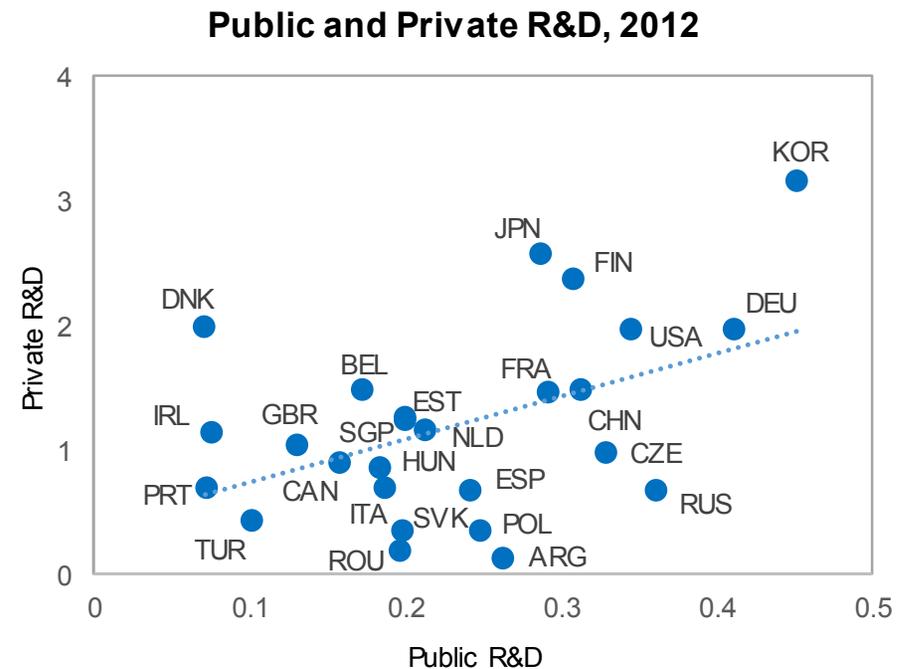
Fiscal Policies for Innovation and Growth

Issues addressed in Chapter 2

- The role of *fiscal policy* for innovation
- Three pillars of innovation
 - Research and development
 - Technology transfer
 - Entrepreneurship

Public R&D is important

- Basic research yield often high social returns – average \approx 20 percent
- Should complement – not substitute for – private R&D
 - Encourage research collaboration between universities and private firms

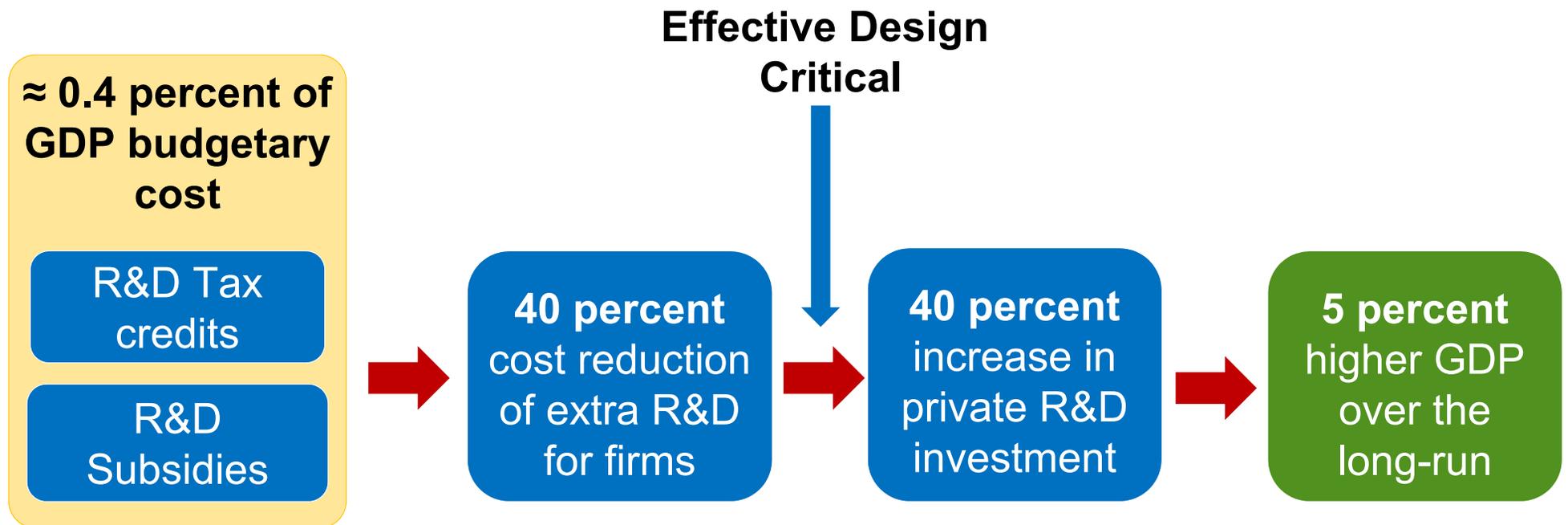


Private R&D is too low

Two reasons for “underinvestment” in private R&D

- Credit constraints – especially prevalent during recessions
 - *Fiscal Monitor* finds that fiscal stabilization policies have strong implications for R&D and TFP growth
- Spillovers to the wider economy – two solutions
 - Coase’s property rights – but market for technology is small relative to R&D spillovers
 - Pigou’s price correction: fiscal incentives to efficiently address externalities

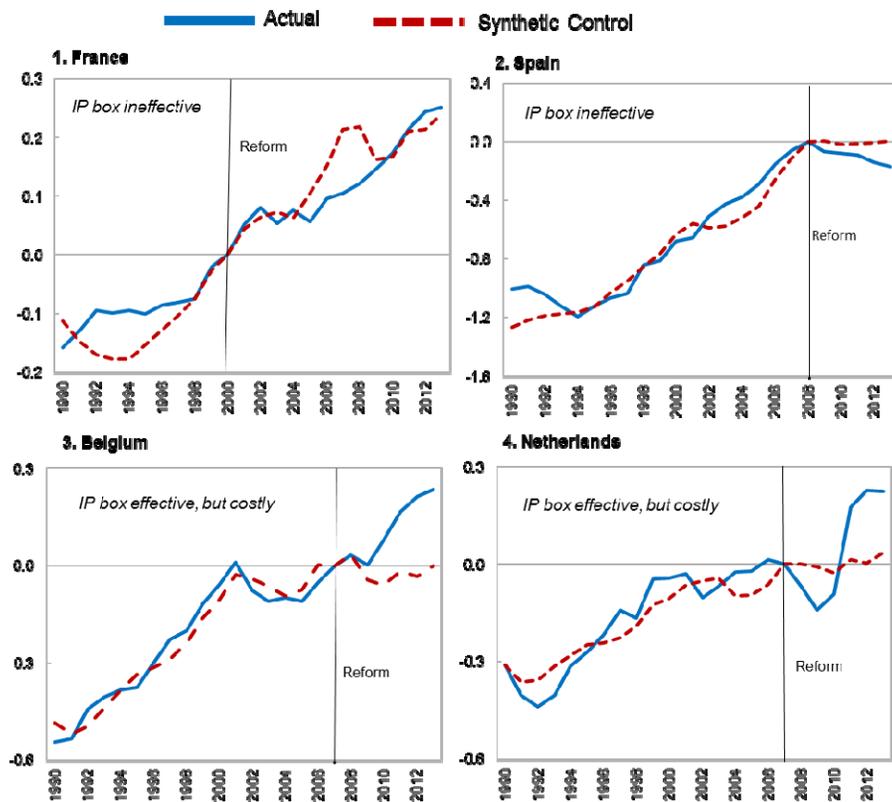
Fiscal incentives to R&D bring significant growth potential



Note: estimates are averages across OECD countries

Design critical – no patent boxes

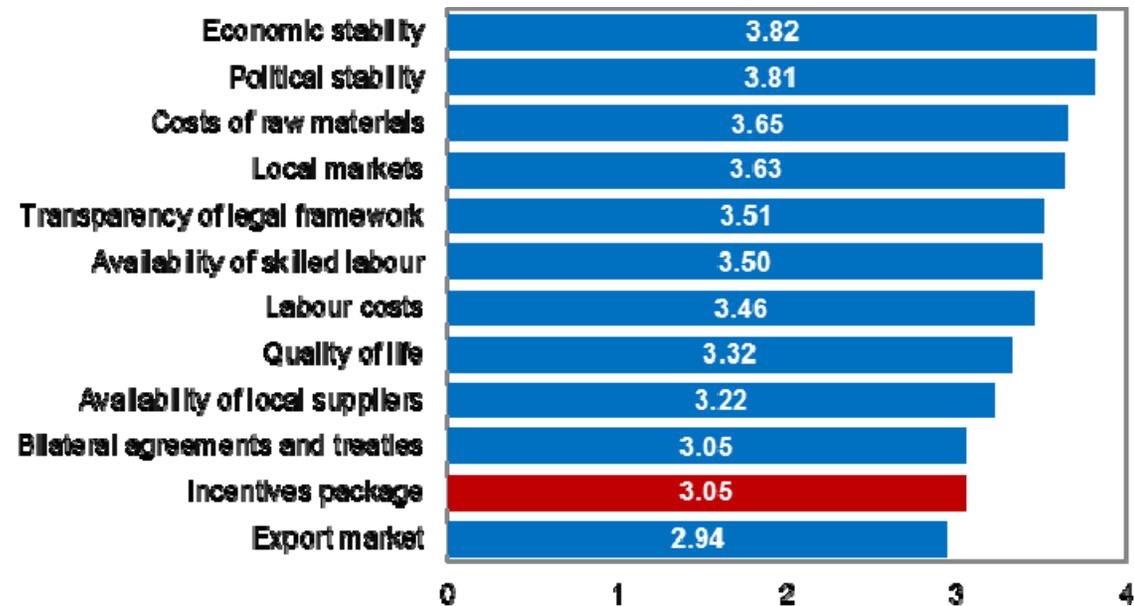
Synthetic Control Estimation Results: Intellectual Property Box and Private R&D (Log of real R&D spending)



- *Either ineffective* – no effect at all in two countries
 - Only effective where tax relief is large and link with R&D strong
- *Or inefficient* – as relief depends on income, not R&D
- *And negative spillovers*
 - Focus is on attracting mobile IP income (aggressive tax competition)

Education, not FDI tax incentives, help technology transfer

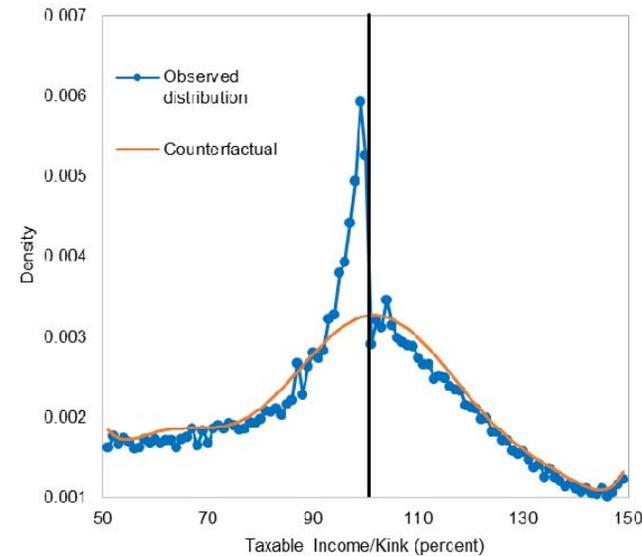
- FDI important channel of technology transfer
 - ... but requires human capital for absorption
- Tax incentives relatively unimportant for FDI... and often costly
 - ‘Stability’ and ‘transparency’ matter
 - New staff estimates confirm
- See also: “Options for low income countries’ effective and efficient use of tax incentives for investment” by IMF and others (2015) for G20



Entrepreneurship – new, not small, is beautiful

- Tax incentives small firms
 - Most small firms are neither new nor innovative
 - ‘Small-business-trap’: bunching at kinks and notches
- Schemes better favor new firms
 - Focus on innovation
 - Refundable schemes
 - Simplified schemes

Bunching at a Kink – Evidence for Costa Rica 2006–13
(Density of taxpayers along the income distribution)



Source: Brockmeyer and Hernandez (2016).
Note: The kink refers to the income level at the exemption threshold for self-employed taxpayers for the years 2006–13. 100 on the horizontal axis denotes that taxable income is precisely equal to the threshold. The tax rate above the threshold is 10 percent.

Main lessons from Chapter 2

- R&D – scope to do more and better
 - Fiscal stabilization matters, also for long-run growth
 - R&D incentives: small expansion, high dividend
 - Design matters: e.g. no patent box
- Technology transfer
 - Education critical; tax incentives not
- Entrepreneurship
 - ‘New’, not ‘small’ is beautiful