



The Distributional Effects of Fiscal Austerity

Davide Furceri

International Monetary Fund

(based on joint work with Daniel Leigh, IMF, Prakash Loungani, IMF and Laurence Ball, Johns Hopkins University and IMF)

**Prepared for presentation 4th Seek Conference
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This presentation is based on a 2011 *Finance & Development* article and a June 2013 IMF Working Paper, available at: <http://www.imf.org/external/pubs/cat/longres.aspx?sk=40699.0>

Views expressed are those of the authors and should be attributed to the IMF or described as constituting IMF policy.



Outline of this presentation

1. Motivation

2. Data

3. Methodology

4. Results

5. Wrap up



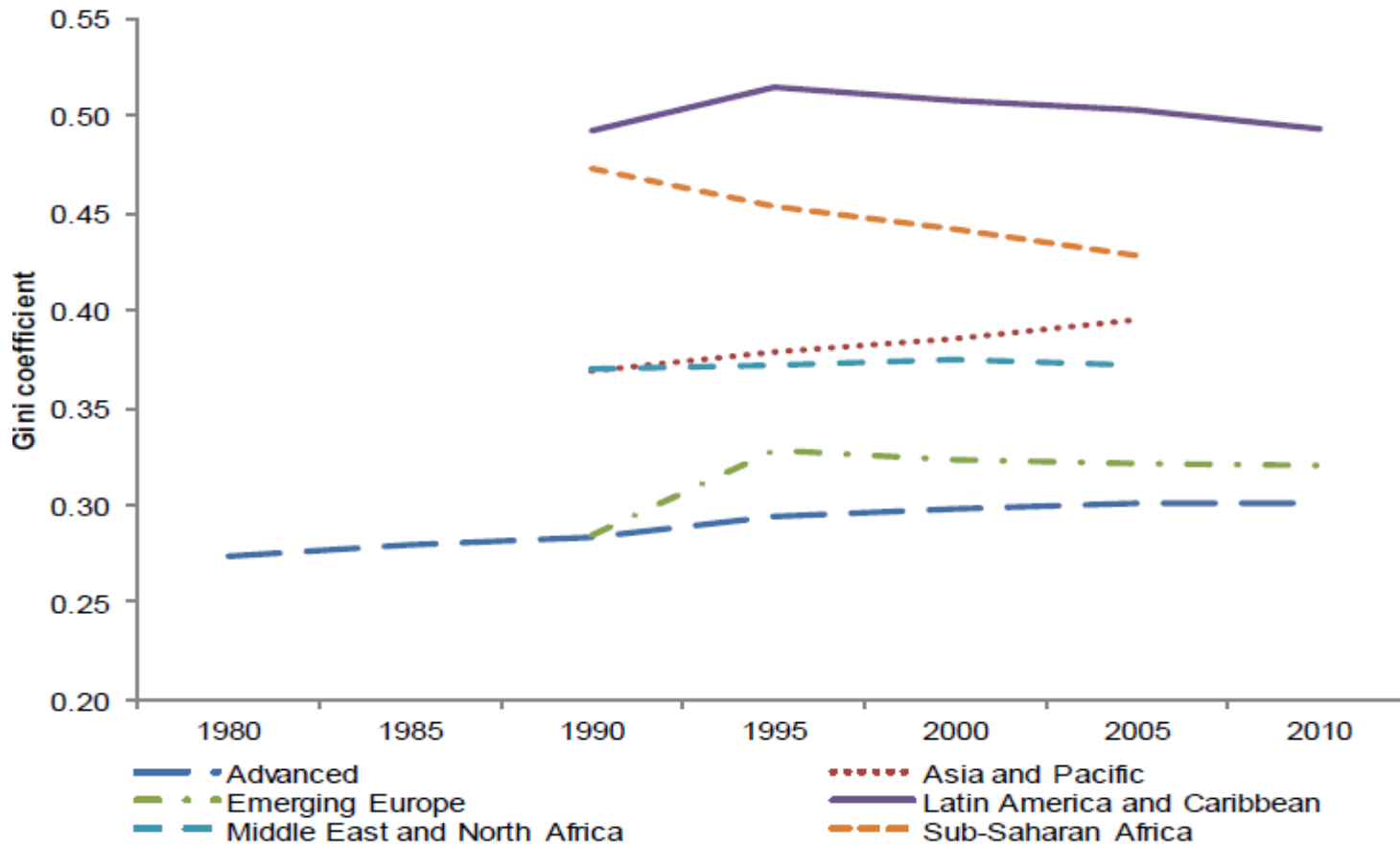
Renewed concern about rising income inequality

- Social unrest in the Middle-East
- High unemployment in many advanced economies in the aftermath of the financial crisis
- Possible adverse impact of fiscal consolidation measures in a number of advanced and emerging market economies



Persistent high inequality in many countries

Figure 1. Trends in Disposable Income Inequality, 1980–2010



Source: IMF SDN (2012). Fiscal Policy and Inequality



Rising inequality in many countries...

Table 1. Changes in Disposable Income Inequality Across Regions, 1990–2005
(Percentage-point change in Gini coefficient)

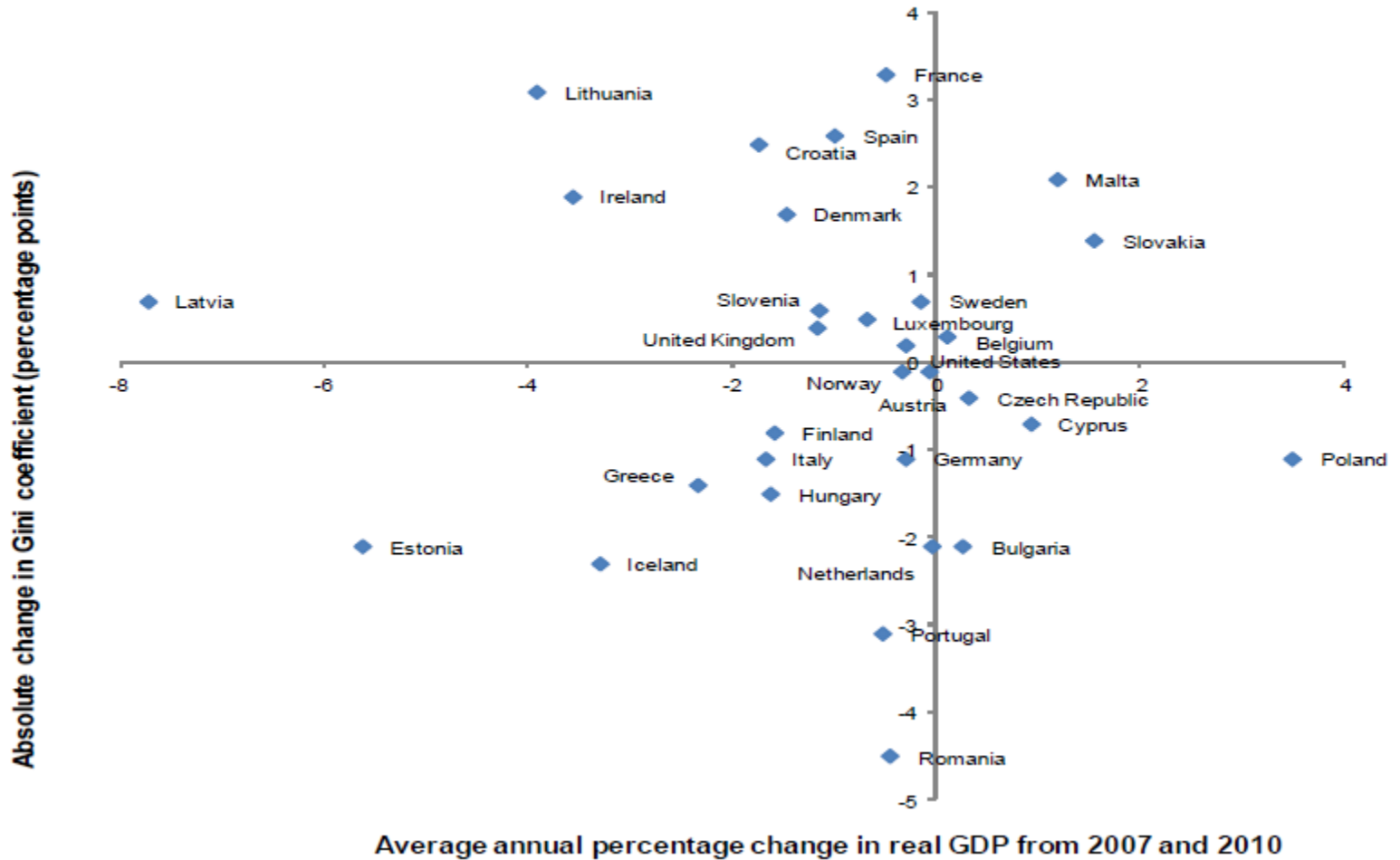
	<i>Change</i>	<i>Large Increase (Change ≥ 5)</i>	<i>Medium Increase (3 ≤ Change < 5)</i>	<i>Small Increase (0 < Change < 3)</i>	<i>Small Decrease (-3 < Change < 0)</i>	<i>Medium Decrease (-5 < Change ≤ -3)</i>	<i>Large Decrease (Change ≤ -5)</i>
<i>Latin America and Caribbean</i>	1990-2005	Colombia, Paraguay, Venezuela	Dominican Republic, Costa Rica, Honduras	Argentina, Bolivia, Jamaica, Uruguay	Panama, Peru, El Salvador	Brazil, Chile, Nicaragua	
<i>Sub-Saharan Africa</i>	1990-2005	Niger, Rwanda, Ghana, Cote d'Ivoire	Madagascar	Mozambique, Nigeria, Tanzania, Madagascar, Mali	Cameroon, Gambia, Uganda, Burundi	Guinea	Burkina Faso, Central African Republic, Ethiopia, Guinea-Bissau, Kenya, Lesotho, Senegal, Sierra Leone, Swaziland, Zambia
<i>Asia and Pacific</i>	1990-2005	China, Nepal, Sri Lanka,	India, Indonesia, Taiwan	Philippines, Vietnam, Bangladesh, Cambodia	Thailand, Lao PDR		Malaysia, Mongolia
<i>Middle East and North Africa</i>	1990-2005	Uzbekistan, Israel		Egypt, Morocco	Mauritania, Pakistan, Yemen	Mauritania, Pakistan, Yemen	Iran, Jordan, Kyrgyz Republic
<i>Emerging Europe</i>	1990-2005	Bulgaria, Croatia, Czech Republic, Kazakhstan, Latvia, Lithuania, Moldova, Poland, Belarus	Georgia, Russian Federation, Ukraine, Albania	Hungary, Slovenia, Turkey			Armenia, Azerbaijan
<i>Advanced</i>	1980-2005	New Zealand, Norway, United Kingdom, United States	Austria, Belgium, Canada, Finland, Germany, Luxembourg, Portugal, Sweden	Australia, Italy, Japan, Netherlands, Spain	Denmark, France, Greece, Ireland	Switzerland	
	1990-2005	Germany	Canada, Finland, Italy, Luxembourg, Portugal, United States	Austria, Belgium, Denmark, Japan, Netherlands, New Zealand, Norway, Spain, Sweden	Australia, France, Greece, Ireland, United Kingdom	Switzerland	

Motivation



...also as a consequence of the crisis...

Figure 3. Disposable Income Inequality Trends Since the Financial Crisis, 2007–2010

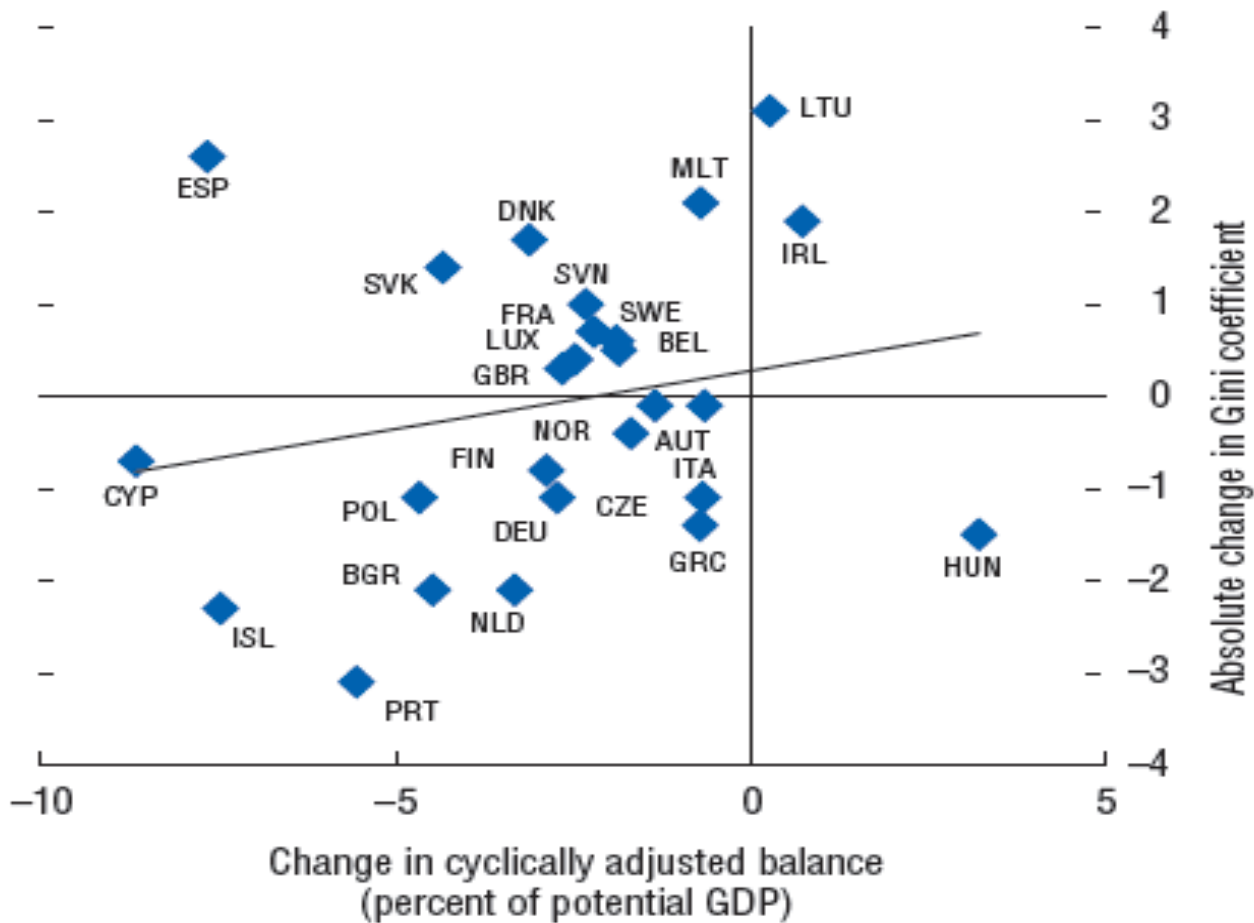


Motivation



...and fiscal consolidation measures (?)

Motivation





Inequality may affect efficiency

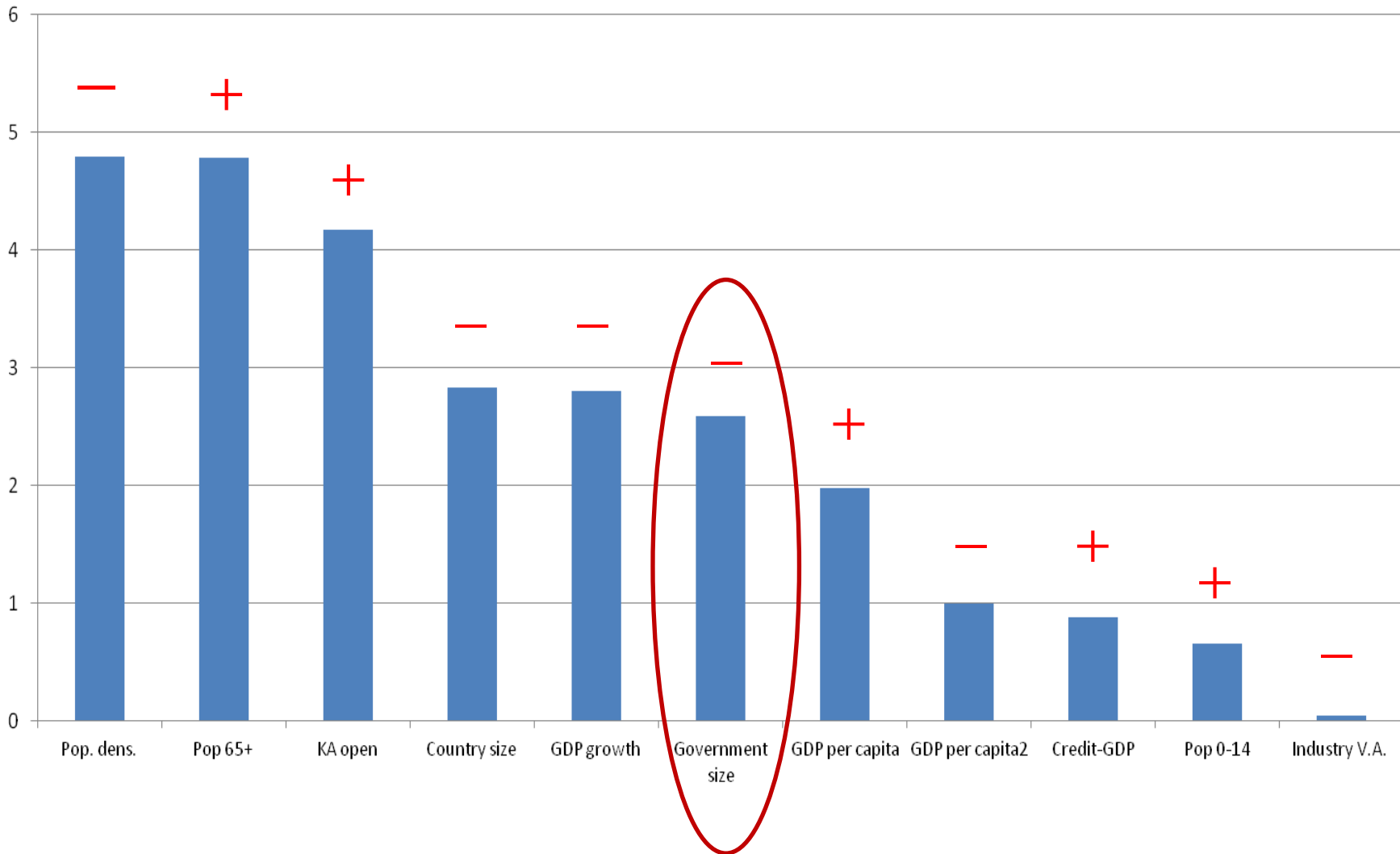
- Important social and economic costs
- Income inequality may have detrimental effect on economic activity:
 - Leading to wasted productive potential and a misallocation of resources (Berg et al. 2011)
 - Reducing individuals' ability to cope with risk
 - Leading to latent social conflicts (Campante and Chor, 2012)
 - Increasing macroeconomic stability (Fitoussi and Saraceno, 2010; Kumhof and Ranciere, 2010)
 - Reducing intergenerational mobility and increasing health problems (Wilkinson and Pickett, 2010)



Fiscal policy one of the most robust determinants of inequality

(BMA estimates of 1 sd change in independent variable on Gini)

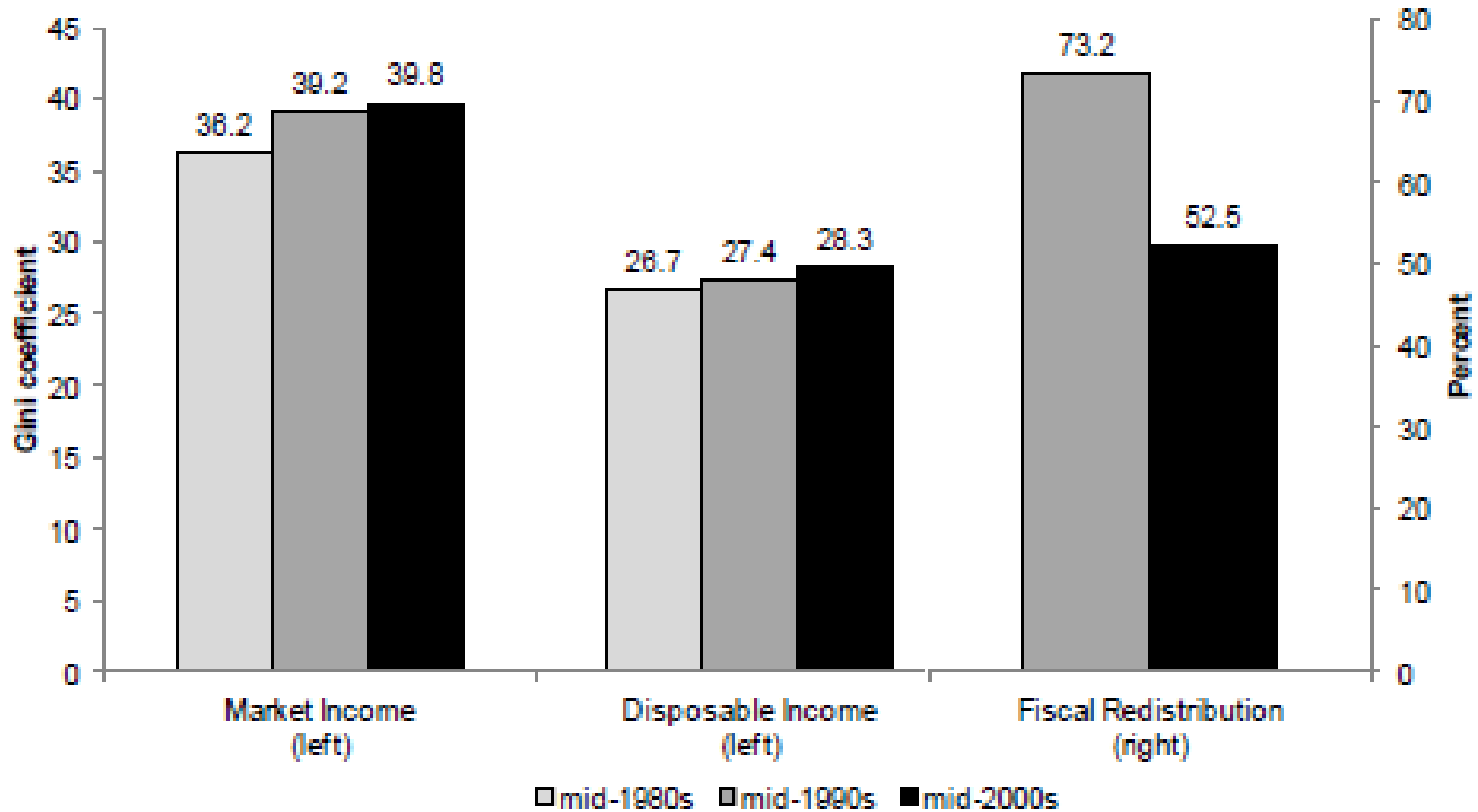
Motivation





Important redistributive role of fiscal policy in AEs

Motivation





Fiscal consolidation required in many advanced countries

- The Great Recession 2007-09 has led to a significant increase in public debt, in large part because of the collapse in tax revenues over this period as incomes fell.
- Against this backdrop, many governments are already undertaking or planning policies to reduce government debt and deficits, through a combination of spending and tax-based consolidation measures.
- Will deficit reduction lead to stronger growth and job creation in the short run? What will be the distributional consequences?



Main results

- Fiscal consolidation episodes have typically had significant distributional effects:
 - increase inequality by 0.1 percentage point (about 0.4 percent) in the very short term, and by 0.9 percentage point (about 3.4 percent) over the medium term;
 - significant and long-lasting fall in the wage income share of about 0.8 percentage point of GDP;
 - raise long-term unemployment by about 0.5 percent over the medium term.



Inequality

- Gini for disposable income (Standardized World Income Inequality Database; Solt 2009 & 2011)
- Shares of wage and profit in GDP (OECD Analytical Database);
- Short (lasting less than six months) and long-term (lasting more than six months) unemployment rates taken from the OECD Analytical Database.

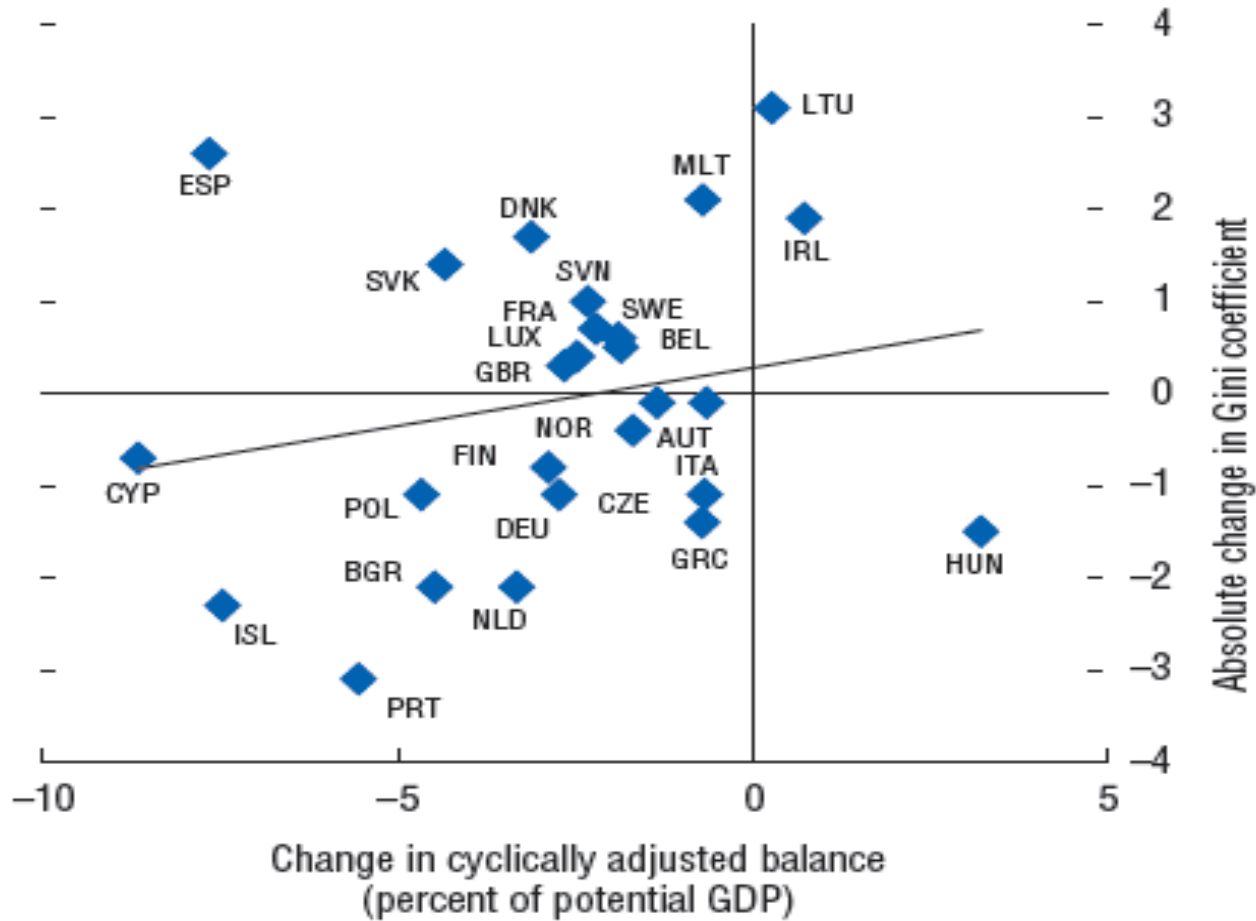


Fiscal consolidation

- Fiscal consolidation episodes are taken from Devries et al. (2011) database.
- The database contains information on 173 episodes of fiscal consolidation for 17 OECD economies (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, Portugal, Spain, Sweden, the United Kingdom, and the United States) during 1978-2009.
- Measures of fiscal consolidation based on a narrative approach and focuses on *policy* actions.

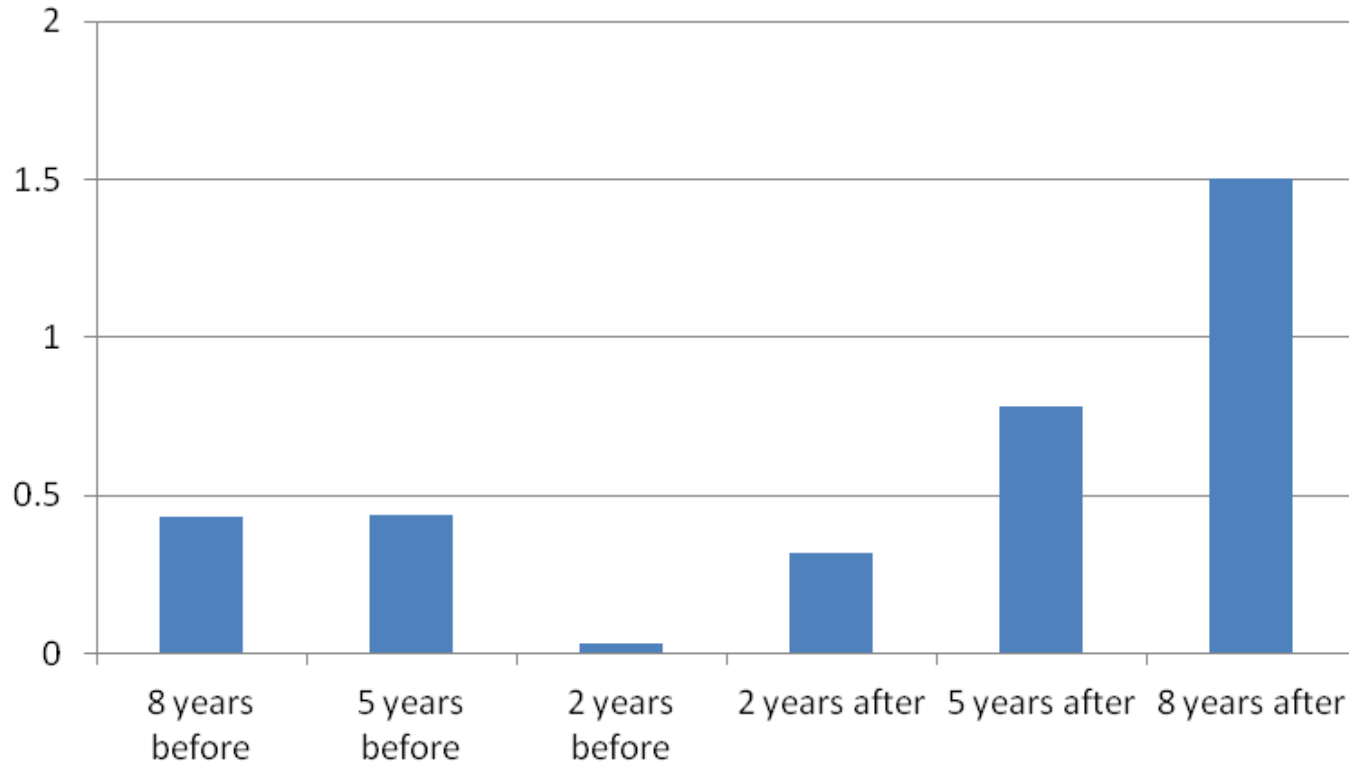


Bivariate relationship





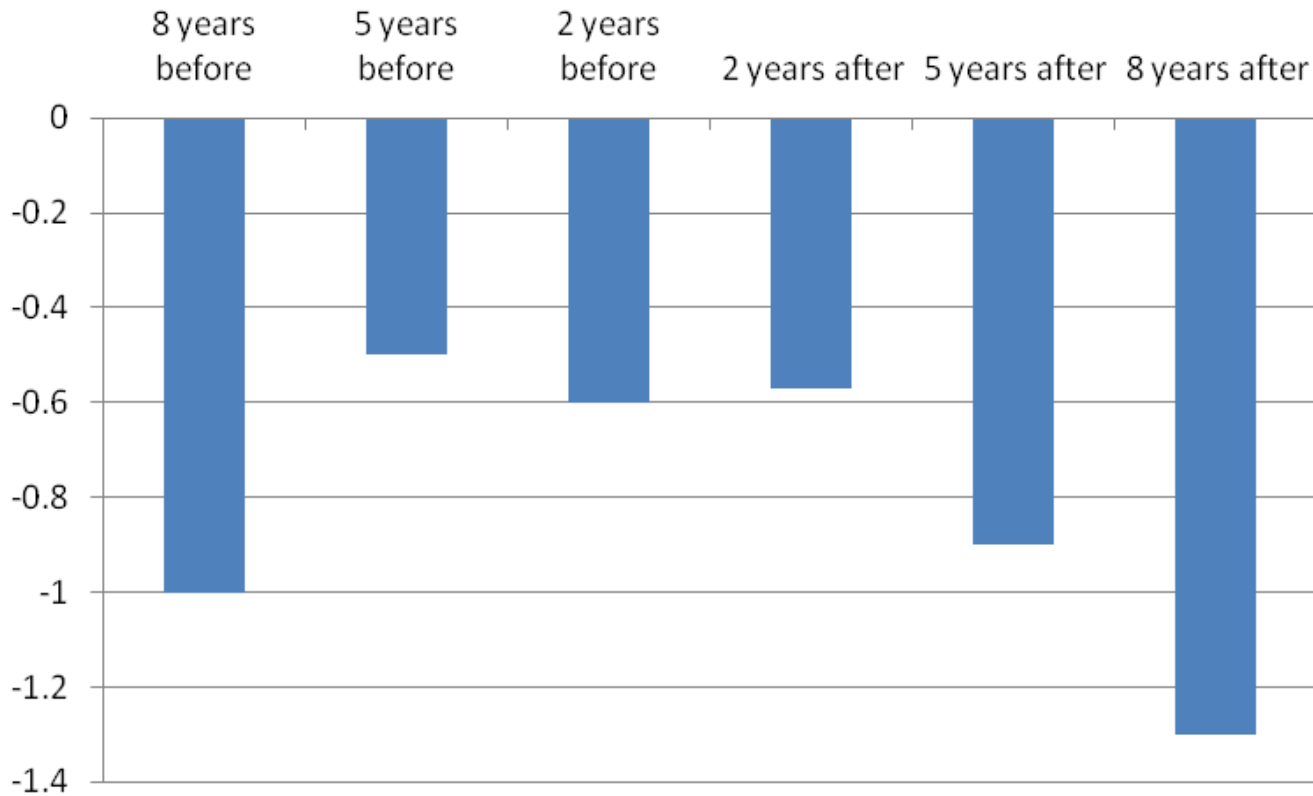
Cumulative changes in Gini before and after fiscal consolidation episodes



Descriptive statistics



Cumulative changes in the wage share before and after fiscal consolidation episodes



Descriptive statistics



Regression framework

Impulse Response Functions by Local Projections (Jorda, 2005)

$$G_{i,t+k} - G_{i,t} = \alpha_i^k + Time_t^k + \sum_{j=1}^l \gamma_j^k \Delta G_{i,t-j} + \beta_k D_{i,t} + \varepsilon_{i,t}^k$$

G = measure of inequality

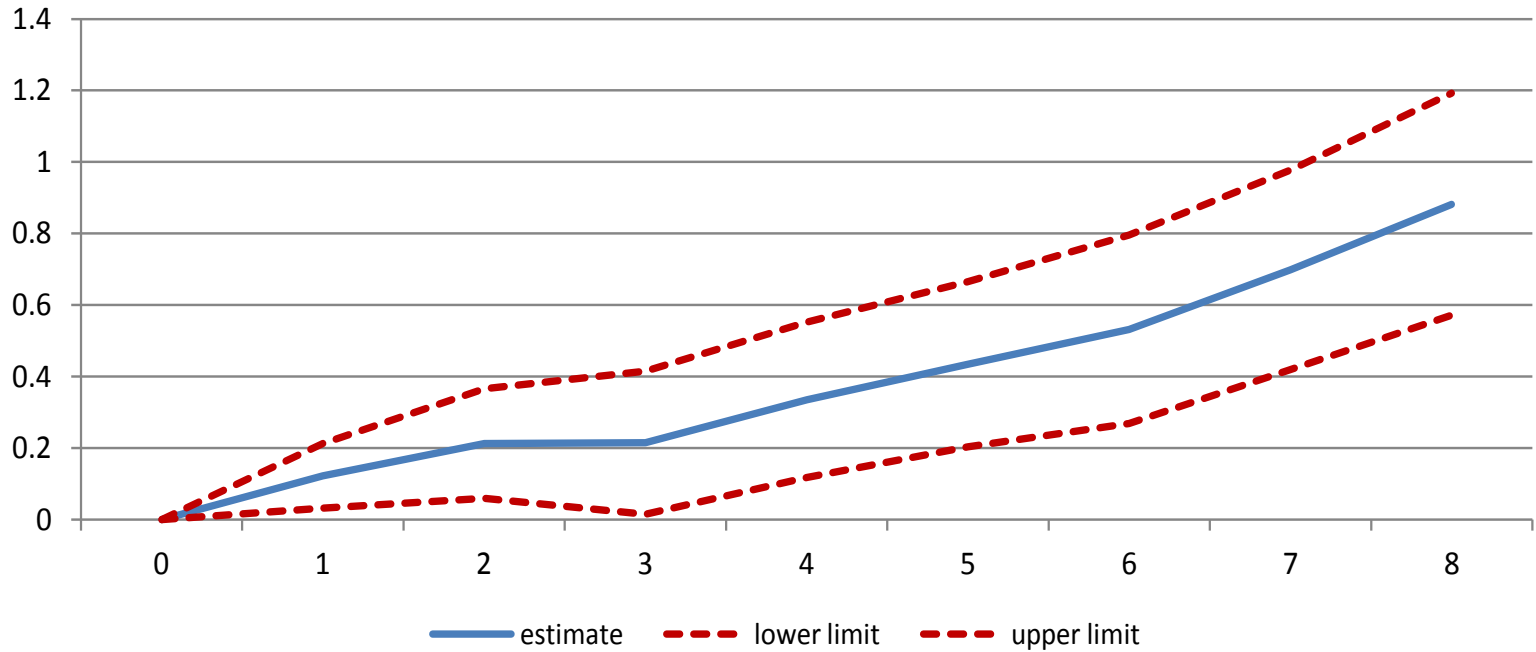
D = dummy variable that takes the value equal to 1 for the starting date of a consolidation episode in country i at time t and 0 otherwise

β_k = distributional impact of fiscal consolidation episodes for each future period k

IRF obtained by estimating the equation for each k and plotting the beta coefficients



The effect of fiscal consolidation on inequality (Gini)



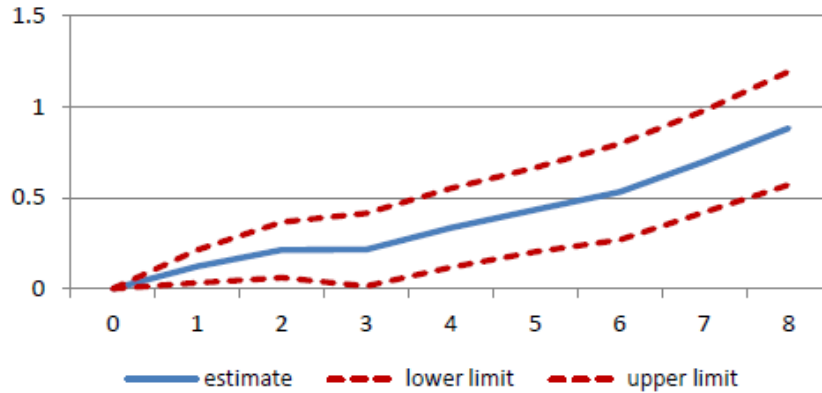
Note: dotted lines equal one standard error bands.



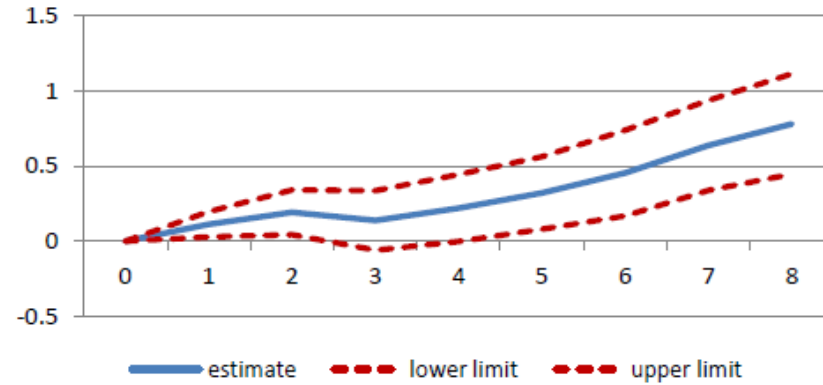
The effect of fiscal consolidation on inequality (Gini)

Results

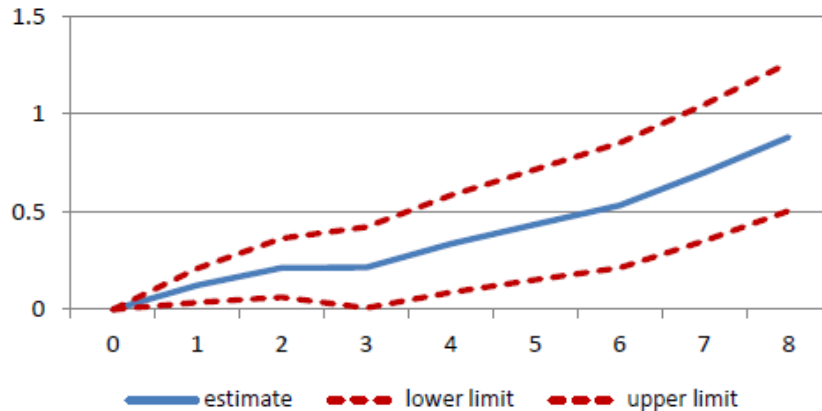
Panel A. Baseline



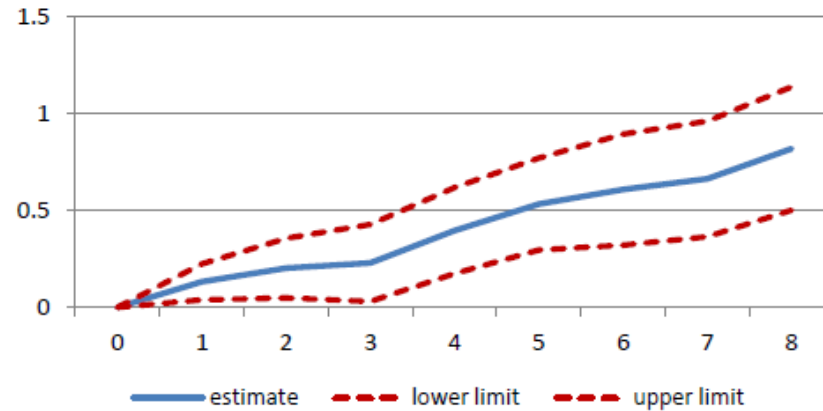
Panel B. Time FE



Panel C. No country FE



Panel D. Additional controls

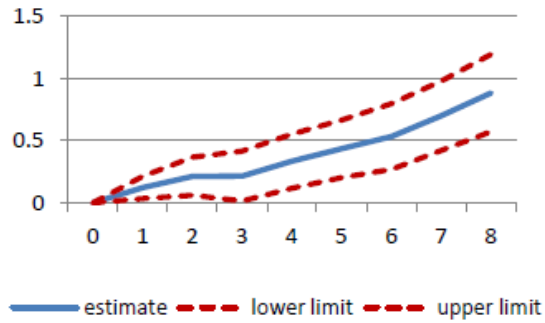


Note: dotted lines equal one standard error bands.

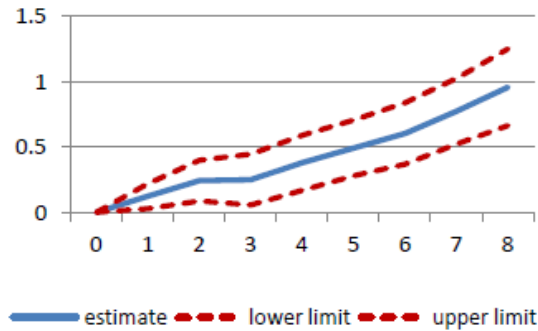


The effect of fiscal consolidation on inequality (Gini)

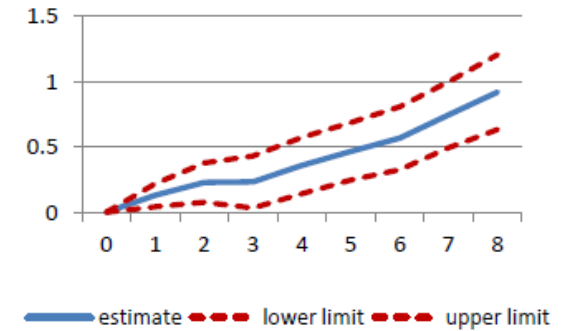
Panel A. Baseline (lags=2)



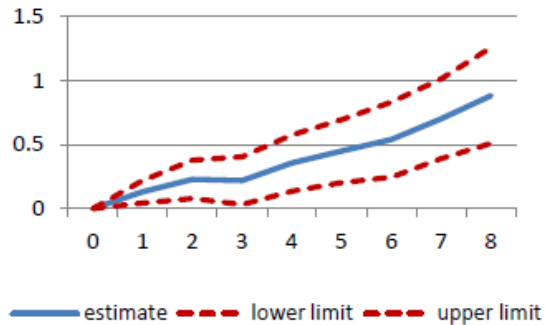
Panel B. lag=0



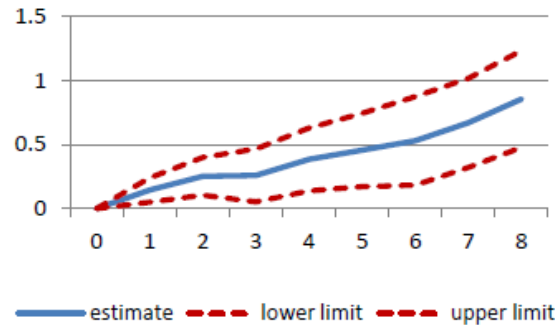
Panel C. lag=1



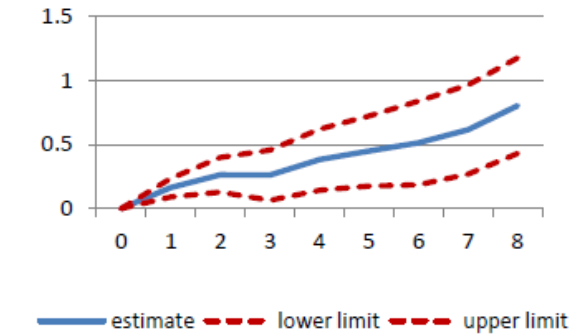
Panel D. lags=3



Panel E. lags=4



Panel F. lag=5



Note: dotted lines equal one standard error bands.



The effect of fiscal consolidation on inequality (Gini)

MEDIUM-TERM EFFECT OF CONSOLIDATIONS ON GINI

	SWIID	OECD	SWIID for observations in the OECD database	Milanovic's <i>All the Ginis</i> database
$Gini_{i,t+5} - Gini_{i,t}$	0.456 (2.04)**	1.294 (3.43)***	0.836 (3.20)***	2.223 (2.02)**
N	473	55	55	147
R ²	0.13	0.27	0.17	0.12

Note. T-statistics based on clustered robust standard errors in parenthesis.

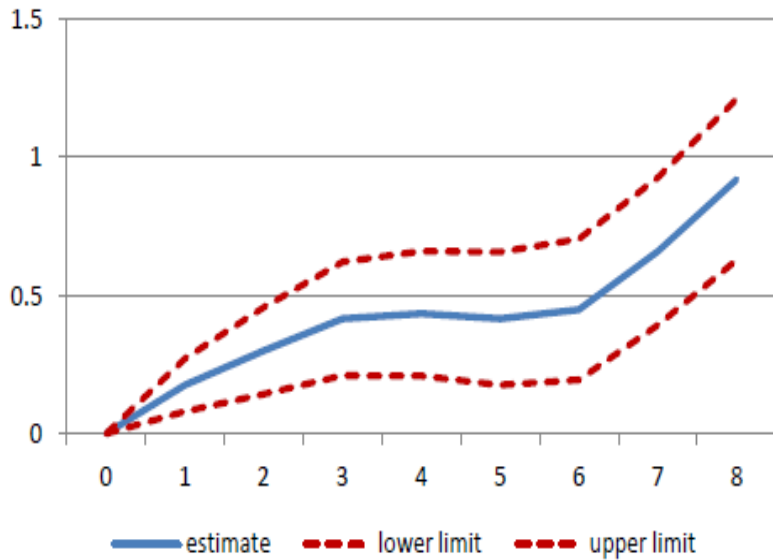
** , *** denote significance at 5% and 1%, respectively



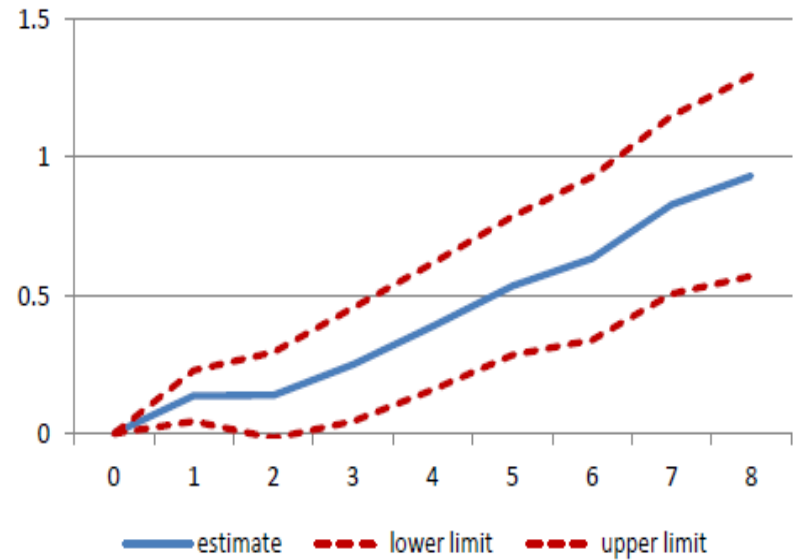
The effect of fiscal consolidation on inequality (Gini)- spending vs. tax-based adjustments

Results

Panel A. Spending



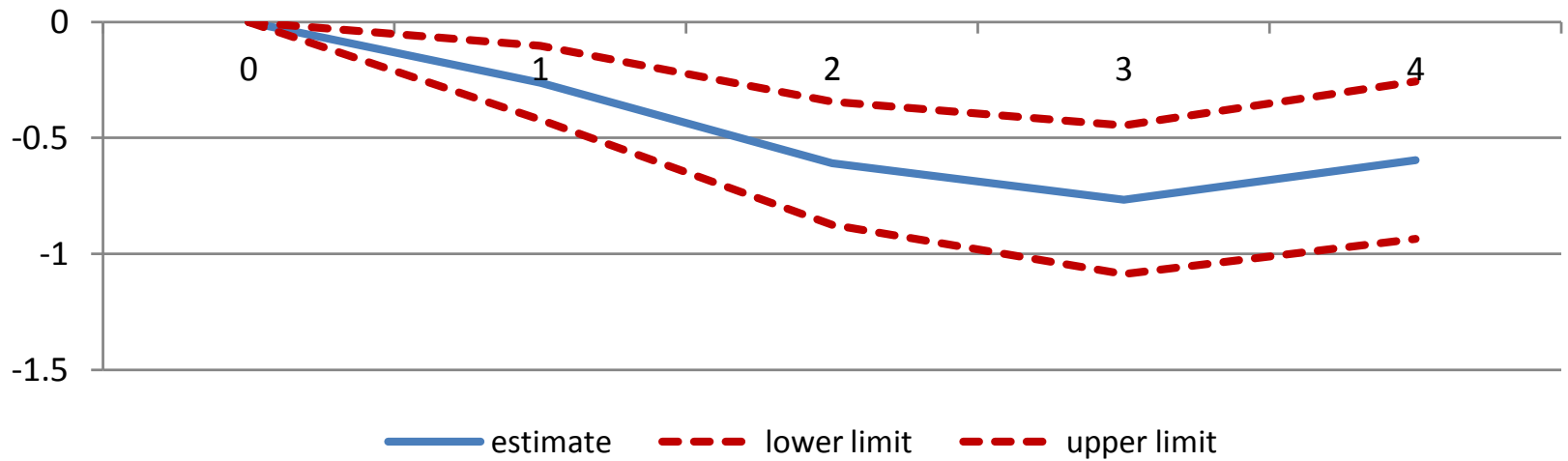
Panel B. Tax



Note: dotted lines equal one standard error bands.



The effect of fiscal consolidation on wage income (% of GDP)



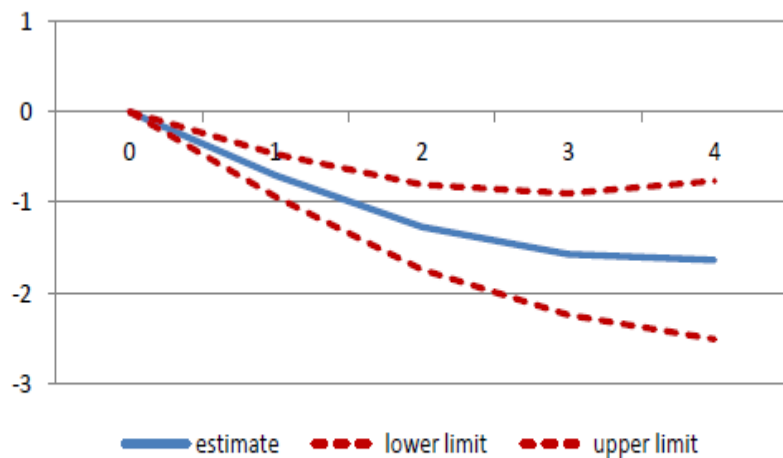
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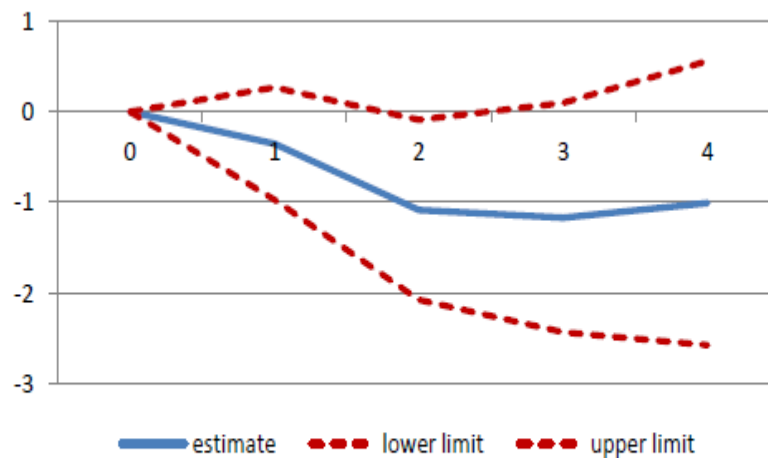
The effect of fiscal consolidation on wage vs. profits and rents (percentage change)

Results

Panel A. Wage income



Panel B. Profit and rent income

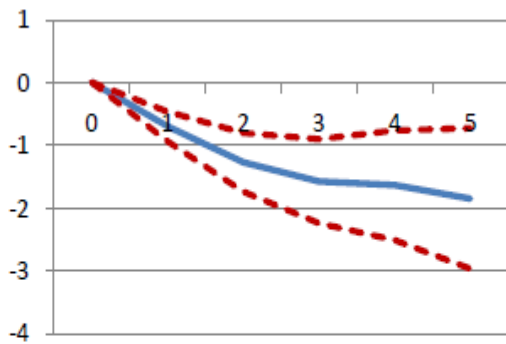


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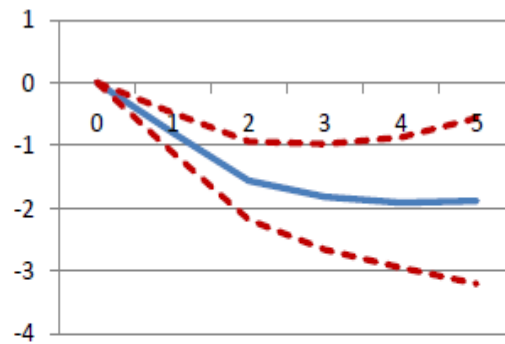
The effect of fiscal consolidation on wage income spending vs. tax-based (percentage change)

Panel A. All episodes



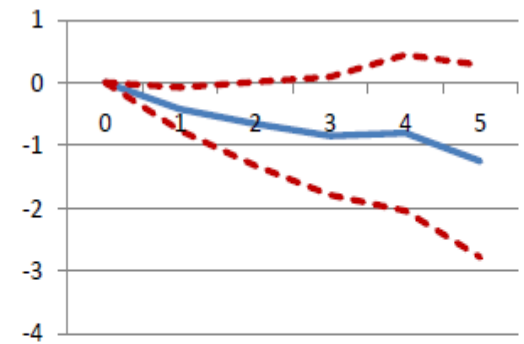
— estimate - - - lower limit - - - upper limit

Panel B. Spending-based episodes



— estimate - - - lower limit - - - upper limit

Panel C. Taxes-based episodes



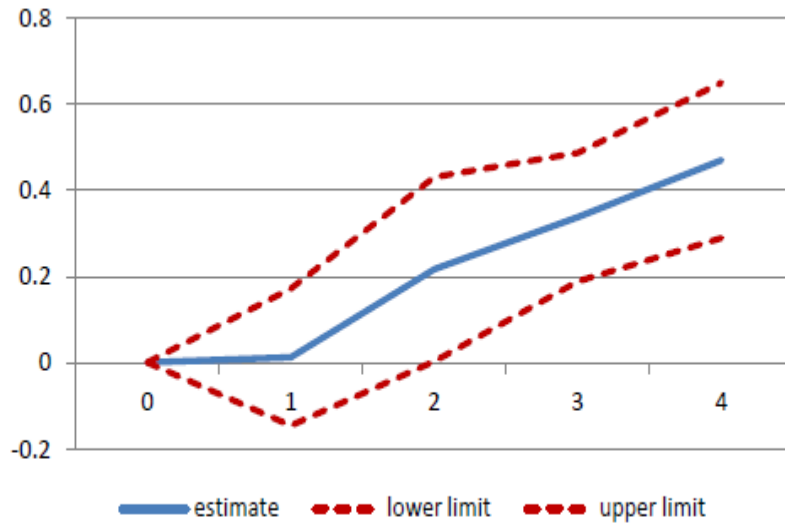
— estimate - - - lower limit - - - upper limit

Note: Note: dotted lines equal one standard error bands.

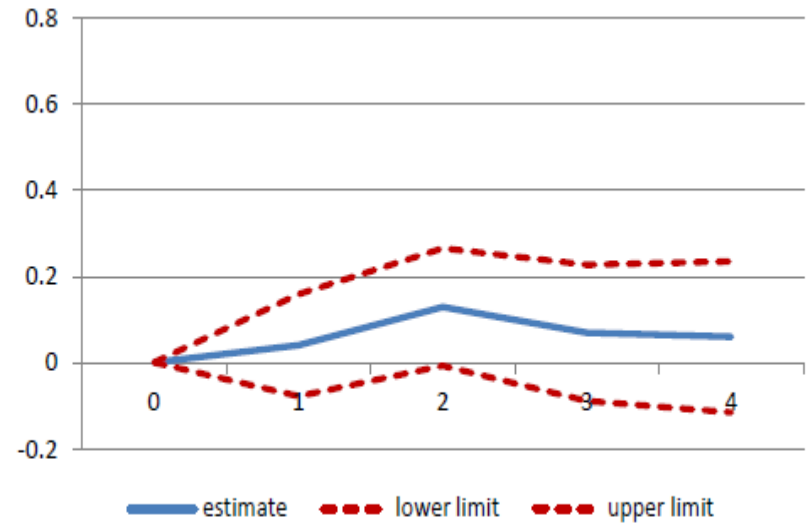


The effect of fiscal consolidation on short vs. long-term unemployment

Panel A. Long-term unemployment



Panel B. Short-term unemployment



Note: dotted lines equal one standard error bands.



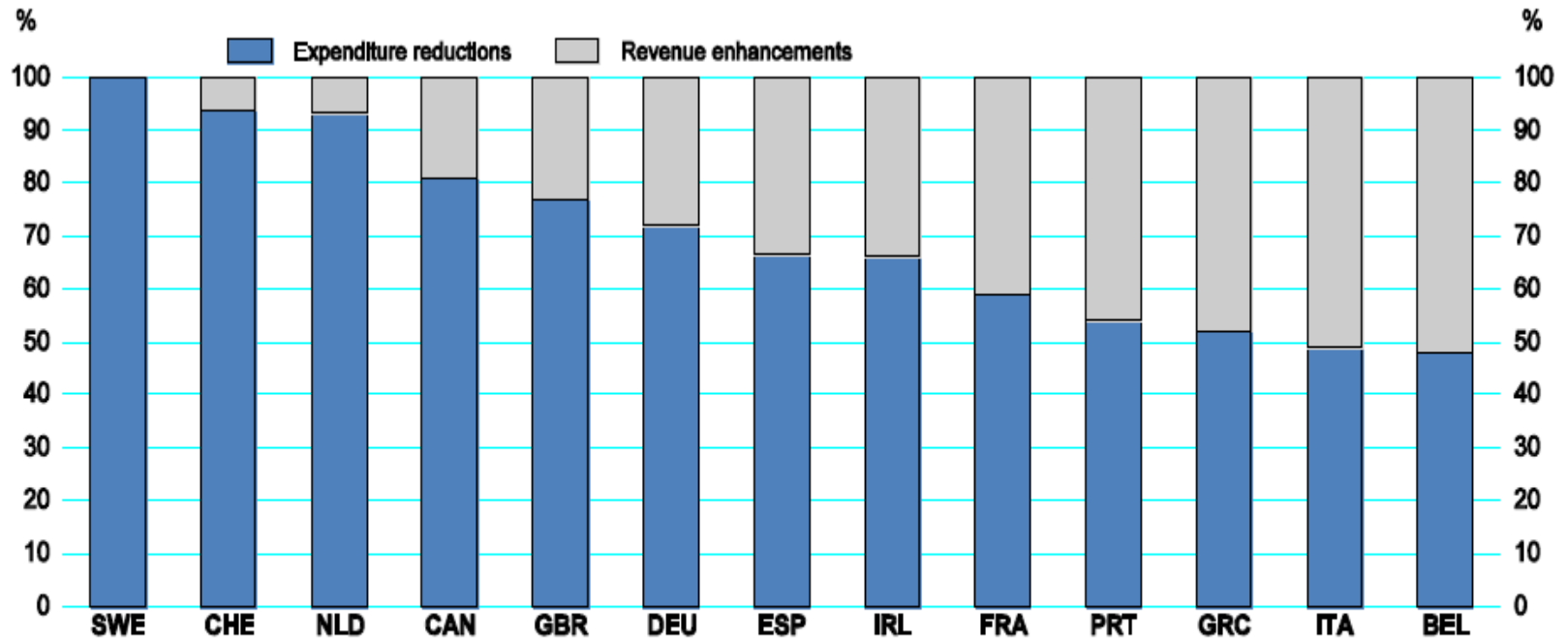
Key Results

- Fiscal consolidation episodes have typically had significant distributional effects:
 - increase inequality by 0.1 percentage point (about 0.4 percent) in the very short term, and by 0.9 percentage point (about 3.4 percent) over the medium term;
 - significant and long-lasting fall in the wage income share of about 0.8 percentage point of GDP;
 - raise long-term unemployment by about 0.5 percent over the medium term.



Fiscal consolidation occurring via spending restraints

B. Contribution to consolidation, 2009-15, survey based ¹



1. Cumulative contribution to consolidation from expenditure and revenue measures according to the OECD Fiscal Consolidation Survey of member governments.

Source: OECD Economic Outlook No. 91 database and OECD Fiscal Consolidation Survey 2012.



Conclusions

- It is important to have realistic expectations about the consequences of fiscal consolidation
- Costs must be balanced against the potential longer-term benefits that consolidation can confer as interest rates decline, and the lighter burden of interest payments permits cuts to distortionary taxes (those that discourage desirable behavior)



Conclusions

- Fiscal measures that are approved now but only kick in to reduce deficits in the future—when the recovery is more robust—would be particularly helpful. Examples include linking statutory retirement ages to life expectancy and improving the efficiency of entitlement program
- Fiscal consolidation plans should also spell out how policies would respond to shocks, such as slower growth than envisaged in the plan



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