

Will it Hurt? Who Will It Hurt?

The Macroeconomic and Distributional Effects of Fiscal Austerity

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Views are those of the author and should not be ascribed to the IMF.

I. Introduction

- The focus of my talk is on advanced economies. Issues facing emerging markets and low-income countries are important of course, but trying to do justice to all in 20 minutes risks doing justice to none.

A challenge facing the advanced economies

- **State of labor markets:** Dismal. Giving statistics on labor markets to this audience would be carrying coal to Newcastle.
- **Fiscal situation:** In 2009, the budget deficit averaged about 9 percent of GDP in advanced economies, up from only 1 percent of GDP in 2007. Government debt averages about 100 percent of GDP—its highest level in 50 years. Age-related pressures on spending compound the problem.
- **Challenge:** How to proceed with fiscal consolidation plans against the background of dismal labor market conditions?

II. Will it Hurt?

- *One view:* Fiscal consolidation will boost growth and lower unemployment.
- *Our view:* Sadly, that is not likely in the short-term.

Results from IMF 2010 (Fall WEO) and Guajardo, Leigh and Pescatori (2011)

- **Basic results.** An analysis of fiscal consolidation—tax hikes and spending cuts—in advanced economies over the past 30 years finds that consolidation reduces output and raises unemployment in the short term. A deficit cut of 1% of GDP typically reduces domestic demand—consumption and investment—by 1%, GDP by $\frac{1}{2}$ % and raises the unemployment rate by $\frac{1}{3}$ percentage points.
- **Pain relievers (monetary response; net exports boost).** At the same time, interest rate cuts, a fall in the value of the currency, and a rise in net exports usually soften the pain. So fiscal consolidation is more painful if it occurs simultaneously across many countries (because everyone cannot export their way out) and if monetary policy is not in a position to offset.
- **Composition of consolidation (tax vs. spend).** Consolidation is more painful when it relies primarily on tax hikes, partly because central banks provide less monetary stimulus during such episodes.
- **Market pressures/confidence effects.** When the perceived sovereign default probability is high, fiscal consolidation has smaller negative effects. This could reflect confidence effects. But even in such cases, on average, the effects are contractionary, with no evidence of any surge of consumption and investment.
- **Long-term gain.** Over the long term, reducing government debt raises output, as interest rates decline, and the lighter burden of interest payments permits cuts to distortionary taxes.
- **Bottom-line.** Virtually all advanced economies need fiscal consolidation, but it is important to have realistic expectations: it is likely to hurt growth and job creation in the short term.

III. Who will it hurt? Impact on Long-Term Unemployment

- In ongoing work, Larry Ball, Daniel Leigh and I are building on the WEO chapter to look at the distributional effects of fiscal consolidations. Our initial work has looked at impact of fiscal consolidation on unemployment of different durations.
- **Estimation:** In the baseline exercise, estimate the following autoregressive equations for a panel of OECD countries:

$$\Delta U_{it}^{long} = \alpha_i + \alpha_t + \sum_{j=1}^4 \alpha_j \Delta U_{it-j}^{long} + \sum_{s=0}^4 \beta_s \Delta FC_{i,t-s} + \varepsilon_{it}$$

where U^{long} is the long-run unemployment rate (≥ 6 months), FC is fiscal consolidation in percent of GDP, i denotes the i th country, and t denotes the t th year.

- **Results:** Fiscal contractions raise both short-term and long-term unemployment on impact. Within 3 years, however, the rise in short-term unemployment fully unwinds, while the rise in long-term unemployment persists up to the end of the horizon considered here—5 years. See Figure 1.
- **Composition** of Consolidation (Tax Hikes vs. Spending Cuts): Tax hikes have a stronger and more persistent impact on longer-term unemployment than do spending cuts. See Figure 2 and 3.
- We are also looking at the impact of fiscal consolidation on the distribution of income—wage vs. profit shares; incomes by deciles; and measures of income inequality. But those results are even less ready for prime-time.
- In the remainder of this talk I'll survey some of the evidence that we already have from previous studies on the impacts of consolidation on the distribution of income. The two studies that I focus on are Alesina and Ardagna (1998) and Carlos Mulas-Granados (2005).

Figure 1. Impact of 1 % of GDP Fiscal Consolidation on Unemployment Rates, by Duration

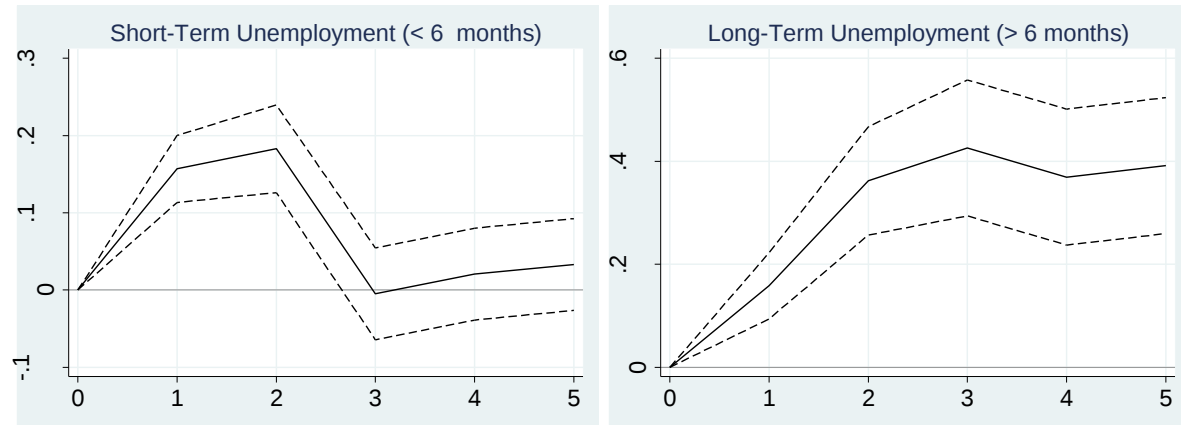


Figure 2. Impact of 1 % of GDP Tax Increase on Unemployment Rates, by Duration

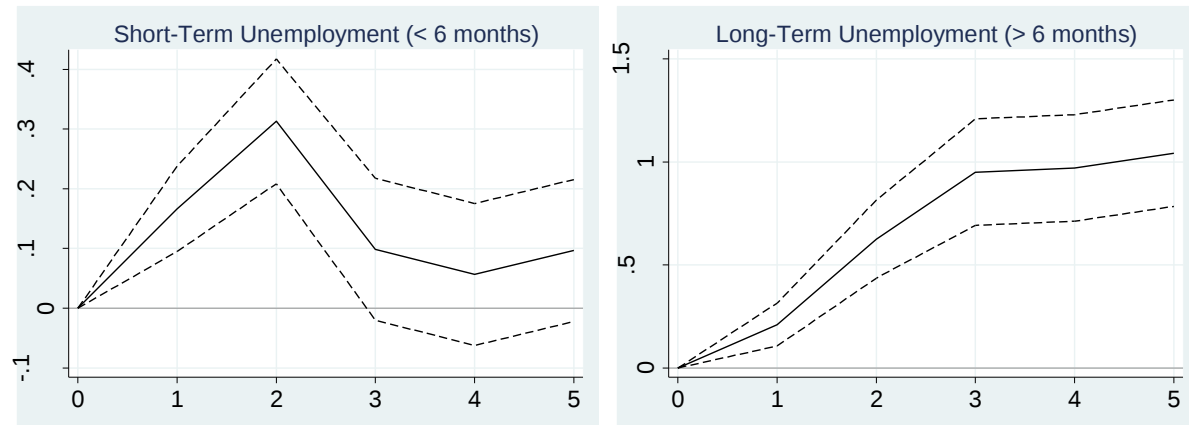
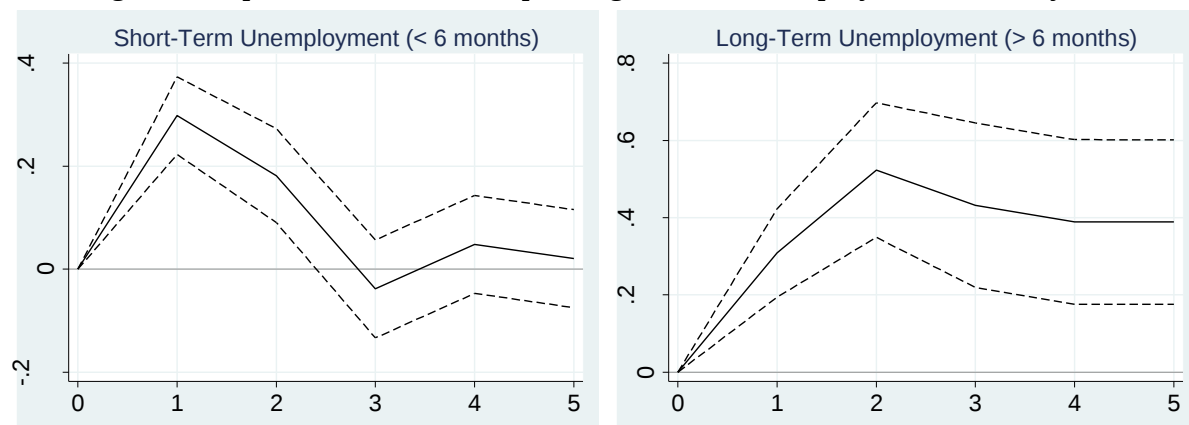


Figure 3. Impact of 1 % of GDP Spending Cuts on Unemployment Rates, by Duration

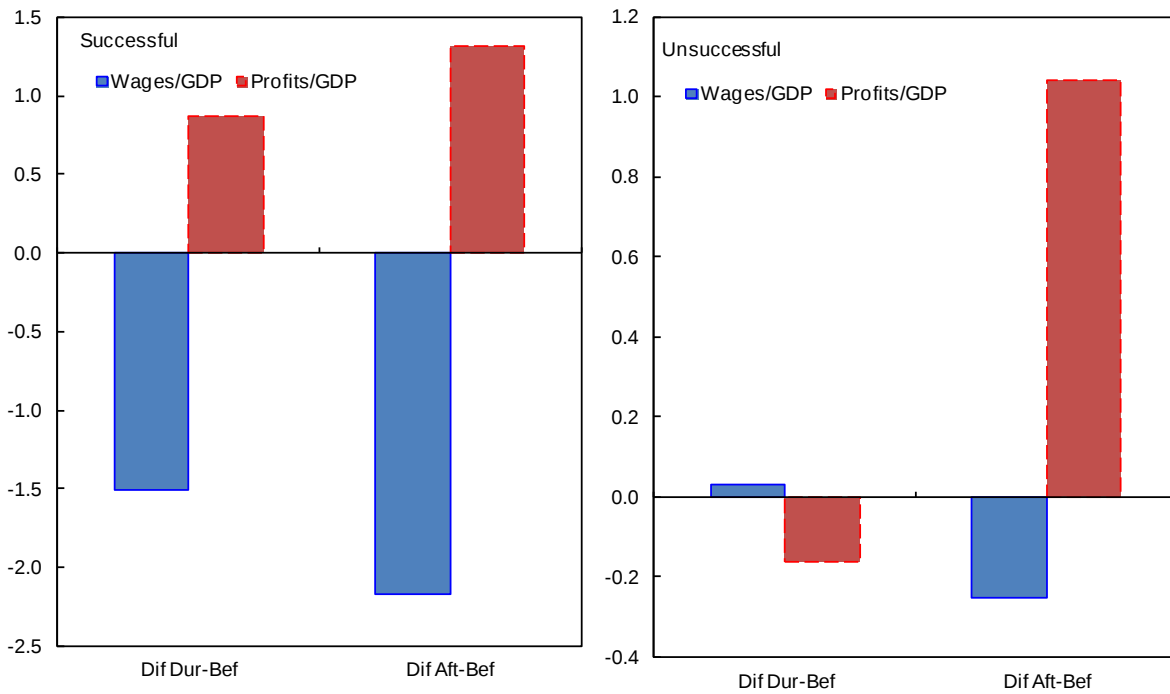


Note: these charts are based on the definition of fiscal consolidation used in IMF 2010 (Chapter 3 of the IMF's World Economic Outlook, Fall 2010).

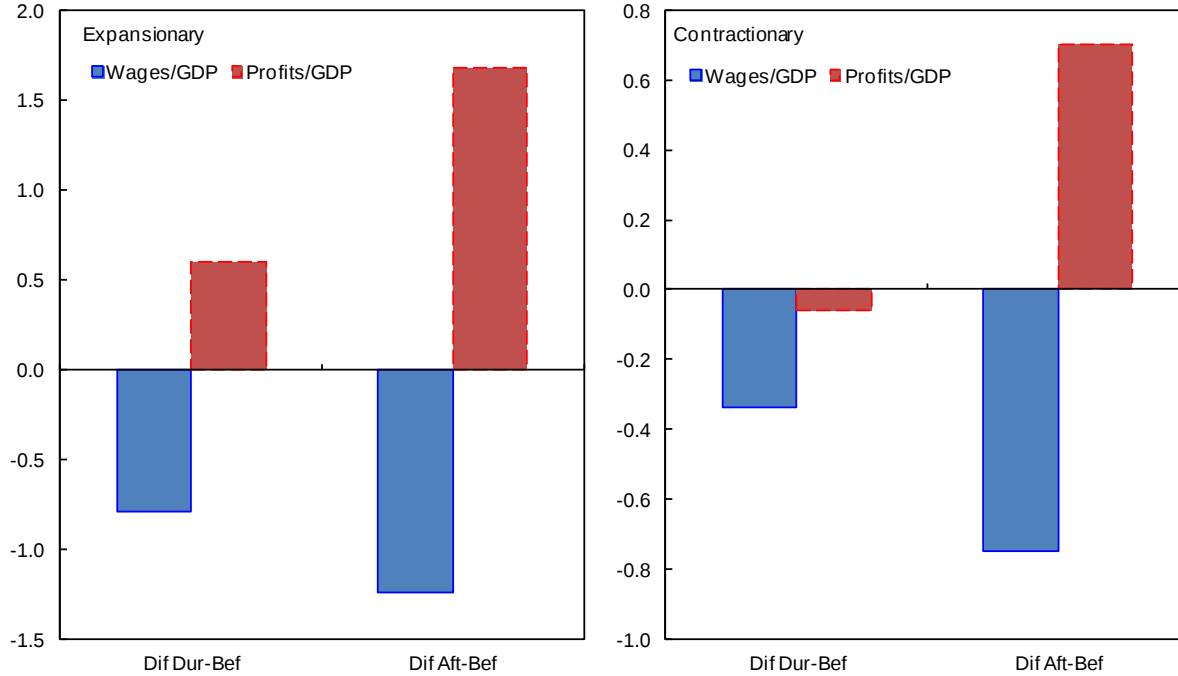
IV. Who Will it Hurt? Impact on Income Distribution

- Alesina and Ardagna (1998) study the impacts of fiscal consolidation. They use the conventional approach of identifying discretionary changes in fiscal policy using the change in the cyclically-adjusted primary balance (CAPB). There are problems with this definition, as noted in IMF (2010) and Guajardo, Leigh and Pescatori (2011), which tend to bias it towards finding expansionary output effects. See also Islam and Chowdhury (2010).
- Setting aside this (admittedly very important) issue, the changes in wage and profit shares associated with this measure fiscal consolidations seem quite clear. Figure 4 shows that “successful” fiscal consolidations tend to be associated with declines in wage shares; both “expansionary” and “contractionary” consolidations are associated with declines in wage shares. The tendency for profit shares is to increase during and in the aftermath of fiscal consolidations. [“Successful” fiscal consolidations are defined by Alesina and Ardagna as ones that led to significant improvements in primary deficits and debt to GDP; “expansionary” consolidations are associated with higher output growth in the period during and after the consolidation.]
- Figures 5 and 6 show changes in wage and profit shares for the 10 detailed case studies in Alesina and Ardagna (1998; Appendix A). In seven of the cases, shown in Figures 5A and 5B, wage shares decline and profit shares increase during and after fiscal consolidation. The three exceptions are shown in Figure 6 (Canada 1986-7, Netherlands 1991, Sweden 1986-7).
- Carlos Mulas-Granados (2005) studies 53 fiscal adjustment episodes in EU member states between 1960 and 2000. He too uses the cyclically-adjusted primary balance to measure consolidations. He finds that fiscal consolidations are associated with greater inequality in incomes (as measured by the Gini and Theil measures of income inequality)—see Figure 7 and the table that follows. He also finds that “while expenditure-based adjustments perform better in terms of subsequent economic growth than do revenue-based adjustments, the latter are less harmful in terms of income distribution.” This result is shown in the table—the variable “*quality of the budget*” measures the extent to which expenditure cuts contribute to the fiscal consolidation.

Figure 4. Successful and Unsuccessful Fiscal Adjustments



Expansionary and Contractionary Fiscal Adjustments



Note: these figures are based on Alesina and Ardagna (1998).

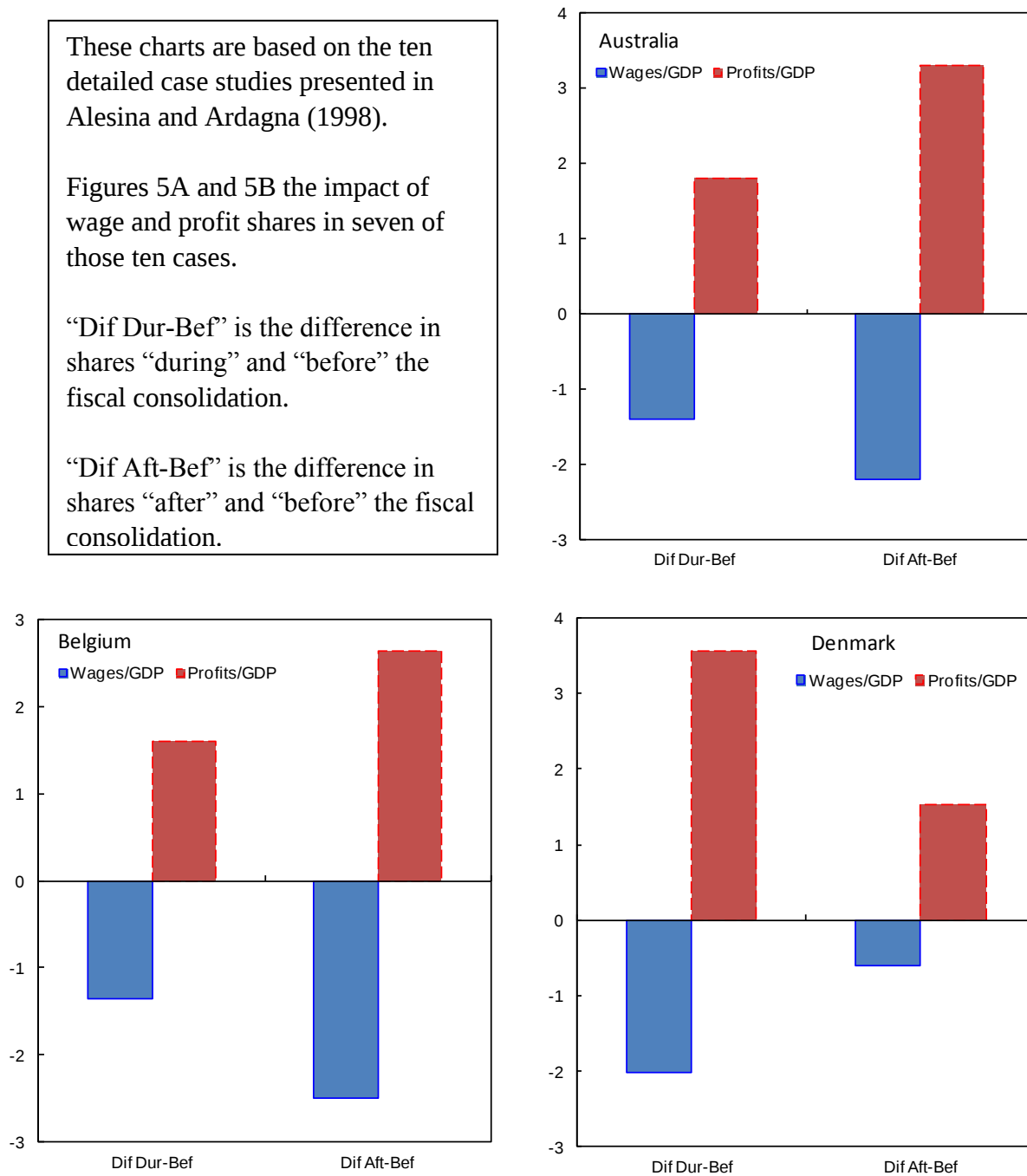
Figure 5A. Fiscal adjustment

These charts are based on the ten detailed case studies presented in Alesina and Ardagna (1998).

Figures 5A and 5B the impact of wage and profit shares in seven of those ten cases.

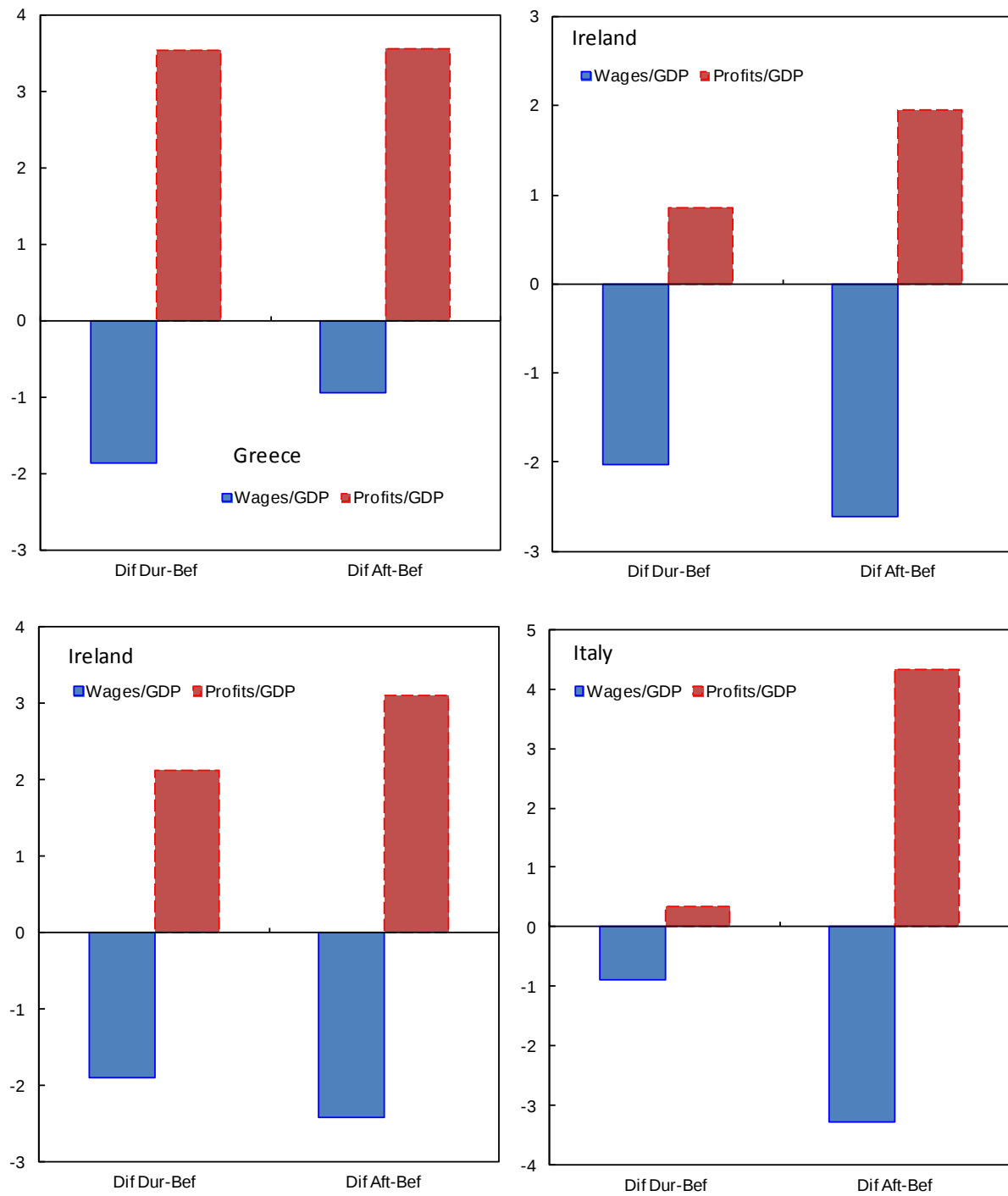
“Dif Dur-Bef” is the difference in shares “during” and “before” the fiscal consolidation.

“Dif Aft-Bef” is the difference in shares “after” and “before” the fiscal consolidation.



Note: these figures are based on Alesina and Ardagna (1998).

Figure 5B. Fiscal adjustment



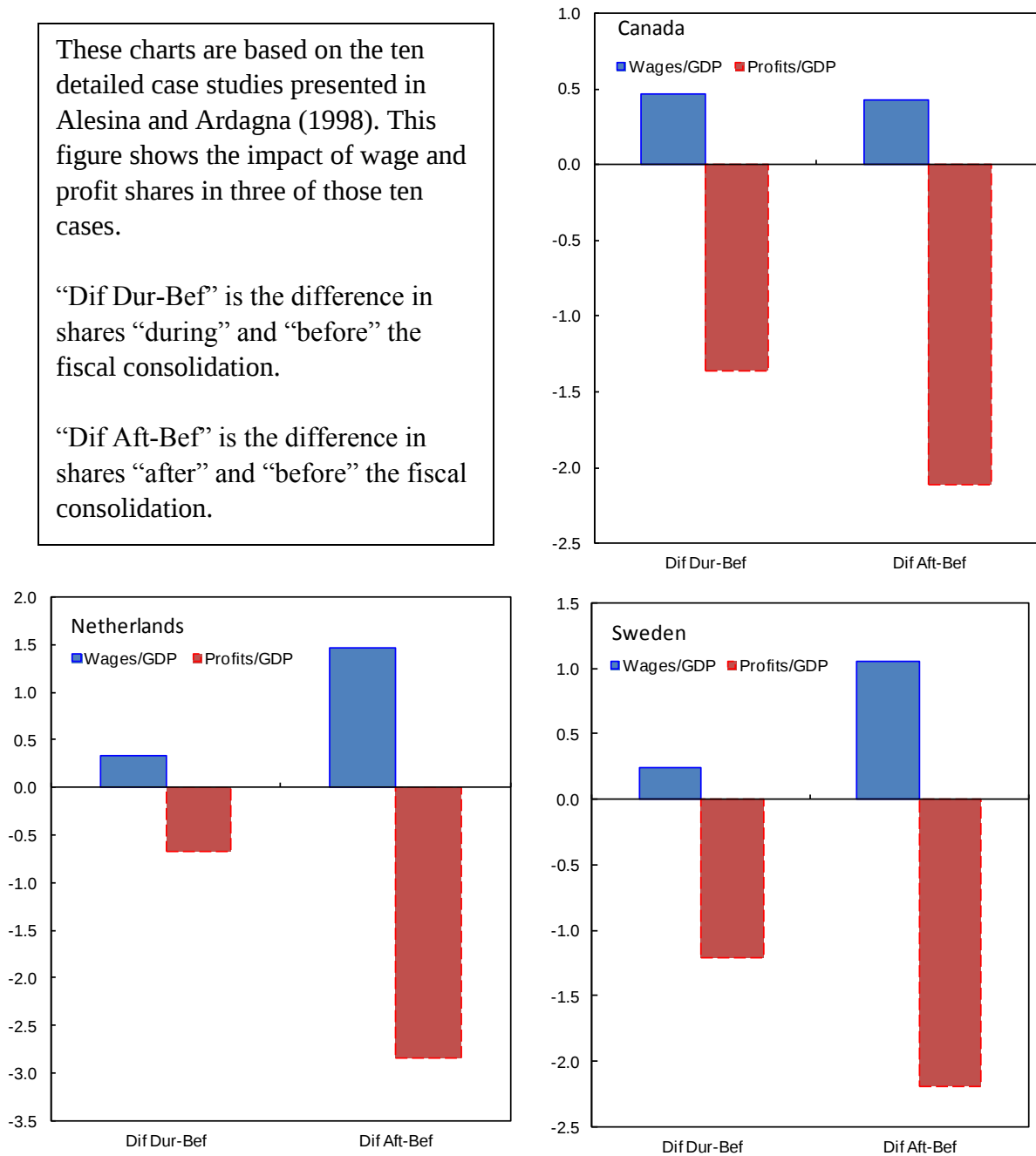
Note: these figures are based on Alesina and Ardagna (1998).

Figure 6. Fiscal adjustment

These charts are based on the ten detailed case studies presented in Alesina and Ardagna (1998). This figure shows the impact of wage and profit shares in three of those ten cases.

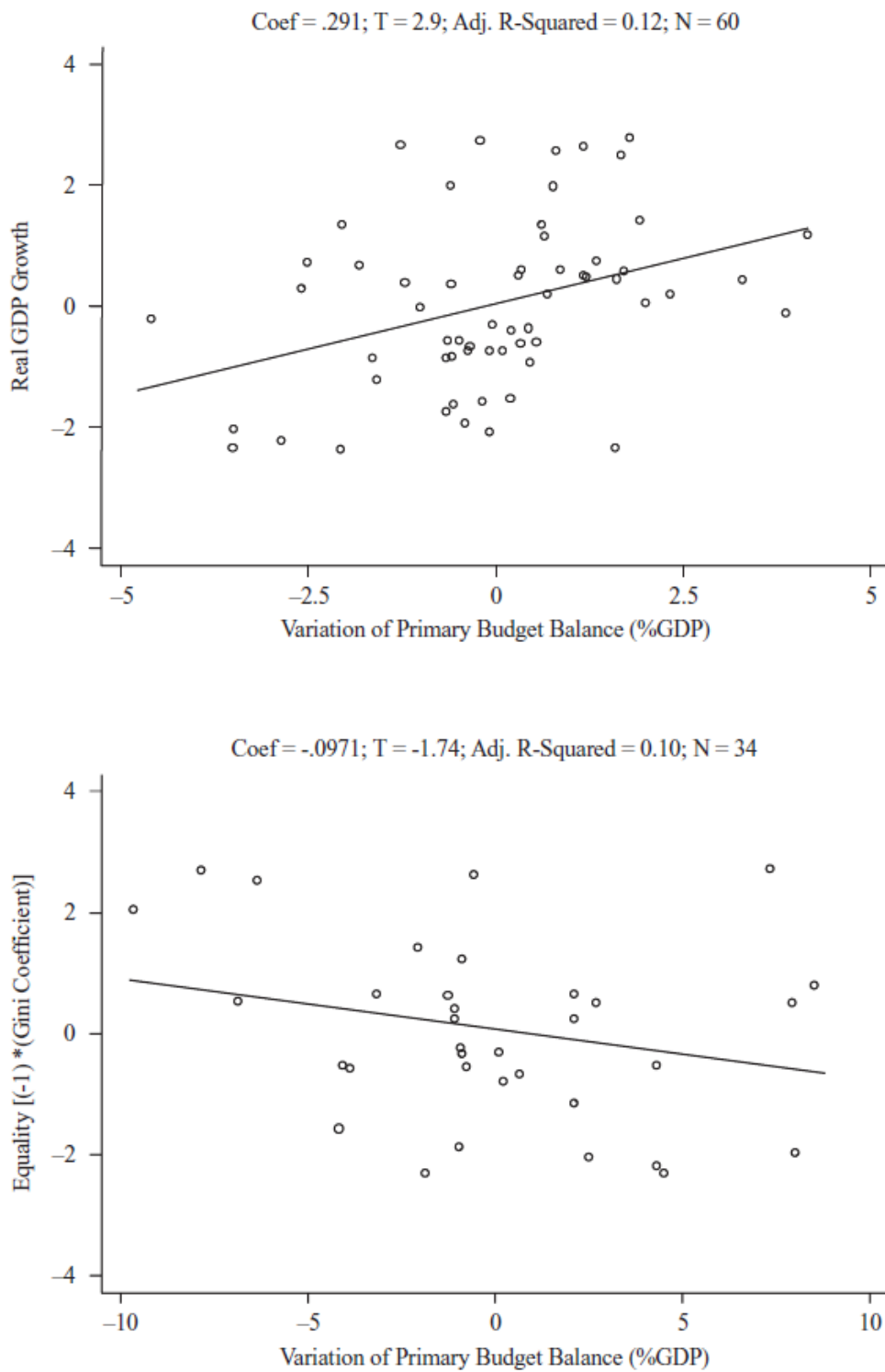
“Dif Dur-Bef” is the difference in shares “during” and “before” the fiscal consolidation.

“Dif Aft-Bef” is the difference in shares “after” and “before” the fiscal consolidation.



Note: these figures are based on Alesina and Ardagna (1998).

Figure 7: Fiscal Adjustments and the Trade-off between Growth and Equality



Note: this figure is from Mulas-Granados (2005)

The Effects of Fiscal Adjustments on Income Distribution

Income Distribution Equation D. Variable: Change in Gini Coefficient	Gini Coefficient (1970-1989)	Gini Coefficient (1990-2000)
Δ Gini Coefficient t-1	0.134*** (3.31)	0.142*** (3.56)
Δ Cyclic. Adj. Primary Budget Balance t-1	0.253*** (1.98)	0.133** (1.88)
Δ Quality of the Budget t-1	0.432*** (4.59)	0.431*** (4.37)
Direct Taxes (% GDP) t-1	-0.078 (1.43)	-0.099 (1.36)
Social Spending (% GDP) t-1	-0.101* (1.81)	-0.099* (1.88)
Enrollment in Secondary Education t-1	-0.276 (1.68)	-0.241 (1.40)
Constant	1.122*** (2.21)	1.426** (1.89)
Observations	297	163
Adj. R-squared	0.35	0.32
LR Chi 2(7)	85.32	98.72
Prob>Chi 2	0.000	0.000
Income Distribution Equation D. Variable: Change in Theil Coefficient	Theil Index (1970-1989)	Theil Index (1990-2000)
Δ Theil Index t-1	0.112*** (3.11)	0.134*** (3.28)
Δ Cyclic. Adj. Primary Budget Balance t-1	0.204*** (2.01)	0.132** (1.86)
Δ Quality of the Budget t-1	0.366*** (4.14)	0.402*** (4.02)
Direct Taxes (% GDP) t-1	-0.086 (1.34)	-0.108 (1.23)
Social Spending (% GDP) t-1	-0.096* (1.92)	-0.098* (1.92)
Enrollment in Secondary Education t-1	-0.212 (1.58)	-0.202 (1.38)
Observations	1.022*** (2.11)	1.126** (1.39)
Adj. R-squared	297	163
LR Chi 2(7)	0.36	0.31
Prob>Chi 2	88.12	96.15
	0.000	0.000

Absolute value of t-statistics in parentheses.

* significant at 10 percent; ** significant at 5 percent; *** significant at 1 percent.

Note: this table is from Mulas-Granados (2005).

References

Alesina, Alberto and Silvia Ardagna, 1998, “Fiscal Adjustments: Why They Can Be Expansionary,” Economic Policy.

Ball, Laurence, Daniel Leigh and Prakash Loungani, “Whom Will it Hurt? The Distributional Effects of Fiscal Consolidation” (in progress)

Guajardo, Jaime, Daniel Leigh and Andrea Pescatori, 2011, “Expansionary Austerity,” forthcoming IMF Working Paper.

IMF, 2010, “Will it Hurt? The Macroeconomic Effects of Fiscal Consolidation,” World Economic Outlook, Fall.

Islam, Iyanatul and Anis Chowdhury, 2010, “Fiscal Consolidation, Growth and Employment: What do We Know?”, G24 Policy Brief No. 57.

Mulas-Granados, Carlos, 2005, “Fiscal Adjustments and the Short-term Trade-Off between Economic Growth and Equality,” Revista de Economia Publica.