CHAPTER 2

CAN FISCAL POLICIES DO MORE FOR JOBS?

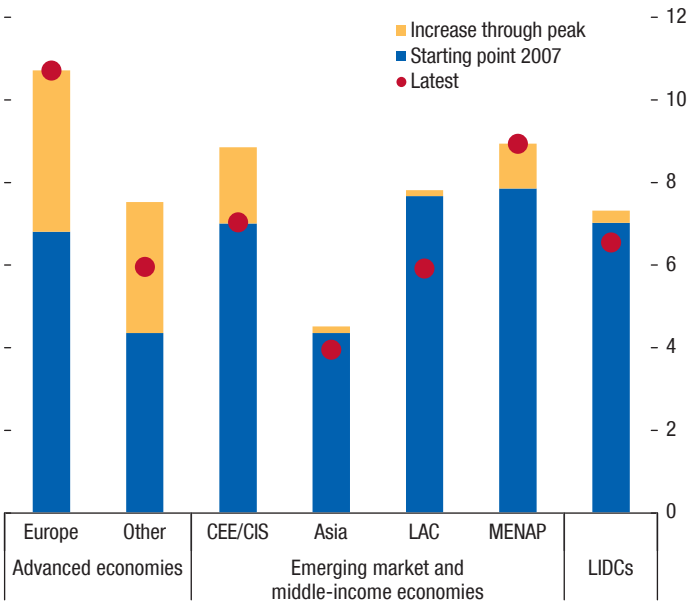
Job creation is at the top of political agendas across the globe. In advanced economies, the employment losses generated by the crisis have been only partially reversed, raising concerns about permanent skills and human capital erosion associated with long-term unemployment and inactivity. In most emerging and low-income developing economies, while crisis-related job losses were relatively contained and largely temporary (Figure 2.1), informality remains high, and job creation insufficient to absorb the large number of young people entering the labor market. Global unemployment exceeds 200 million people, and an additional 13 million people are expected to be unemployed by 2018 (ILO, 2014).

Can fiscal policy do more for jobs? And how can policymakers maximize the "bang for the buck" given that fiscal room for maneuver is constrained in many advanced and developing economies? These are the topics of this chapter, which builds upon previous studies of the broad impact of fiscal policy on employment (including IMF, 2012).

High and persistent levels of unemployment call for a multi-pronged policy response, usually based on labor market reform but also encompassing other economic policies. While fiscal policy cannot substitute for structural labor market reform, the main conclusion of this chapter is that it can help support job creation in a number of ways, both in the short term and over a longer horizon. However, the impact of fiscal policy on labor market outcomes depends on country circumstances, including the state of the economy, the existence of labor market rigidities, and the interplay with other macroeconomic policies. Therefore, its application requires judgment on the specifics of the particular case.

- The design of fiscal consolidation matters for labor market outcomes. The debate on the growth and employment impact of expenditure-based versus revenue-based consolidations is not settled in the literature. Some studies find short-term spending multipliers to be higher than revenue multipliers, while others have concluded the opposite. Many factors can explain these diverging findings, including differences in country samples; in econometric methodologies; the specific nature of the revenue or expenditure measures; country-specific characteristics; and starting conditions, to mention a few. Our analysis pays particular attention to different starting conditions but, given the difficulties, should still be seen as suggestive rather than definitive. We find that in advanced economies, tax-based consolidations appear to be associated with a more adverse effect on jobs in normal times. However, the situation differs if the starting point of the adjustment is a protracted recession, when expenditure adjustment is found to have a larger short-term adverse effect on employment. Ultimately, what may matter most is the nature of the specific revenue or expenditure measures that are being implemented.
- In emerging and developing economies, where the emphasis of fiscal policy is on sustained growth and

Figure 2.1. Average Unemployment Rate by Country Group
(Percent of labor force)



Sources: International Labour Organization; World Bank; and IMF staff estimates.
Note: Averages weighted by population. All groups show 2013 unemployment data, except for low-income developing countries, which refer to 2012 data. CEE/CIS = Central and Eastern Europe and Commonwealth of Independent States; LAC = Latin America and the Caribbean; MENAP = Middle East and North Africa and Pakistan; LIDCs = low-income developing countries.

economic development, one of the most important challenges regarding the labor market is to facilitate the creation of better paying and more productive jobs. Policies should aim at removing administrative and tax barriers to formal employment, and providing growth-enhancing public services and greater access to finance and training. To this end, adjustment based on revenue mobilization efforts could be preferable to expenditure cuts in some instances. However, for those countries where current outlays have grown at a very rapid pace in recent years, spending rationalization may be a priority.

- In some cases, a transitory loosening of the fiscal stance can buy valuable time to implement crucial labor market reforms. A slower pace of consolidation or higher fiscal deficits can absorb the potential costs of labor market reforms (and other structural reforms). Whether and how much fiscal support to provide to facilitate labor market reforms is a decision that needs to be carefully examined, and its potential benefits (in terms of faster potential output growth) weighed against its risks (largely in terms of debt sustainability). Overall, the case for fiscal relaxation in support of reforms is stronger when the costs and benefits of the reforms are well specified and sufficiently certain, there is a strong commitment to carry them to their end, and the ensuing fiscal relaxation does not undermine confidence or endanger debt sustainability.
- Targeted fiscal measures can be part of the toolkit to address localized labor market malfunctions, such as high youth unemployment, low female labor force participation,[1] and falling elderly labor force participation. Measures targeted to specific segments of the labor force have been found to be more cost effective than blanket ones. These measures include targeted cuts in employer's social contributions and targeted pension reforms.

The rest of the chapter starts with an empirical assessment of the impact of fiscal consolidations on labor market outcomes in advanced and developing economies; it then explores the fiscal costs of fostering labor market reforms; discusses the impact of labor taxes on employment; and concludes with an analysis of the impact of two prominent fiscal reforms aimed at enhancing labor market outcomes in specific segments: targeted social security contribution cuts and pension reforms.

[1] Fiscal policies to increase female labor force participation were recently discussed in IMF (2013).

Does the Composition of Fiscal Consolidation Affect Labor Market Outcomes?

Fiscal consolidation is called for in many economies, advanced and emerging, to reduce high public debt ratios and rebuild fiscal buffers used during the crisis. With the economic recovery not yet on a strong footing, concerns remain that these policies may exacerbate crisis-related job losses, delay a jobs recovery, or have long-lasting negative effects on the labor market such as hysteresis. Conversely, protracted weakness in the labor market can undermine the viability of a sustained period of fiscal consolidation.

This section attempts to shed light on the impact of fiscal consolidation on employment in advanced and developing economies—an area that has received relatively little attention to date.[2] A first possible approach, not pursued here, would be to rely on the voluminous literature on the effects of fiscal policy on output (IMF, 2010; Batini, Eyraud, and Weber, 2014) and on the hypothesis that there is a stable relationship between output and unemployment (or employment)—the Okun's Law (Ball, Leigh, and Loungani, 2013). Under this approach, the impact of fiscal consolidation on employment would be derived from its effects on output. A second complementary approach, followed in this section, is to study directly the link between fiscal policies implemented during consolidation episodes and the subsequent evolution of employment and unemployment.

The approach followed here contributes to the policy analysis in several respects. The output-employment relationship embodied in Okun's Law is an empirical regularity reflecting the interaction of many factors (e.g., the state of the economy, policy settings, output composition, or country-specific institutional arrangements). For these reasons, it is found to differ from one country to another. Thus, in principle, changes in these factors could result in a varying output-employment relationship. Recent research suggests that Okun's Law could be fairly stable within each country over time, including during the crisis (Ball, Leigh, and Loungani, 2013), but there is still no consensus on this matter (Gordon, 2010; Cazes, Verick, and Al-Houssami, 2012; Meyer and Tasci, 2012; and Ball, Leigh, and Loungani, 2013)—particularly regarding the stability

[2] Studies on the employment effects of fiscal consolidation include Monacelli, Perotti, and Trigari (2010), Brückner and Pappa (2012), Ramey (2012), Kato and Miyamoto (2013), Tagkalakis (2013), and Dell'Erba, Koloskova, and Poplawski-Ribeiro (2014).

of the output-employment relationship since the crisis. A priori, there are also grounds to question the stability of the output-employment relationship under different fiscal policies—even if these policies have a similar effect on output.[3] Further, the approach followed here extends the analysis by estimating the effects on different segments of the labor force, and in developing economies. Overall, the findings in this section tend to confirm that the impact of fiscal policy instruments on employment broadly parallels their impact on output.

Drawing from the literature, two approaches are used to identify fiscal consolidation episodes. First, the narrative approach (Romer and Romer, 2010) is used for a set of 17 advanced economies over the period 1980–2010 (Devries and others, 2011).[4] Second, in the absence of comparable information for emerging and developing economies, the approach of Afonso (2010), based on changes in the cyclically adjusted primary balance (CAPB) is used for 28 emerging and developing economies over the period 1980–2013 (see Appendix and Jalles, 2014, for a more extensive discussion of the methodology). The impact of fiscal consolidation on labor market variables is examined through a dynamic panel model and presented in the form of impulse response functions (IRFs). These IRFs show the impact on labor market outcomes, over a period of six years, of an increase in the overall balance of 1 percentage point of GDP (actual or potential GDP, respectively, for the narrative and CAPB approaches).[5]

It is worth noting that the debate on the growth and employment impact of expenditure-based versus revenue-based consolidations is not settled in the literature. Some studies find short-term spending multipliers to be higher than revenue multipliers (Gali, Lopez-Salido, and Valles, 2007; Spilimbergo, Symansky, and Schindler, 2009). However, other studies have shown that expenditure-based fiscal consolidations have a more favorable effect on output than revenue-based consolidations (Alesina and Ardagna, 2010; IMF, 2010). As discussed in the April 2012 *Fiscal Monitor,* the size of the short-term multipliers is not the only thing that matters in designing a fiscal adjustment package. Long-term effects on potential output, starting conditions, and other country-specific characteristics are also important. Given these considerations and empirical limitations, the results presented in this section should be seen as suggestive and interpreted with due caution. In particular, some of the IRFs estimates are surrounded with significant uncertainty, as reflected in wide statistical confidence bands around their point estimates, which in some cases do not allow rejection of the hypothesis that these IRFs could be negligible or nil.

For advanced economies, the main finding is that tax-based consolidations are associated with a large adverse effect on jobs in normal times, but that the relation changes in protracted recessions. In that latter situation, the negative employment effect of expenditure adjustment is found to be stronger than in tax-based consolidations, and the employment rebound may be delayed. This finding is largely in line with the literature on state-contingent effects of fiscal policy,[6] and with previous studies that have found the effects of fiscal expenditure to be much larger in downturns than in other periods, and also larger than the effects of tax measures (Batini, Callegari, and Melina, 2012).

- On average, revenue-based consolidations have an adverse and long-lasting impact on employment: six years after the start of the adjustment, the employment rate is ¾ percentage point lower (Figure 2.2). In contrast, expenditure-based consolidations appear to have a small and short-lived negative impact on employment. The relation is, however, barely significant at standard confidence levels. Other empirical studies have also found that in normal times the output effect of tax measures is larger than that of spending measures (Romer and Romer, 2010; Dell' Erba, Koloskova, and Poplawski-Ribeiro, 2014). The analysis of specific labor market segments (youth unemployment and long-term unemployment) corroborates these findings (Figure 2.3).
- When the analysis is conditioned on the state of the economy, in normal times and in short recessions[7] the previous result holds: expenditure-based consolida-

[3] For example, a tax cut and an expenditure increase scaled as necessary to have the same impact on output could have different effects on employment if the typical expenditure increase had a substantial component of public employment in labor-intensive activities, and the tax cut raised activity uniformly across all sectors.

[4] For recent applications of this approach see IMF (2010) and Guajardo, Leigh, and Pescatori (2014).

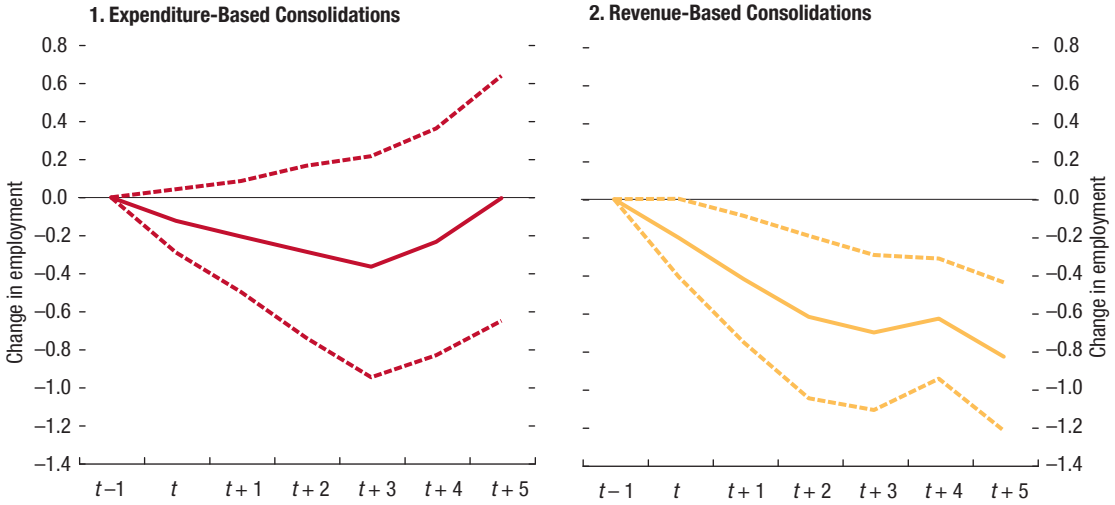
[5] The IRFs are estimated using the local projection method (Jorda, 2005). This estimator is preferred to the VAR alternative, as it can accommodate non-linearities. The estimated dynamic equation contains two lags of the appropriate dependent variable, country and time effects, the output gap, and the relevant consolidation variable (and interaction terms). See Appendix for methodological details.

[6] See for example Auerbach and Gorodnichenko (2012), Baum, Poplawski-Ribeiro, and Weber (2012), and Dell'Erba, Koloskova, and Poplawski-Ribeiro (2014).

[7] Normal times correspond to non-recessionary periods while recessions are considered non-protracted when lasting less than 24 months (Appendix 2.1).

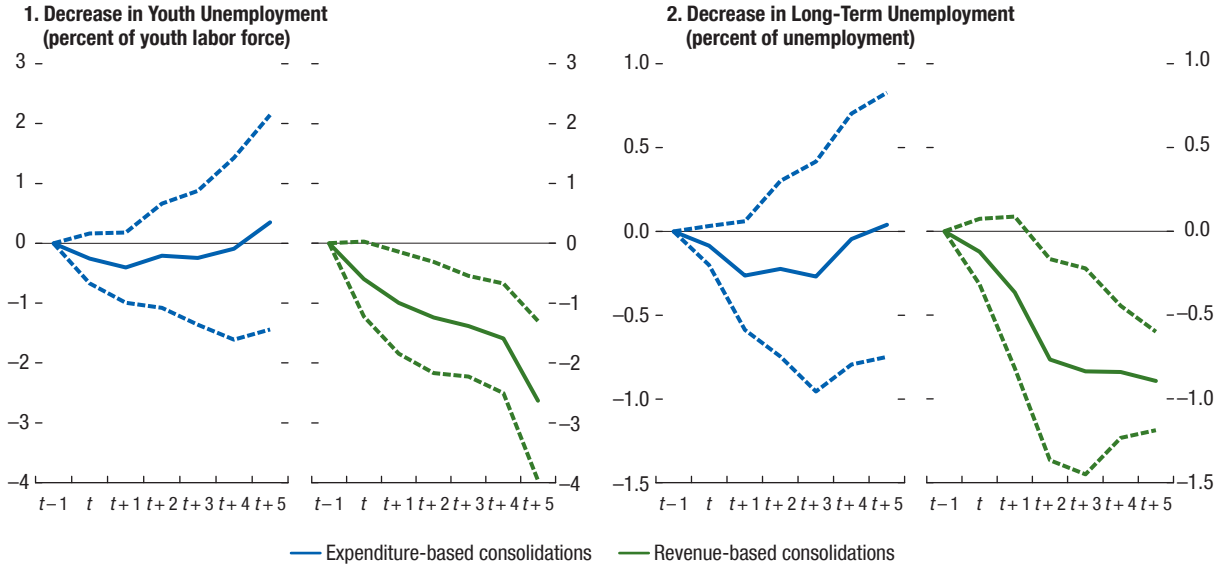
Figure 2.2. Advanced Economies: Impact of Expenditure- and Revenue-Based Consolidations on Employment

(Percent of working-age population)



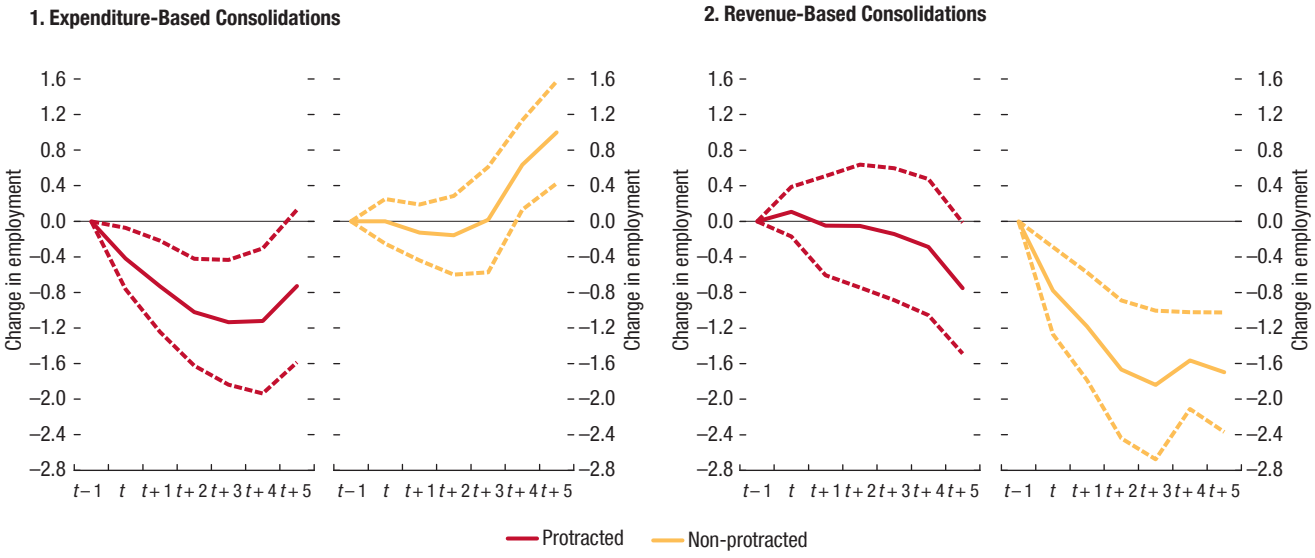
Sources: European Commission; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: Impulse response functions (solid lines) are computed using a local projection estimator based on Jorda (2005) and plotted together with their 90 percent confidence bands, which are used to represent the uncertainty in a given estimate (dotted lines). See Appendix 2.1 for further details. Interpretation: when both lower and upper confidence bands are above (below) zero, then the corresponding impulse response estimate at time *t* can be inferred to be positive (negative) at a 10 percent significance level, where *t* indicates the first year of consolidation. When the upper (lower) limit is above zero and the lower (upper) limit is below zero, then the impulse response is less precisely estimated, and it is not statistically different from zero at the same significance level.

Figure 2.3. Advanced Economies: Impact of Expenditure- and Revenue-Based Consolidations on Different Unemployment Segments



Sources: European Commission; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: See the Figure 2.2 note for methodological details. Negative (positive) values indicate an increase (reduction) in the unemployment rate.

Figure 2.4. Advanced Economies: Impact of Expenditure- and Revenue-Based Consolidations Following Protracted Recessions on Employment
(Percent of working-age population)



Sources: European Commission; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: See the Figure 2.2 note for methodological details.

tions are associated with a smaller impact on employment and a faster rebound in jobs than revenue-based consolidations. But the rebound is much delayed following protracted recessions (i.e., economic contractions lasting at least two consecutive years). Then, expenditure-based fiscal consolidations are found to have a larger short-term negative effect on employment than revenue-based consolidations (Figure 2.4).

The findings differ for emerging and developing economies, suggesting that in their case, fiscal consolidations based on improved revenue mobilization efforts may be preferable for jobs.

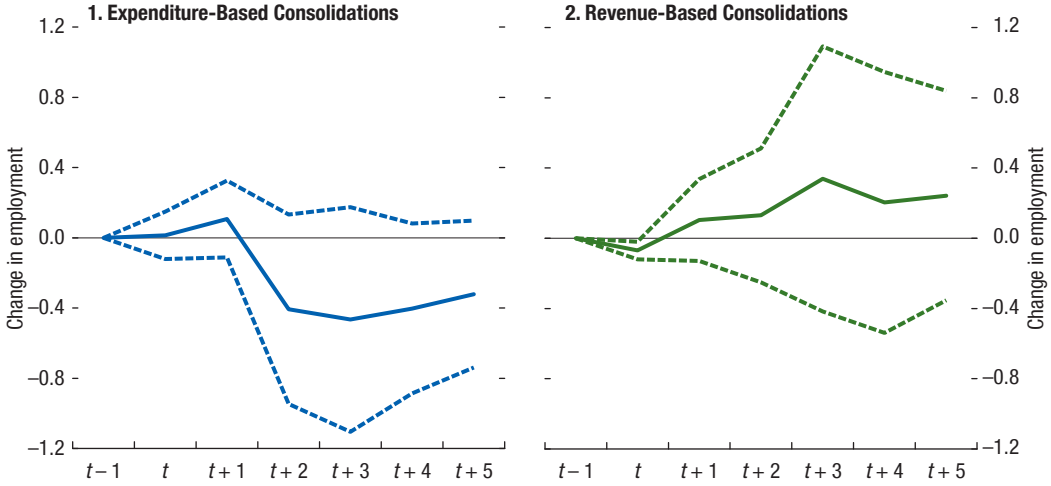
- In emerging and developing economies, expenditure-based consolidations seem more costly in terms of employment than revenue-based consolidations (Figure 2.5). The reason may be that, given spending rigidities and relatively low levels of public outlays, spending-based consolidations in these economies fall disproportionally on capital and other productive public services, having more adverse impacts on employment and growth. Previous studies have also found that fiscal consolidation achieved through revenue increases tends to be more lasting in emerging and developing economies (Gupta and others, 2004, 2005)—particularly if they include some tax reforms such as base broadening, removing exemptions, and combating tax evasion.[8]
- The difference in findings between advanced and emerging and developing economies also holds when the comparison is based on results using the same CAPB approach in both groups of countries, suggesting that it is not due to the use of different methodologies.[9]

In sum, there is evidence that the composition of consolidation matters for labor market outcomes, although the impact also depends on the type of economy, its cyclical position, and other country-specific

[8] For a detailed discussion on revenue reform options, refer to the October 2013 *Fiscal Monitor—Taxing Times.*

[9] As presented, results for advanced and developing economies are not entirely comparable given the different methodologies used. Although results for emerging and developing economies appear to be less statistically significant than those for advanced economies, this is largely the result of the different methodologies used. Results for advanced economies are also less statistically significant when based on the CAPB approach than on the narrative approach. Comparisons based on the same CAPB approach suggest that the main difference between the two groups of countries is on the impact of spending-based consolidations: they seem to be worse for jobs in developing than in advanced economies. Data limitations do not allow us to separate the effects of fiscal policies in normal times and in protracted recessions in the case of emerging and developing economies.

Figure 2.5. Developing Economies: Impact of Expenditure- and Revenue-Based Consolidations on Employment
(Percent of working-age population)



Sources: European Commission; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: See the Figure 2.2 note for methodological details. Developing economies include emerging market and middle-income economies and low-income developing countries.

characteristics (for example, labor market structure and institutional arrangements).

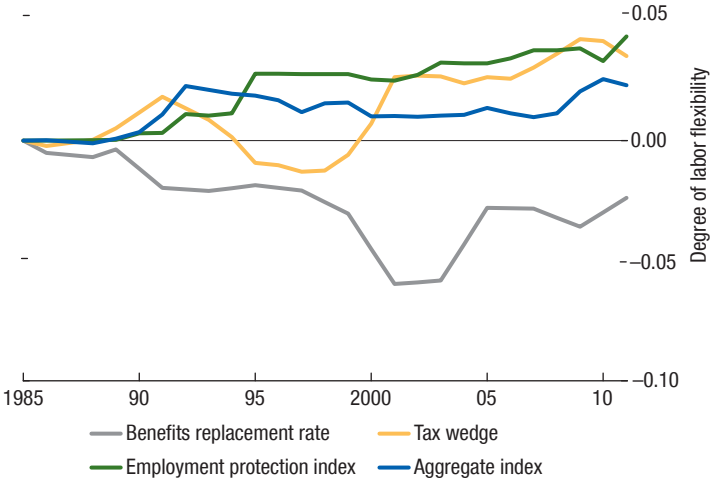
- In advanced economies, a gradual pace of spending cuts would be preferable since the labor market rebound may be delayed following protracted recessions. At the same time, persistent reliance on revenue measures could lead to a long-lasting decline in employment. As economic growth improves, a shift toward spending measures would help minimize adverse labor market outcomes.
- In emerging and developing economies, prioritizing revenue mobilization, rather than spending cuts, may lead to better employment outcomes in the medium term, especially where needs for public services and infrastructure are large. Policies that facilitate the creation of better paying and more productive jobs would help address labor market challenges in these economies.
- Regarding specific tax and expenditure components, the existing evidence (IMF, 2012) finds positive effects on labor force participation from reducing the tax wedge on labor, improving active labor market policies and their administration, reforming pension systems, and enhancing child support (fostering female participation). However, the precise design of consolidation efforts should closely take into account specific country circumstances and initial conditions. Later sections discuss some of these measures in more detail.

Can Fiscal Policy Support Job-Friendly Labor Reforms?

This section explores how fiscal policy can complement job-creating labor market reforms, including by bringing forward their benefits and mitigating their costs. More specifically, how much fiscal space do reform-enabling policies require? Should a country's reform efforts be taken into account when assessing its fiscal stance and medium-term budget plans? These questions are at the forefront of the policy debate in Europe, but their relevance is more general, especially in countries where employment growth is hampered by persistent market rigidities and fiscal firepower is limited.

Labor market reforms have advanced in an overly slow and piecemeal manner in advanced economies, despite empirical evidence that these reforms, if well designed, could significantly foster employment (OECD, 2014; Turrini and others, 2014). The main problem is that effective labor reforms are not only very difficult to get right (see Blanchard, Jaumotte,

Figure 2.6. Labor Reform Trends among OECD Countries, 1985–2011
(Cumulative changes)



Sources: Organisation for Economic Co-operation and Development; and IMF staff calculations.
Note: See footnote 10 in the text for variable definitions.

and Loungani, 2014); they are even more difficult to implement, given their first-order distributive implications and the related political fallouts.

The strong status quo bias is evident from the evolution of labor reform indices.[10] Figure 2.6 captures broad reform trends (a higher index indicates more flexible labor arrangements). The aggregate index essentially moved sideways for most of the 1990s, although it has trended upward in the latest years.

Labor market reforms can give rise to fiscal costs—either directly, through changes in labor taxes or unemployment benefits, or indirectly, through the use of fiscal offsets to mitigate the reform's distributive effects; and more broadly, if the fiscal stance is relaxed to compensate for the adverse impact of the reform on near-term activity. The labor reform index can be used to identify reform episodes and calculate associated fiscal costs. Since the link between labor market reform and a change in the fiscal stance is difficult to quantify precisely, the cost estimation exercise only covers the first two categories of costs, and thus should be seen as a lower bound. In practice, out of 60 episodes of labor reform observed in Organisation for Economic Co-operation and Development (OECD) countries during 1985–2011, 42 were associated with fiscal costs, both direct and indirect, for an average of 0.5 percent of GDP.[11]

Labor Market Reform Can Have Sizeable Direct Fiscal Costs

Some labor reforms affect fiscal instruments and, as such, have direct budgetary repercussions. A clear example is the reduction in the labor tax wedge—the difference between the labor cost paid by employers and the take-home wage of employees due to income tax and social security contributions. Reducing the tax wedge could effectively lower labor costs for firms and boost job creation (see next section), but would lead to a tax revenue loss. Likewise, active labor market policies and changes to unemployment insurance schemes can have direct budgetary effects.

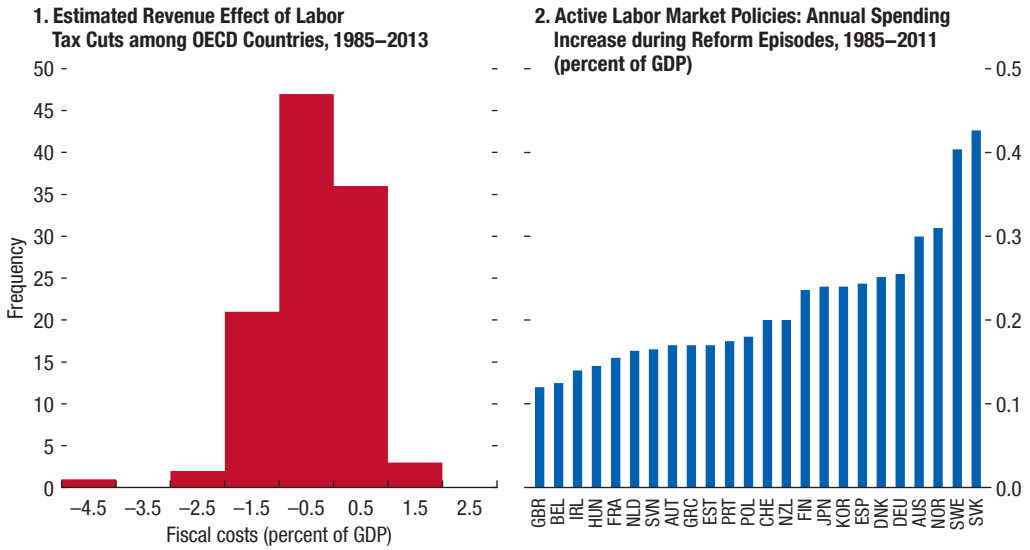
Labor tax cuts can have a sizeable fiscal impact. After accounting for the effect of the business cycle and inflation on nominal labor tax revenues, econometric analysis suggests that, all else equal, cutting the tax wedge by 1 percentage point is, on average, associated with a revenue loss of 0.3 percent of GDP.[12] The effect varies across episodes depending on the state of the business cycle and tax compliance. While it is inherently difficult to obtain precise ex post empirical estimates of revenue losses caused by tax cuts, a proxy for the total impact of labor tax reforms can be derived from "excess" variations in labor tax revenue during

[10] The labor reform index aggregates four indicators (the labor tax wedge, the unemployment benefits replacement rate, spending on active labor market policies, and the labor protection index). Data on two of these components (the employment protection legislation index and spending on active labor market policies) are only available from 1985. The tax wedge measures the difference between labor costs to the employer and the corresponding net take-home pay of the employee. It comprises the sum of personal income tax, employee and employer social security contributions, and any payroll tax less cash transfers. It is expressed as a percentage of labor costs (OECD, 2014). Active labor market policies are aimed to help unemployed people return back to work, including through job placement services, benefit administration, and labor market programs such as training and job creation (OECD, 1994).

[11] A reform episode is defined as a year with an unusually large increase (i.e., one standard deviation or above) in a subcomponent of the labor reform index. The fiscal impact of the reform is calculated on an annual basis, for the year of the reform and the following year. A total of 64 reform episodes have been identified, but the information required to estimate total fiscal costs is only available for 60 of them.

[12] Based on a panel regression of OECD countries over 1985–2013, where labor tax revenues (in percent of GDP) are a function of the labor tax wedge, the output gap, CPI inflation, and country dummies, with country-specific slopes for the output gap and inflation. The labor tax wedge used in this chapter is the tax wedge for a single individual at 100 percent total earnings (OECD, 2014).

Figure 2.7. Direct Fiscal Costs of Labor Market Reforms



Sources: Organisation for Economic Co-operation and Development (OECD); and IMF staff calculations.
Notes: See footnotes 12 and 13 in the text for methodological details.

tax cut episodes.[13] The average loss (negative excess variations) amounts to 0.8 percent of GDP, although in some cases, it exceeds 2 percent of GDP (Figure 2.7, left panel). Interestingly, however, about one-third of tax cut episodes coincided with positive "excess" variations, suggesting either quick positive effects on employment or other offsetting developments (e.g., improved tax compliance).

Well-designed active labor market policies (ALMPs) grease the wheels of the labor market. Most notably, through training and job creation programs as well as effective placement services, well-designed ALMPs can help improve labor market flows, reducing the duration of unemployment spells while achieving social goals (OECD, 2006). But these programs can be costly. Among OECD countries, average public spending on ALMPs amounted to about 1 percent of GDP during reform episodes, with some countries spending more than double that. Over the last three decades, ALMP reforms have left a non-negligible footprint on budgets, with costs ranging between 0.1 percent and 0.4 percent of GDP per year (Figure 2.7, right panel).

Reforms can also have positive effects on the budget. For example, episodes of reductions in unemployment benefit replacement rates since 1985 in OECD countries appear to have produced relatively modest savings (about 0.2 percent of GDP per episode).[14]

Fiscal Offsets Have Often Been Used to Mitigate the Distributive Effects of Labor Market Reform

Distributive concerns can lead governments to complement reforms with measures aimed at mitigating their impact on certain population segments. A typical example is when a reduction in employment protection is bundled with measures aimed at mitigating the financial impact on employees. The relaxation in employment protection is expected to allow smoother reallocations of jobs across sectors and a shorter duration of unemployment spells, but against greater individual risk of unemployment and weaker wage bargaining power. Recent examples include reforms aimed at reducing labor market duality in Europe. Different measures have been used to mitigate the potential adverse effect on labor.

- A number of countries, including France (1987) and Denmark (1995), accompanied the relaxation of employment protection with more generous

[13] The "excess" variation is defined as the change in labor tax revenue that cannot be explained by the output gap or inflation. Technically, it is the residual of the same regression described above, but excluding the tax wedge as an explanatory variable.

[14] These estimates correspond to the unexplained residual of an econometric regression linking the spending on unemployment benefits to the unemployment rate during episodes of reductions in replacement rates.

unemployment benefits (Figure 2.8, panels 1 and 2). The estimated fiscal costs ranged from 0.1 percent of GDP in France to 1 percent of GDP in Denmark.[15]

- Lower employment protection can also be accompanied by higher spending on ALMPs, as looser firing restrictions can initially result in higher unemployment. Offering more job training and matching services can improve labor market flows and reduce the risk of extended unemployment spells. Several countries, including the Netherlands (2009), Finland (1992), and Portugal (1990) have simultaneously lowered employment protection and increased spending on ALMPs, sometimes by a large amount; e.g., 0.8 percent of GDP in Finland (Figure 2.8, panels 3 and 4).
- In some countries, labor tax cuts were enacted simultaneously or soon after reductions in employment protection, notably in Finland (2002), the Netherlands (1994–95), Slovenia (2006–08), and Sweden (2002)—see Figure 2.8, panels 5 and 6. In a few instances, tax cuts coincided with a reduction in unemployment benefits. To the extent that the latter measure weakens workers' bargaining power in collective wage negotiations, the tax cuts can be interpreted as a compensating measure motivated by distributive concerns. Alternatively, it may also reflect a "making work pay" approach (Figure 2.8, panels 7 and 8).

Whether the use of fiscal offsets is justified empirically remains an open question. For instance, Buti, Röger, and Turrini (2009), and Buti, Turrini, and van den Noord (2014) find that, contrary to popular perceptions, reformist governments do not face lower re-election chances than others. Yet, they observe that reformists are more likely to be re-elected when mechanisms to soften potentially adverse consequences of the reforms exist, including ample social safety nets and an effective and well-regulated financial sector.

Can a Relaxation of the Fiscal Stance Help Bring Forward the Macroeconomic Benefits of Labor Market Reform?

A broader type of fiscal offset would aim at bringing forward the macroeconomic benefits of labor market reform through a temporary boost to domestic demand. The rationale is that the reform would have an immediate adverse impact on output and employment, while its benefits would often materialize only over the medium term (Bouis and Duval, 2011). This demand expansion could include, where appropriate, increased public investment, which would additionally enhance long-term growth and employment potential (April 2014 WEO, Chapter 3). The combination of immediately observable costs of reforms with more diffuse and uncertain benefits is likely to fuel resistance to implementation of the reform, particularly in periods of low employment growth. A relaxation of the fiscal stance could be used to edge it off. This is parallel to the idea, often mentioned in the context of policy discussions in Europe, that countries undertaking growth-enhancing structural reforms could slow down the pace of fiscal consolidation to account for their near-term effects on output.

The literature has shown that, in principle, expansionary macroeconomic policies could be used to boost aggregate demand and supply and quickly unlock employment gains (Blanchard and others, 1985; and Blanchard and Summers, 1986). It is difficult to identify empirical cases of such "two-handed" strategies. However, simulations can be used to illustrate their potential impact on output and public debt. The results, shown in Figure 2.9, are based on a highly stylized model with two essential parameters: the short-term cost of reform[16] on output (with a high-cost assumption of 2.8 percent of GDP three years after the reform, and a low-cost variant of 1 percent of GDP four years after the reform);[17] and hysteresis, or the persistence over time of responses to temporary shocks (with a high hysteresis coefficient of 0.2 and a low hysteresis coefficient of 0.05).[18] In all scenarios, the fiscal multiplier is set at 1.25 and it is assumed to fall gradually to zero after four years;[19] the initial public debt is 100 percent of GDP, falling to about 70 percent after 20 years without reform; and the fiscal stimulus is

[15] These numbers reflect the unexplained part of an econometric regression linking the spending on unemployment benefits to the unemployment rate. Beetsma and Debrun (2004) estimate the fiscal cost of the same French reform at 0.25 percent of GDP.

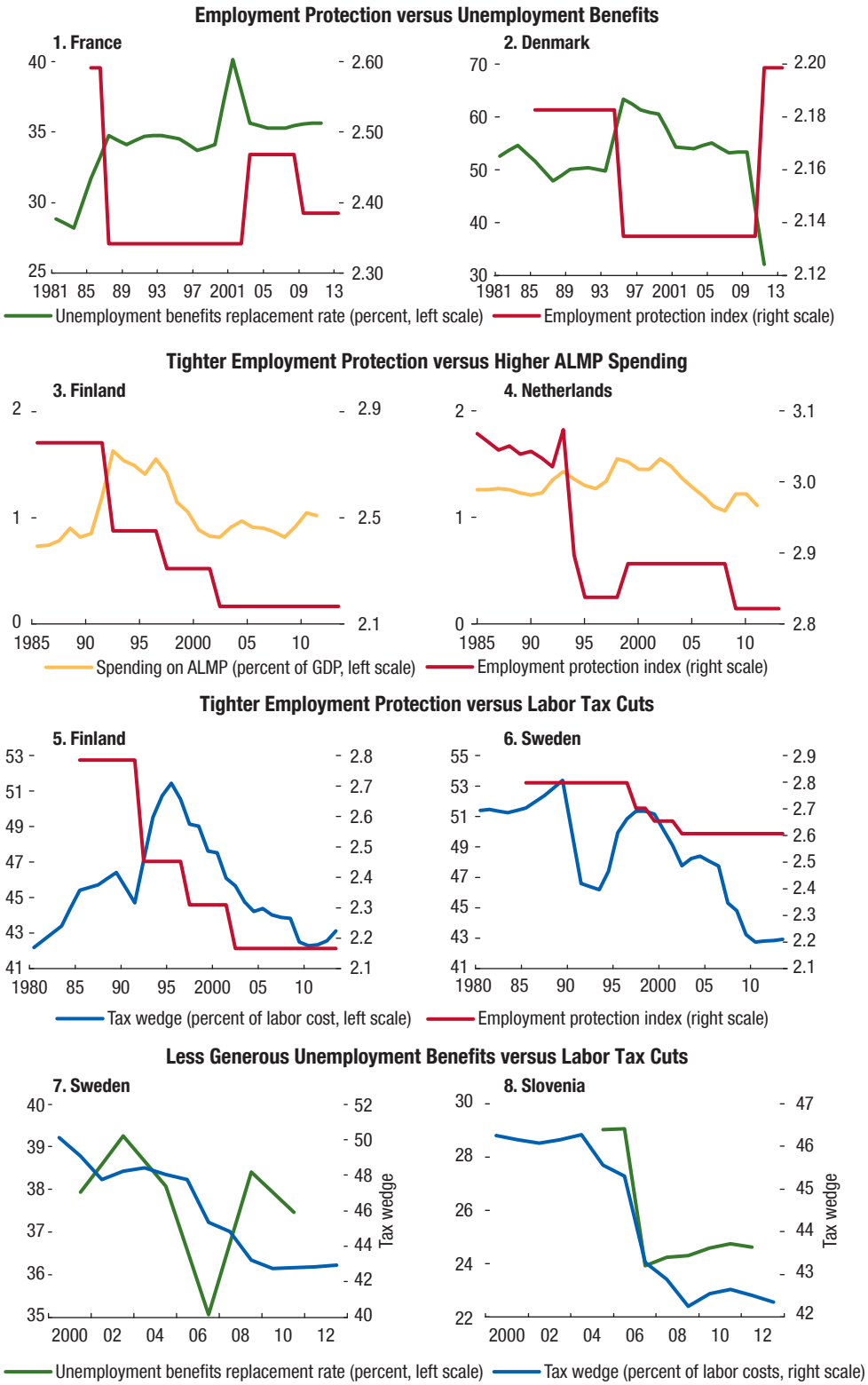
[16] Reform is defined here as a change in the aggregate labor market reform index described above.

[17] The high-cost assumption is taken from the April 2004 *World Economic Outlook* and the low-cost one from Bouis and Duval, 2011. The output loss is measured relative to the baseline (no reform) scenario.

[18] The hysteresis coefficient measures the permanent effect of a 1 percent temporary shock on output. See DeLong and Summers, 2012.

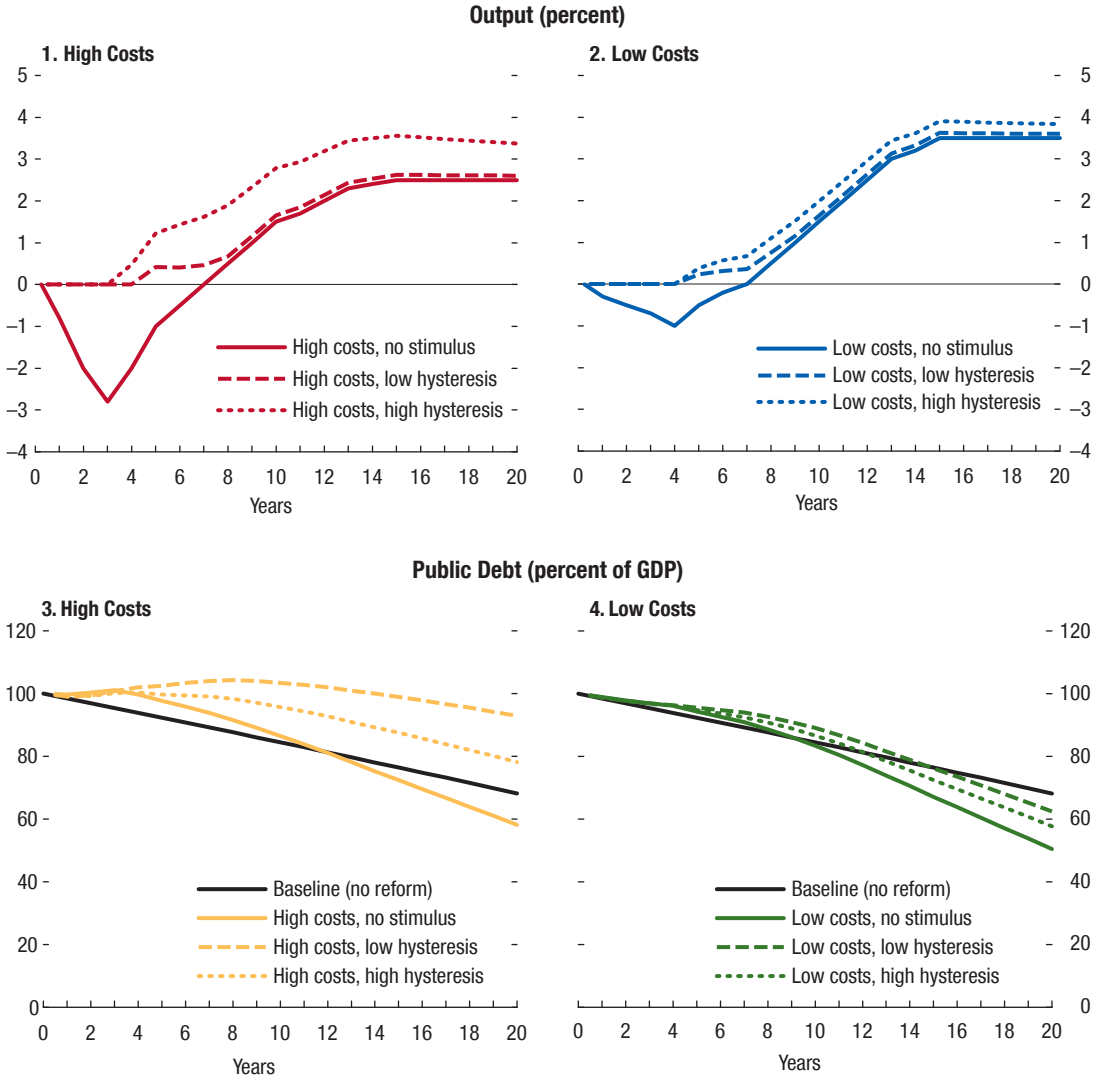
[19] Recent literature has found that during periods of weak activity and when monetary policy is constrained by the zero lower bound, fiscal multipliers are likely to be above 1 (Coenen and others, 2012).

Figure 2.8. Fiscal Costs of Measures Compensating Redistributive Effects of Labor Reforms



Source: Organisation for Economic Co-operation and Development.
Note: For variable definitions, see footnote 10 in the text. ALMP = active labor market policies.

Figure 2.9. Implications of a Two-Handed Approach to Reforms



Sources: Organisation for Economic Co-operation and Development; and IMF staff estimates.

calibrated to fully offset the short-term output costs of the reform. Simulation results are sensitive to the size of the fiscal multiplier. Should the multiplier be lower than the assumed 1.25, the resulting fiscal costs would be higher, and conversely if the multiplier were higher than assumed. The exercise is highly simplified, and thus the results are only indicative.

The simulations suggest that the fiscal stimulus would help bring forward net output gains by several years. These output gains are particularly large and persistent when hysteresis is assumed to be high. However, the two-handed approach would also raise public debt. The debt impact is closely related to the estimated output cost of the reform (and relatedly, to the size of the fiscal stimulus). The debt buildup would be relatively manageable in the low-cost scenario, but in the high-cost scenario, it is too large to be recouped after 20 years.

In sum, in the near term, labor market reforms are likely to entail fiscal costs, including those necessary to elicit consensus for the reform, as well as transitory output costs, particularly if implemented in depressed economic conditions. Implementation will be more difficult if the costs, however transitory, must be covered by offsets elsewhere in the budget, rather than by higher deficits. Whether and how much fiscal support to provide to facilitate labor market reforms is a decision that needs to be carefully examined, and its

potential benefits (in terms of faster potential output growth) weighed against its risks (largely in terms of debt sustainability). A number of considerations have a bearing on this decision:

- First and foremost, fiscal space must be available to absorb the higher deficit. That implies access to financing at a reasonable cost, but also sufficient credibility to ensure that the widening of the deficit is perceived as temporary and does not undermine confidence.
- The authorities must be committed to carry the reform to its end without reversal. This is particularly relevant when considering mitigating policies, which often entail permanent costs. It would be preferable to include explicit "sunset clauses" in targeted fiscal offsets. An alternative would be to strengthen social support schemes that protect against the near-term adverse impact of reforms as well as of other shocks.
- Estimates of benefits from labor market reforms should err on the conservative side. These estimates are subject to large margins of uncertainty. As reflected in the empirical literature, the size and timing of their impact on output or employment differ significantly across countries because of historical and institutional factors as well as societal preferences that are hard to predict.

Overall, the case for fiscal relaxation in support of reforms is stronger when the costs are well identified and limited in size and in time. The gains are likely to be more elusive when the reforms are not well specified and the fiscal outlays less closely linked to specific goals. The gains are also likely to be smaller where fiscal credibility is weaker. In these cases, the demand multiplier could be lower due to confidence effects, and higher risk premiums could partially offset the demand impulse. In extreme cases, fiscal relaxation could even have a perverse effect on growth.

Targeted Fiscal Measures I: Cutting Labor Taxes

Reforms to support employment often rely on targeted fiscal instruments—including, most prominently, labor taxes.[20] In recent years, cuts in labor taxes have been introduced (or considered) with certain frequency, particularly in Europe. Indeed, reducing the tax burden on labor is a clear policy priority in the European Union (EU) growth agenda.[21] This section investigates the link between some labor taxes and employment, as well as recent experiences with targeted cuts in social security contributions.[22]

Employment and the Tax Wedge

Labor taxes and social security contributions (SSC) affect both the demand and the supply sides of the labor market. They discourage labor demand (by raising labor costs to employers) and labor supply (by lowering the real consumption wage of workers and discouraging participation). The extent to which a tax cut will boost employment depends on the degree of competition in labor and product markets and on the elasticities of demand and supply in these markets. In general, the impact of a cut in employer SSC on employment will be larger if the elasticity of labor supply is higher (as is typically found for unskilled labor).

The employment effects of cuts in labor taxes also depend on labor market institutions. Theoretically, the positive effects on employment will be stronger if labor market rigidities limit wage flexibility. In economies with a large proportion of informality, labor taxes also raise the cost of formal employment relative to informal (untaxed) employment, and changes in labor taxes will shift labor from one segment to the other.

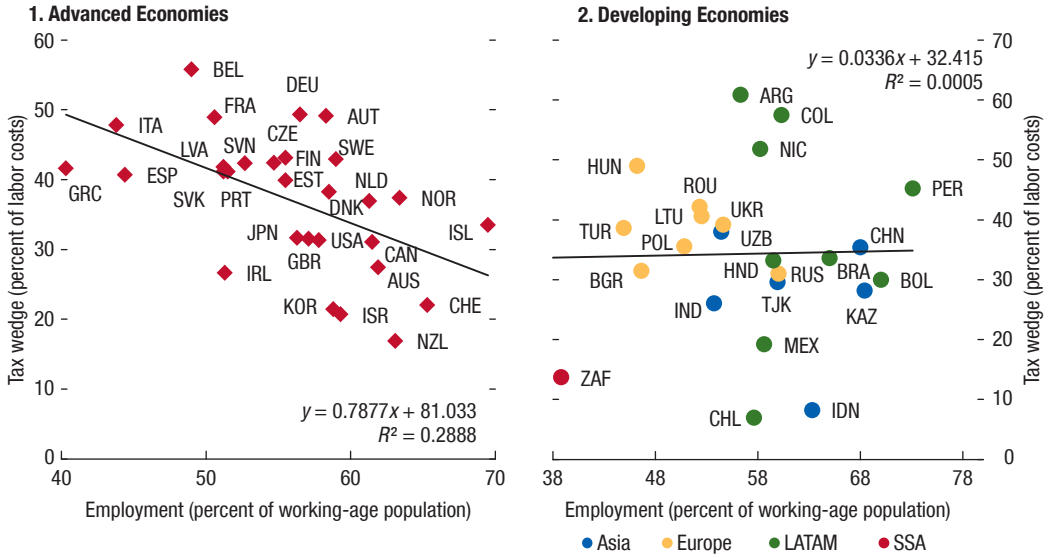
There is ample evidence that a large tax wedge has a negative effect on employment in advanced economies. However, the precise effects differ across countries, depending on complex interactions with labor market institutions (Nickell, 2003; Bassanini and Duval, 2006; IMF, 2012). The literature for emerging and developing economies is more limited and provides mixed results (Lora and Fajardo, 2012). For example, Heckman and Pagés (2004) find that the employment impact of increases in social contributions is less than half in Latin America than in OECD countries. Other studies find small or negligible effects on employment of labor tax changes in Turkey (Betcherman, Daysal, and Pagés, 2010), Chile (Gruber, 1997), and Argentina (Cruces, Galiani, and Kidyba, 2010). By contrast, a number of

[20] Following the *GFSM* (2014), taxes on labor include payroll taxes, taxes on income paid by employees, social security contributions, other social contributions, and other levies on labor income, whether paid by the employer or the employee.

[21] See Eurogroup statement of July 8, 2014.

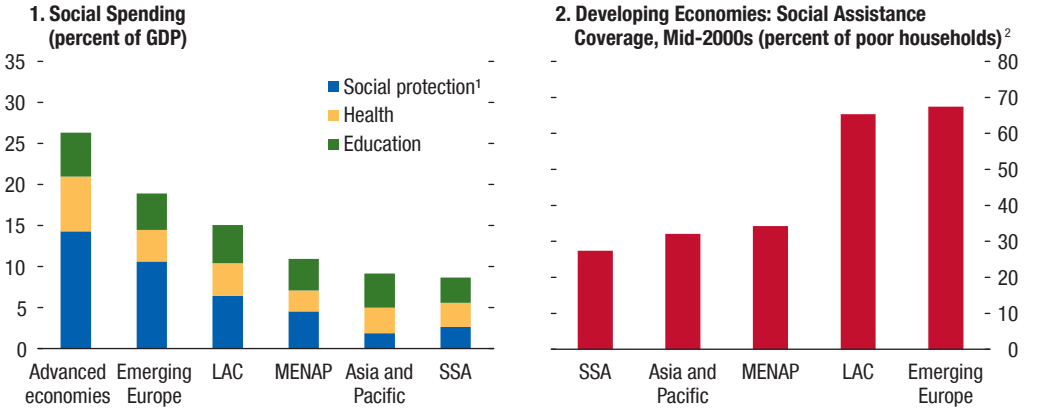
[22] Some countries have sought to achieve similar employment objectives by the use of other (sometimes country-specific) tax-benefit system instruments. These include the personal income tax, unemployment insurance and benefits, hiring subsidies, in-job tax credits, personal allowances, specific active labor market policies, and other policy levers. A comprehensive study of this broader set of policy instruments is beyond the scope of this chapter.

Figure 2.10. Relationship between the Tax Wedge and the Employment Rate



Sources: Institute for the Study of Labor; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: The black line shows an ordinary least squares (OLS) regression line. LATAM = Latin America; SSA = Sub-Saharan Africa. Developing economies include emerging market and middle-income economies and low-income developing countries.

Figure 2.11. Social Assistance Coverage and Social Spending



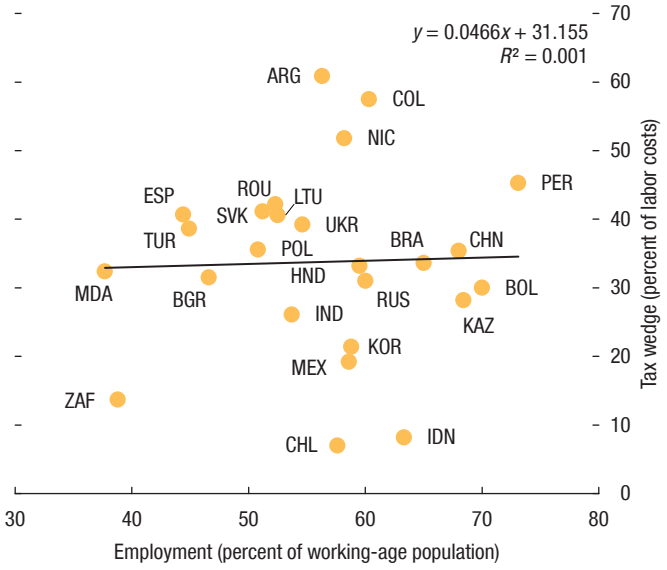
Sources: World Bank; and IMF staff estimates.
Note: LAC = Latin America and the Caribbean; MENAP = Middle East and North Africa and Pakistan; SSA = Sub-Saharan Africa. Developing economies include emerging market and middle-income economies and low-income developing countries.
[1] Social protection spending includes spending on pensions and transfers.
[2] Coverage indicates the share of the poorest 40 percent of households that receive a social protection transfer.

studies have found larger effects in emerging Europe and Central Asia (Lehman and Muravyev, 2012; World Bank, 2007) and in some Latin American countries, such as Colombia (Kugler and Kugler, 2009).

Figure 2.10 illustrates the findings in the literature. It indicates that in advanced economies, the tax wedge is negatively associated with employment. Strikingly, this relationship is not significant for emerging and developing economies.

A number of factors can explain this lack of correlation in emerging and developing countries. First, the social safety net is significantly smaller in emerging and developing economies than in advanced economies (Figure 2.11). This often makes unemployment

Figure 2.12. Low Social Security Coverage: Tax Wedge and Employment



Sources: Institute for the Study of Labor; Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: The black line shows an ordinary least squares (OLS) regression line. The figure reports only those countries for which social security coverage is below the median of a panel of 51 advanced and developing economies.

unaffordable and the labor supply relatively insensitive to changes in labor taxes. Relatedly, informality is higher in these countries (on average 45 percent of the working-age population is covered by social security, compared to 90 percent in advanced economies). When coverage is low (informality high), changes in the tax wedge would result in shifts between formal and informal employment, with possibly little impact on total employment.[23] Figure 2.12 shows that there is no significant relation between employment and the tax wedge where social security coverage is low (below the median of a sample of 51 advanced and developing economies). These countries are mostly emerging and developing economies.

This suggests that even more than in advanced economies, a pressing challenge for fiscal policy in developing economies is to facilitate the creation of not only more jobs, but better paying and more productive jobs. A reduction in the tax wedge, and more broadly the removal of tax and other disincentives to enter the formal economy, may facilitate shifts from informal to formal employment, but may need to be complemented by other policies such as education, health, and social spending that can boost labor productivity, and thus access to better-paying jobs. Increasing productivity in traditional sectors, including agriculture, is a particularly crucial goal in countries where, given current demographic trends, these sectors can be expected to remain the main source of jobs over the medium-term (Fox and others, 2013). Efforts to raise labor productivity should be paired with policies to support the business environment, such as the provision of much needed public services (e.g., security, sanitation, and transport) and access to finance and training.

[23] This would be consistent with the findings of Lora and Fajardo (2012) and of Antón, Hernández, and Levy (2012) for Mexico.

Targeted Cuts to Employer Social Security Contributions Are Cost-Effective

Cuts in employer SSC are likely to result in higher labor demand and employment. Partly, this is because employer SSC represent the largest component of the labor tax wedge. But also these cuts are more likely to reduce labor costs because they take time to pass through into higher take-home wages. The effect of other taxes on labor, in particular income taxes, were discussed in the October 2013 issue of the *Fiscal Monitor* and will not be covered in this section.

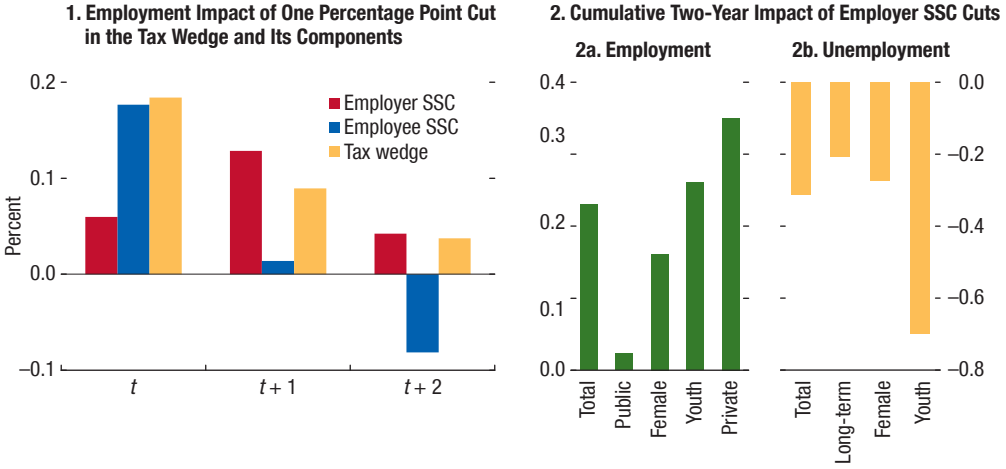
An econometric analysis for 34 OECD countries over the 2003–12 period corroborates this view and suggests that, on average, cuts in employer SSC have a longer-lasting positive impact on employment than cuts in employee SSC (Figure 2.13).[24] Considering different segments of the labor market, employer SSC cuts appear to be especially effective in reducing youth unemployment and generating youth employment.

Reducing employer SSC seems to be particularly effective in more rigid labor markets, where institutional arrangements prevent market-clearing wage levels and fast wage adjustments. Indeed, in countries with stronger hiring and firing regulations (above the OECD median), the employment impact of a cut in employer SSC is on average two times larger than in countries with more flexible labor markets (Figure 2.14).

Cutting social contributions can be more challenging where revenue feeds funds earmarked to social spending, or when they are, or are perceived to be, linked with the entitlement to subsequent benefits.

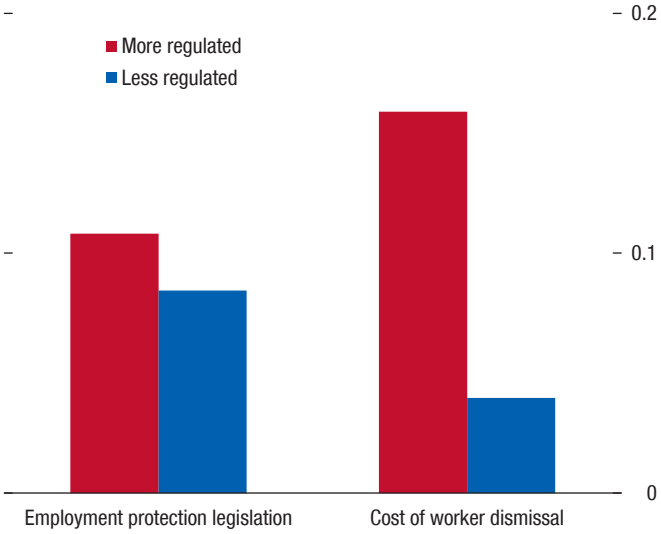
[24] The impact of changes in social security contribution rates, including leads and lags, on changes in employment are obtained by panel fixed-effects regressions. The regressions also control for GDP, the output gap, and year fixed effects. Standard errors are clustered at the country level.

Figure 2.13. OECD Countries: Impact of Cuts in Employer Social Security Contributions



Sources: Organisation for Economic Co-operation and Development (OECD); World Bank; and IMF staff estimates.
Note: Employment variables are expressed as a percentage of the relevant working-age population, and unemployment variables are expressed as a share of the relevant labor force. The variable *t* represents the year of the cut. SSC = social security contributions.

Figure 2.14. OECD Countries: Employment Impact of One Percentage Point Employer SSC Cut across Different Degrees of Labor Market Regulation
(Percent of working-age population)



Sources: Organisation for Economic Co-operation and Development; World Bank; and IMF staff estimates.
Note: Cost of worker dismissal is defined as the severance pay for redundancy dismissal after five years of continuous employment. SSC = social security contributions.

These problems, however, can be addressed. Compensatory transfers can be made from general revenue to preserve the sustainability of the pension funds, if needed; alternatively, statutory contributions could be left unchanged, but tax credits or rebates could be offered to lower labor costs.

On the financing side, as mentioned above, the fiscal costs from lower SSC rates can be significant. They may require offsetting measures, which can be hard to find, particularly in those countries with little fiscal space. The fiscal cost, however, can be reduced by targeting SSC relief to specific groups, such as low-skilled or youth, where the unemployment problem is generally more severe. Indeed, regression estimates suggest that employer SSC cuts targeted to the low-paid typically have a lower cost. A 1 percentage point cut in the employer SSC rate would reduce labor taxes and social security revenues by 0.5 percentage point of GDP if applied to high-wage earners (133 percent of average income) and by about 0.35 percentage point if applied to low-wage earners (67 percent of average income).

Although, in general, a broad-based uniform approach to taxation is preferable to avoid creating rent-seeking incentives and avoidance opportunities, targeted action can be justified under certain conditions (IMF, 2012): (1) proposed targeted groups, in particular, low-wage earners and youth, account for the bulk of the non-employed; (2) labor supply and labor

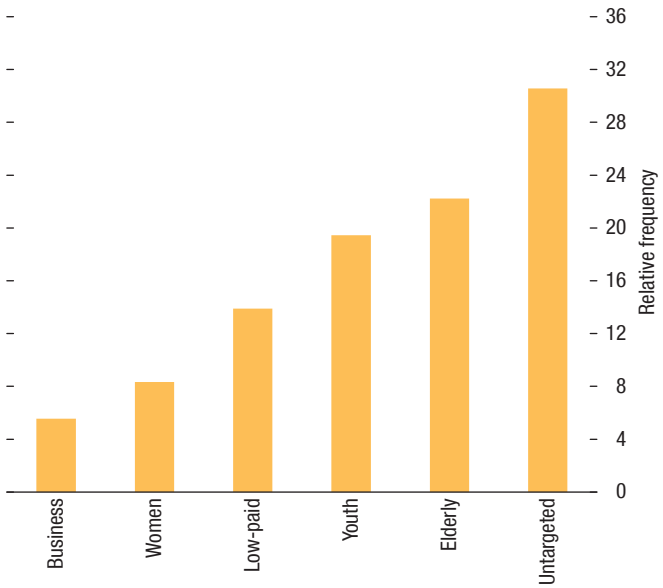
demand of targeted groups are relatively more elastic than those of non-targeted groups, therefore minimizing distortions and other leakages; and (3) fiscal cost is significantly lower relative to broad-based approaches. Appropriate design and implementation are however critical to ensure targeted interventions are cost-effective, as discussed below.

In practice, targeting to specific groups, such as low-wage earners and the young, has proved to increase the employment impact per dollar of relief given. This is because elasticities of labor supply are higher for these groups, and the pass-through effect—whereby lower contributions are passed through to higher wages, resulting in less reduction in labor costs and employment creation—is more limited for low-skilled workers (Betcherman and Pagés, 2007).

There is also evidence that targeted cuts are effective. A number of countries in the EU have implemented cuts in employer SSC targeted to young, low-paid, elderly, and female workers over the period 2000–13 (Figure 2.15). These targeted policies provide conditions close to that of a natural experiment, whereby one can observe the impact of the policy on the targeted group and compare it to the outcome for non-targeted groups. In the case of the tax cut, the comparison is between employment of the targeted group (for example, the young), and that of the non-targeted group, before and after the year of introduction of the cut (a differences-in-differences estimator). Figure 2.16 shows that in Sweden, a cut in employer SSC targeted to the young led to faster growth in youth employment than non-youth employment (while before the introduction of the reform, both segments displayed a similar trend). Targeted cuts for the elderly also seem to have been effective in Germany (2003) and in Italy (2001).

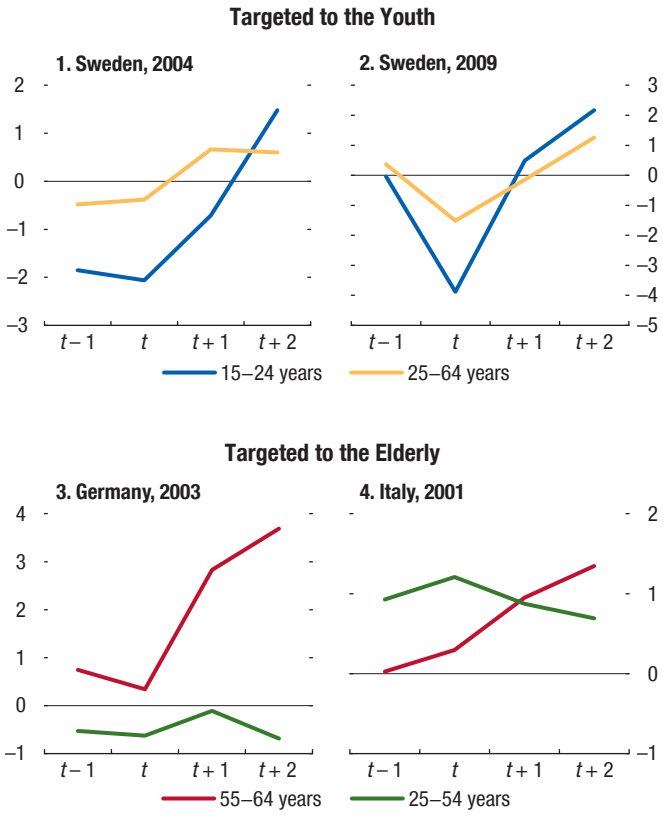
Targeted SSC relief must be designed so as to minimize new distortions. If badly designed, targeted cuts can lead to substitution and displacement effects. Substitution effects occur where targeted workers replace non-targeted workers with no net effect on employment. For instance, in the case of Italy, following the reduction of employer SSC for older workers, the growth rate of employment of younger workers (ages 25–54) decelerated significantly—although this may have been

Figure 2.15. European Union: Frequency of Employer Social Security Contribution Cuts by Group, 2000–13
(Percent of total)



Sources: European Commission; and IMF staff calculations.

Figure 2.16. Impact on Employment Growth of a Cut in Employer Social Security Contributions
(Percent of working-age population)



Sources: European Commission; Organisation for Economic Co-operation and Development; and IMF staff estimates.

partly the result of severe skill mismatches. In general, ill-designed targeted cuts may also increase revenue collection costs, and facilitate tax evasion and fraud.

A number of design lessons can be learned from country experiences of employer SSC cuts (Box 2.1). In particular, targeting based on broad characteristics (the low paid, the young) rather than on specific employment status (new hires, employer size) avoids stigmatizing certain job seekers and minimizes the scope for substitution effects. Calibrating the reductions in employer SSC according to wage levels (rather than capping them to a given threshold) avoids creating a low-paid trap.

Finally, targeted cuts are more effective the better they are known and the easier they are to comply with. Ex-post assessments suggest that targeted cuts may not be effective as envisaged by ex-ante simulation studies if information about the measure is not easily available (Marx, 2005), or if the administrative reporting costs necessary to prove eligibility are so high that only large firms benefit from these measures (Katz, 1998; Couch, Besharov, and Neumark, 2013).

Budget-Neutral Financing Options

Countries with limited fiscal space have often used revenue-neutral shifts from employer social contributions toward other taxes to finance SSC cuts.

- *A shift toward indirect taxes ("fiscal devaluation")* would in principle both boost employment and increase external competitiveness (September 2011 *Fiscal Monitor*). Despite its theoretical appeal, examples of fiscal devaluation are not abundant. Implementation has been hindered by its potentially regressive impact, although compensatory measures can be identified to overcome the adverse effect of higher indirect taxes on equity. A few countries have, however, carried out fiscal devaluations with some success. The best known examples are Denmark (1987), Germany (2007), and Hungary (2009–10), where value-added tax (VAT) hikes compensated, at least in part, the reduction in SSC. Empirical evidence suggests that to generate a significant employment effect, the tax shift needs to be sizeable (De Mooij and Keen, 2012).
- *Other revenue-neutral tax shifts*. Less distortionary taxes, such as property and environmental taxes, are usually preferred to finance SSC cuts. In addition, Ireland recently imposed a temporary levy on private pension funds. In Estonia, cuts in employer SSC in 2013 were offset by increases in excise taxes (tobacco and alcohol) and in pollution and navigation fees. Environmental taxation was increased in Croatia in conjunction with employer SSC cuts in 2012, but the two measures were part of a more comprehensive set of reforms. In Hungary, the reduction of SSC was financed by an increase in corporate income tax for companies operating in the energy sector, and increases in VAT and excise rates on energy products.
- *Expansion of the revenue base.* While claims that labor tax cuts are self-financing are hard to justify, labor tax cuts and, importantly, streamlining of administrative processes can contribute to increase formal employment in emerging and developing economies, with important fiscal implications. Larger formal employment means higher tax revenues and positive economic growth effects. For example, in Croatia and Georgia, reductions in the contribution rates were financed by the widening of the contribution base and improved compliance.

Spending cuts are the other way to ensure budget neutrality. In practice, they have been used less often. Improving the targeting of public transfers, for example, through better use of means-testing, can create the space to lower SSC (April 2014 *Fiscal Monitor*). Other areas where significant savings are possible are early retirement, disability benefits, and sickness benefits.[25] There may also be scope for cuts on nonsocial spending. For example, the Netherlands financed many of its 1996 labor market reforms through a variety of spending cuts, mostly affecting social transfers, the wage bill, and state transfers to firms. In Croatia, reforms including SSC cuts also involved cuts in the wage bill, subsidies, and health spending. Public expenditure reviews can be used to inform the decisions on financing the reforms (IMF, 2010).

Targeted Fiscal Measures II: Pension Reform to Increase Old-Age Employment

Besides high youth unemployment, two additional localized labor market malfunctions include low female labor force participation (FLFP) and falling old-age employment. Recent studies, including IMF

[25] For example, Góra and others (2006) estimates that if there were no early retirement schemes in Poland, social security contributions could be reduced by one-third, and if expenditures on disability pensions were reduced to the average OECD level, the rate could be reduced by an additional percentage point.

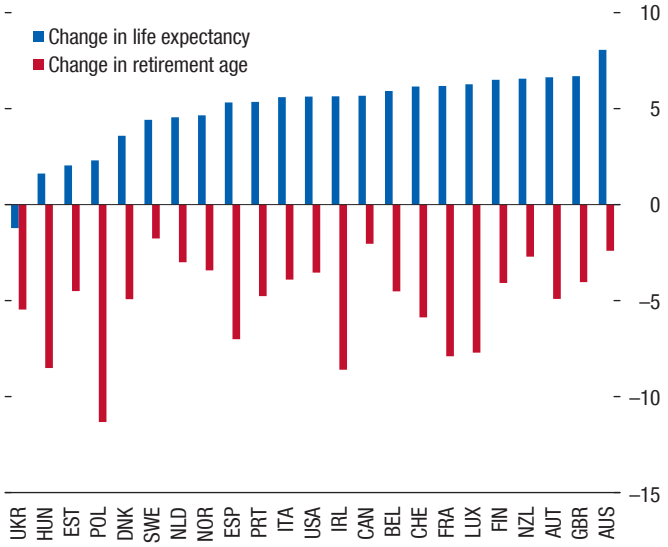
2013, have concluded that there is significant scope for increasing FLFP through fiscal policies. In particular, replacing family income taxation with individual income taxation and tax credits or benefits for low-wage earners can boost FLFP. On the expenditure side, properly designed family benefits (e.g., parental leave), reform of child support, reforms of the pension system, and expenditure on the education of women can also increase the incentives of women to work.

Less attention has been paid to measures to enhance employment rates among the older segments of the population. This is in part because whether to follow that route is a matter of social choice, as different countries have different preferences between employment and retirement over the life cycle. This section discusses options for those countries where increasing old-age employment has been adopted as a policy objective.

Male labor force participation has declined in many countries over the past decades, largely because of declines in employment of older segments of the population. Figure 2.17 shows that despite improved health conditions and higher life expectancy, people in advanced and emerging economies are working less, resulting in spending now, on average, about 10 years longer in retirement (the sum of the two bars) than in 1970.

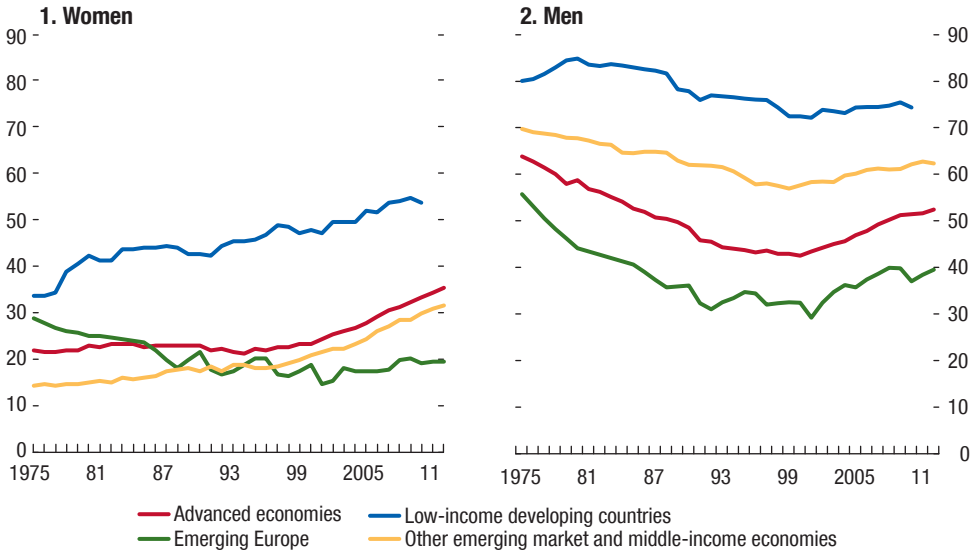
All country groups saw a decline in male old-age labor force participation between the mid-1970s and the late 1990s (Figure 2.18). This was due in good part to non-fiscal factors, such as growing average lifetime incomes and the increasing proportion of two-earner households, which made early withdrawal from the labor market affordable in advanced economies. But

Figure 2.17. Change in Life Expectancy at Age 60 and Effective Retirement Ages for Men
(Years)



Sources: University of California, Berkeley and Max Planck Institute for Demographic Research; Organisation for Economic Co-operation and Development; and IMF staff calculations.
Note: The blue bars show the change in life expectancy from 1970 to 2010, and the red bars show the change in retirement age from 1970 to 2012.

Figure 2.18. Labor Force Participation Rates by Gender, Ages 60–64
(Percent of working-age population)



Sources: International Labour Organization; and United Nations (2012).

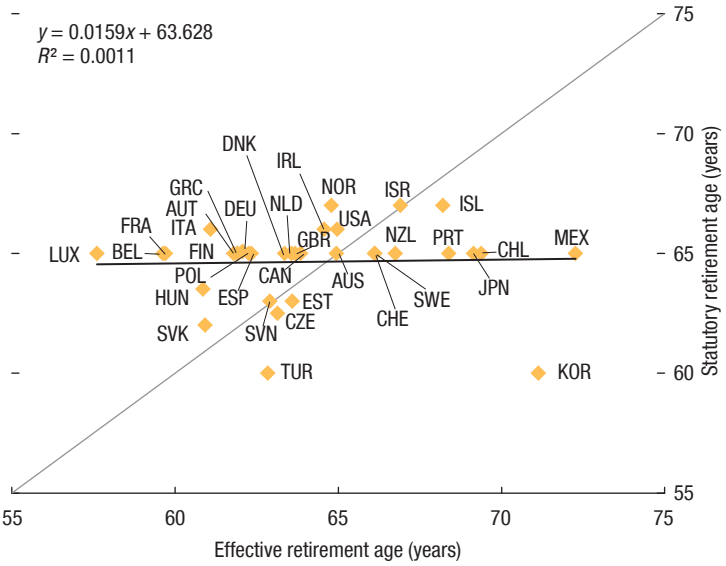
public policies also had a role, including through generous public pensions, unadjusted for improving life expectancy at retirement. In addition, many governments promoted early retirement in the 1970s and 1980s as a means of combating youth unemployment (Box 2.2). These developments had two adverse effects on public finances: public pension liabilities increased, and falling old-age employment curtailed both output and tax revenues. In the mid-2000s, male labor force participation rebounded in advanced economies and emerging Europe, partly due to various pension reforms. However, old-age labor force participation remains low in many countries.

Female labor force participation rates developed differently than male rates, starting from a lower base but increasing throughout the period with the exception of emerging Europe, where early retirement rules incentivized women to accelerate their exit from the labor market. In developing economies, the rising female labor force participation is due to a combination of pull and push factors, including improved education, expansion of the market economy, and expanded female employment opportunities. However, female participation remains well below its potential in most countries (Elborgh-Woytek and others, 2013).

Strikingly, the evidence shows that the statutory retirement age is not a key determinant of retirement decisions. Figure 2.19 shows no significant relation between these two variables. Increases in the statutory retirement age do not necessarily lead to an increase in labor force participation for older workers. Reforms will have to tackle other features of pension systems, including (unsurprisingly) financial considerations.

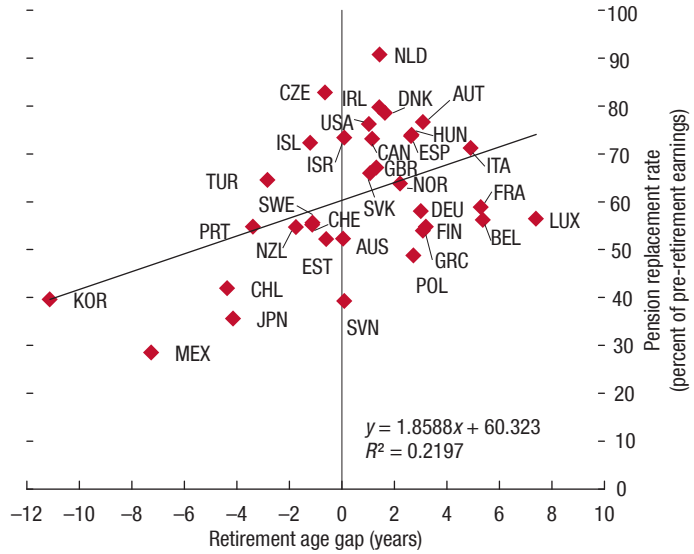
- *Affordability of retirement.* Replacement rates (benefit levels relative to wages) of pension schemes influence retirement decisions: countries with higher replacement rates tend to experience effective retirement ages below the statutory retirement ages (Figure 2.20). Public pension schemes are not the only sources of retirement income (Figure 2.21): mandatory and voluntary private pension schemes augment public pension entitlements and influence retirement decisions, too. The larger the share of public pension benefits in total old-age income, the greater the impact public pension policy can have on labor participation. At the same time, in countries where private pension schemes play an important role, the regulation and taxation of these schemes may also play a role in promoting old-age labor force participation.

Figure 2.19. Statutory versus Effective Retirement Ages for Men, 2012



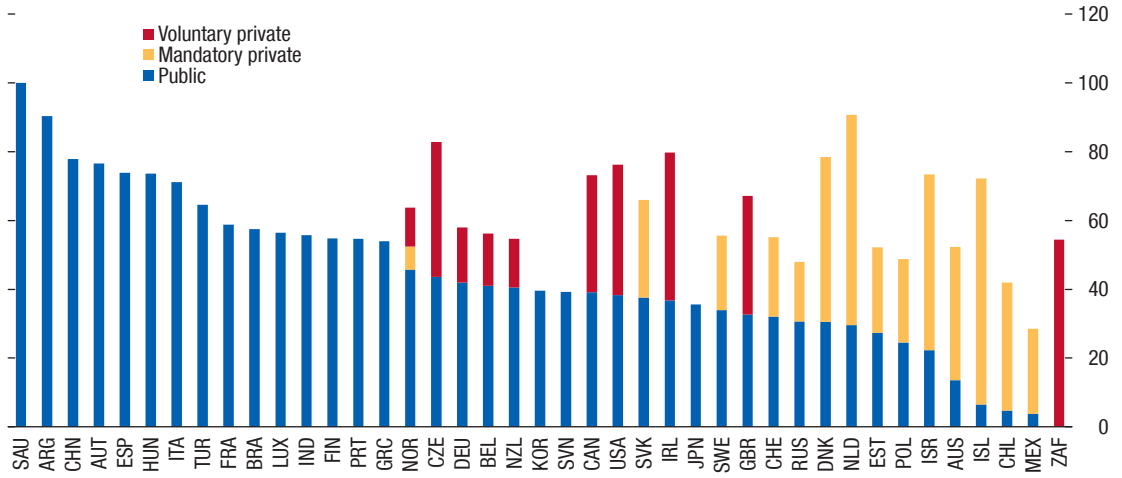
Source: Organisation for Economic Co-operation and Development.
Note: The black line shows an ordinary least squares (OLS) regression line, and the grey line is the 45 degree line. People who retire under disability pensions awarded after age 40 are also represented in effective retirement ages.

Figure 2.20. Pension Replacement Rates for Average Workers versus Retirement Age Gap for Men, 2012



Source: Organisation for Economic Co-operation and Development.
Note: The retirement age gap is defined as the statutory retirement age less the effective retirement age. Pension replacement rates include public and private replacement rates. The black line shows an ordinary least squares (OLS) regression line.

Figure 2.21. Average Wage Earners: Replacement Rates for Mandatory and Voluntary Public and Private Pension Schemes
(Percent of pre-retirement earnings)

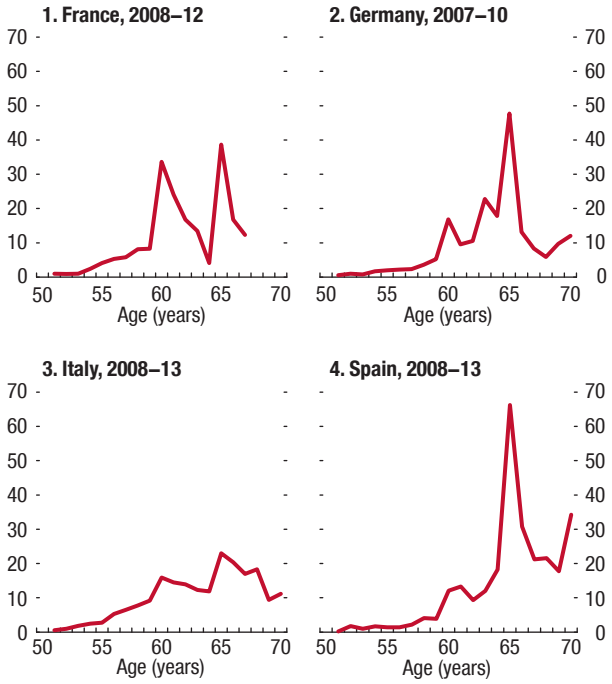


Source: Organisation for Economic Co-operation and Development (2013a).
Note: Data on voluntary private pensions are unavailable for some countries, including Japan.

- *Legal possibility to retire.* Public pension systems typically include long-service provisions that allow retirement on the basis of the number of years worked, rather than age. In addition, disability benefits equal to or higher than old age pensions reduced by early retirement penalties often offer an alternative to early retirement. In practice, many people retire as soon as the system allows them to do so (with or without deductions in benefits). This is referred to as the age of first eligibility. Figure 2.22 shows that the likelihood of retirement is highest at the age of first eligibility and at the statutory retirement age.
- *Implicit tax rates.* The implicit tax on continuing work (or the net effect of wage taxes, contributions, and foregone pension benefits) also influences the decision to stay or exit the labor market (Figure 2.23). An actuarially neutral[26] early or late retirement would impose no implicit tax. In practice, most public pension schemes impose positive implicit tax rates: early retirement deductions and late retirement increments are usually below actuarially neutral levels.[27]

A number of reforms can be introduced to encourage higher old-age labor force participation—some

Figure 2.22. Select Advanced Economies: Probability of Exiting the Labor Market
(Percent)

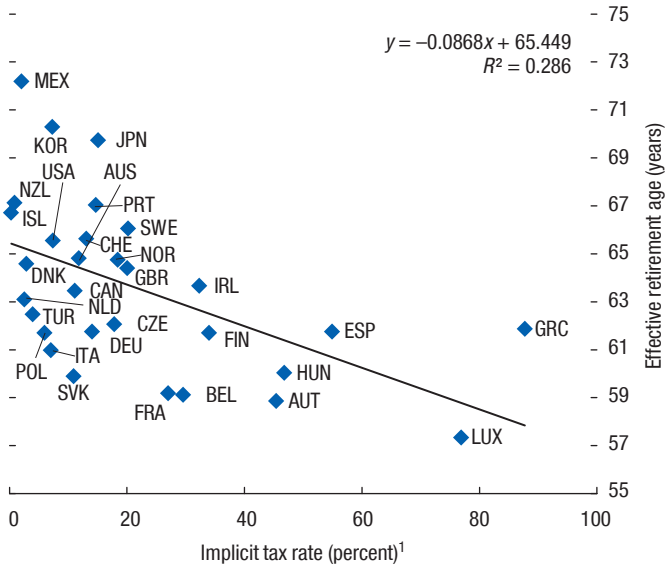


Source: Eurostat, European Union Labour Force Survey.
Note: Figures show the average probability of exiting the labor market during the indicated period, which varies by country due to data availability. Probabilities include both males and females.

[26] An increment or deduction is actuarially neutral if the present value of additional contributions and the present value of the pension benefits earned through these additional contributions are equal (see Duval, 2003).

[27] See, for example, Queisser and Whitehouse (2006) and Bisciari and others (2009).

Figure 2.23. Implicit Tax Rate and Men's Effective Retirement Age, 2009



Source: Organisation for Economic Co-operation and Development.
Note: The black line shows an ordinary least squares (OLS) regression line. The most recent data available are from 2009.
[1]Implicit tax rate is a weighted average of implicit tax rates for early retirement pathways (ages 55–60, 75 percent) and for old-age pension schemes (ages 60–65, 25 percent).

of them already in place in a number of advanced economies.[28] Revisiting long-service provisions and early retirement rules would tighten the link between statutory and effective retirement ages. On the benefit side, lower accrual rates, longer averaging periods for pension calculations, less generous benefit indexation, and benefit taxation in line with standard income tax rules could restore incentives to stay in the labor force. Reducing the implicit tax on continuing work would call for higher early retirement penalties and higher deferred retirement increments than observed in most public pension schemes.[29] In addition, lowering tax wedges for older workers could also be an effective way to encourage participation, given evidence that participation is more tax sensitive than among other groups (see for example Blundell, 2014). The impact of such reforms would vary across countries, but could be significant: a simple simulation suggests that a combination of measures could increase employment of the 55–64 age group by 1 to 11 percentage points.[30]

Accompanying policies would be needed, however, to ensure that those that postpone retirement do find employment.[31] Without job creation, delaying retirement may increase old-age unemployment, especially in the case of low-income workers, and consequently raise old-age poverty or non-pension welfare transfers. Enhancing the provision of training to the elderly through active labor market policies (e.g., Austria, Belgium, Germany) could help them acquire job-related skills, increasing their employment prospects.[32] Efforts should be targeted to lower-skilled workers, as old-age employment rates are very sensitive to education levels.[33] Reductions in labor taxes and provision of wage subsidies can also help (e.g., Italy, Netherlands, Serbia, Spain). Governments may also consider protecting elderly employment through anti-discrimination legislation, although the literature indicates that the effectiveness of such legislation could be mixed: it

[28] Several advanced and emerging economies (including Australia, France, Germany, Greece, Hungary, Poland, Spain, Turkey, and the United Kingdom) have enacted legislation raising statutory retirement ages, which will take effect gradually, and other reforms. In addition, several countries have implemented automatic revaluation mechanisms with a sustainability factor in the pension system, with the goal of achieving financial sustainability and providing incentives to delay retirement.

[29] Other options include flexible work arrangements (Austria, Norway), partial retirement (part-time combined with partial pension), allowing access to pension benefits while working after reaching the eligibility age (Austria, Spain).

[30] Based on the coefficients from Bassanini and Duval (2006) and actual data as of 2009 for selected advanced economies. Among the reforms, the implicit tax rate is lowered to zero, the retirement age increases by two years above the official retirement ages, unemployment benefits are merged at the median-OECD level, and the labor tax wedge also merged at the median-OECD level. As many countries have already started implementing various pension reforms, the impact could be smaller than the above estimates.

[31] In addition, pension reforms would have to be introduced in a manner that gives sufficient time to participants to adjust their consumption and savings in a non-disruptive manner.

[32] The potential mismatch between productivity and wage caused by seniority-based wages system and lack of up-to-date skills is often presented as a reason for employers' reluctance to retain the elderly. The literature is, however, inconclusive about the relationship between age and productivity (Lallemand and Rycx, 2009; Eichhorst and others, 2013).

[33] People with higher education tend to have higher employment rates at older ages: higher-skilled people tend to work longer than less-educated ones. This may be due to the slower amortization of their skills, more opportunities to update their skills, better health status resulting from less strenuous jobs, and a stronger bargaining position. Providing training to the low-skilled through active labor market policies may help employment retention and hiring prospects—even if it is not a substitute for improving education (see, for example, Eichhorst and others, 2013, for a discussion of the benefits of training for older workers). Given a strong correlation between education levels and lifetime earnings, higher-skilled people have the highest likelihood to continue working after the age of first eligibility and even the statutory retirement age. Conversely, lower-skilled people, who receive lower absolute pension levels, find it difficult to hold down a job even though their welfare would benefit from continued work.

may protect the elderly already employed, but may act against new hiring of the elderly.

Measures may also be needed to mitigate distributional consequences. For example, increasing retirement ages shortens low-income earners' beneficiary period disproportionately given their typically shorter life expectancy, and thus reduces the progressivity of public pension systems in terms of total benefits received. Pension reforms should be designed to strike a right balance between actuarial fairness and adequacy at the lower part of the income distribution. Gradually reducing the size of mandatory schemes and making them actuarially both fair and neutral, while introducing non-contributory, targeted basic (social) pensions could help improve fiscal sustainability, provide incentive for late-career labor supply, and protect against old age poverty.

Appendix 2.1. Methodology for Estimating the Impact of Fiscal Consolidation on Employment

The literature addressing the identification of fiscal episodes is vast and has, for a long time, relied on ad-hoc rules or thresholds based on changes in the cyclically adjusted primary balance (CAPB). Some caveats surrounding this approach have been highlighted recently. In particular, the CAPB approach could bias empirical estimates toward finding evidence of non-Keynesian effects.[34] Many non-policy factors, such as price fluctuations, influence the CAPB and can lead to erroneous conclusions regarding the presence of fiscal policy changes.[35] In addition, even when the CAPB accurately measures fiscal actions, these include discretionary responses to economic developments, such as fiscal tightening to restrain rapid domestic demand growth. With these considerations in mind, an alternative "narrative approach" has been developed, relying on the identification of fiscal episodes on the basis of concrete policy decisions. Proponents of this approach argue that the estimated size of the fiscal measures during the episodes identified have the advantage of not being affected by the cycle (since their construction is "bottom-up"), can minimize identification problems,[36] and are unlikely to imply risks of reserve causation. That said, the narrative approach could also have some drawbacks: it largely relies on judgment calls, and it may not eliminate endogeneity problems entirely if policies are themselves endogenous.

The empirical analysis in the chapter relies on both the narrative and CAPB-based approaches (the latter being employed largely because of the lack of sufficient information to construct a narrative dataset for countries others than some advanced economies). Specifically, the analysis uses the publicly available dataset compiled by Devries and others (2011) based on the policy-action based method for advanced economies;[37] and it relies on Afonso's (2010) approach based on the changes in the CAPB, for other advanced economies and, more importantly, emerging and developing economies. In this latter case, a fiscal episode occurs when either the change in the CAPB (as a percentage of potential GDP) is at least one and one-half times the standard deviation (from the reference country panel) in one year, or when the change in the CAPB is at least one standard deviation on average in the last two years. The time span is 1980–2013. Other CAPB-based approaches, including Giavazzi and Pagano (1996)[38] and Alesina and Ardagna (1998),[39] were used to assess robustness.

The dynamic impact of fiscal consolidation variables on labor outcomes is estimated following the approach proposed by Jorda (2005) and Teulings and Zubanov (2010),[40] which allows the impulse response functions (IRFs) to be estimated directly from local projections.[41] For each future year k, the estimation equation has the following form:

$$L_{i,t+k} - L_{i,t} = \alpha_i^k + \phi_t^k + \sum_{j=1}^{2} \gamma_j^k L_{i,t-j-1} + \beta_1^k(\Delta CAPB_{i,t} * FC_{i,t}) + \beta_2^k gap_{i,t-1} + \varepsilon_{i,t}^k \quad (1)$$

[34] See Afonso and Jalles (2014) for a recent study.

[35] For example, a stock price boom raises the CAPB by increasing capital gains tax revenue, and also tends to coincide with an expansion in private domestic demand (Morris and Schuknecht, 2007).

[36] However, as Hernandez de Cos and Moral-Benito (2011) and Jorda and Taylor (2013) argue, fiscal shocks may not be exogenous and can be predicted.

[37] The episodes are identified by examining historical policy documents, such as national budget laws, budget speeches, central bank reports, Convergence and Stability Programs submitted by authorities to the European Commission, and IMF and OECD reports.

[38] A fiscal episode consists of a change in the CAPB of at least 2 percent of GDP in one year or at least 1.5 percent on average in the last two years.

[39] This approach considers a limit of 3 percentage points (p.p.) of GDP for a single year consolidation, and cumulative changes in the CAPB that are at least 5, 4, 3 p.p. of GDP in 4, 3, or 2 years respectively, or 3 p.p. in one year.

[40] This method has one important advantage: it can easily accommodate non-linearities better than a traditional VAR approach, which is of particular relevance when evaluating state-dependent impulse responses.

[41] See Duval, Eris, and Furceri (2011) and Bernal-Verdugo, Furceri, and Guillaume (2012) for a similar approach.

where L_{it} is a labor-market variable in country i in period $t+k$, $FC_{i,t}$ is a fiscal-consolidation dummy (that takes value 1 for consolidation in period t in country i and zero otherwise); α_i^k and ϕ_t^k represent country and time effects; $gap_{i,t}$ is the (initial) output gap in the period prior to the fiscal shock; $\varepsilon_{i,t}^k$ is an i.i.d. error term satisfying standard assumptions. The coefficient γ_j captures the persistence in changes in labor-market variables; and β_1^k measures—for emerging and developing economies—the impact of 1 percentage point of potential GDP improvement in the CAPB on the change in labor market outcomes for each future period k.[42] Equation (1) is estimated by panel fixed effects (least-squares dummy variable). IRFs are then obtained by plotting the estimated β_1^k for k =0,…,5 (in years), with confidence bands (at a 90 percent level) being computed using the standard deviations associated with the estimated coefficients.[43]

Equation (1) is then re-estimated for the decomposition exercise in which fiscal adjustments are split into expenditure and tax-based episodes, where the term ($\Delta CAPB_{i,t+1} * FC_{i,t+1}$) is replaced by two terms, namely ($\Delta pEXP_{i,t+1} * FC_{i,t+1}$) and ($\Delta REV_{i,t+1} * FC_{i,t+1}$) with $pEXP_{i,t}$ denoting primary expenditure and $REV_{i,t}$ denoting total revenues, which are jointly estimated.[44] Similarly, when accounting for the possibility of asymmetry of the impact in different phases of the economy (Baum, Poplawski-Ribeiro, and Weber, 2012), equation (1) is re-estimated allowing all coefficients in the regression to be state-dependent. That is, right-hand-side variables are interacted with an indicator function (that takes the value one in periods of protracted recession and zero otherwise, i.e., in periods of shorter recessions or no recessions) and also its complement (Ramey and Zubairy, 2013).[45] Jalles' (2014) technical note provides further insights, results, and discussions.

[42] Note that in the case of the narrative approach, the term $\Delta CAPB_{i,t+1} * FC_{i,t+1}$ is replaced by the overall size of the fiscal consolidation in a given year directly from Devries and others' (2011) dataset. Hence, β_1^k measures the impact of 1 percentage point of GDP improvement in the overall balance on the change in labor market outcomes for each future period k.

[43] While the presence of a lagged dependent variable and country fixed effects may in principal bias the estimation of γ_j and β_k in small samples (Nickell, 1981), the length of the time dimension mitigates this concern. The finite sample bias is in the order of 1/T, where T in the sample is 33 (1980–2012).

[44] There are inherent methodological difficulties in testing the hypothesis regarding which of the two types of consolidation is preferred. First, the distinction between revenue and expenditure measures is often more semantic than economic; second, labor market effects are unlikely to be uniform within the categories of expenditure and revenue measures.

[45] Protracted recessions are defined by an annual dummy equal to one for periods of at least 24 months of economic contraction, and zero otherwise, using the Recession Indicators Series by the Federal Reserve Bank of St. Louis.

Box 2.1. Targeted Employer Social Security Contribution Cuts: Lessons from Experiences in Advanced Economies

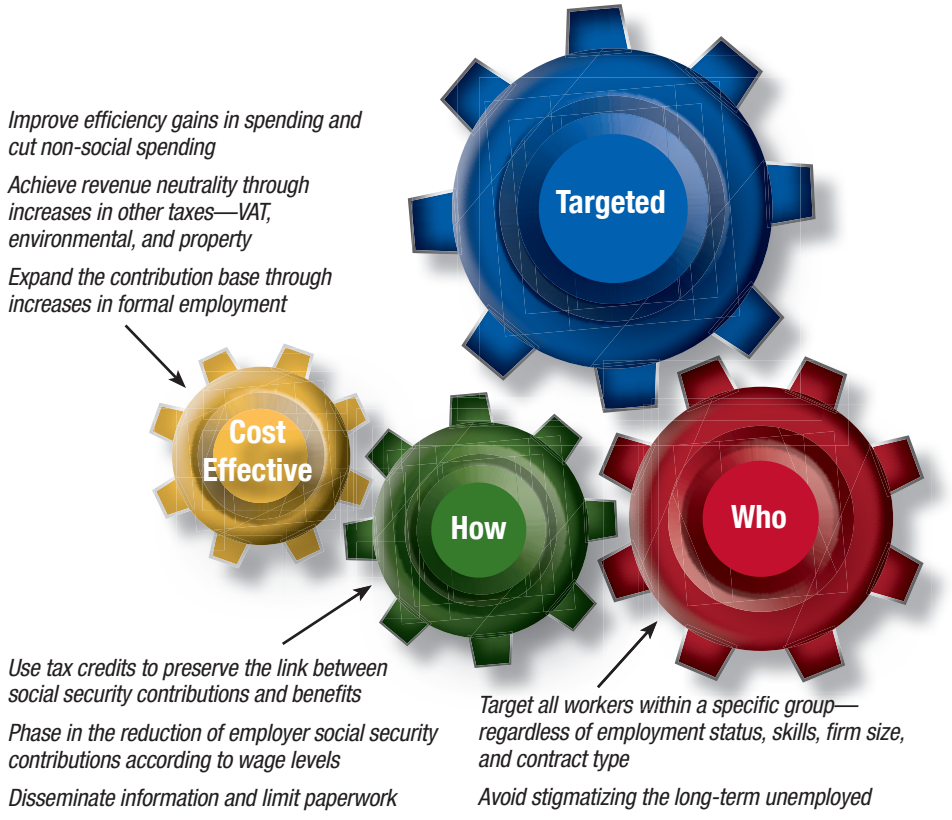
A number of design lessons can be learned from the experiences of countries that have cut employer social security contributions (SSC) in the past (Figure 2.1.1).

Targeting the low-paid and youth has been associated with better labor market outcomes than targeting very specific disadvantaged socioeconomic groups. Ex-post evaluations of cuts targeting low-wage/low-skilled individuals during the 1990s have found employment elasticities above one in France (Crepon and Desplatz, 2001 and Kramarz and Philippon, 2001) and in the Netherlands among the youth (Nelissen, Fontein, and Van Soest, 2005). Targeting other socioeconomic groups such as the long-term unemployed and other disadvantaged groups from specific regions, as shown by a number of U.S. employer subsidies, have delivered more mixed results, as they may serve to stigmatize participating job-seekers and limit employer interest in the program (Burtless, 1985; Katz, 1998; and Marx, 2008).[1] Active labor market policies providing training and placement services to these groups have shown to be a more effective instrument (IMF, 2012).

Targeting all workers within a specific group—regardless of employment status, employer size, and contract type—creates fewer distortions. Cuts targeted at "new" jobs only are notoriously complex to monitor, and end up in low take-up, small employment effects and large substitution effects (Neumark, 2011, Chirinko and Wilson, 2010). Targeting small firms per se may not be effective either (Haltiwanger, Jarmin, and Miranda, 2010). Employer SSC cuts conditioned to new hires under permanent contracts, particularly prevalent in Spain, have been shown to lead employers to substitute workers under the unsubsidized temporary contract for those under subsidized permanent contracts

[1] For instance, the success of U.S. New Job Tax Credit program implemented in the late 1970s is partly attributed to the fact that it did not target any particular disadvantaged socioeconomic group directly, but rather low-wage individuals indirectly by only applying tax credits to the first $4,200 of wages per employee (Katz, 1998).

Figure 2.1.1. Elements of Successful Employer Social Security Reforms



Box 2.1 *(concluded)*

with little or no impact on total employment (Arranz, Serrano, and Hernanz, 2013; Mendez, 2008).

A phased reduction of employer SSC within a well-defined range has been shown as an effective scheme when targeting the low-paid. Attempts to heavily restrict coverage by restricting the cut up to a given threshold may backfire, as it will lead firms to over-report the number of eligible low-paid workers under their payroll so as to maximize the relief intake. It will also make it expensive for employers to provide future pay increases for low-paid workers creating a "low-pay trap." Schemes where the relief is gradually reduced as wages move further from the least paid has been shown to dampen firms' over-reporting and under-paying incentives by allowing employers' implicit marginal contribution rates to increase more smoothly (Phelps, 1997).

This has been the preferred option of most schemes targeting low-wage workers in advanced economies with the SSC cut phased gradually up to about 1½ times the minimum wage (OECD, 2011b).

Targeted tax credits[2] *have been used in some countries that want to preserve the link between social security contributions and benefits*. The payment of social contributions is generally linked—albeit, in many cases, very weakly—to benefits. Uncompensated cuts in rates or exemption thresholds for employer SSC will, therefore, either lead to cuts in benefits with negative implications for labor supply or unfunded mandates compromising the fiscal sustainability of the social security system. To avoid that, some countries have effected reductions in social security contributions by narrowing social contribution bases through the provision of tax credits (Denmark, France, Netherlands, Sweden) and social security rebates (Spain).

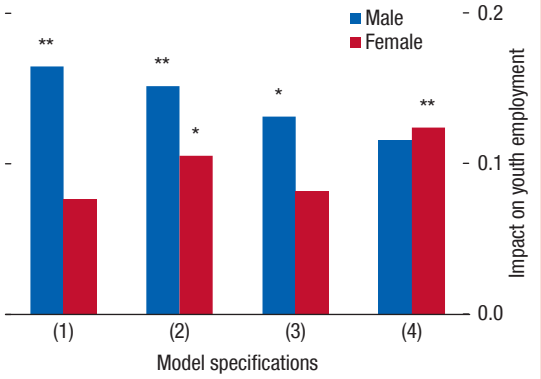
[2] For more details on tax credit schemes see Chirinko and Wilson (2010), Neumark (2011), Couch, Besharov, and Neumark (2013).

Box 2.2. Do Old Workers Crowd Out the Youth?

Promoting elderly labor force participation often raises the question of whether older workers crowd out younger people from the labor market. This was a popular argument in the 1970s and 1980s, and indeed based on this, many countries, including Belgium, France, Denmark, and the United Kingdom introduced generous early retirement schemes with the intention to reduce youth unemployment.

In theory, such crowding out might take place in the short run, in an environment where there is a fixed labor demand ("lump of labor hypothesis"), and young and old workers are substitutable in terms of skills and cost of hiring. Recent empirical studies for advanced and OECD economies (e.g., Jousten and others, 2008; Gruber, Milligan, and Wise, 2009; Eichhorst and others, 2013; Munnell and Wu, 2012), however, do not find such crowding-out effects—instead, they find a statistically insignificant, or in some cases a positive, correlation between youth and old employment rates. Eichhorst and others point out that young and old workers are not perfect substitutes given the introduction of new technologies. Gruber and others argue that the results are in line with the fact that increased female labor force participation in the past few decades had little impact on male employment: the economies grew and absorbed increased labor force. Analysis for emerging market and developing economies does not find evidence of crowding-out either. In fact, there may be some evidence of crowding-in effects, suggesting that old and young employment can increase simultaneously with more favorable labor market conditions (Figure 2.2.1).[1]

Figure 2.2.1. Developing Countries: Elderly Labor Force Participation and Youth Employment
(Percent of youth population)



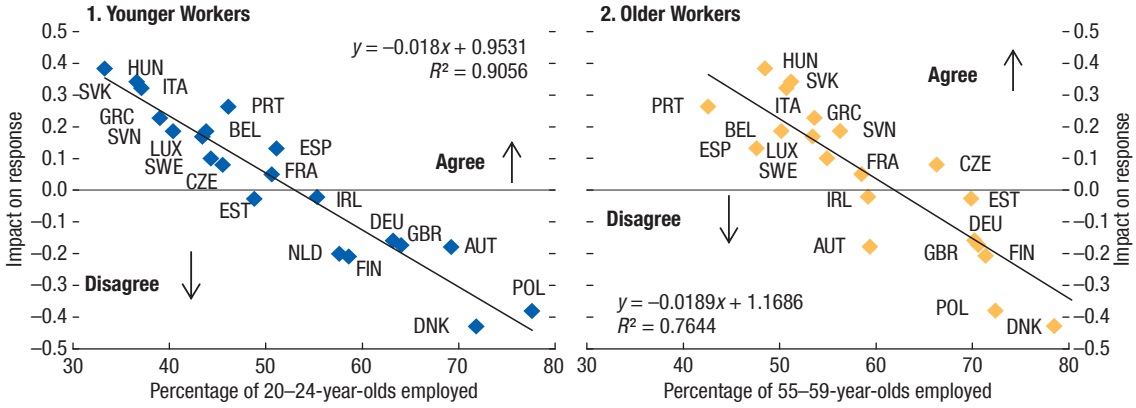
Sources: International Labour Organization; World Bank; and IMF staff estimates.
Note: * (**) indicate significance at the 10 (5) percent levels. See footnote 1 in this box for details on model specifications.

An Eurobarometer survey indicates that people who have lower education or live in countries with less favorable general labor market conditions tend to perceive such crowding out as real (Figure 2.2.2), which may influence the policy discourse in these countries.

[1] The figure shows coefficients estimated with country-fixed effect panel regressions applied to unbalanced panel data for 102–134 developing economies, depending on data availability, for the period of 1980–2011. The * (**) indicates significance at the 10 (5) percent level; while no * indicates no statistical significance. Model specifications (1)–(4) control for the following variables: (1) real GDP growth rate; (2) real GDP growth rate and share of agriculture (percent of total GDP); (3) real GDP growth rate and share of manufacturing (percent of total GDP); and (4) real GDP growth rate and urbanization (urban population in percent of total population). Panel unit-root tests do not indicate the existence of a unit root for any variables included in this analysis. Data on youth (ages 15–24) employment and elderly (ages 55–64) labor force participation are from ILO, which cover both formal and informal sectors. Data on elderly employment is not available; therefore labor force participation is used as a proxy. One-year lagged variables are used for all the independent variables, except elderly labor force participation rates, for which contemporaneous variables are used, to avoid possible endogeneity problems. Addressing multicollinearity, when two independent variables are correlated, the following two steps are taken: first, regress a variable with the other variable and generate residual series; and second, use the residual series, instead of the regressed variable at the first step, for the regressions for youth employment rate. When using residual series, bootstrapping methods are used to estimate standard errors.

Box 2.2 *(concluded)*

Figure 2.2.2. Survey Results on Crowding Out of the Youth by the Elderly



Sources: Organisation for Economic Co-operation and Development (OECD) analysis of Eurobarometer survey of 27,113 people in the European Union, of which 21,133 are in OECD member countries; OECD Employment database for employment rates; and IMF staff estimates.
Note: The black lines show the ordinary least squares (OLS) regression line. Estimation is based on an index of whether respondents strongly disagree (–2), somewhat disagree (–1), somewhat agree (1), or strongly agree (2) with the view that fewer jobs will be available to the youth due to older workers remaining in the labor force. In addition to the variables shown, the analysis controlled for region (metropolitan, other urban, and rural) and economic activity (retired, other not working, employed, and self-employed). The results shown are predicted values taking all these factors into account at once. All variables included in the econometric model were significant at the 1 percent level.

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