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Labor and Product Market Reforms in Advanced Economies: Fiscal Costs, Gains, and Support

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EXECUTIVE SUMMARY

Persistently sluggish growth has led to growing policy emphasis on the need for structural reforms that improve the functioning of labor and product markets in advanced economies. However, reforms have progressed slowly because of political opposition and concerns about their distributive and short-term economic effects. At the same time, the ability to cushion these effects is hindered by high public debt and mounting long-term fiscal pressures. This note provides new empirical analysis, numerical simulations, and case studies to assess the fiscal impact of labor and product market reforms in advanced economies and evaluate the case for complementing reforms with fiscal support. As such, it provides a major addition to recent IMF analysis that examined the output and employment effects of reforms (IMF 2016a).

Main findings of the analysis:

- Most labor and product market reforms can strengthen medium-term public finances indirectly by raising output. In some cases, such as lower entry barriers for firms, this indirect fiscal gain can be sizable. In other instances, the gains can be amplified or offset by the direct fiscal impact of the reform. For instance, unemployment benefit reforms improve fiscal outcomes both indirectly and directly through lower spending, but the up-front costs of labor tax cuts and higher spending on active labor market policies are only partly recouped over time as output rises. A budget-neutral implementation of these reforms can yield unambiguous fiscal gains.

- The effects of reforms on fiscal outcomes depend on business cycle conditions. Employment protection reforms strengthen fiscal positions in an expansion, but weaken them in periods of slack due to their short-term output cost. Similarly, the fiscal gains from unemployment benefit reforms are larger under strong cyclical conditions. In contrast, debt-financed labor tax cuts and active labor market policy spending have stronger indirect positive effects on public finances in times of economic slack because of larger fiscal multipliers, which must be weighed against their direct costs.

- Under weak cyclical conditions, a package combining certain labor market reforms—such as easing job protection or reducing the level or duration of unemployment benefits where particularly high—and credible, temporary, and well-designed up-front fiscal stimulus on average can yield a net fiscal gain over the medium term. This is because the stimulus enhances the effect of these reforms on output and thereby on tax revenues. The package is self-financed over the medium term insofar as the increase in tax revenues from the reform exceeds the financing cost of the initial stimulus. The cost of temporary up-front fiscal stimulus may also be fully offset by subsequent gains if it helps reduce political obstacles to major reforms that yield medium-term fiscal gains, for instance by improving their distributive impact. However, country-specific circumstances—such as government funding costs and their response to stimulus, the magnitude and quality of that stimulus, and the strength of reform implementation—affect the extent to which such gains can be reaped.

- Case studies suggest that fiscal incentives have indeed facilitated reforms by alleviating transition and social costs. These incentives comprised permanent reductions in distortive taxes and one-time measures, accompanied by a strong consensus and political commitment to reform. Even so, reforms have occasionally been reversed. Incentives have been provided in the context of either a supportive overall fiscal stance or fiscal consolidation—in which case they were financed by other reforms or harmful cuts in public investment.

Policy implications—The case for temporary fiscal stimulus and incentives for labor and product market reforms depends on the type of reform, the initial cyclical position, the credibility of the political commitment to and consensus for comprehensive reforms—including strong ownership—and available fiscal space.

- Countries with fiscal space can use it to provide temporary up-front reform support, especially if there is economic slack. Such support can take the form of targeted budgetary incentives to mitigate adjustment costs, especially for the most vulnerable; recalibration of distortive fiscal measures; or other spending that raises long-term output—for example, infrastructure spending on high-return projects. A strong commitment to reforms is an essential prerequisite.

- In countries that lack fiscal space, the decision to provide up-front fiscal support depends on the credibility of the government's commitment to strong implementation of comprehensive reforms and sustainable fiscal policies. If these are forthcoming, temporary up-front fiscal support could in theory help mitigate the short-term economic or social costs of some reforms while delivering a medium-term fiscal gain. However, if a country's commitment to fiscal prudence and reforms lacks credibility because of weak ownership or a track record of reform reversals or weak implementation, fiscal support is not warranted even when cyclical conditions are weak. In such cases, careful prioritization and sequencing of reforms are crucial to maximize output and fiscal gains and ensure that they are widely shared. Lower-cost measures with a beneficial impact on output and public finances, such as product market reforms, should be implemented first. Labor market reforms should be designed in ways that mitigate possible short-term costs—for example, passing employment protection reform that takes effect over time can immediately boost hiring. Unemployment benefit reforms, labor tax cuts, and active labor market policies should be implemented in a budget-neutral manner. Fiscal incentives could be considered, but as part of broader growth-friendly fiscal rebalancing. However, offsetting their cost by cutting public investment would be highly counterproductive.

- The design and implementation of fiscal rules should encompass the flexibility to incentivize reforms and acknowledge their medium-term fiscal benefits. Such flexibility reduces the risk that support for reforms will be offset by harmful cuts in public investment. To preserve the credibility of the fiscal framework and confidence in efforts to ensure fiscal sustainability, such flexibility should be conditional on a credible political commitment to strong reforms (possibly only after the reforms), as well as on a strong medium-term fiscal plan. Institutions such as politically independent fiscal councils and productivity commissions can be helpful on this front.

MOTIVATION AND INTRODUCTION

1. Context. Concerns about persistently sluggish growth amid high public debt and mounting long-term fiscal pressures in advanced economies are increasingly reflected in policy debates on the need for structural reforms to durably lift potential output over the medium term (Gaspar, Obstfeld, and Sahay 2016). High on the agenda are a range of reforms designed to strengthen the functioning of product and labor markets. Nevertheless, progress toward these reforms has remained slow because of political opposition and concerns about their distributive and short-term economic effects. Reform adoption may also have been hindered by strained government budgets. This raises questions about the fiscal costs and gains from reforms. To what extent can reforms help strengthen fiscal positions over the medium term? Can policy packages combining reforms with temporary up-front fiscal support yield a net fiscal *gain* over the medium term as well as facilitate implementation?

2. Complex interplay between reforms and fiscal policy. Labor and product market reforms can have both direct and indirect effects on public finances and can vary across reform types. Some reforms have a direct impact on public spending (for example, reduction in unemployment benefits) or revenues (for example, labor tax cuts) but also an indirect impact on fiscal positions through changes in output. Second, the effects of reforms may materialize over different horizons, requiring an analysis of their impact over time. Third, the channels of transmission can be complex because reforms' effect on economic activity and fiscal positions depends on prevailing cyclical conditions. Moreover, the stance of fiscal and other macroeconomic policies at the time of reform can have bearing on reform impacts. Whether and how much fiscal support to provide to facilitate and incentivize reforms also requires an understanding of the costs and benefits involved. All these considerations warrant a more systematic analysis of the interactions between fiscal policy and structural reforms.

3. Three key questions. These complex interactions raise three broad sets of issues on which this note sheds new light:

- How do different labor and product market reforms affect fiscal positions and public debt dynamics?
- Can some reforms eventually yield *stronger* fiscal gains when accompanied by up-front temporary fiscal stimulus? If so, which reforms and under what conditions?
- Can fiscal incentives facilitate the adoption of major reforms in the first place (for example, by enhancing their distributive impact), and can they do so without increasing the future debt burden?

4. Focus on labor and product market reforms. Our analysis focuses on a range of reforms designed to strengthen the functioning of labor and product markets. These have been found variously to lift productivity, increase employment, and strengthen resilience to macroeconomic shocks.[2] Reform areas encompass product market regulation (for example, deregulating retail trade, professional services, and certain segments of network industries, primarily by reducing barriers to entry); employment protection legislation reforms (for example, easing hiring and dismissal regulations for regular workers); increasing the ability of and incentives for the unemployed to find jobs by reducing the level or duration of unemployment benefits or by increasing the resources for and efficiency of active labor market policies, including policies to boost participation of underrepresented groups; and cutting labor tax wedges.[3]

5. Multipronged analysis. The analysis in this note relies on three complementary analytical approaches. First, using a new data set of major labor and product market reforms across advanced economies over the past four decades, it provides an empirical analysis of the dynamic impact of reforms on fiscal positions. It also examines how this impact varies depending on initial cyclical conditions and accompanying fiscal policy. Second, a stylized numerical framework is used to assess the conditions under which different reforms are potentially self-financing, providing a useful complement to the empirical results. Finally, country case studies and counterfactual analysis provide a more granular assessment of how fiscal policy has been used in practice to encourage reform implementation, including to mitigate distributional concerns. Although the note makes a particular effort to isolate the fiscal effects of changes in structural policies, the results should still be interpreted with care given the difficulty of disentangling the impact of structural reforms from that of other simultaneous measures with direct fiscal impacts.

6. Fiscal dividend from structural reforms. Empirical analysis suggests that most labor and product market reforms can create fiscal space over the medium term.[4] This is because reforms raise output by boosting employment or labor productivity or both. This, in turn, helps improve budgetary outcomes and strengthen fiscal sustainability, although gains typically materialize only gradually. However, for some reforms, this indirect fiscal gain needs to be weighed against their direct fiscal costs (for example, higher spending on active labor market policies, labor tax wedge cuts), because those costs are only partly recouped over time as output rises. A budget-neutral implementation of these reforms compensates for these direct costs and therefore unambiguously

[2] See, for example, Dabla-Norris and others 2015; Bouis and Duval 2011; Barkbu and others 2012; Blanchard, Dell'Ariccia, and Mauro 2013; Cette, Lopez, and Mairesse 2016; Égert 2016; Gal and Theising 2015; and IMF 2016a.

[3] Studies have also shown that other supportive structural reforms (for example, strengthening tax and public administrations and rationalizing tax systems) could help boost medium-term growth and magnify the beneficial impact of labor and product market reforms (IMF 2015a).

[4] Fiscal space generally refers to room for a government to raise spending or lower taxes without endangering market access and debt sustainability. An assessment of a country's fiscal space needs to take into account the level and trajectory of public debt, financing needs, fiscal track record, economic conjuncture, and market sentiment, among other things.

leads to a lower public-debt-to-GDP ratio, but output gains are more limited than they are when reforms are financed through debt.

7. Policy packages combining reforms with temporary fiscal support. Unlike in the case of product market reforms, the economic effects of some labor market reforms depend significantly on business cycle conditions. For instance, reforms to employment protection and unemployment benefit systems have positive effects in good times, but can become contractionary in periods of economic slack. The empirical analysis suggests that, under these conditions, supportive fiscal policy can on average help front-load the growth impact of the reforms, amplifying the benefits to public finances. In particular, a temporary fiscal stimulus can improve the short-term response of the economy to these reforms, over and above its direct impact on aggregate demand, thereby improving debt dynamics. Numerical simulations show that under weak cyclical conditions, the beneficial impact on public-debt-to-GDP ratios of a package combining certain labor market reforms with temporary fiscal support holds broadly for a range of plausible assumptions about the output response to reforms, fiscal multipliers, and the difference between the long-term interest rate and the GDP growth rate. Still, initial conditions matter. For instance, the initial level of public debt and the long-term interest rate, the degree of ownership, and the political commitment to major reforms that will ensure significant effects on output and tax revenues, strongly influence the desirability of fiscal support, as does the availability of other policy levers.

8. Alleviating adjustment and social costs. Country case studies and counterfactual analysis suggest that fiscal policy has indeed helped ease the transition and distributive costs of reforms. However, the effectiveness of fiscal support in improving debt dynamics depended on a broad consensus for reforms and well-designed, credible policy actions. Comprehensive plans with clear and transparent objectives, sequenced milestones, measures to protect the most vulnerable and ensure that reforms do not increase inequality more broadly, and a commitment to reform were critical for the success and durability of reforms. In the absence of genuine ownership and when based on distortive measures (for example, public investment cuts), accompanying reforms with fiscal support runs the risk of costly reversals and permanent output and fiscal losses.

9. No one-size-fits-all approach. The case for temporary fiscal relaxation to accompany structural reforms is ultimately country and reform specific, depending on the nature and strength of reforms, the cyclical position of the economy, the amount of available fiscal space, the credibility of reform packages, and a strong medium-term fiscal framework. Countries most in need of reforms are often constrained by the lack of fiscal space, suggesting the need for their careful prioritization, sequencing, and design. Here, the focus should be on product market reforms that do not entail short-term costs. Labor market reforms should also be implemented, but supported by budget-neutral fiscal incentives as part of growth-friendly fiscal rebalancing.

10. Road map. The next three sections analyze the fiscal impact of various labor and product market reforms, how this impact can sometimes be shaped by prevailing business cycle conditions

and up-front fiscal support, and the role of fiscal incentives for successful reform adoption. The following section concludes.

FISCAL IMPACT OF STRUCTURAL REFORMS

This section assesses the impact of different types of structural reforms on fiscal balances and debt dynamics over the short and long term, using both empirical analysis and a numerical framework.

11. Direct and indirect budgetary impact of reforms. The impact of labor and product market reforms on public finances involves both direct and indirect effects. Direct effects typically reflect budgetary gains (for example, shorter duration of unemployment benefits) or costs (for example, more public spending on active labor market policies, lower labor taxation) associated with reform implementation, even before accounting for the reforms' economic effects. Indirect effects result from the impact of reforms on output and employment over time, which can vary widely across types of reforms (IMF 2016a) and depend on their credibility and design (Heinemann 2005). For instance, product market reforms typically entail limited direct fiscal costs. However, they generally deliver a positive output effect in the short term as lowering barriers to firm entry stimulates private investment and hiring. Cuts in labor tax wedges and higher spending on active labor market policies, however, have a direct as well as an indirect effect on public finances as they boost potential output by spurring positive labor demand and supply responses. As such, fiscal gains from these reforms depend on the extent to which their positive effect through higher output offsets their associated budgetary costs.

12. The impact of reforms over time: an empirical approach. The analysis relies on a new IMF database that identifies major policy changes in five reform areas for a sample of 26 advanced economies spanning the past four decades. The reform areas include reduction in product market regulation, employment protection legislation reforms, streamlining unemployment benefits, higher spending on active labor market policies, and cuts in labor tax wedges.[5] The empirical analysis then estimates and traces out the average evolution of output, fiscal balances, and public-debt-to-GDP ratios in the aftermath of major policy changes—both reforms and "counter-reforms" (see Technical Appendix 1 for details).[6] This response differs depending on whether reforms involve primarily an indirect effect or both direct and indirect effects on public finances.

[5] Compared with existing data sets on labor and product market regulations, this unique database focuses on major reforms—which are identified using a narrative approach that identifies the precise date of their implementation and has broader cross-country and time-series coverage. For details, see Duval and others, forthcoming, and IMF 2016a.

[6] The analysis considers the impact of reforms one at a time, raising potential concerns about omitted variables—reforms could be carried out across different areas at the same time. Estimating our regressions by including reforms in all areas simultaneously does not change the basic thrust of our results. The results are also robust to including expected changes in fiscal outcomes to address potential reverse causality, and to controlling for major reforms in other areas, which could a priori have caused an omitted variable bias.

A. Reforms Entailing Primarily Indirect Fiscal Impacts

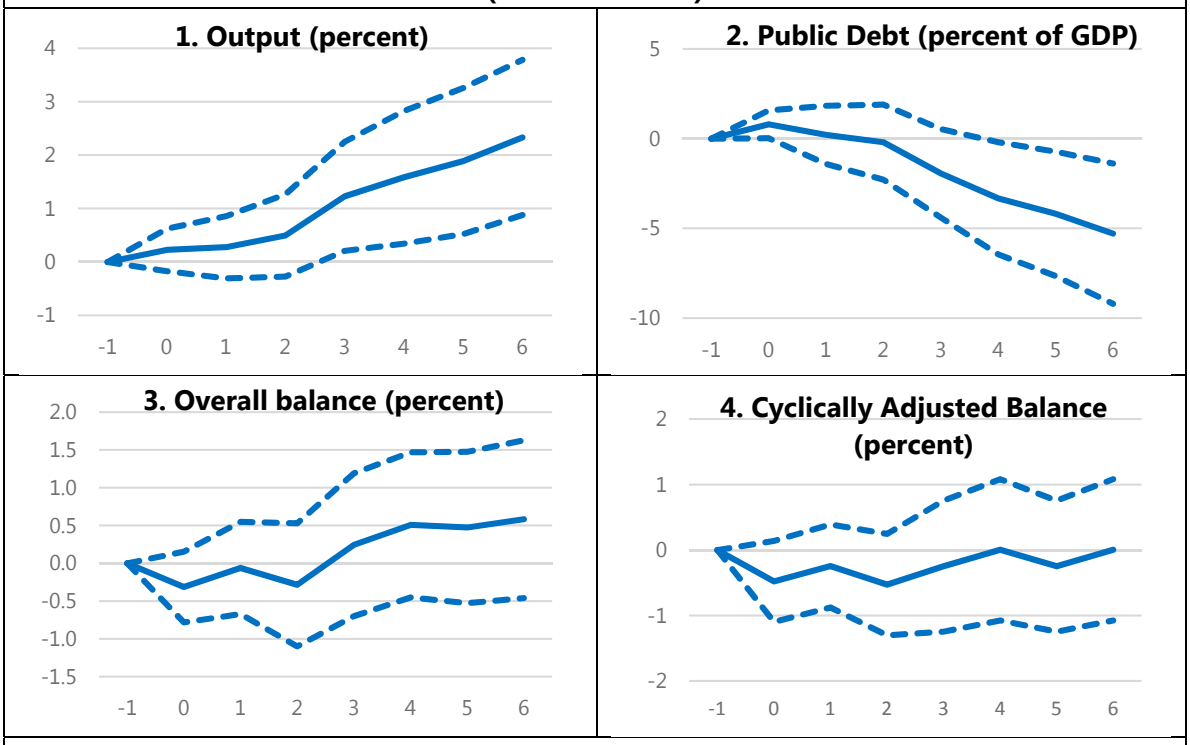
13. Product market reforms. Across advanced economies, major episodes of deregulation of retail trade, professional services, and network sectors—such as significant reductions in barriers to entry—led to large increases in GDP and higher revenues, which in turn lowered public-debt-to-GDP ratios. Figure 1 presents the average estimated impulse response of output, debt-to-GDP ratios, and the overall fiscal balance to these reforms (see Technical Appendix 1 for estimation details). On average, GDP rose by more than 2¼ percent, and the public-debt-to-GDP ratio declined by about 5¼ percentage points after seven years.[7] While the initial response of the public-debt-to-GDP ratio is positive, and that of the overall balance accordingly negative, they are not statistically significant. These findings are consistent with the view that such reforms do not *systematically* entail direct or indirect (through lower output) fiscal costs in the short term. Moreover, the medium-term impact on the overall balance is positive, but is surrounded by much uncertainty.[8]

14. Employment protection legislation reforms. The empirical analysis suggests that, historically, major reforms of job protection for regular workers, on average, had a limited impact on public finances over the medium term (Figure 2). This reflects their small and statistically insignificant effects on output over the medium-term horizon considered, as well as the absence of up-front fiscal costs in general. However, as discussed in the next section, this average (non)impact masks widely different effects depending on whether such reforms are implemented during expansions or in periods of significant economic slack.

[7] The empirical estimates of the output effects of product market deregulation and other reforms considered in this note are very close to those in IMF 2016a as they rely on similar specifications. See Technical Appendix 1 for details.

[8] Product market reforms could also affect public finances through changes in prices (for example, liberalization of the telecommunications sector could lower prices and reduce value-added tax revenues). However, the impact of product market reforms on tax revenues as a share of GDP (not reported here) is not statistically significant at any horizon. The non–statistically significant effect on the overall balance is also consistent with previous studies in the literature, including Hoeller and Giorno 2005 and Deroose and Turrini 2006.

Figure 1. Output and Fiscal Effects of Product Market Reforms
(Years on x-axis)

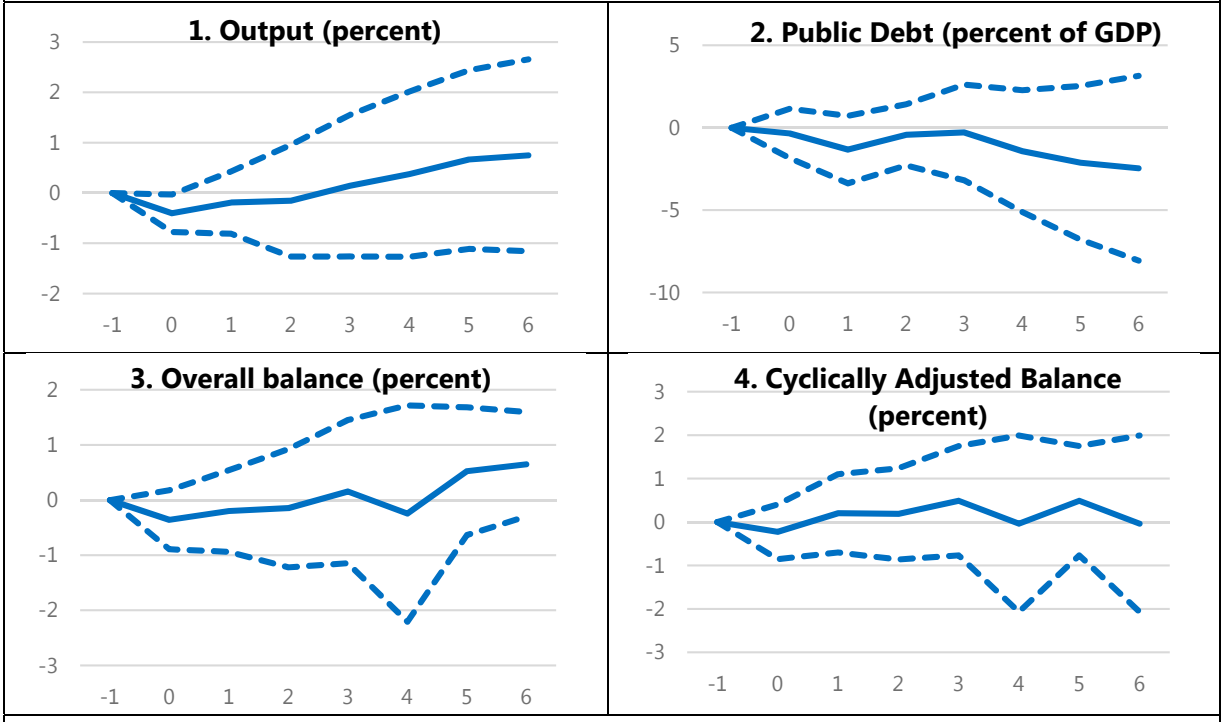


Source: IMF staff calculations.
Note: t = 0 is the year of the major reform shock (for details, see IMF 2016a). Solid blue lines denote the average estimated response to the shock; dashed blue lines denote 90 percent confidence intervals.

B. Reforms with Direct Fiscal Costs

15. Average historical impact of unemployment benefit reform, labor tax cuts, and higher active labor market policy spending. Unemployment benefit reforms that entail sizable cuts in replacement rates have historically delivered the largest decline in public-debt-to-GDP ratios—about 9 percentage points after seven years, on average. This effect operates both directly through the budgetary savings generated, as illustrated by the immediate rise in the fiscal balance, and indirectly through higher employment and output (Figure 3, Panel A). The empirical results also suggest that, on average, cuts in the labor tax wedge and higher spending on active labor market policies did not increase the public-debt-to-GDP ratio over the medium term. This is in part because the fiscal gains from higher output appear to offset the direct fiscal costs of these measures over this horizon (Figure 3, Panels B and C).

Figure 2. Output and Fiscal Effects of Employment Protection Legislation (Years on x-axis)



Source: IMF staff calculations.
Note: t = 0 is the year of the major reform shock (for details, see IMF 2016a). Solid blue lines denote the average estimated response to the shock; dashed blue lines denote 90 percent confidence intervals.

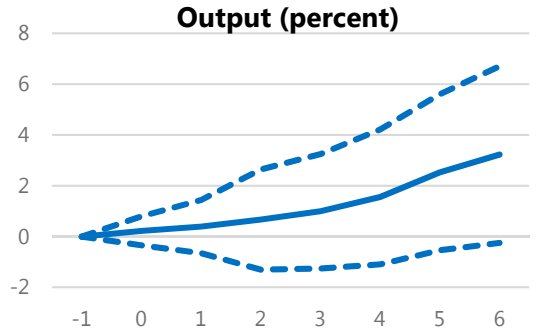
16. Limitations of empirical results. The results of the empirical analysis should be treated with care: such reforms have often been accompanied by other fiscal measures that cannot be fully controlled for in the analysis (see Technical Appendix 1 for details). For example, labor tax cuts were often accompanied by offsetting tax increases or spending cuts or both (IMF 2014a; and Technical Appendix 2), which could explain why the initial deterioration in the fiscal balance was lower than expected.[9] Moreover, the empirical estimates capture the *average* historical impact of major reforms on budgetary outcomes.[10] As such, they do not explicitly account for inherent uncertainty and cross-country heterogeneity regarding key variables (for example, output response to reforms, fiscal multipliers, and government funding costs).

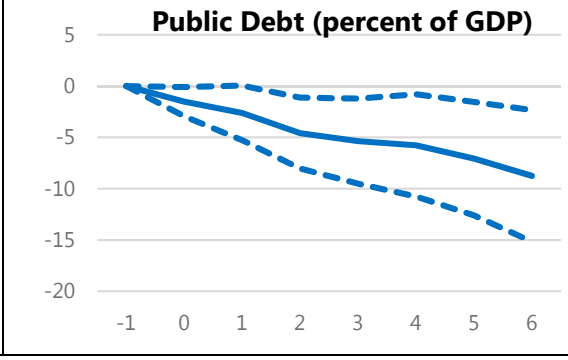
[9] As an illustration, assuming the labor tax wedge cut applies to all existing labor—an upper bound—and the labor share is about 60 percent, the immediate fiscal impact would be expected to be on the order of 0.6 percent of GDP, while our estimate is on the order of 0.2 percent of GDP. Using a different approach, IMF 2014 finds that a 1 percentage point cut in the labor tax wage reduced labor tax revenues by about 0.3 percent of GDP on average, close to our estimate.

[10] The analysis also assessed whether the effect of reform varies depending on initial fiscal positions (initial debt-to-GDP ratio, cyclically adjusted balance) and with the existence of fiscal rules. None of these factors were found to significantly affect our results.

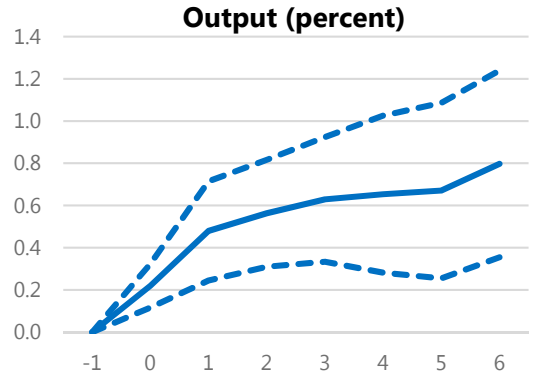
Figure 3. Output and Fiscal Effects of Reforms with Direct Fiscal Costs
(Years on x-axis)

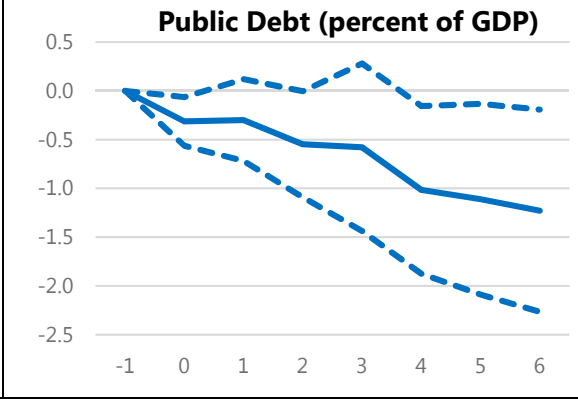
A. Unemployment Benefit Reforms (average major reform)



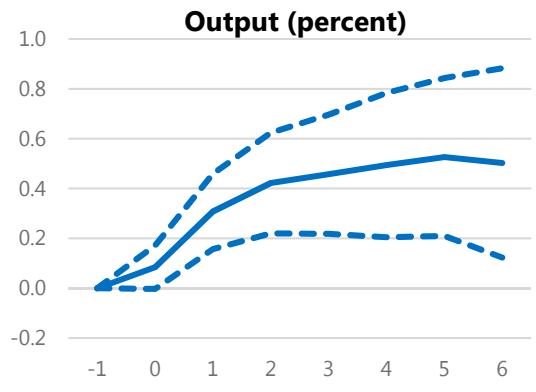


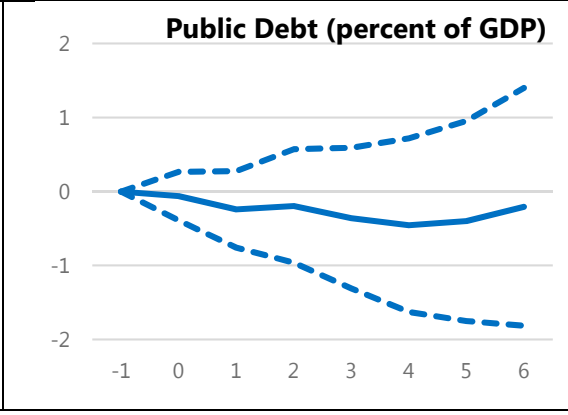
B. Labor Tax Wedge Cut (1 percentage point cut)





C. Active Labor Market Policies (10 percent increase in spending)





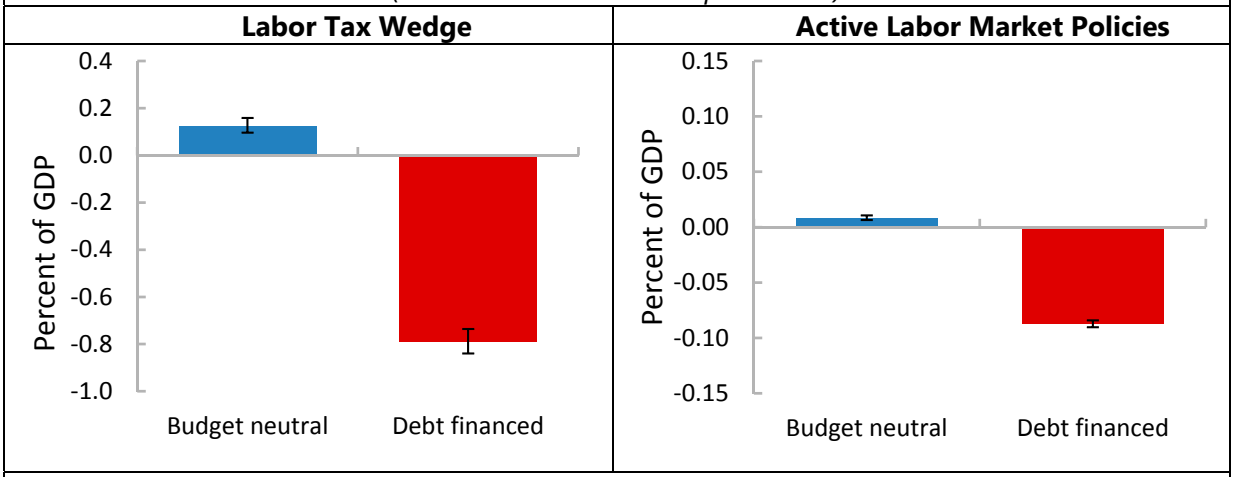
Source: IMF staff calculations.
Note: t = 0 is the year of the major reform shock (for details, see IMF 2016a). Solid blue lines denote the average estimated response to the shock; dashed blue lines denote 90 percent confidence intervals.

17. A complementary numerical framework. In order to address these issues, and examine the sensitivity of reform impacts on debt dynamics, we present complementary numerical simulations based on a simple framework inspired by DeLong and Summers (2012).[11] The simulation compares the potential short-term fiscal costs associated with certain structural reforms—such as debt-financed labor tax cuts or increases in public spending on active labor market policies—with their medium-term benefits through higher output. Over the medium term, the extent to which structural reforms raise potential output is the key driver of the evolution of the public-debt-to-GDP ratio since fiscal multipliers are assumed to be zero at this horizon—a more conservative assumption than in DeLong and Summers, which factors in the hysteresis effects of fiscal expansion or contraction. The framework is calibrated to countries that are members of the Organisation for Economic Co-operation and Development and uses among its key inputs the empirical estimates of the short- and medium-term output effects of debt-financed and budget-neutral changes in labor tax wedges and active labor market policy spending. Other inputs in the model calibration include current marginal tax rates and IMF *World Economic Outlook* forecasts of interest rates and the long-term growth rate of potential GDP over 2015–21 for a large sample of advanced economies. This illustrative framework is used to assess the degree of self-financing of different reform and fiscal packages and examine their sensitivity to key parameter values (see Technical Appendix 1 for details).

18. Budget-neutral fiscal structural reforms. The simulations suggest that higher spending on active labor market policies and labor tax wedge cuts generate net fiscal benefits over the medium term when implemented in a budget-neutral fashion; that is, when their direct fiscal cost is offset by other measures (Figure 4). This is because the reforms boost output and revenues while the direct fiscal costs are fully offset by design. However, if the budgetary costs of these reforms are financed through higher borrowing, fiscal benefits in terms of improved debt dynamics may not materialize. This is because the additional revenues collected from the higher output may be insufficient to offset the up-front fiscal costs associated with reforms. Budget-neutral implementation of these reforms yields smaller short-term output gains, but is associated with larger debt reductions than in the case in which the cost of reforms is uncompensated.

[11] The key intuition underlying the DeLong and Summers (2012) approach is that fiscal expansion has short-term and long-term effects. In the short term, it leads to (1) higher output through the fiscal multiplier and (2) a higher debt ratio as fiscal expansion needs to be financed through new debt. In the long term, fiscal expansion is self-financing if higher tax revenues due to higher long-term output exceed the fiscal costs associated with financing the new debt. We adapt this framework by considering the impact of structural reforms on short- and medium-term output levels as estimated in IMF 2016a (see Technical Appendix 1). As regards fiscal policy, we assume that the fiscal multiplier is positive in the short term but equal to zero over the medium term—a conservative assumption that assumes away the hysteresis effect of fiscal policy on output featured in DeLong and Summers 2012.

Figure 4. Net Medium-Term Fiscal Benefits of Budget-Neutral and Debt-Financed Cuts in the Labor Tax Wedge and Increases in Active Labor Market Policy Spending
(Positive values denote improvement)



Source: IMF staff calculations.
Note: The bars represent the net fiscal gains associated with labor tax wedge and active labor market policy reforms (1 percentage point cut and 10 percent increase in spending, respectively), as measured by the improvement in the overall fiscal balance over the medium term relative to the no-reform scenario. Budget-neutral reforms entail measures to offset the direct fiscal costs associated with the implementation of reforms. The error bars show minimum and maximum values in Organisation for Economic Co-operation and Development countries. See Technical Appendix 1 for a detailed explanation of the cost-benefit analysis underpinning estimates of net fiscal gains over the medium term.

FISCAL SUPPORT FOR REFORMS: IMPORTANCE OF BUSINESS CYCLE CONDITIONS

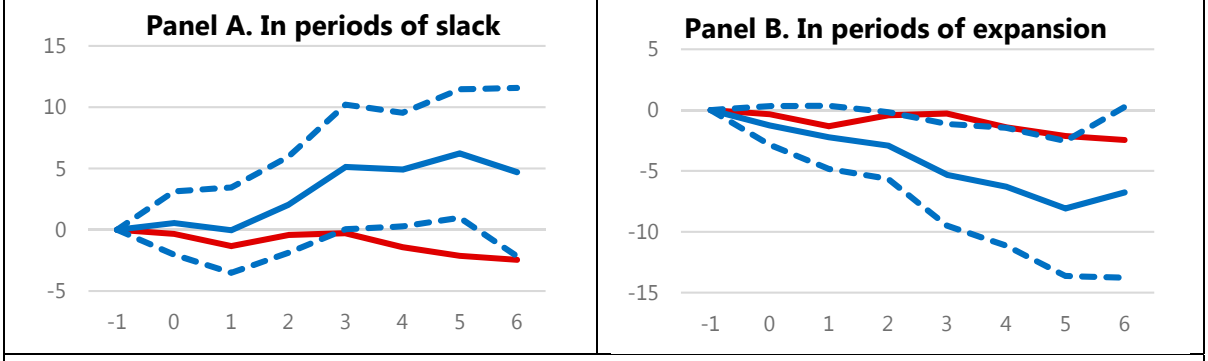
This section assesses the extent to which the fiscal impact of reforms varies with prevailing cyclical conditions at the time of implementation, and whether or not reform is accompanied by an up-front fiscal stimulus or contraction.

19. Business cycle conditions and impact of reform on output. The effects of different reforms on output vary depending on prevailing business cycle conditions. Product market reforms deliver a positive output effect in the medium term under both strong and weak cyclical conditions (IMF 2016a). In contrast, the output effect of labor market reforms depends on the state of economic activity and the type of reform. On the one hand, lower labor tax wedges and higher spending on active labor market policies appear to have larger effects on output under weak cyclical conditions. On the other hand, reforms to employment protection arrangements and unemployment benefit systems have positive effects in good times, but weak (unemployment benefits) or even negative (job protection) effects in bad times.[12]

[12] The weak output effect of a reduction in unemployment benefits is consistent with fiscal multipliers being larger in times of economic slack (Auerbach and Gorodnichenko 2012; Blanchard and Leigh 2013; Jordà and Taylor 2013;

20. Business cycle conditions and impact on fiscal positions. Because the impact of certain reforms varies depending on the state of economic activity, so does their impact on budgetary outcomes. In particular, job protection reforms, on average, increased the public-debt-to-GDP ratio when carried out in periods of major economic slack, while lowering it during good times (Figure 5). This is primarily because such reforms raise hiring more than layoffs (and thus employment and output) in expansions, but have the opposite effect in recessions. Likewise, unemployment benefit cuts reduce the public-debt-to-GDP ratio when carried out during expansions, but not if implemented during periods of major slack when the output effects are weaker.[13]

Figure 5. Impact of Employment Protection Legislation Reform on Public-Debt-to-GDP Ratio: The Role of Business Cycle Conditions
(percent of GDP; years on x-axis)



Source: IMF staff calculations.

Note: t = 0 is the year of the major reform shock (for details, see IMF 2016a). Solid blue lines denote the estimated response to the reform shock; dashed blue lines denote 90 percent confidence intervals. The solid red line shows the unconditional result (i.e., the average estimated impact across different growth regimes. The growth regime (expansion versus slack) is defined using a smooth transition function as in Auerbach and Gorodnichenko 2012, which takes values between 0 and 1 depending on the extent to which the economy is in recession (see Technical Appendix 1 for details). The charts show estimated impulse responses for large and low values of the smooth transition function, that is, assuming $F(z)$ = 0.75 and $F(z)$ = 0.25.

21. Role of fiscal stimulus in enhancing short-term effects of labor market reforms. By improving business cycle conditions, a temporary up-front fiscal stimulus can play a role in front-loading the macroeconomic benefits of certain labor market reforms (Bordon, Ebeke, and Shirono

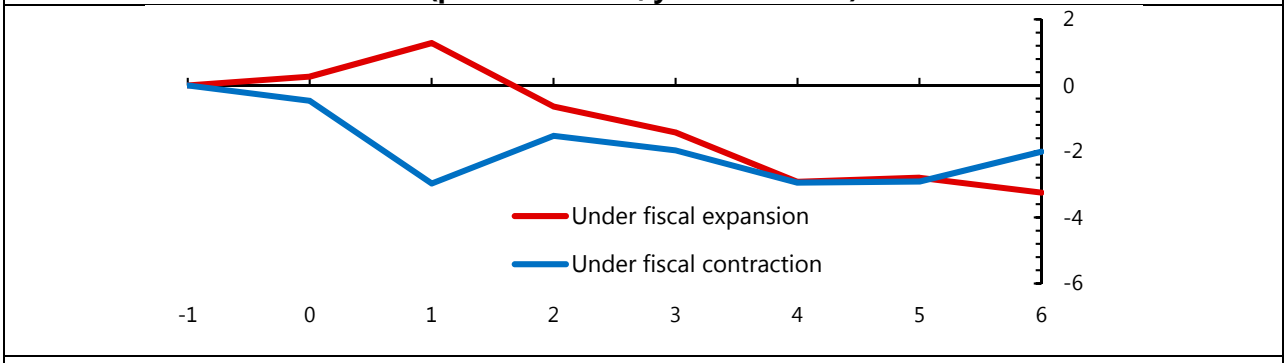
Abiad, Furceri, and Topalova 2015). Moreover, low-income households are more likely to respond to a reduction in transfers during downturns by cutting consumption (Mian and Sufi 2010). Job protection reforms can have a contractionary effect on economic activity in periods of economic slack as they can trigger immediate layoffs, weakening aggregate demand (Cacciatore and others 2016).

[13] The empirical specification examines whether these effects vary with overall business cycle conditions at the time of the reform, and between periods of fiscal expansion and contraction, by testing for interactions (see Technical Appendix 1). The difference between the two regimes, which reflects the different output effects of reforms during expansions and recessions, however, is less statistically significant and robust in the case of unemployment benefit reforms.

2016; IMF 2016a).[14] For instance, fiscal stimulus can motivate firms and workers to respond positively to employment protection reforms. This is because the more expansionary the fiscal policy, the stronger the aggregate demand: firms will respond to reforms by recruiting new workers and keeping existing ones rather than laying them off. This is confirmed by the empirical analysis, which shows that fiscal stimulus—in the form of an unanticipated government consumption shock that is uncorrelated with reforms, and has a direct positive effect on output in the short term but not in the medium term (see Technical Appendix 1 for details)—enhances the medium-term output and budgetary effects of these reforms in weak cyclical conditions. In particular, job protection reforms are found to lower the medium-term public-debt-to-GDP ratio if accompanied by up-front fiscal stimulus, but to increase it when undertaken in conjunction with a fiscal contraction. Qualitatively similar results hold in the case of unemployment benefit reforms.[15]

22. Package combining fiscal stimulus and reform. By increasing output directly through higher demand, and indirectly improving the response of output to certain labor market reforms, a package combining reforms with up-front fiscal stimulus can, on average, improve medium-term budgetary outcomes. In particular, a package combining job protection reform and fiscal stimulus initially increases the public-debt-to-GDP ratio thanks to the direct fiscal cost involved (Figure 6). But as reforms gradually increase output, public debt dynamics improve, with the public-debt-to-GDP ratio declining two years after the reform and falling below its pre-reform level after three years.

Figure 6. Effect of Employment Protection Legislation Reform on Public-Debt-to-GDP Ratio under Alternative Fiscal Policy Stances
(percent of GDP, years on x-axis)



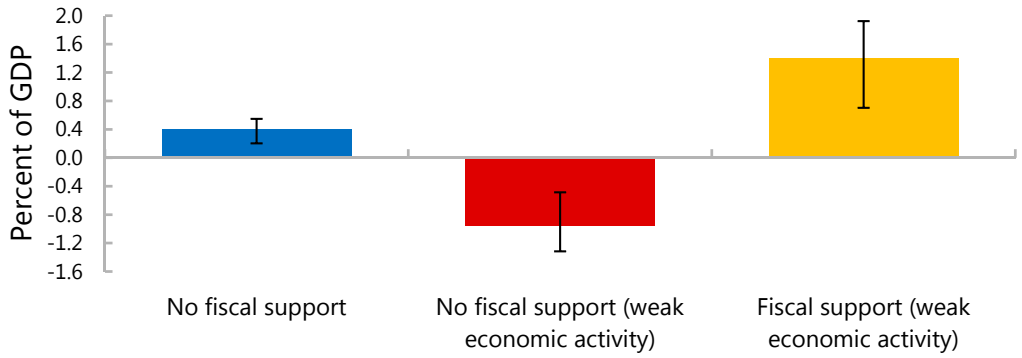
Source: IMF staff calculations.
Note: $t = 0$ is the year of the major reform shock. The solid blue (red) lines represent the average results under fiscal contractions (expansions). The fiscal policy regime (expansion versus contraction) is defined using a smooth transition function as in Auerbach and Gorodnichenko 2012, which takes values between 0 and 1 depending on the extent to which the economy is experiencing fiscal contraction. The charts show estimated impulse responses for large and low values of the smooth transition function, that is, assuming $F(z) = 0.75$ and $F(z) = 0.25$. $F(z) = 0.75$ (0.25) typically corresponds in the sample to an unanticipated government consumption shock of about –0.85(+0.85) percent of GDP.

[14] Coining the term "two-handed approach," Blanchard and others (1985) and Blanchard, Dornbusch, and Layard (1986) have argued that macroeconomic stimulus from aggregate demand policies can be necessary to foster the implementation and effectiveness of structural reform packages.

[15] These results do not vary in a statistically significant way across countries if the initial level of public debt is taken into account.

23. Numerical analysis. Simulations using the numerical framework mentioned above confirm that a package combining employment protection reforms with temporary fiscal stimulus is generally self-financing over the medium term under a plausible range of key parameter values. In the short term, the direct cost of stimulus is partly offset by its positive impact on output and, thereby, on tax revenues. In other words, the debt increase is lower than the size of the stimulus. Over the medium term, the reform boosts output and revenues, while the fiscal stimulus is conservatively assumed to have no medium-term effects. At the same time, up-front fiscal stimulus enhances the medium-term impact of the reform on output. Whether a package combining reform with fiscal expansion generates a net benefit over the medium term thus depends on whether the fiscal gain from reform exceeds the financing burden of the initial debt increase (see Technical Appendix 1 for a formal description of the framework). As can be seen from Figure 7, while employment protection reforms entail positive net fiscal benefits, this is not the case when implemented in weak cyclical conditions. An up-front fiscal expansion can improve the output response to reform, amplifying fiscal gains and making it self-financing when the impact of the reform starts to kick in. This result holds for a range of key parameter values, such as the fiscal multiplier, the interaction between fiscal stimulus and the output effect of reform, and country-specific government borrowing costs (Technical Appendix 1).

Figure 7. Net Fiscal Benefit of Job Protection Reforms under Weak Economic Conditions
(Positive values denote improvement)



Source: IMF staff calculations.
Note: The bars represent the net fiscal gains associated with job protection reforms, as measured by the improvement in the overall fiscal balance relative to the no-reform scenario over the medium-term. The blue bar represents the average net fiscal gain in all reform episodes. The red bar captures the average gains associated with reforms implemented under weak economic conditions without fiscal support. The yellow bar shows the average net gains associated with reforms implemented with support during periods of economic slack. The error bars indicate minimum and maximum values in Organisation for Economic Co-operation and Development countries. See Technical Appendix 1 for a detailed explanation of the cost-benefit analysis underpinning the estimates of net fiscal benefits over the medium term.

24. Caveats. Two important caveats should be taken into account when interpreting these results. First, the numerical simulations assume that real interest rates are exogenously determined and do not respond to fiscal actions or debt levels. While the results are robust to a range of plausible alternative calibrations of real interest rates, higher values make it less likely that a package combining up-front stimulus with reform can be self-financing, especially if the impact of reform is

less than expected (see Technical Appendix 1). The real interest rate response to fiscal stimulus would depend on the country's initial fiscal position, including initial debt levels; the credibility of reform plans and strength of implementation; and the availability of other policy levers to support demand beyond fiscal policy.[16] As such, the debt-growth trade-offs associated with discretionary support for certain labor market reforms would need to be carefully calibrated to country circumstances. A second caveat is that the numerical framework does not factor in any output effect from fiscal stimulus over the medium term, which could materialize if there is hysteresis when cyclical conditions are weak or if stimulus is focused on measures, such as higher infrastructure spending, that raise potential output (IMF 2014b). Including such effects would strengthen the argument for a package combining employment protection reforms with temporary fiscal stimulus (DeLong and Summers 2012).

FISCAL SUPPORT TO FACILITATE REFORMS

This section examines the use of (1) fiscal stimulus and measures to incentivize and promote structural reforms and (2) other factors that helped push reforms forward. It uses case studies of five major reformers and a narrative approach as well as counterfactual analysis.

25. Garnering political consensus for reforms. Structural reforms often entail winners and losers, making it difficult to get broad-based buy-in. The costs of reform can be immediate, directly observable, and concentrated, while the benefits can be more diffuse and uncertain and available over the longer term, generating a "collective action" problem (Olson 1965). Indeed, resistance to reforms and the risk of reform reversals have induced governments to take fiscal and other measures to mitigate their distributional impact (IMF 2014a).[17] Assessing how fiscal incentives can encourage the implementation of structural reforms is thus essential.

26. Evidence from country cases. Country case studies allow for more granular documentation of the use of fiscal incentives for structural reforms and the existence of other factors conducive to reforms, such as a strong political and economic mandate for reforms or social partnership arrangements. The former could reduce the need for fiscal incentives to implement reforms, whereas the latter could increase the likelihood of reform packages comprising quid pro-quo fiscal sweeteners in exchange for reforms.

27. Country selection. The case studies focus on a group of large and small advanced economies: Finland, Germany, Ireland, the Netherlands, and the United Kingdom (see Technical

[16] It is also important to keep in mind that although the theoretical framework hinges on transition to a new long-term steady state, the empirical estimates used for calibration are based on five-year-ahead impulse responses. Hence, only the medium-term impact of reforms is captured. Estimates of the output impact of reforms are also subject to uncertainty.

[17] Country experiences and previous empirical evidence are mixed, but have tended to suggest that reforms are more successfully adopted and implemented in countries that implemented fiscal stimulus (IMF 2004, 2016a; Beetsma and Debrun 2004; Høj, Nicoletti, and Dang 2006).

Appendix 2 for details). These countries were selected because they were some of the biggest reformers of the past three decades, implementing a large number and broad range of reforms during the period 1980–2007. They generally also have a record of fiscal prudence during their reform years. Together, their structural reform episodes capture the use of a broad range of fiscal measures to support structural reforms.

28. Coverage. To the extent possible, the case studies document the use of fiscal and other incentives for reforms undertaken in the five countries during reform episodes. Fiscal incentives cover measures implemented with a clear and well-documented intent to gain acceptance from different interest groups. They also include measures that were implemented simultaneously, potentially with a different objective in mind, but nevertheless helped advance reforms by mitigating potential social costs.[18]

29. The economic and political context for reforms. Countries generally undertook labor and product market reforms in the context of difficult economic conditions marked by high unemployment, a stagnant economy, and pressures on public finances. There was strong ownership amid a growing realization and an emerging consensus that reforms were unavoidable (Germany's Hartz reforms in the early 2000s; the United Kingdom's reforms of the 1980s; Finland's reforms of the 1990s; Ireland in the late 1980s; and the Netherlands in the 1980s and 1990s). Some governments explicitly ran on a reform mandate and won, signaling a general consensus for reforms (for example, the election of the Thatcher government in 1979). Reforms were also dictated by the need to adhere to EU laws and to maintain fiscal discipline in order to reduce government debt.

30. Incentivizing labor market reforms. A broad range of labor market reforms were implemented in the case study countries during 1980–2007. These included wage moderation and flexibility, including by reducing the strength of centralized collective bargaining, easing employment protection, tightening and rationalization of unemployment benefits, and strengthening of active labor market policies. A range of fiscal sweeteners—comprising temporary and permanent measures—were used to facilitate reforms, although in a few instances reforms were eventually reversed:

- Income tax rate cuts were widely used to secure buy-in for labor market reforms, especially the reduction and rationalization of unemployment benefits and social safety nets and wage moderation (in all countries). There was a special focus on reducing the tax burden for low incomes (all countries), a complementary labor market reform in itself; introducing progressively higher income tax thresholds to benefit the poor (Finland, Germany, Ireland, United Kingdom), and higher personal tax allowances (United Kingdom).[19]

[18] There are long leads and lags in the interaction of fiscal parameters and reforms (for example, fiscal incentives can coincide with, predate, or even follow the initiation of the reform). The case studies seek to document all such interactions over the arc of the reform.

[19] A more recent example is the 2015 unemployment benefit reform in Finland, which is slated to be supported by a number of supportive fiscal measures, such as tax cuts and increases in earned income tax credits.

- There was direct budget support for active labor market policies, such as wage subsidies (Germany) or temporary tax cuts for firms hiring the long-term unemployed (Netherlands); creation of subsidized jobs (Netherlands, Germany, United Kingdom); and the introduction of subsidies for firms hiring disabled workers (Netherlands).

- More generally, some countries implemented broad reform packages, often combining politically challenging structural measures with targeted fiscal measures. In particular, reforms of unemployment benefit systems and social assistance were accompanied by cuts in labor taxes for low-income workers and higher spending on active labor market policies targeted at the low skilled (including youth) and the long-term unemployed (Finland, Germany, Netherlands, United Kingdom). In addition, some countries made a concerted effort to improve the investment climate for small and medium-sized businesses to facilitate employment (Finland, Ireland, United Kingdom) and labor mobility (pension portability and housing market reforms in the United Kingdom).

- Given the prominent role of social partnerships in all countries, other incentives were also quite important, including the use of grandfathering to reduce the burden of adjustment on current beneficiaries (for example, the Netherlands for disability insurance and Germany for the reduction in unemployment benefits in the 1990s).[20] Myriad other factors also helped push reforms forward, such as the gradual decline in the strength of centralized collective bargaining (Ireland, Netherlands, United Kingdom) and effective prioritization of reforms, with the most important and politically easiest implemented first (Germany's Hartz reforms and the reform of disability insurance in the Netherlands in the early 2000s) and the use of EU funds for targeted regional support.

31. Promoting product market reforms. Product market reforms implemented by the case study countries included the deregulation and privatization of network industries and state-owned enterprises; improvements in the business climate, including through the deregulation of various sectors; and the harmonization of competition policies with EU laws. Fiscal-reform interlinkages varied across these different types of reforms:

- Reforms to improve the business climate were accompanied by corporate tax cuts in some countries (Germany, Ireland, United Kingdom), although not in Finland or the Netherlands. For example, Germany reduced the corporate tax burden for small and medium enterprises and shifted it to larger corporations in the late 1990s.[21] Concurrently, small and medium enterprises were given greater access to capital, barriers to trade were reduced, and procedures for starting new businesses were simplified.

[20] For example, the 1982 Wassenaar Agreement in the Netherlands between trade unions, employers, and the government was an agreement to lower wages in exchange for shorter workweeks. Moreover, in Ireland, the government and social partners reached four partnership agreements during 1987–2003 that included agreement on the development of a wide range of state services. These included social welfare transfers and the privatization of state assets in exchange for overall fiscal restraint. In time, such agreements were broadened to include representation from groups other than employers and trade unions, such as the unemployed.

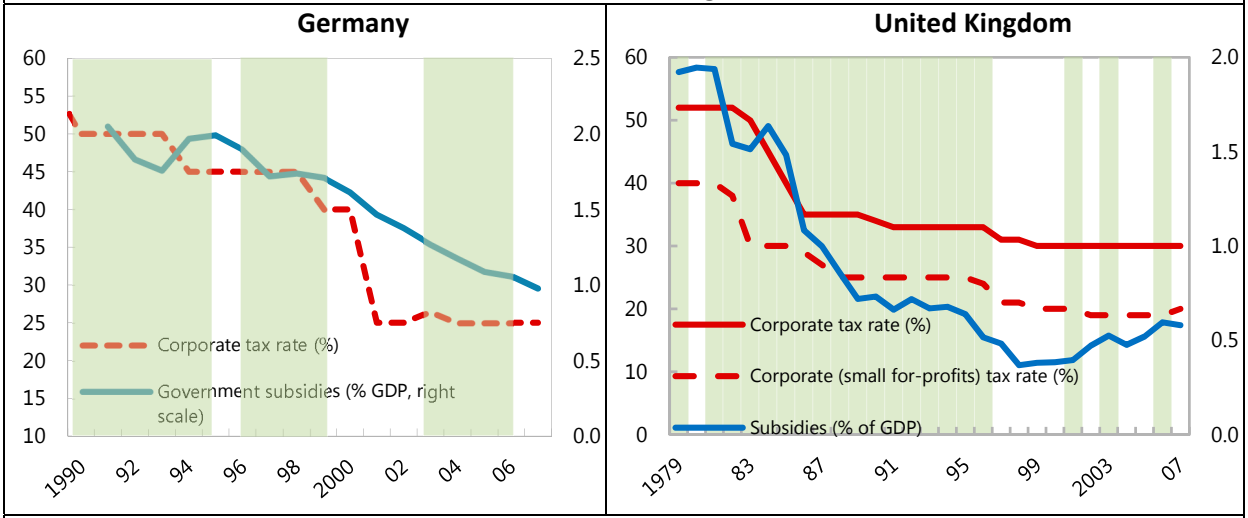
[21] Tax incentives for small and medium enterprises, however, had the unintended consequence of discouraging firm expansion, thereby holding back their productivity growth (IMF 2015b).

- There was a significant use of fiscal sweeteners to initiate privatization. This took many forms, such as reducing debt-related pension liabilities (Ireland) and granting share options to employees (Ireland, United Kingdom). The privatization of East German companies during 1990–95, which included agreements on a lower selling price, grants, debt cancellation, redundancy payments, budget support for the wage bill, and special early retirement plans, was a special case. Privatization was accompanied by active labor market policies, including public works programs to support the unemployed.

- Given the strong public sector footprint in several sectors of the economy, the privatization of state-owned enterprises helped reduce public sector subsidies over time (Finland, Germany, Ireland, United Kingdom) and remove impending future infrastructure investment expenditures and debts off these countries' balance sheets (Figure 8). Privatization receipts were used to service government debt (Finland, Germany); for investment and research and development (Finland); to strengthen the privatized entity (Finland); and to cover future pension liabilities (Ireland).

- Reforms that included deregulation and the enhancement of competition were largely fostered by the need to comply with EU directives (all countries). In addition, some reforms were incentivized by grandfathering—for example, during the liberalization of professional services in the Netherlands there was a two-year transition period for public notaries. In a few cases, fiscal sweeteners were used after reforms were completed (that is, ex post)—such as special tax relief that allowed a write-off of capital losses from the deregulation of the taxi industry in Ireland (Box 1)—but these were the exception rather than the rule.

Figure 8. Product Market Reforms, Corporate Tax Rates, and Government Subsidies in Germany and the United Kingdom



Sources: IMF, *World Economic Outlook;* Rhodes, Hough, and Butcher 2014 U.K. Office for National Statistics; and IMF staff estimates.
Note: The shaded areas indicate episodes of product market reforms (see Technical Appendix 2 for details).

32. A rationale for fiscal support to facilitate product market reforms. Up-front temporary fiscal support for product market deregulation can yield a net fiscal gain in the medium term, aside from any direct effect on fiscal revenues from privatization. This is because such reforms improve

debt sustainability by boosting output and revenues and entail limited direct budgetary costs. Illustrative numerical simulations using the framework shown earlier, and subject to similar caveats, suggest that 1 percent up-front fiscal relaxation to support product market reform yields a net fiscal benefit over the medium term, even if the direct impact of the fiscal stimulus on medium-term output is set to zero (Figure 9). Thus, both the historical narrative and numerical simulations provide some rationale for fiscal incentives to facilitate product market deregulation.[22] That said, the amount of fiscal support that could be provided to alleviate political and adjustment costs associated with these reforms depends on several factors, including the country's initial fiscal position; the strength, ownership, and credibility of reforms; and the identification and measurement of welfare losses from reforms.

Box 1. An Example of Post-Reform Fiscal Incentives

The Liberalization of the Dublin Taxi Market

Reform:[1] The Dublin taxi industry was under state licensing control until 1997. Almost no new taxi licenses were issued during 1978–91, resulting in poor taxi service that could not keep up with strong demand driven by the substantial economic growth of the 1990s. In 1998, in response to consumer pressures, a team of consultants concluded that an immediate doubling of the number of taxis was warranted to address supply shortages. They recommended a gradual approach to full liberalization over 10 years to ensure an orderly market transition and to prevent substantial losses for taxi drivers who had recently purchased expensive taxi licenses in the open market. The implementation of these recommendations was stalled by litigation and threats of strikes. In 2000, the High Court ruled that the government could not restrict the granting of additional taxi licenses to existing license holders. The government introduced new regulations setting up a licensing system with uniform national fees and barred local authorities from imposing numerical limits. The result was an immediate and full liberalization of entry into the taxi market.

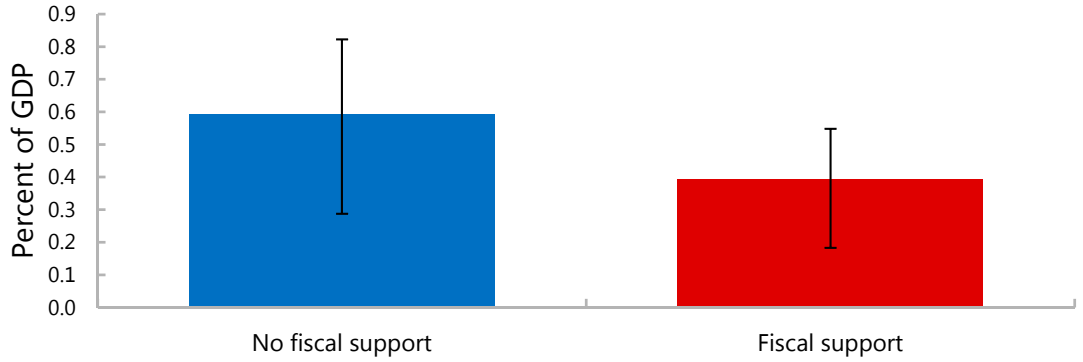
Fiscal incentives: As a conciliatory gesture to license holders who suffered a loss in the capital value of their licenses, a special tax-relief provision that allowed license holders to write off their capital loss over a number of years was introduced after the reform. Taxi drivers could write off the actual cost of a taxi license retroactively for three years over a five-year period under the provisions in the Finance Bill (2001) Preliminary List. Although the compensation speeded reform by reducing industry resistance to lower revenue for protected incumbents, it also motivated firms in other markets to lobby for similar treatment (OECD 2001).

1/ Based on Barrett 2010 and OECD 1999, 2001a, and 2001b).

[22] At the current juncture, such support could be relevant in the deregulation of retail trade and professional services where political economy constraints have been found to impede reforms (Wyplosz and Delpla 2007).

Figure 9. Net Fiscal Benefit of Product Market Reforms under Weak Business Cycle Conditions

(Positive values denote improvement)



Source: IMF staff calculations.

Note: The bars represent the net fiscal gains associated with product market reforms, as measured by the improvement in the overall fiscal balance relative to the no-reform scenario over the medium-term. The blue bar represents the average net fiscal gain in all reform episodes. The red bar captures the average gains associated with reforms implemented in weak economic conditions and supported by fiscal stimulus. The error bars show minimum and maximum values in Organization for Economic Co-operation and Development countries. The medium-term multiplier for the fiscal support is conservatively assumed to be zero in this exercise. See Technical Appendix 1 for a detailed explanation of the cost-benefit analysis underpinning the estimates of net fiscal gains over the medium term.

33. Counterfactual analysis. The case studies are also supported by an empirical assessment of the effect of structural reforms on fiscal variables using the synthetic control method (SCM). This approach allows us to measure the deviations between the performance of reforming countries and their non-reforming counterfactuals (see Technical Appendix 2 for details).[23] Examining broad reform episodes involving multiple reforms in Finland, Germany, Ireland, and the Netherlands suggests the following (Figure 10):

- Consistent with findings from the case studies, reforms were systematically associated with tax cuts. In most cases, tax rates were reduced relative to non-reforming counterfactual countries, including personal income tax cuts (Finland), the value-added tax rate (Netherlands), personal income tax and corporate tax rates (Germany), and a combination of rates (Ireland).

- Fiscal consolidation undertaken in some cases was financed by cuts in public investment. Germany and Finland embarked on overall fiscal consolidation while implementing product and

[23] The SCM is a data-driven technique that identifies a synthetic counterfactual country (the counterfactual) for comparison with the reforming case study country (reformer). The counterfactual analysis was based on reform phases instead of individual reforms as many reforms were implemented in packages, resulting in overlaps between the impact of individual reforms. The determination of the beginning of the reform phase in countries was based on judgment given the leads and lags in the interaction between fiscal measures and structural reforms. The selected dates are Finland (1997), Germany (2003), Ireland (1999), and the Netherlands (1994). For a full discussion of the strengths and weaknesses of this approach, see Technical Appendix 2. The pretreatment fit was strong as evidenced by low root mean square prediction.

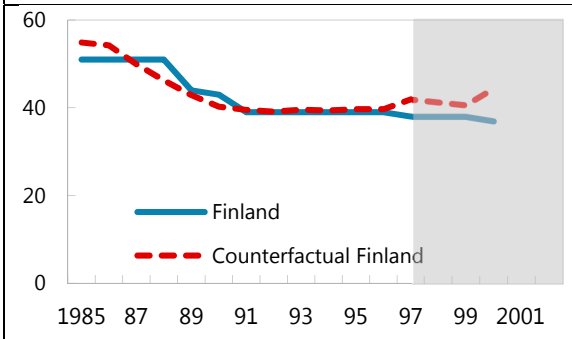
labor market reforms, unlike Ireland and the Netherlands, which had more supportive policies. The former experienced a decline in public investment that was significantly larger than in the counterfactual countries or was on a declining trend following the reform (Finland). Ireland, on the other hand, was able to increase public investment well above that of its counterfactual country.

- Countries that provided fiscal stimulus (Ireland, Netherlands) experienced a larger reduction in public debt than the non-reforming counterfactuals, consistent with the findings of the previous section. In contrast, countries that pursued fiscal consolidation experienced a small decline in general government debt (Finland) or no decline in general government debt relative to its synthetic counterfactual (Germany).

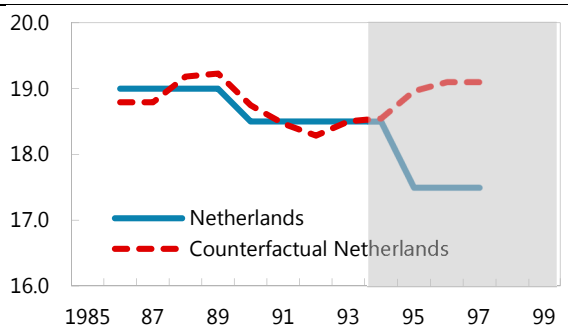
34. Conclusion from country experiences. Case studies of selected major reformers show widespread use of fiscal instruments to incentivize structural reforms. Labor market reforms were often accompanied by income tax rate cuts, increases in income tax thresholds, and other reforms, such as active labor market policies, that cushioned the reforms' impact on the vulnerable. Product market reforms were generally accompanied by corporate tax rate cuts and occasionally by the use of fiscal sweeteners. Non-fiscal factors, such as EU countries' compliance with EU directives, also played an important role in driving reform. Reforms led to a decline in government-debt-to-GDP ratios, which was larger where the fiscal stance accompanying reforms was more supportive. However, fiscal incentives for reform accompanied by fiscal consolidation were sometimes "paid for" by cuts in public investment. Such cuts can undo the benefits of reforms (Box 2). Country studies also suggest that the ownership and design of reforms were a critical ingredient of their success.

Figure 10. How Reformers Fared Relative to Counterfactuals, Selected Countries
(Synthetic control method)

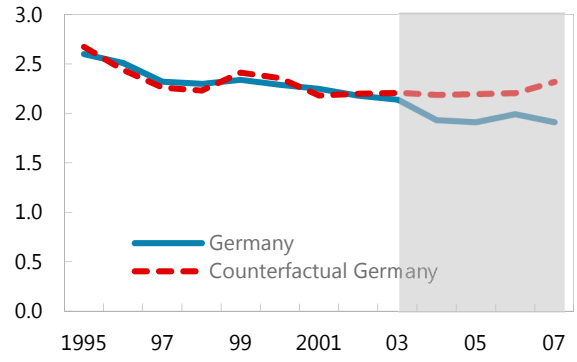
Finland: Individual Tax Rate (percent)



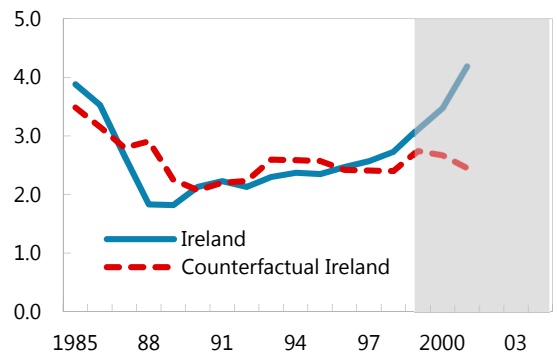
Netherlands: VAT Tax Rate (percent)



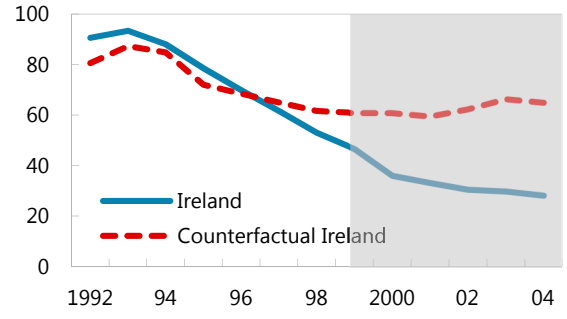
Germany: Public Investment (percent of GDP)



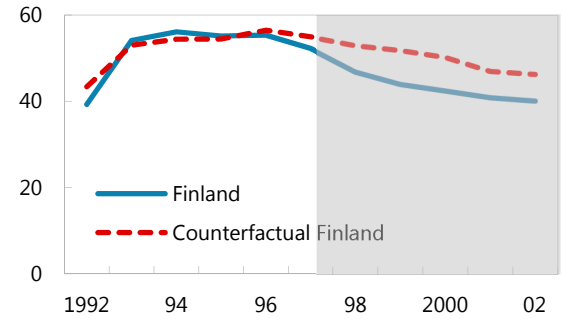
Ireland: Public Investment (percent of GDP)



Ireland: General Government Debt (percent of GDP)



Finland: General Government Debt (percent of GDP)



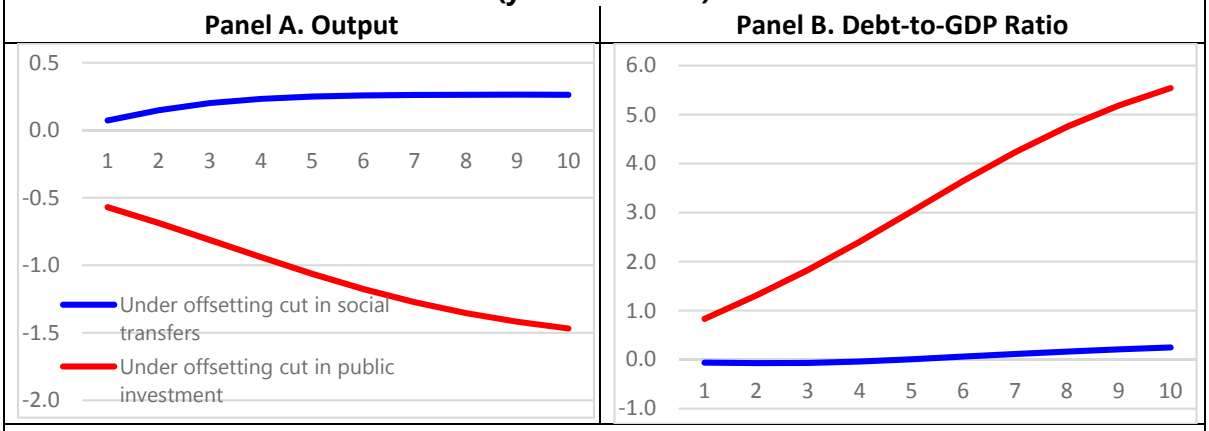
Sources: IMF, *World Economic Outlook*; and IMF staff estimates.
Note: For a detailed discussion of the methodology, see Technical Appendix 2. VAT = value-added tax.

Box 2. Impact of Counterproductive Offsetting Fiscal Measures: An Illustration

Insofar as fiscal incentives for reform accompanied by fiscal consolidation are "paid for" by cuts in public investment, growth can be affected and the gains from reforms may be undone. This issue came to the fore as the financial crisis prompted politically easier cuts in government investment in many advanced economies, reinforcing a long-term declining trend (IMF 2014b; Eyraud and Wu 2015).

As an illustration, the IMF's Global Integrated Monetary and Fiscal Model (GIMF) is used to simulate the impact of a 1 percent labor tax wedge cut across the euro area on GDP and on the public-debt-to-GDP ratio under two financing measures: (1) a cut in lump-sum social transfers that leaves output essentially unchanged; and (2) a cut in public investment with a large output loss in the short term through fiscal multiplier effects. The latter are particularly large, with monetary policy assumed to be constrained by the effective lower bound on interest rates. Over the long term, a decline in the economy's productive capacity drags down output. Figure 2.1 shows that the output and fiscal losses from the public investment cut vastly offset the gains from the labor tax wedge cut.

Figure 2.1. Effect of a Labor Tax Wedge Cut on Output and the Public-Debt-to-GDP Ratio under Alternative Offsetting Financing Measures
(years on x-axis)



Source: IMF staff calculations.
Note: the figure shows IMF Global Integrated Monetary and Fiscal Model simulations of the impact on euro area GDP (panel 1) and the public-debt-to-GDP ratio (panel 2) of a 1 percentage point cut in the labor tax wedge across the euro area implemented in quarter t = 0, depending on whether the fiscal cost of the tax cut is offset by (1) a cut in lump-sum social transfers (blue line) or (2) a cut in public investment (red line). Monetary policy is assumed to be constrained by the effective lower bound.

POLICY DISCUSSION

35. Initial fiscal support can facilitate reforms that yield subsequent fiscal gains. . . The analysis in this note makes a case for fiscal policy to support the implementation of labor and product market reforms that lift productivity and employment. Temporary loosening of the fiscal stance can ensure that gains are spread widely across the population, thereby enhancing the likelihood of reforms being implemented and sustained. Under weak cyclical conditions, temporary fiscal support can front-load the gains of economically costly and difficult labor market reforms over and above its direct effect on output. This can be especially valuable if there is limited scope for other macroeconomic policies, such as monetary and exchange rate policy, and for other forms of extra-national financial support to address temporary weakness in aggregate demand resulting from

reforms, or if the labor market is scarred by a protracted recession. The higher output from reform, in turn, can improve public finances over the medium term, serving to offset the cost associated with the initial fiscal support provided. Temporary loosening of the fiscal stance can also ease distributional costs and ensure that income gains are spread widely across the population, thereby enhancing the likelihood of beneficial reforms being implemented and sustained. These positive effects are further strengthened if the real interest rate remains below the GDP growth rate and if direct effects of the stimulus on medium-term output—ignored here, but possible for example if the stimulus prioritizes high-return infrastructure projects—are taken into account. At the same time, higher government funding costs and adverse market reactions to low-quality stimulus and weak reforms would reduce the likelihood of net fiscal gains.

36. . . . but design, credible political commitment to strong reforms—including strong ownership—and macroeconomic conditions are key. For fiscal support to be successful, it should be temporary, targeted, and conditional on political commitment to major reforms. This will minimize the up-front fiscal cost, maximize the medium-term gain, and ensure continued availability and low financing costs. If used as part of a package to boost the output effect of reforms, fiscal support could have a larger impact under weak cyclical conditions or as a complement to specific labor market reforms—such as employment protection and unemployment benefit reform—that could otherwise temporarily weaken aggregate demand. If used to get buy-in for reforms, fiscal support should target the more vulnerable and groups who demonstrably bear the brunt of the reforms. In other words, losses should be well identified and measurable. In addition, fiscal support should be conditional on credible implementation of major reforms that cannot be easily reversed. Regardless of the objective, fiscal incentives should avoid distortive tax and expenditure policies and prioritize measures that raise long-term output—for example, infrastructure spending on high-return projects.

37. Consideration of fiscal space is also crucial. Ultimately, and as highlighted in the IMF's *Guiding Framework for Structural Reforms* prepared for the Group of 20 (IMF 2016b), the case for fiscal policy support for structural reforms depends on the reform and the country, particularly on the fiscal position of the economy and, relatedly, the likely reaction of financial markets.

- Conceptually, even in countries with limited fiscal space, temporary up-front fiscal support could mitigate the short-term economic and social costs of some reforms—for example, the costs of difficult labor market reforms implemented under weak cyclical conditions. If reforms are strong and credible and can be fully implemented, a package including temporary fiscal support could help mitigate short-term costs while still strengthening medium-term public finances.

Fiscal support is not warranted, however, in countries without fiscal space if their commitment to fiscal prudence and reform lacks credibility because of weak reform ownership or a track record of reversals or poor implementation. In such cases, reforms must be carefully prioritized and sequenced and favor lower-cost measures that have a beneficial impact on public finances, such as

lowering barriers to product market entry. Labor market reforms should also be designed to front-load their output and fiscal gains through expectation effects—for example, by passing employment protection legislation reforms that do not take effect immediately, so as to boost hiring right away without increasing layoffs. Budget-neutral implementation of unemployment benefit reforms, labor tax wedge cuts, and active labor market policies should be considered, but as part of a broader growth-friendly reform package. For instance, broadening the tax base can reduce inefficiency and generate revenue to finance high-payoff but costly reforms, such as labor tax cuts. Cuts in public investment to finance fiscal incentives should be avoided as their harmful long-term effect on output can undo reform gains.

38. The design and implementation of fiscal rules should build in some flexibility, for example, as is already provided by the Stability and Growth Pact in the European Union. This would allow for sufficient time for the full beneficial effects of reforms for output and public debt (six years or so on average for product market reforms) to materialize. Such flexibility would also help reduce the risk of fiscal support for reforms at the expense of harmful cuts in public investment, with a potentially negative long-term growth impact. Moreover, in order to preserve the credibility of the fiscal framework and confidence in a country's efforts to ensure fiscal sustainability, such flexibility could depend on credible major measures (including possibly after reform). More generally, to preserve debt sustainability and anchor confidence, fiscal relaxation in support of structural reforms should be accompanied by a credible commitment to a medium-term plan clarifying the long-term objectives of fiscal policy. This could help instill market confidence and facilitate reform adoption while amplifying medium-term payoffs. More detailed work on the implications of this note for the design and implementation of fiscal rules is left for future research

39. Role of fiscal and other institutions. Effective institutions—such as independent fiscal councils and productivity commissions—can help improve transparency and generate consensus for reforms by fostering awareness about the need for and impact of reforms. Fiscal councils could help by providing detailed analysis and unbiased assessments of structural reform payoffs. Many fiscal councils are in a good position to carry out this function; they already assess the short-term and long-term impact of particular policy initiatives, including of a structural nature and provided they have budgetary implications. Productivity councils could also be charged with designing reforms in consultation with stakeholders, monitoring implementation and preliminary outcomes, and proposing amendments to action plans—including fiscal actions—as necessary for success. Such entities have been playing a useful role in several countries, such as Australia, Belgium, Germany, the Netherlands, and New Zealand.

REFERENCES

Abiad, Abdul, Davide Furceri, and Petia Topalova. 2015. "The Macroeconomic Effects of Public Investment: Evidence from Advanced Economies." IMF Working Paper 15/95, International Monetary Fund, Washington, DC.

Auerbach, A. J., and Y. Gorodnichenko. 2012. "Measuring the Output Responses to Fiscal Policy." *American Economic Journal: Economic Policy* 4 (2): 1–27.

Barkbu B., J. Rahman, R. Valdés, and an IMF staff team. 2012. "Fostering Growth in Europe Now." IMF Staff Discussion Note 12/07, International Monetary Fund, Washington, DC.

Barrett, Sean D. 2010. "The Sustained Impacts of Taxi Deregulation," *Economic Affairs* 30 (1): 61–65.

Beetsma, R., and X. Debrun. 2004. "Reconciling Stability and Growth: Smart Pacts and Structural Reforms." *IMF Staff Papers* 51 (3).

Blanchard, O. J. 2006. "European Unemployment: The Evolution of Facts and Ideas," *Economic Policy* 21 (45): 5–59.

———, G. Dell'Ariccia, and P. Mauro. 2013. "Rethinking Macro Policy II: Getting Granular." IMF Staff Discussion Note 13/03, International Monetary Fund, Washington, DC.

———, R. Dornbusch, J. Dreze, H. Giersch, R. Layard, and M. Monti. 1985. "Employment and Growth in Europe: A Two-Handed Approach: Report of the CEPS Macroeconomic Policy Group." *Economic Papers* 36.

———, R. Dornbusch, and R. Layard. 1986. *Restoring Europe's Prosperity*. Cambridge, MA: MIT Press.

———, and D. Leigh. 2013. "Growth Forecast Errors and Fiscal Multipliers." *American Economic Review* 103 (3): 117–20.

Bordon, A. R., C. Ebeke, and K. Shirono. 2016. "When Do Structural Reforms Work? On the Role of the Business Cycle and Macroeconomic Policies." IMF Working Paper 62, International Monetary Fund, Washington, DC.

Bouis, R., and R. Duval. 2011. "Raising Potential Growth after the Crisis: A Quantitative Assessment of the Potential Gains from Various Structural Reforms in the OECD Area and Beyond." OECD Economics Department Working Paper 835, Organisation for Economic Co-operation and Development, Paris.

Cacciatore, Matteo, Romain Duval, Giuseppe Fiori, and Fabio Ghironi. 2016. "Market Reforms in the Time of Imbalance." *Journal of Economic Dynamics and Control*.

Cette, G., J. Lopez, and J. Mairesse. 2016. "Market Regulations, Prices, and Productivity," *American Economic Review* 106 (5): 104–08.

Dabla-Norris, E., S. Guo, V. Haksar, M. Kim, K. Kochhar, K. Wiseman, and A. Zdzienicka. 2015. "The New Normal: A Sector-level Perspective on Productivity Trends in Advanced Economies." IMF Staff Discussion Note 15/3, International Monetary Fund, Washington, DC.

DeLong J. B., and L. H. Summers. 2012. "Fiscal Policy in a Depressed Economy." *Brookings Papers on Economic Activity* 44 (1): 233–97.

Deroose, S., and A. Turrini. 2006. "The Short-Term Budgetary Implications of Structural Reforms: Evidence from a Panel of EU Countries." In *Proceedings from the ECFIN Workshop "The Budgetary Implications of Structural Reforms,"* Brussels, December 2, 2005.

Duval, Romain. D. Furceri, J. Jalles, and H. Nguyen. Forthcoming. "A New Narrative Database of Product and Labor Market Reforms in Advanced Economies." IMF Working Paper, International Monetary Fund, Washington, DC.

Égert, B. 2016. "Regulation, Institutions, and Productivity: New Macroeconomic Evidence from OECD Countries." *American Economic Review* 106 (5): 109–13.

Eyraud, L., and T. Wu. 2015. "Playing by the Rules: Reforming Fiscal Governance in Europe." IMF Working Paper 15/67, International Monetary Fund, Washington, DC.

Gal, P., and A. Theising. 2015. "The Macroeconomic Impact of Structural Policies on Labour Market Outcomes in OECD Countries: A Reassessment." OECD Economics Department Working Paper 1271, Organisation for Economic Co-operation and Development, Paris.

Gaspar, V., M. Obstfeld, and R., Sahay. 2016. "Macroeconomic Management When Policy Space Is Constrained: A Comprehensive, Consistent, and Coordinated Approach to Economic Policy." IMF Staff Discussion Note 16/09, International Monetary Fund, Washington, DC.

Heinemann, F. 2005. "How Distant Is Lisbon from Maastricht? The Short-Run Link between Structural Reforms and Budgetary Performance." In *Proceedings from the ECFIN Workshop "The Budgetary Implications of Structural Reforms,"* December 2, 2005, edited by S. Deroose, E. Flores, and A. Turrini.

Hoeller, P., and C. Giorno. 2006. "Nothing Ventured, Nothing Gained: The Long-Run Fiscal Reward of Structural Reform." Economics Department Working Paper 493, Organisation for Economic Co-operation and Development, Paris.

Høj J., V. Galasso, G. Nicoletti, and T. Dang. 2006. "An Empirical Investigation of Political Economy Factors behind Structural Reforms in OECD Countries." OECD Economic Studies 41, Organisation for Economic Co-operation and Development, Paris.

International Monetary Fund (IMF). 2004. "Fostering Structural Reforms in Industrial Countries." *World Economic Outlook,* Chapter 3, Washington, DC, April.

———. 2014a. "Can Fiscal Policies Do More for Jobs?" *Fiscal Monitor,* Chapter 2, Washington, DC, October.

———. 2014b. "Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment" *World Economic Outlook,* Chapter 3, Washington, DC, October.

———. 2015a. "Fiscal Policy and Long-term Growth." IMF Policy Paper, Washington, DC.

———. 2015b. *Spain—Selected Issues, Obstacles to Firm Growth in Spain,* IMF Country Report 15/233, Washington, DC.

———. 2016a. "Time for a Supply-Side Boost? Macroeconomic Effects of Labor and Product Market Reforms in Advanced Economies." *World Economic Outlook*, Chapter 3, Washington, DC, April.

———. 2016b. "A Guiding Framework for Structural Reforms." IMF Staff Note for the G20, Washington, DC.

Jordà, Òscar, and Alan Taylor. 2013. "The Time for Austerity: Estimating the Average Treatment Effect of Fiscal Policy." NBER Working Paper 19414, National Bureau of Economic Research, Cambridge, MA.

Mian, Atif R., and Amir Sufi. 2010. "Household Leverage and the Recession of 2007 to 2009." NBER Working Paper 15896, National Bureau of Economic Research, Cambridge, MA.

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

Organisation for Economic Co-operation and Development (OECD). 1999. "Other Structural Reforms." In *OECD Economic Surveys: Ireland 1999*. Paris.

———. 2001a, Page 69 (see footnote 61).

_____. 2001b. OECD Reviews of Regulatory Reform, Regulatory Reform in Ireland, Paris.

Rhodes, Chris, David Hough, and Louise Butcher. 2014. "Privatization." House of Commons Library, Research Paper 14/61, London.

Wyplosz, C., and J. Delpla. 2007. *La fin des privileges, payer pour reformer*. Paris: Hachette Litterature.