FISCAL POLICY AND GROWTH: WHY, WHAT, AND HOW?

Key messages:

- ✓ A number of tax and expenditure policies can help increase employment, private investment and productivity, and thereby countries' growth potential (Table 1).
- ✓ There is no "one size fits all"—the optimal mix of policies depends on country-specific conditions, preferences and administrative capacities.
- ✓ Policy design and social consensus matter for the successful implementation of reforms.
- ✓ Appropriately designed, fiscal reform packages can serve both growth and equity objectives.
- ✓ If countries so require, there are a number of options for creating fiscal space in the least harmful way for growth and equity.
- ✓ For countries that cannot (or do not need to) expand fiscal space, growth prospects can be enhanced through budget-neutral reforms.

At the Brisbane summit, G-20 leaders established "raising global growth to deliver better living standards and quality jobs for people across the world" as their highest priority. This note aims to provide policy-makers with practical guidance on how fiscal policy instruments may be applied towards this goal.

I. INTRODUCTION

1. **Increasing potential output is a priority in major advanced and emerging market economies.** In the aftermath of the global financial crisis, the level of potential output in many affected countries declined sharply; and the reduction in its growth rate still persists (IMF, 2015a). Restoring robust growth is essential for addressing the challenges ahead and will require making effective use of all fiscal tools that are available to policy-makers.

Table 1. Menu of Options: Fiscal Policies for Medium- to Long-Term Growth

	Advanced Economies	Emerging Economies
Macroeconomic Stability		
Reduce large fiscal deficits	xxx	xxx
Adjust pace and composition of fiscal consolidation to protect growth	xxx	xxx
Contain increase in age-related expenditure	xxx	xx
Structural Fiscal Policies		
Policies to encourage labor supply		
Reduce labor taxes, especially at low income levels	xxx	xx
Redesign unemployment benefits, including by ajusting eligibility and duration	xxx	xx
Provide in-work benefits and tax credits	xxx	xx
Increase use of active labor market programs (ALMPs)	xxx	xx
Stimulate labor force participation of:		
-women, including through individual taxation	xxx	xx
-older workers, by restricting early retirement and providing tax incentives	xxx	xx
-low-skilled workers, through targeted ALMPs and use of in-work benefits	xxx	xx
Policies to enhance investment in physical capital		
Design a system that taxes excess returns on capital	xxx	xx
Provide well-designed tax incentives that reduce the cost of capital	xxx	xx
Protect or increase the public capital stock	xxx	xxx
Enhance the productivity of public investment by strengthening the investment process	xx	xx
Policies to support human capital development		
Provide access to education for disadvantaged groups by:		
-spending more at lower levels	xxx	xxx
-increasing cost-recovery for tertiary education	xxx	xx
-conditioning cash transfers on school enrollment	xx	xxx
Expand access to basic healthcare by:		
-reducing user charges for low-income households	xx	xxx
-addressing supply-side barriers in less developed areas	x	xxx
-conditioning cash transfers on preventive health visits	x	xxx
Policies to increase total factor productivity and promote technological progress		
Grant tax credits or deductions for R&D	xxx	xx
Increase public R&D spending	xxx	xx
Provide more efficient public infrastructure	xxx	xxx
Fiscal Space		
Revenue measures		
Use indirect, property/wealth and environmental taxes to raise revenue	xxx	xxx
Broaden tax base, including by reducing exemptions and preferential regimes	xxx	xxx
Improve revenue administration and simplify forms and procedures	xx	xxx
Expenditure measures		
Rationalize the public wage bill	xxx	xxx
Improve the design of social spending programs by better targeting	xxx	xxx
Improve the efficiency of spending through targeted sectoral reforms, e.g. in health or education	xxx	xxx
Eliminate generalized subsidies, especially for energy products	xx	xxx
Reform inefficient SOEs	xx	xxx
Equity and Growth		
Include mitigating measures when implementing potentially regressive reforms (e.g. increasing indirect taxes)	xxx	xxx
Growth-enhancing reforms that also help equity include closing tax loopholes used by the wealthy and targeted CCTs	xxx	xxx
Policy Design and Complementarity		
Build social consensus through effective communication and/or compensating losers	xxx	xxx
Complement fiscal reforms with other structural reforms and consistent macroeconomic policies	xxx	xxx

Note: 'xxx' denotes highly relevant policy, 'xx' denotes moderately relevant policy and 'x' denotes less relevant policy.

2. **The first part of this note explores which fiscal policy measures can boost medium- to long-term growth; and how significant their impact may be.**[1] Based on recent analytical work at

[1] Consistent with earlier studies, this section considers a broad scope of fiscal policies, as well as complementary structural reforms, macroeconomic policies, and reform design (Tanzi and Zee, 1997).

the IMF (IMF, 2015b forthcoming), it draws from a review of the literature on the topic and several analytical studies, including nine country studies covering advanced, emerging and low-income countries; a statistical analysis of fiscal reforms and growth accelerations; and an endogenous growth model that simulates the growth impact of revenue and spending reforms.[2]

3. **It finds that the growth dividend from fiscal reforms can be substantial.** For example, in a set of country studies per capita growth in advanced countries is estimated to be about ¾ percentage points higher following fiscal reforms, on average. However, these results should be interpreted with caution as other coterminous reforms also played an important role in many cases. Simulations of an endogenous growth model, which does isolate the impact of fiscal reforms, show that a budget-neutral tax reform package aimed at enhancing the efficiency of the tax system may lift long-term growth by as much as ½ percentage point; and shifting the composition of spending toward infrastructure investment could add ¼ percentage point (IMF 2015b forthcoming).

4. **Careful design and social consensus matter for the success and durability of reforms.** To reap full growth benefits, fiscal reforms need to be internally consistent and complemented by relevant structural reforms (e.g., labor or trade) and supportive macroeconomic policies. Balancing efficiency and equity objectives and fostering public support through social dialogue are critical. While individual policies may be regressive, reform packages and their impact on equity should be analyzed as a whole.

5. **For countries that lack fiscal space, the second part of the note illustrates how fiscal space can be created while minimizing adverse effects on growth and equity.**[3] Specifically, it provides a high-level framework developed by the OECD for making policy choices about tax and spending instruments to create fiscal space.[4] According to this illustrative exercise, many G-20 advanced countries have significant scope to meet fiscal challenges with limited adverse side-effects on growth and equity if instruments are well-chosen. While the choice of instrument depends on weights attached to short- versus long-term growth and equity considerations, relatively favorable instruments that emerge include subsidy and pension reforms and property taxes.

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[2] The country studies cover Australia, Chile, Germany, Ireland, Malaysia, the Netherlands, Poland, Tanzania and Uganda. Country selection was based on the number of fiscal reform episodes, including macroeconomic stabilization, tax and expenditure policy and institutional reforms, as well as considerations for income and geographical diversity.

[3] Fiscal space is defined as "the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position."

[4] The analytical underpinnings, empirical basis and technical details for this section are available in Cournède, B., A. Goujard and Á. Pina (2014). In light of the short-term outlook, the scope of fiscal instruments is limited to measures at the immediate disposal of policy-makers (tax increases and expenditure cuts), and does not consider structural measures or efficiency improvements.

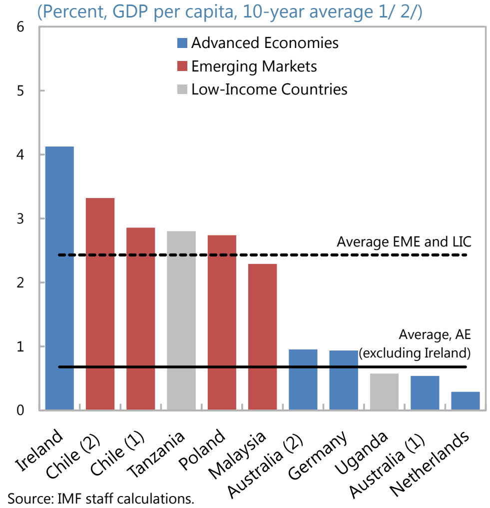
II. FISCAL POLICIES TO BOOST MEDIUM- TO LONG-TERM GROWTH: WHAT WORKS?

6. Country studies confirm the potential of fiscal reforms to affect growth (Figure 1). Using a common methodology to evaluate the effects of fiscal policy on growth, country studies show a significant increase in average growth during the 10 years following fiscal reform episodes.[5] As discussed above, one should be cautious in attributing the increase in growth entirely to fiscal reforms, however, as they were often part of broader reform packages. With this caveat, the country studies find that:

- In advanced countries, excluding Ireland which experienced a significantly higher growth dividend, per capita growth in the post-reform period is about ¾ percentage points higher than the counterfactual. In emerging market economies and low-income countries (LICs), the estimated divergence in growth paths reaches almost 2½ percentage points, on average.

- Shifts in the contribution of the different factors at times coincided with the focus of fiscal reform efforts: for example, in cases where an overhaul of labor taxation and reductions in the tax wedge were at the core of tax changes (e.g., Ireland, the Netherlands), the contribution of labor in total output growth increased after the reform.

Figure 1: Estimated Growth Gain
(Percent, GDP per capita, 10-year average 1/ 2/)



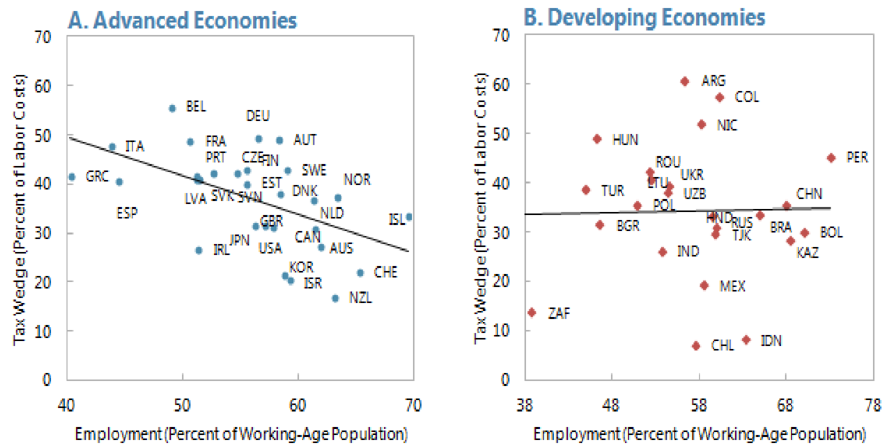
Source: IMF staff calculations.
1/ 5-year averages for Germany and Poland.
2/ Chile (1) refers to the first reform episode (1974); Chile (2) to the second reform episode (1983); Australia (1) to the first reform episode (1985); and Australia (2) to the second reform episode (1998).

Policies to Promote Employment

7. Lowering overall taxes on labor income can boost labor supply and demand but equity considerations are important. Figure 2 shows that, in advanced economies, the labor tax wedge—including social security contributions—is negatively correlated with employment, while in developing economies (including emerging market economies and LICs) there is no clear relationship, mainly due to smaller social safety nets and the narrower personal income tax base (IMF, 2014a). Revenue-neutral policy simulations using an endogenous growth model show that reducing tax on labor income by 5 percentage points leads to higher long-run economic growth of about 0.2-0.3 percentage point, as the increase in the after-tax wage induces higher labor supply. *For instance, in Ireland labor taxes were cut in the context of a social partnership agreement in 1987. This contributed to a strong increase in labor force participation and a noticeably higher contribution of labor to total economic growth without a worsening of inequality.*

[5] The methodology used is the Synthetic Control Method (SCM); it allows for assessing the effect of fiscal reforms on growth through the creation of a counterfactual, i.e. growth in the absence of reforms (see IMF, 2015b forthcoming, for more technical details).

Figure 2. Relationship Between the Tax Wedge and Employment Rate



Source: IMF (2014a).
Note: the black lines shows an ordinary least squares (OLS) regression line.

8. Social benefits can be designed to strengthen work incentives and employment. Unemployment benefits, if not well designed, can adversely affect employment incentives and outcomes. The withdrawal of benefits as individuals return to employment can operate like a tax on earned income and create work disincentives, especially for low-wage workers and families with children. Efficient benefit design can help:

- ***Conditioning benefits.*** In most advanced economies, benefit eligibility is conditioned on participation in ALMPs, including personal employment services, training, and public employment schemes. *In 2003-5, Germany introduced activation conditions along with wide-ranging labor market reforms to improve job search efficiency, raise work incentives, and foster labor demand.*

- ***Greater use of in-work benefits.*** A system of in-work benefits that allows for the gradual withdrawal of benefits as earnings or employment duration increase has been adopted by economies that target labor market participation (*including Germany, the Netherlands, the UK and Sweden*). This reduces the net tax on earnings with significant benefits for employment and poverty reduction.

- ***Individual unemployment savings accounts (ISAs)*** can reduce the distortionary impact of contributions by strengthening the link with benefits received; and also facilitate the expansion of unemployment insurance in emerging economies with high informality. *A number of emerging economies use individual accounts, including Brazil and Chile.*

9. Tax and spending measures targeted at specific groups could elicit an even greater labor supply response with a positive impact on growth.[6] In many countries, labor force participation of women, low-skilled and older workers is low. Targeted measures can help boost the supply response of these groups:[7]

- ***Women***: Female labor supply is highly responsive to tax incentives. To stimulate female labor force participation (FLFP), India applies a higher tax exemption for women, and most advanced economies replaced family taxation with individual taxation to reduce the tax burden for secondary earners. Spending reforms that could increase FLFP include improving girls' education (*e.g., in India, Turkey*); well-designed family benefits, including paid parental leave (*e.g., in the United States*); more flexible work options (*e.g., in India and Japan*); and greater availability of child-care options (*e.g., in Germany, Japan, and the United States*). *Policies that have had a beneficial impact on FLFP include benefit reforms and labor market flexibility (Germany, and the Netherlands); education (Ireland); and a shift from family to individual taxation (Ireland).*

- ***Older workers****:* Older workers are also very sensitive to financial incentives (IMF, 2014a). Lower tax rates (including implicit taxes on continued work) can improve incentives to remain in the labor force. *Australia, Denmark, the Netherlands, and Sweden, for example, have introduced specific earning tax credits for older workers, aimed at stimulating labor-market participation.* On the expenditure side, options include increasing the effective retirement age, and adjusting pension benefits to actuarially fair levels that do not distort participation decisions. At the same time, targeted measures should protect against old-age poverty by expanding social pensions for low-income workers (*e.g., in India, Indonesia, and Thailand*; Clements, Eich, and Gupta, 2014). *Many advanced and emerging countries have enacted legislation to raise retirement ages (Australia, France, Germany, and Poland).*

- ***Low-skilled workers***: Empirical evidence shows that targeted tax credits result in positive net employment effects as low-skilled workers exhibit higher labor supply elasticities than high-skilled workers (OECD, 2011). Most advanced economies have introduced in-work tax credits. Hiring subsidies or targeted reductions in non-wage labor costs (such as social contributions) can stimulate demand for low-skilled labor. Making tax schedules more progressive can be a revenue-neutral way of reducing the tax wedge for low-skilled workers.

[6] For instance, in Japan, the annual potential growth rate could rise by about ¼ percentage point if the female labor participation rate were to reach the G7 average (Elborgh-Woytek and others, 2013). In OECD countries, full convergence in participation rates could increase per capita growth rates by 0.6 percent, on average (OECD, 2012a).

[7] At the same time, there is a need for complementary reforms to ensure employability for specific groups like the long-term unemployed or disabled; otherwise, tightening reforms will fail to raise employment and may increase inequality and poverty (OECD, 2015a).

Policies to Enhance Investment

10. Taxation of capital income influences private savings and investment decisions. By increasing the user cost of capital, corporate taxes can have an adverse impact on domestic investment and FDI which is likely to vary across different types of firms (Vartia, 2008). On a personal level, taxing capital income can discourage savings. Revenue-neutral policy simulations using the endogenous growth model indicate that reducing tax on capital income by 5 percentage points (while increasing the consumption tax to keep fiscal revenue unchanged) adds about 0.2 percentage points to long-run economic growth. *Malaysia streamlined and reduced corporate income tax (CIT) to a level comparable to other South-East Asian countries, which contributed to a surge in investment. Similar responses to CIT cuts were observed in Germany, Ireland and the Netherlands*.

11. Reforming corporate income taxes to tax "excess returns" could have a significant growth dividend. While their distortionary impact is widely acknowledged, CITs are an important source of revenue in many economies. Limiting the tax to "excess returns" or rents would reduce investment distortions, thereby promoting long-term growth while still generating revenue. Under the allowance for corporate equity (ACE) scheme, investments that earn a "normal" return are exempt from taxation through a deduction of an imputed return on equity. The ACE also reduces the bias toward debt-financing, created by the deductibility of interest expenses (De Mooij, 2011). Alternatively, a debt bias can be reduced by limiting interest deductions. *Several advanced and emerging economies (including Austria, Belgium, Brazil, and Italy) have used variants of the ACE scheme, with some evidence of a positive impact on private investment.*

12. Tax incentives can significantly erode the revenue base without achieving offsetting benefits from increased investment, unless they are properly designed and limited. Tax incentives take several forms, such as tax holidays, preferential tax treatments in special zones or targeted allowances for certain investments. The choice of incentive and design matter critically for the effectiveness of tax incentives (IMF, World Bank, OECD, and UN, 2015 forthcoming; Johansson and others, 2008). For instance, well-targeted incentives that reduce the cost of capital, such as accelerated depreciation schemes, investment tax credits, and super deductions, have been used with some success in advanced countries. In contrast, open-ended and profit-based tax holidays are less effective, erode the tax base indefinitely, and can be very costly. This argues for a rigorous cost-benefit analysis. Also, more favorable tax incentives in one country can divert FDI flows from other countries and thereby dampen their growth prospects and erode their tax base. To avoid adverse tax competition, international cooperation is needed. *An assessment of tax incentives that were introduced in Malaysia in 1986 concluded that—while they succeeded in stimulating domestic investment—foreign investors were primarily influenced by other factors, including macroeconomic stability and the quality of infrastructure.*

13. Public investment, in particular in infrastructure, can raise the economy's productive capacity and growth potential. In the endogenous growth literature, public capital yields both direct and indirect growth dividends (by increasing the longevity of private capital). In particular, emerging economies with large infrastructure gaps stand to reap high returns from increasing public investment. Assuming significant slack and accommodative monetary policies, IMF (2014b) estimates that higher infrastructure investment could raise output by up to three percent in advanced economies. Staff's analysis confirms that spending on transportation and communication exhibits a high likelihood of subsequent growth acceleration (20 percent).[8]

14. However, the growth dividend from public investment depends on the efficiency of the investment process. Not all public investment creates economically valuable capital. In particular, in countries with weak public investment management processes, public investment is unlikely to translate fully into productive capital and growth (Gupta and others, 2014). IMF (2015c forthcoming) estimates that the average country loses about 30 percent of the value of its public investment to inefficiencies in the investment process), and that the growth dividends from closing the "efficiency gap" could be substantial: the most efficient countries get twice the dividend from investment compared with the least efficient countries. Improving institutional arrangements for allocating public investment projects is most important for enhancing efficiency.

Policies to Support Human Capital Development

15. Fiscal policies can play an important role in promoting human capital. Public spending on education can directly affect education outcomes and raise the stock of human capital. Also, tax credits or the deductibility of education expenses can mitigate the adverse impact of progressive income taxation on human capital accumulation. Empirical studies confirm the potential payoffs for growth from investing in health and education: Jamison and others (2013) estimate that the economic value of increases in life expectancy in all low- and middle-income countries between 2000 and 2011 was equivalent to a 1.8 percent annual increase in GDP. Staff's growth acceleration analysis suggests that sustained increases in health and education spending are likely to be followed by growth accelerations (with a likelihood of 40 and 25 percent, respectively)..

16. Education reform in both advanced and emerging economies should focus on improving access for disadvantaged groups. In emerging economies, low-income groups and girls have lower access to education, especially at higher levels; and in advanced economies significant inequities in education outcomes persist. These unequal opportunities perpetuate inequality across generations, further constraining the economy's long-term growth potential (see also, OECD, 2015b). Reform priorities include increasing investment in lower levels of education; improving the efficiency of education spending; increasing cost recovery in tertiary education while protecting the poor through means-tested grants or income-contingent loans; and conditioning cash assistance to disadvantaged groups on participation in education. *CCTs are being increasingly used in both advanced and emerging economies. The largest of its kind—Bolsa Familia in Brazil—provides assistance to 14 million families or about 50 million people. The United Kingdom introduced means-tested education stipends conditioned on education performance; and New York City pays targeted education and health subsidies (IMF, 2014e).*

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[8] Throughout this note, the likelihood of growth accelerations refers to the conditional probability calculated as the number of fiscal reforms that were followed by growth accelerations in the subsequent 5-year period as a share of the total (see IMF, 2015b forthcoming).

17. Improving or maintaining the access of the poor to health care services is another priority. In advanced economies, public health care spending accounted for about 6½ percent of GDP in 2013, and is projected to rise on average by 3 percentage points of GDP between 2015 and 2030 (IMF, 2015d). Health care reforms to curb the growth of spending will be necessary in many countries, including increased cost-sharing with the private sector. Reform design should ensure that the poor retain access to services, for instance by exempting them from co-payments. In emerging economies, universal access to a basic package of health services would yield the highest growth dividends. This can be achieved through expanding basic health coverage to low-income households; reducing or eliminating user charges for the poor; linking utilization of preventive care to eligibility for other social benefits (such as CCTs); and addressing supply-side barriers in less developed areas.

Policies to Increase Total Factor Productivity

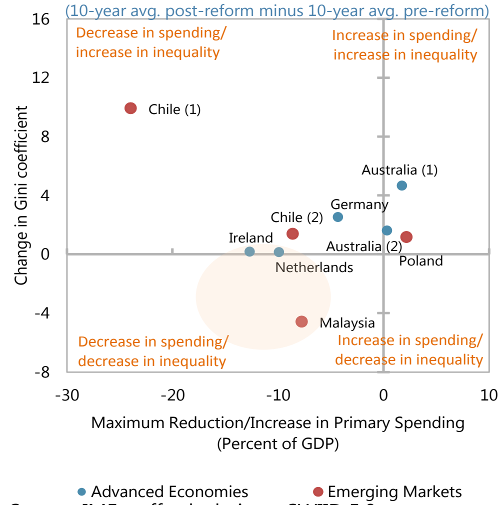
18. The supply of key public goods can raise TFP and growth. Notably, public investment in physical infrastructure can improve the productivity of private capital and raise its rate of return. Similarly, public spending on education can accelerate technology catch-up and enhance local productivity by improving the ability of the domestic labor force to absorb cutting edge technologies from the global economy.

19. Tax policies can affect TFP by improving resource allocation and incentives to invest in R&D. R&D tax incentives generally take two forms: (i) tax credits that reduce the costs of R&D; and (ii) special intellectual property (IP) boxes that reduce the tax burden on profits earned from patents and trademarks. In advanced economies, R&D tax provisions are found to have a positive, albeit relatively small, impact on TFP (OECD, 2010). However, R&D tax incentives can be distortive and ineffective if not designed carefully. *A few countries have provided tax credits and deductions of R&D-related spending with some success (Ireland, Malaysia).*

Balancing Equity and Efficiency Objectives is Critical

20. Income equality can lead to higher long-term growth through faster human and physical capital accumulation. Recent studies indicate that high levels of inequality are, overall, harmful for the pace and sustainability of growth (Berg, Ostry and Zettelmeyer, 2012; Causa and others, 2014; Cingano, 2014; Ostry and others, 2014). Higher personal income, larger government transfers, and/or better public services in more equal societies can lead to a faster accumulation of human capital.

Figure 3. Trends in Inequality Post-Reform
(10-year avg. post-reform minus 10-year avg. pre-reform)



Source: IMF staff calculations, SWIID 5.0.
1/ Refers to Gini coefficient after taxes and transfers.

21. While efficiency-enhancing reforms can have adverse distributional consequences, appropriately designed fiscal reform packages can serve both growth and equity objectives. For instance, a shift from direct to indirect taxes can reduce the progressivity of the tax system and increase inequality. A reduction in social transfers—aimed at encouraging labor participation—might likewise have a detrimental impact on equity. However, if the proceeds of a regressive, yet growth-enhancing tax reform are used to finance higher health and education spending or CCTs tied to the schooling of young children, the overall outcome may be higher growth and human capital and lower inequality. Reducing evasion, including through automatic exchange of information, and tax expenditures or loopholes that largely benefit the rich can also simultaneously benefit growth and income equality. *Despite public spending cuts, income inequality did not increase significantly after Ireland's first reform episode in the late 1980s (Figure 3). This reflects the composition of fiscal adjustment—cuts in untargeted transfers were progressive—as well as the sharp increase in employment (Bastagli, Coady and Gupta, 2012).*

The "How" Matters: Design and Implementation of Reforms

22. How reforms are designed and implemented are key determinants of their success in generating strong and sustained long-term growth. The most critical considerations in this regard include social dialogue around key reform areas; policy complementarities; consistency with structural and macroeconomic policies; and policy credibility (IMF, 2014f; IMF, 2015b forthcoming).

23. Social dialogue enhances the likelihood of reforms being implemented and sustained. In advanced economies public sector employment reforms that involved social dialogue resulted in much deeper and more sustained reductions in the wage bill. Examples of such reform episodes include the Netherlands and Ireland. The Netherlands' *Wassenaar* agreement (1982) and Ireland's tripartite agreement (1987) facilitated the implementation of politically difficult measures such as cuts in benefits and wage moderation.

24. A number of strategies can help foster public support for reforms, including effective communication and compensatory measures. Effective communication with stakeholders that emphasizes the intended benefits of reforms—or the cost of maintaining the status quo—can help mitigate resistance to reforms. Also, compensatory measures for expected "losers" have been found to be effective in gaining public support for reform packages; and common policy anchors can help forge consensus. *In Ireland and the Netherlands, real wage growth reductions were compensated with tax cuts to mitigate the impact on disposable income; and cuts in social benefits were made more palatable by the promise of job-creation. In Poland, the prospect of EU-accession was critical in overcoming resistance to pension reform and benefit cuts. In most cases, countries apply a combination of strategies (Clements and others, 2013).*

25. Successful fiscal reforms exploit policy complementarities to maximize their impact on growth, and are accompanied by supportive structural reforms and macroeconomic policies:

- ***Fiscal policy complementarities.*** In all countries studied fiscal measures reinforced each other. For example, in the Netherlands, Ireland and Germany, work incentives were enhanced by reducing both benefits and income taxes. Analysis of growth acceleration episodes points to the potential benefits of policy complementarities: the likelihood of growth acceleration is higher when expenditure and revenue reforms are combined.

- ***Supportive structural reforms in other areas.*** Structural reforms can help to boost medium- to long-term growth and magnify the impact of fiscal reforms. In the majority of country studies, fiscal reforms were implemented together with other structural reforms. For instance, to boost employment, countries combined reforms of the tax-benefit system to improve work incentives with labor market reforms aimed at facilitating job creation (Netherlands, Ireland, and Germany).

- ***Consistent macroeconomic policies.*** Reform packages also require a "two-handed approach" (Blanchard and others, 1985) where macroeconomic policies support structural reforms. For example, a transitory loosening of the fiscal stance can buy valuable time to implement labor market reforms.

26. The credibility of reforms can boost their effectiveness and impact on growth. Recent evidence for advanced economies confirms that the establishment of a credible medium-term adjustment path matters more for instilling market confidence and reducing risk premia than the initial fiscal adjustment effort (Harris and others, 2013). Policy credibility can thus allow for an even distribution of adjustment effort over time—or even back-loading—and hence minimize the potential negative impact on longer-term growth from hysteresis effects (IMF, 2013b).

III. CREATING FISCAL SPACE: HOW TO PRIORITIZE TAX AND SPENDING MEASURES?

27. For countries that need to consolidate or create room for growth-enhancing reforms, this section illustrates how fiscal space can be created while minimizing adverse effects on growth and equity. After setting out some general principles, this section provides a high-level framework developed by the OECD for making policy choices about tax and spending instruments to create fiscal space.[9] The aim is to reduce adverse side-effects and underpin the pursuit of strong near-term demand, long-term growth and lower income equality. Spending or revenues should be adjusted by prioritizing areas where there are the most favorable or the least damaging consequences.

28. In all countries, fiscal space can be created through both tax and expenditure policies. In addition, borrowing is an option for countries where fiscal sustainability and rollover risk are not a concern. Best practices include:

- ***A shift towards more growth-friendly taxes.*** Indirect and property taxes are relatively less harmful for growth than direct taxes (IMF, 2013a; Johansson and others, 2008). In many

[9] The analytical underpinnings of the framework are available in Cournède, B., A. Goujard and Á. Pina (2014).

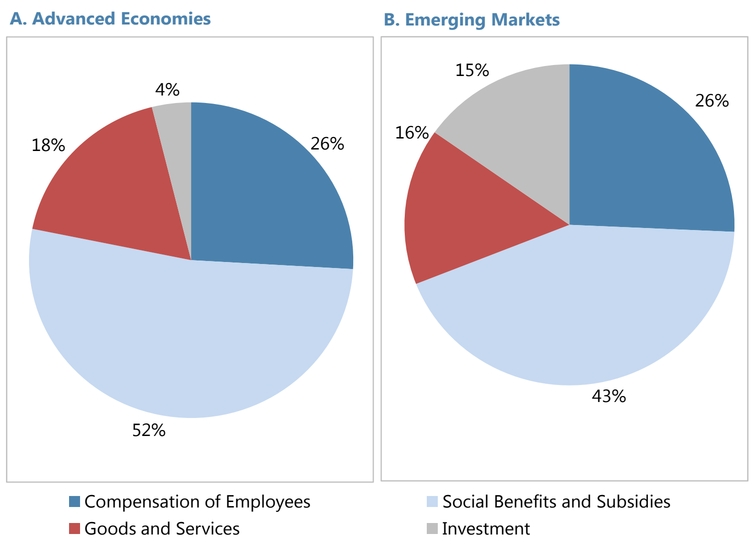
countries, closing value-added tax (VAT) policy and compliance gaps would both improve revenue collection and remove inefficiencies. Increasing excise taxes on alcohol, tobacco and even sugar, can be justified on the grounds of their harmful health effects.

- ***Base-broadening measures.*** Eliminating tax exemptions and preferential treatments or improving their targeting could yield higher revenue and improved horizontal equity while enhancing growth. *A number of countries combined tax cuts with base broadening, including Australia in the 1980s and the United Kingdom in the 1990s.*

- ***Improvements in revenue administration.*** Tax compliance affects the revenue yield, efficiency and fairness of a tax system. Effective reforms include the introduction of risk management techniques and segmentation of taxpayers, with a focus on large taxpayers. Also, simplification of laws and procedures can help reduce the cost of taxpayer compliance.

- ***Rationalizing spending.*** Three-quarters of total spending in advanced and emerging economies consists of wages, subsidies and social benefits (Figure 4). Priority areas for rationalization include the government wage bill (where public sector wages and employment are high); and social spending (where it is poorly targeted). For example, in advanced economies, only one-fifth of total spending on family benefits was means-tested in 2011 (IMF, 2014f). *Public wage bill rationalization helped create fiscal space and contributed to wage moderation in the Netherlands, Ireland, and Germany.*

Figure 4. Public Expenditure Composition, 2007-2013



- ***Aging.*** Age-related spending on pensions and health care also accounts for a large share of government spending in advanced and emerging economies (40 percent and 30 percent, respectively; IMF, 2014f). With population aging, this spending is projected to increase by 4½ and 3½ percent of GDP in G20 advanced and emerging economies, respectively, over the next 15 years (Clements, Coady, and Gupta, 2012; IMF, 2015a). *Many advanced economies have adopted reforms to contain age-related spending, including by raising retirement ages and introducing price controls in health care.*

- ***Improving efficiency.*** There is scope to enhance the delivery of essential public services while saving resources. For example, at least 20-40 percent of health spending is typically wasted (World Health Organization, 2010; Grigoli and Kapsoli, 2013). The potential for efficiency gains is also large in education and quasi-fiscal activities.

- ***Addressing negative environmental externalities.*** Fiscal policy can boost more environmentally sustainable growth by pricing environmental externalities and improving resource allocation. Also, eliminating energy subsidies and introducing environmental taxes can generate substantial fiscal resources: in 2015, spending on energy subsidies (on a post-tax basis) is projected to reach US$5.3 trillion (or 6½ percent of global GDP).[10] Potential revenue gains from environmental taxes such as carbon taxes or congestion pricing could amount to 2.9 percent of global GDP (Gupta and Keen, 2015).

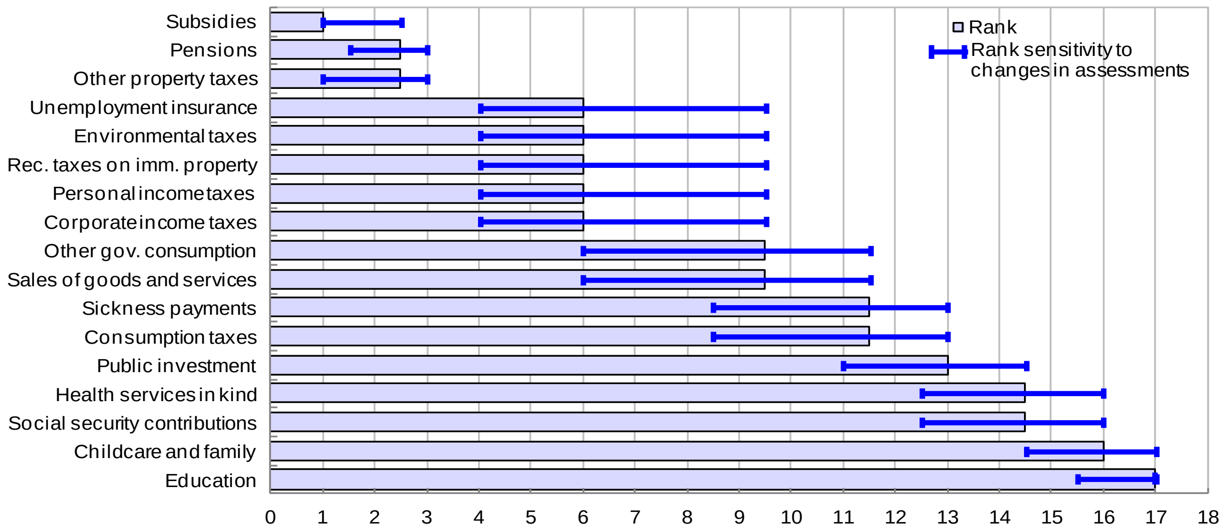
29. Based on country-specific conditions and objectives, some instruments will be more appropriate than others. For illustrative purposes, Figure 5 presents a "ranking" of revenue and expenditure instruments in terms of their expected short- to medium-term impact on growth and equity. Instruments are ranked from most to least compatible with growth and equity, where the two objectives are given equal weights.[11] In line with the analysis of section II, the ranking relies on detailed assessments of the different measures in the literature. While the impact assessments underpinning Figure 5 have been found to hold in general across advanced countries, they will not apply in all countries and need to be treated with caution.

30. The framework suggests that revenue increases from estate tax (other property taxes) and reductions in subsidies and pension spending are key policy instruments to improve the fiscal policy mix, as they involve limited effects on growth or income distribution. By contrast, spending cuts in education, health care and family policies, as well as hikes in social security contributions, are generally unfavorable because of their adverse effects on growth and/or equity.

[10] Post-tax subsidies arise when the price paid by firms and households for energy products is below supply and distribution costs plus an efficient level of taxation.

[11] The assessment assumes that governments increase taxes or cut spending without improving efficiency or introducing compensating measures in other areas, although such accompanying reforms are highly desirable in most cases. This assumption is made to distinguish between budgetary choices and structural reforms.

Figure 5. An Illustrative Ranking of Instruments to Create Fiscal Place While Supporting Growth and Equity



Note: The rankings are taken from Cournède, Goujard and Pina (2014). All consolidation measures have been assessed for their Keynesian effects on short-term growth; their supply effects on long-term growth; and their consequences for income distribution, before and after behaviour adjusts. A score of -2 to +2 is given to the effect of each instrument on each objective. Growth and equity effects are weighted equally. Short- and long-term effects are weighted equally. Combining scores and weights yields an indicator for each instrument, which is used to rank them. Stochastic simulations provide a measure of the sensitivity of ranks to the assessment of instrument effects on growth and equity. In 10,000 random draws, each individual instrument score along each objective is kept with a probability of ¾ or increased by +1 with a probability of ⅛ or reduced by -1 with a probability of ⅛. The sensitivity range displays the 10th and 90th percentiles of the instrument rankings in the stochastic simulations.

Source: Cournède, Goujard and Pina (2014).

31. Countries may have ample or limited scope to use favorable instruments depending on their tax and spending structures. For example, a government with very high income tax rates is likely to have more limited scope to increase them than one starting with low tax rates. The framework sets criteria to capture the limited scope that countries have for using different instruments. More specifically, the assumption is that each measure, say a spending cut, can proceed as long as it does not take the country into the group of ten OECD countries that spend least in this area as a share of GDP. The calculations impose the additional constraint that the cut cannot be excessively large.[12]

[12] This limits cuts to one standard deviation of the cross-country distribution of how much governments spend in the area under consideration as a ratio of GDP. Additional assumptions take into account cross-country differences in structural unemployment and demography and limited room to reduce pensions in the near term.

Table 2. Availability of Relatively Favorable Instruments to Create Fiscal Space

(Percent of potential GDP)

	AUS	CAN	DEU	ESP	FRA	GBR	ITA	JPN	KOR	USA
Subsidies	0.6	0.3	0.3	0.2	0.7	0	0.3	0	0	0
Pensions	0	0	0.2	0	0.6	0.3	0.9	0.8	0	0.5
Other property taxes	0	0.5	0.5	0	0	0.2	0	0.4	0	0.7
Unemployment benefits	0	0.2	0.8	1.6	0.8	0	0.2	0.3	0.1	0.2
Environmental taxes	0.7	0.7	0.5	0.7	0.7	0.2	0	0.7	0	0.7
Recurrent taxes on immovable property	0	0	0.9	0.4	0	0	0.6	0	0.6	0
Personal income taxes	0	0	0	2.5	0	0.5	0	4.6	4.6	1.0
Corporate income taxes	0	0.2	0.9	0.9	0.5	0.4	0.4	0	0	0.2
Availability of relatively favorable instruments (sum of above):	***1.3***	***2.0***	***4.2***	***6.3***	***3.3***	***1.5***	***2.4***	***6.8***	***5.8***	***3.3***
Other government consumption	1.0	2.3	0	0.6	1.8	2.2	0	0	0	0
Sales of goods and services	0	0	0.3	1.0	0	0.7	1.0	1.0	1.0	0
Sickness and disability payments	0	0	0	0.7	0	0.7	0.2	0	0	0
Consumption taxes	2.5	2.5	2.0	2.5	0	1.4	0	2.5	2.5	2.5
Public investment	1.1	1.1	0	0	1.1	0.3	0	1.1	1.1	0.3
Health services provided in kind	0.4	1.4	1.5	0.4	1.5	1.5	0.8	1.5	0	1.5
Social security contributions	5.3	5.3	0	1.4	0	5.0	0	0.9	0.9	4.5
Family	1.1	0	0.6	0	1.1	1.1	0.3	0	0	0
Education	0	0.2	0.8	0.2	0.8	0.3	0.3	0.3	0	0

Source: Cournède, Goujard and Pina (2014) database and OECD calculations.

32. Many G-20 advanced countries have significant scope to meet fiscal challenges with limited adverse side-effects on growth and equity if instruments are well-chosen. The framework suggests that France, Germany, Japan, Korea, Spain and the United States could improve their primary balance by more than three per cent of GDP using only spending reductions and revenue increases that are in the top half of least damaging measures in the ranking of Table 2. Countries where tax and spending structures are already relatively well aligned with the hierarchy implied by this approach have smaller potential to improve growth and equity through adjusting their policy mix, including Australia and the United Kingdom.

33. Corporate and personal income taxes are favorable instruments if putting a strong weight on equity considerations but less so if giving overriding priority to long-term growth. Corporate or personal income taxes take different places in the ranking of instruments depending on the weights given to objectives, as they raise acute trade-offs between output and equity considerations. Corporate and personal income taxes are relatively good candidates to create fiscal space in countries where income dispersion is wide. The ranking of fiscal instruments can also take into account their effect on external imbalances. To pick one example, this approach suggests favoring increases in consumption taxes over social security contributions in countries that experience large current-account deficits.[13]

34. Reductions in public expenditure become more attractive when taking a long-term perspective. The hierarchy of instruments can look through near- and medium-term considerations and focus on the very long term, say 2030, a horizon at which Keynesian demand effects lose relevance. The framework can produce an illustrative long-term ranking at this horizon by dropping short-term considerations. Public expenditure cuts move up the ranking when switching to the long run. Symmetrically, personal and corporate income taxes, which generate distortions that durably reduce growth, drop to low places in the long-term ranking.[14]

[13] Concrete, quantified implications of incorporating external imbalances and differentiating ranking depending on country circumstances are available in Cournède, Goujard and Pina (2014).

[14] The full illustrative long-term ranking is : 1. Subsidies; 2. Pensions; 3. Other government consumption, Unemployment benefits, Environmental taxes and Other property taxes; 7. Sickness and disability payments, Recurrent taxes on immovable property and Sales of goods and services; 10. Consumption, personal income and corporate income taxes; 13. Public investment, Health services; 15. Family policy and Social security contributions; 17. Education

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