

The Size of the Fiscal Expansion: An Analysis for the Largest Countries¹

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The size of the fiscal stimulus has varied significantly across countries. This note discusses why the stimulus differed across large economies.² It also discusses whether countries could do more to support world demand.

Review of fiscal packages

1. On February 13, the U.S. Congress approved a new economic stimulus package.

The package comprises new Federal government spending in infrastructure, health and education, and unemployment assistance, as well as transfers to states and new tax cuts. The headline amount of the U.S. package is \$787 billion (5.6 percent of annual GDP), and the initial impact is expected to take place mainly in 2009–11. For comparison with other countries, the Fund staff estimate the package at \$719 billion (5.1 percent of GDP).³ With all major countries having now defined fiscal stimulus packages, it is time to assess how these packages compare across countries.

	U.S. Stimulus Package (in billions of dollars, CY basis)			
	2009	2010	2011	Total
Total	283	259	121	663
(in percent of GDP)	2.0	1.8	0.8	4.6
Revenue measures	99	116	37	252
Individual income	37	80	32	149
Corporate income	57	32	-2	87
Other	5	4	7	16
Expenditure measures	184	143	84	411
Infrastructure and other	32	47	47	126
Safety nets	77	14	5	96
State aid and education	75	82	32	189

Source: U.S. CBO; Fund staff estimates.

2. Regarding the composition of the fiscal stimulus, the large countries have generally followed a “policy diversification” approach, with a significant spending component.⁴ Stimulus

	Stimulus Packages in Large Countries (in percent of GDP)			
	2008	2009	2010	Total
Canada	0.0	1.5	1.3	2.7
China	0.4	2.0	2.0	4.4
France	0.0	0.7	0.7	1.3
Germany	0.0	1.5	2.0	3.4
India	0.0	0.5	...	0.5
Italy	0.0	0.2	0.1	0.3
Japan	0.4	1.4	0.4	2.2
U.K.	0.2	1.4	-0.1	1.5
U.S.	1.1	2.0	1.8	4.8
Average 1/	0.5	1.6	1.3	3.4

Source: Fund staff estimates

1/ PPP GDP-weighted average.

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² For this note, the G-7 countries plus China and India. The estimates are based on projections for the January 2009 World Economic Outlook.

³ The headline amount includes a temporary “patch” of \$70 billion to provide relief to taxpayers with respect to the Alternative Minimum Tax. This amount was included in previous baseline U.S. fiscal forecasts and is therefore excluded.

⁴ Policy diversification and emphasis on spending are two key recommendations included in “Fiscal Policy and the Crisis,” IMF Staff Position Note, December 29, 2008, SPN/08/01.

packages provide a mix of tax cuts and new expenditures, with the latter representing about two-thirds of the total. All countries are boosting infrastructure spending, while nearly all are stepping up transfers to vulnerable groups. Six of the nine countries are providing tax relief only to individuals, while Canada, the U.S., and Japan will provide tax benefits to both individuals and corporates. Virtually all of the nine countries will provide relief either on corporate income or indirect taxes (see Table 1).⁵

3. **The size of the stimulus packages has varied significantly.** Including the measures undertaken in 2008, the U.S. stimulus is largest (a cumulative 4.8 percent of GDP during 2008–10), while Italy and India are at the lower end of the spectrum. Two sets of factors help explain the relative size of stimulus packages: (i) differences across countries in the need for stimulus; and (ii) differences in fiscal space.

Differences in the need for stimulus

4. **The size of the automatic stabilizers.** Countries in which the automatic stabilizers are larger will need smaller discretionary stimulus. Change in Overall Balance

Government size is a proxy for the impact of automatic stabilizers and is smaller in China, India, the U.S., Canada, and Japan, and it is indeed negatively related to the fiscal stimulus (Chart 1). ⁶ The U.S. also has less extensive social benefits (unemployment insurance, training), particularly compared with Europe. Fiscal institutions may also limit the functioning and size of automatic stabilizers, such as balanced-	(in percent GDP, relative to pre-crisis year 1/)			
	2008	2009	2010	Average
Canada	-0.9	-2.9	-3.2	-2.4
China	-1.1	-3.0	-3.0	-2.3
France	-0.6	-2.8	-3.6	-2.3
Germany	...	-3.2	-4.4	-3.8
India	-2.6	-3.3	-2.2	-2.7
Italy	-1.1	-2.4	-2.8	-2.1
Japan	-1.3	-3.7	-3.7	-2.9
U.K.	-1.5	-4.6	-5.4	-3.8
U.S.	-3.5	-5.7	-6.1	-5.1
PPP-weighted average	-2.0	-4.1	-4.4	-3.6

Source: Fund staff estimates.

1/ Pre-crisis year is 2007, except for Germany (2008).

⁵ “Headline” announcements of fiscal stimulus measures may be larger. For example, in some countries (e.g., China and India), additional stimulus is being taken outside of the budget. The figures do not include financial sector support operations that involve an acquisition of assets, while in some countries, part of the announced stimulus included measures that were already planned or was offset by other measures (Italy).

⁶ See Chapter V of “Companion Paper—The State of Public Finances—Outlook and Medium-Term Policies after the 2008 Crisis” for a discussion of the estimation of the impact of automatic stabilizers. Some analysts have suggested that automatic stabilizers on the revenue side in the U.S. have weakened in recent years, following changes in tax legislation (see, for example, “Implementing the New Fiscal Policy Activism,” by Alan J. Auerbach, January 2009 American Economics Association Meetings).

budget rules in the U.S. states.⁷ All this implies that, in order to compare the size of the fiscal action across countries, it is better to focus not just on the discretionary fiscal stimulus, but on the overall fiscal balance, including its automatic component.

5. **The size of the output gap.** The magnitude of the overall fiscal expansion—discretionary and nondiscretionary components—should depend on the size of the output gap that each country faces in the absence of fiscal support.⁸ For example, the deterioration in the growth outlook in the U.S. has been among the most severe in the large G-20 countries, starting earlier than elsewhere and with a greater effect on labor markets. Japan, the U.K., and Canada have also experienced a significant widening of output gaps. To gauge the importance of this factor, Chart 2 plots the average fiscal impulse (with respect to the pre-crisis year) against an estimate of the average output gap during the crisis.⁹ The chart confirms that countries that have faced a stronger output deceleration have acted to allow fiscal policy to play a more supportive role. The regression line is steeper if computed for the advanced countries subset, as China and India expanded relatively more.

6. **Other factors.** The fiscal expansion in a particular country should be larger if multipliers are lower. In this respect, a fairly sizable part of the rise in deficits in countries with larger financial systems, like the U.K. or the U.S., reflects lower tax payments from their financial sector (which benefited from profits that were above “normal” long-term trends). Arguably, the positive impact on demand of this component is lower than for other revenue losses, contributing to a lower multiplier.¹⁰

⁷ Considerable spending in the U.S. stimulus package is intended to provide transfers to states, in order to cushion the impact of declining activity and state and local tax revenues. Federal aid to U.S. states for such programs as Medicaid and education is expected to amount to \$157 billion in 2009–10 or 1.1 percent of GDP. Other federal spending of \$79 billion or 0.6 percent of GDP over 2009–10 will also help states, in part, build or maintain transportation, energy, and environmental infrastructure. In recent years, state and local governments have relied heavily on revenue sources linked to the housing sector, and without these transfers, virtually all U.S. states would need to cut spending to meet balanced-budget requirements (although these vary in their degree of flexibility).

⁸ See Chapter V of “Companion Paper—The State of Public Finances—Outlook and Medium-Term Policies after the 2008 Crisis” for a discussion of the estimation of output gaps. In some cases (e.g., China), this involved use of a Hodrick-Prescott filter to compute trend GDP.

⁹ The crisis year is 2008 for all countries, except for Germany where the output gap is estimated to have started increasing only in 2009. The output gap in the absence of fiscal support is estimated by subtracting from the January 2009 WEO baseline an estimate of the effect on output arising from the fiscal expansion (using a multiplier of 0.8 for the change in the deficit, within the range of multipliers estimated in past empirical research—see, for example, Appendix II of IMF Staff Position Note, December 29, 2008, SPN/08/01). The same multipliers have been applied across the countries, although the effectiveness of stimulus may vary, depending on institutional quality, the ease of scaling up investment projects and other spending, and the credibility of future consolidation.

¹⁰ The same argument could be made with respect to losses in tax revenues arising from housing and equity price declines, which were particularly large in the U.S.

Differences in fiscal space and conclusions

7. **Fiscal space.** Some countries entered the crisis with greater fiscal space to expand, including more favorable levels of deficits, public debt, contingent liabilities, and interest rates (Canada, China, France, Germany, the U.K., and the U.S.). By contrast, others faced relatively higher real interest rates (India, Italy) or elevated debt levels (India, Italy, and Japan) with less room to expand. Indeed, the size of the fiscal stimulus has been negatively correlated with the size of public debt (Chart 3). Another factor affecting the available fiscal space was the competing needs for financial sector support. The direct impact on gross debt arising from this support (capital injection, purchase of assets and treasury lending, and treasury backing for central bank support) has amounted to 4 percent of GDP for the country sample (PPP-weighted average), being relatively larger for the U.K. (20 percent of GDP), Canada (9 percent) and the U.S. (6 percent).

8. **Altogether these factors explain a good part of the differences observed across countries.** In particular, the larger fiscal expansion in the U.S. (even adjusting for the output gap outlook) can, at least in part, be explained by the larger fiscal space (particularly the comparatively lower level of public debt and its low interest rate) and by the stronger losses of tax revenues from the financial sector. Conversely, the more limited fiscal space can explain why Italy and Japan have had lower fiscal expansions.

Should governments do more?

9. **Growth impacts and needs.** Stimulus efforts to date, together with the impact of the automatic stabilizers, will provide an important boost to growth and help forestall a negative downward spiral.¹¹ Preliminary staff estimates suggest that fiscal policy may have contributed 2–2½ percentage points to PPP-weighted growth of the nine countries in 2008 and may provide 2–2¼ percentage points in 2009 and ¼–½ percentage points in 2010 (Chart 4).¹² However,

Fiscal Balance and Public Debt Projections for 2009
(in percent of GDP)

	Overall fiscal balance		Public debt	
	Pre-Crisis	Current	Pre-Crisis	Current
Canada	0.8	-1.5	61.0	63.0
China	-0.9	-2.0	13.4	22.2
France	-2.5	-5.5	63.0	72.3
Germany	-0.5	-3.3	61.1	76.1
India	-5.0	-8.5	69.8	82.7
Italy	-2.3	-3.9	104.1	109.4
Japan	-3.7	-7.1	194.2	217.0
U.K.	-2.1	-7.2	42.9	58.2
U.S. 1/	-3.2	-8.5	63.4	81.2

Source: October 2007 and January 2009 WEOs.

1/ The estimate of deficit for the US in 2009 excludes 3.5 percent of GDP in financial sector support included in the January 2009 WEO projections. January 2009 WEO projection is also augmented with information on the final U.S. stimulus package.

¹¹ The effects of fiscal policy on growth and the importance of joint versus individual fiscal action are further discussed in a forthcoming staff paper, “The Case for Global Fiscal Stimulus.”

¹² The range reflects different assumption on multipliers.

the January 2009 WEO, which already incorporates the impact of this fiscal impulse, still projects very slow global growth in 2009 (0.5 percent) with a decline in output in the G-7 (-2.0 percent). Moreover, risks currently appear clearly weighted on the downside. Thus, further fiscal policy support may be needed.

10. **Is there fiscal space?** The rise in deficit and debt levels that has already taken place—together with the prospective demand for additional support to the financial sector that may materialize—has reduced the room for further supportive fiscal action. Risk measures, such as spreads on credit-default swaps, have risen for some countries. On the other hand, interest rates remain low in others (e.g., France, Germany, Japan, and the U.S.). Also, the fiscal space is larger in countries that have so far expanded less.

11. **Increasing fiscal space.** The available fiscal space can be increased through appropriate policy design. Ideally, a larger fiscal expansion in times of economic crisis can be accommodated if policy design increases the likelihood of a fiscal tightening once conditions improve, so as to ensure long-term fiscal solvency. In this respect, Fund staff has recommended a four-pillar strategy to ensure fiscal solvency:

- Stimulus packages should not have permanent effects on deficits;
- Medium-term fiscal frameworks should clarify government's commitment to fiscal correction once economic conditions improve;
- Structural reforms should be implemented to enhance growth, and thus, medium-term revenue prospects; and,
- Countries facing demographic pressures should firmly commit to clear strategies for health and pension reforms.

The four pillars of this strategy are further discussed in “The State of Public Finances: Outlook and Medium-term Policies After the 2008 Crisis,” a paper recently discussed by the IMF Executive Board.

Table 1. Composition of Fiscal Stimulus Packages in the G-7, China and India

Measure	Canada	China	France	Germany	India	Italy	Japan	UK	US
Expenditure									
Infrastructure investment	T	T	T	T	T		T	S	T
Support to SMEs and/or farmers				T			T		
Safety nets	T	T	T	T		T	T	T	T
Housing/construction support	T	T	T	T			T	T	
Strategic industries support	T	T		T	T				
Increase in public wage bill									
Other	T	T	T	T	T		T	T	T
Revenue									
CIT/depreciation/incentives	P		P				P		P
PIT/exemptions/deductions	P			P			P	P	P
Indirect tax reductions/exemptions		P	T	P	T			S	
Other							P	P	

Source: Country authorities; and IMF country desks.

Measures announced as of February 13, 2009.

T: temporary measures (with explicit sunset provisions or time-bound spending).

S: self-reversing measures (costs are recouped by compensatory measures in future years).

P: permanent measures (with recurrent fiscal costs).



