

# The Macroeconomic Effects of Government Transfers: a Social Accounting Matrix Approach

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**Government transfers** to individuals and families play a central role in the Brazilian social protection system, accounting for almost 14 per cent of Gross Domestic Product (GDP) in 2009. While their fiscal and redistributive impacts have been widely studied, the macroeconomic effects of transfers are harder to ascertain.

Following previous research based on the circular flow of income in Brazil, Neri et al. (2013) constructed a Social Accounting Matrix (SAM) for 2009 and estimated the short-term accounting multipliers for seven different government monetary transfers: Social Security pensions for former private-sector workers and civil servants (RGPS and RPPS, respectively); the Continuous Cash Benefit (Benefício de Prestação Continuada), a non-contributory, means-tested old-age and disability benefit; the Programa Bolsa Família, a conditional cash transfer targeting poor families; the Abono Salarial, a yearly wage subsidy to low-wage workers in the formal sector; unemployment insurance for formal-sector workers; and the lump-sum withdrawals from the Fundo de Garantia por Tempo de Serviço (FGTS), a mandatory savings account for formal private-sector workers.

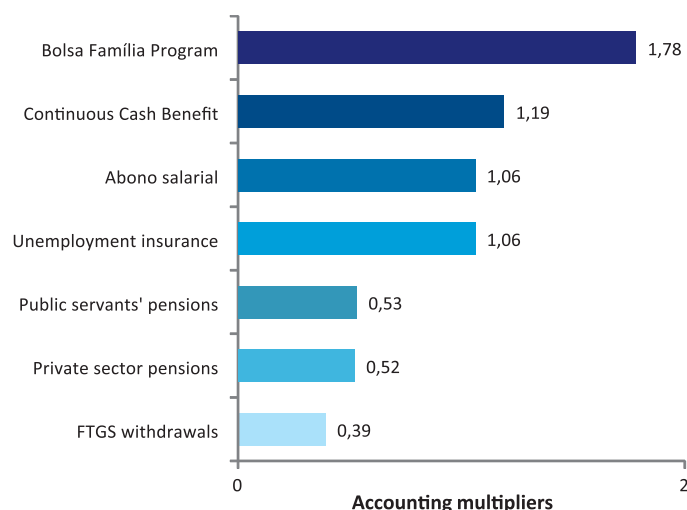
The SAM is a double-entry square matrix depicting all income flows in the economy. The data were compiled mostly from the 2009 Brazilian National Accounts and the 2008/2009 POF, a household budget survey. Our SAM was disaggregated into 56 sectors, 110 commodities, 200 household groups and seven factors of production (capital plus six types of labour, according to schooling). Finally, we ran a set of regressions to separate household consumption into 'autonomous' (or 'exogenous') and 'endogenous' components.

The economic modelling based on the SAM begins by specifying the endogenous and exogenous accounts. The latter comprise expenditures which are independent of current income. In our case, all government expenditures, capital investments, property incomes, the household's autonomous consumption and imports/exports are exogenous; more specifically, we are interested in the effects of an exogenous injection into each of the seven government transfers outlined above. All the other accounts are thus endogenous. So-called 'leaks' are income flows from the endogenous to the exogenous accounts. The leaks—such as savings, taxes and imports—are crucial to determine the multiplier effect of an exogenous injection, as they allow the system to go back to equilibrium.

The model rests on three other key assumptions. First, it follows the demand-driven Keynesian tradition, and thus assumes that causality starts with demand injections. Second, it assumes that supply is perfectly elastic. Third, it assumes that the families' propensity to save and consumption profile are fixed—that is, rising incomes do not provoke changes in behaviour.

The figure shows the multiplier effects of the seven government transfers on GDP. Their interpretation is straightforward: each multiplier corresponds to the growth in GDP resulting from each additional dollar injected into each transfer.

## Multiplier Effects of Monetary Transfers on GDP



Source: Estimated from the Social Accounting Matrix.

The Programa Bolsa Família has the highest effect by a large margin: according to the model, if the government increased Bolsa Família expenditures by 1 per cent of GDP, overall economic activity would grow by 1.78 per cent. Another means-tested transfer, the Continuous Cash Benefit, comes second. Only three transfers—the private-sector and public servants' pensions and FGTS withdrawals—had multipliers lower than unity—that is, the exogenous injections in these transfers leak out of the circular flow of income early.

The multipliers for other relevant macroeconomic aggregates—household and total consumption, disposable income etc.—reveal a similar pattern, with Bolsa Família on top, and pensions and the FGTS at the bottom.

Thus, under the admittedly stringent assumptions of our model, the results largely confirm the hypothesis that the government transfers targeting poor households, such as the Bolsa Família, help foster economic growth. Naturally, it should be stressed that the multipliers relate marginal injections into government transfers to short-term economic performance. In the long term, there is no doubt that what truly matters is the expansion of the country's productive capacity.

### Reference:

Neri, M.; F. Vaz; P. Ferreira. (2013) Efeitos Macroeconômicos dos Programa Bolsa Família: Uma Análise Comparativa das Transferências Sociais, in T. Campello and M. Côrtes Neri (eds), *Programa Bolsa Família: uma década de inclusão e cidadania*. Brasília, Ipea, chapter 11. pp. 194-206. <[http://www.ipea.gov.br/portal/images/stories/PDFs/livros/livros/livro\\_bolsafamilia\\_10anos.pdf](http://www.ipea.gov.br/portal/images/stories/PDFs/livros/livros/livro_bolsafamilia_10anos.pdf)>