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Macroeconomics of Turkey's agricultural reforms: an intertemporal computable general equilibrium analysis☆

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Abstract

Turkey recently launched a set of structural reforms to address elimination of producer price subsidies in its agriculture, and replacing them with a targeted direct income transfer program. The paper investigates analytically viable options of the proposed agricultural-cum-fiscal reform and analyzes the formal links between the public sector fiscal balances, accumulation patterns, dynamic resource allocation, and consumer welfare under a medium-long-term horizon. We utilize a dynamic general equilibrium model. The model results suggest that even though there are expected modest welfare gains of consumers' intertemporal efficiency, the repercussions of these policies on the rural economy and aggregate gross domestic product are likely to be deflationary.

JEL classification: C68; E63; Q18

Keywords: Turkish agriculture; Dynamic CGE model; Producer price subsidies; Direct income support

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1. Introduction

Turkey recently launched a comprehensive policy reform program towards disinflation of domestic prices under the guidance and proviso of the IMF and the IBRD. The major elements of the program included monetary targets through a quasi-currency board and fiscal austerity via specific targets for non-interest primary expenditures. It also entailed a detailed program of structural reforms addressing elimination of producer price subsidies in agriculture, and replacing them with a moderately targeted direct income transfer program. This shift is expected to create major repercussions both within the domestic economy and also in the fiscal balances of the public sector.

The Turkish macroeconomic environment is known to be very fragile and unsustainable for over a decade. The post-1990 period witnessed rapid deterioration of the fiscal position of the successive Turkish governments, and the public sector borrowing requirement increased to as much as 15% of the GNP in 1999, just before imposition of the disinflation program. The state resorted to a massive operation of domestic debt financing by way of new issues of debt instruments. As a result, the stock of domestic debt grew rapidly to reach 68% of the GNP in 2002. The interest expenditures on domestic debt surmounted to 22% of the GNP by the end of 2001, and continued to exert an important source of macroeconomic disequilibrium within the domestic economy. In spite of the shift in the nature and the scope of the December 1999 and June 2001 stabilization programs, structural reforms in banking, agricultural, energy and telecommunication sectors remain intact.[1,2]

With respect to agriculture, the Turkish state had a long tradition of sectoral support by way of direct price subsidies, and indirect means of subsidized use of agricultural credit, virtual direct un-taxation of rural incomes, and guaranteed state purchases of strategic commodities such as tobacco, sugar beet, and nuts. Recent studies[3] show that the total monetary value of aggregate subsidization reached to 11.3 billions US$ as of 1998, and that about 70% of this cost is borne directly by the domestic consumers. Budgetary transfers to the sector amount to an average of 3.5 billions US$ per annum over the last five years.

It is the purpose of this study to investigate analytically viable options of the proposed agricultural-cum-fiscal reform and adjustment under conditions of a heavy domestic debt burden and persistent foreign trade deficit. We investigate the process of Turkey's recent move towards direct income support in agriculture replacing the long history of price interventions; and analyze the formal links between the

[1] Turkey's program for transition to a strong economy: Targets, policies, and implementation (in Turkish), May 2001. Undersecretariat of Treasury, Ankara.

[2] Basic structural reform issues in the program for transition to a strong economy (in Turkish), December 12, 2001. Undersecretariat of treasury.

[3] See, e.g., Cakmak, Kasnakoğlu, and Akder (1999), Ozkaya, Oyan, Isin, and Uzmay (2000); OECD (2000).