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The effects of exchange rate fluctuations on economic activity in Turkey

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Abstract

The paper examines the effects of exchange rate fluctuations on real output, the price level, and the real value of components of aggregate demand in Turkey. The theoretical model decomposes movements in the exchange rate into anticipated and unanticipated components. Unanticipated currency fluctuations help to determine aggregate demand through exports, imports, and the demand for domestic currency, and aggregate supply through the cost of imported intermediate goods and producers' forecasts of relative competitiveness. Anticipated exchange rate appreciation has significant adverse effects, contracting the growth of real output and the demand for investment and exports, while raising price inflation. Unanticipated exchange rate fluctuations have asymmetric effects that highlight the importance of unanticipated depreciation in shrinking output growth and the growth of private consumption and investment, despite an increase in export growth.

Keywords: Exchange rate fluctuations; Asymmetry; Supply and demand channels; Policy implications

JEL classification : F41; F31; E32; E31

1. Introduction

There has been an ongoing debate on the appropriate exchange rate policy in developing countries. The debate focuses on the degree of fluctuations in the exchange rate in the face of internal and external shocks. Exchange rate fluctuations are likely, in turn, to determine economic performance. In judging the desirability of exchange rate fluctuations, it becomes, therefore, necessary to evaluate their effects on output growth and price inflation. Demand and supply channels determine these effects.

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A depreciation (or devaluation) of the domestic currency may stimulate economic activity through the initial increase in the price of foreign goods relative to home goods. By increasing the international competitiveness of domestic industries, exchange rate depreciation diverts spending from foreign goods to domestic goods. As illustrated in Guittian (1976) and Dornbusch (1988), the success of currency depreciation in promoting trade balance largely depends on switching demand in the proper direction and amount, as well as on the capacity of the home economy to meet the additional demand by supplying more goods.[1]

While the traditional view indicates that currency depreciation is expansionary, the new structuralism school stresses some contractionary effects. Meade (1951) discusses this theoretical possibility. If the Marshall–Lerner condition is not satisfied, currency depreciation could produce contraction.[2] Hirschman (1949) points out that currency depreciation from an initial trade deficit reduces real national income and may lead to a fall in aggregate demand. Currency depreciation gives with one hand, by lowering export prices, while taking away with the other hand, by raising import prices. If trade is in balance and the terms of trade are not changed, these price changes offset each other. But if imports exceed exports, the net result is a reduction in real income within the country. Cooper (1971) confirms this point in a general equilibrium model.

Diaz-Alejandro (1963) introduced another argument for contraction following devaluation. Depreciation may raise the windfall profits in export and import-competing industries. If money wages lag the price increase and if the marginal propensity to save from profits is higher than propensity to save from wages, national savings will go up and real output will decrease. Krugman and Taylor (1987) and Barbone and Rivera-Batiz (1987) have formalized the same views.

Supply-side channels further complicate the effects of currency depreciation on economic performance. Bruno (1979) and van Wijnbergen (1989) postulate that in a typical semi-industrialized country where inputs for manufacturing are largely imported and cannot be easily produced domestically, firms' input costs will increase following a devaluation. As a result, the negative impact from the higher cost of imported inputs may dominate the production stimulus from lower relative prices for domestically traded goods. Gylfason and Schmid (1983) provide evidence that the final effect depends on the magnitude by which demand and supply curves shift because of devaluation.[3]

To summarize, currency depreciation increases net exports and increases the cost of production. Similarly, currency appreciation decreases net exports and the cost of production. The combined effects of demand and supply channels determine the net results of exchange rate fluctuations on real output and price.[4]

This paper focuses on the relationship between exchange rate fluctuations and economic activity in Turkey. The contribution of the theory is in treating the process of forming rational

[1] Empirical support of this proposition for Group 7 countries over the 1960–1989 period is provided in Mendoza (1992).

[2] The Marshall–Lerner condition states that devaluation will improve the trade balance if the devaluing nation's demand elasticity for imports plus the foreign demand elasticity for the nation's exports exceed 1.

[3] Hanson (1983) provides theoretical evidence that the effect of currency depreciation on output depends on the assumptions regarding the labor market. Solimano (1986) studies the effect of devaluation by focusing on the structure of the trade sector. Agenor (1991) introduces a theoretical model for a small open economy and distinguishes between anticipated and unanticipated movement in the exchange rate. Examples of empirical investigations include Edwards (1986), Gylfason and Radetzki (1991), Rogers and Wang (1995), Hoffmaister and Vegh (1996), Bahmani (1991), Kamin and Rogers (2000), and Kandil and Mirzaie (2002, 2003).

[4] For an analytical overview, see Lizondo and Montiel (1989).