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### **THE INFLATIONARY CONSEQUENCES OF REAL EXCHANGE RATE TARGETING VIA ACCUMULATION OF RESERVES**

The issue of foreign currency reserve accumulation by central banks has become something of a hot topic. The wisdom of this policy has been questioned by academic economists and policymakers and justifications from national authorities vary [1], so we limit our focus here to the popular argument routinely advanced by politicians and central bankers, whereby reserve accumulation leads to a cheaper domestic currency and stimulates the export sector of the economy [2]. Mentions potentially positive effects of a disequilibrium real exchange rate and [3] provides empirical evidence showing that accumulation of international reserves in developing countries correlates with higher economic growth. These authors also demonstrate the theoretical basis for a policy of buying international currency to show that, in the presence of an externality in the exports production sector, such a policy leads to higher long-run growth rates through the mechanism of real exchange rate undervaluation. Basically, the argument goes, the resource sector brings hard currency into the country, reducing the incentive for domestic producers to make tradable goods because such goods become cheaper to purchase in the world market. The economy, in turn, reduces to extraction of natural resources and production of non-tradable services, and overall economic growth declines as neither sector creates demand for research and development. The central bank can react by buying up part of the currency inflow to prevent appreciation of the real exchange rate and stimulate production of finished goods that can compete with imports. While this strategy is clearly inferior to such fiscal measures as corrective taxation, it seems to offer a second-best option for a developing country unable to administer a discriminatory taxation scheme.

The idea that the monetary authority can influence the real exchange rate flies in the face of the classical view that the real exchange rate is merely a relative price between domestic and foreign goods, i.e. the real exchange rate is determined by the relative supply and demand for such goods, not the monetary authorities. Indeed, several authors [4] conclude this variable cannot be influenced in the long run. The monetary implementation of the policy involves continuous purchases of hard currency on foreign exchange markets (effectively an inflation tax). Alternatively, the fiscal implementation calls for conventional taxation of resource extraction.

Here, we build a dynamic general equilibrium model and add the instrument of reserve accumulation to allow for the long-run effect on the

real exchange rate. We assume that the central bank continuously purchase a fraction of the export revenues on the spot market, thereby increasing demand for foreign currency that could potentially be spent on imports. This, in turn, makes import more expensive and lead to undervaluation of the real exchange rate. This policy acts as an inflation tax, we estimate the expected inflationary consequences. The inflationary effects turn out to be quite large, although till small enough to allow for a long-run real effect.

We analyze the effects of the central bank's policy within the framework of a three-sector open economy without market imperfections. Household consume domestic non-tradable services and manufactured goods that are either imported or produced locally. Locally produced goods are assumed to be non-tradable and imperfectly substitutable with imports. Manufactured goods and services are complementary to each other. Production occurs in two sectors: non-tradable service and non-tradable manufacturing, while exports are assumed to be pure endowment. Foreign currency prices of exported and imported goods are exogenous.

The assumption of endowment export sector allows the wage level and the prices of exports to be independent of each other. We show in our model, this de-linking of the terms of trade and wage level allows the monetary authorities to influence the real exchange rate. In reality, of course, the export employs a certain amount of labor.

In this paper, we derived a clear long-run tradeoff between the devalued level of the real exchange rate and inflation in case when the real exchange rate is targeted by the policy of the accumulation of the foreign exchange reserve. The results of our simulations suggest that the policy of the real exchange rate targeting by an active policy of reserves accumulation can have a minor impact on the real exchange rate. However, there is a risk of severe inflationary consequences where the level of monetization of the economy is low as in Ukraine.

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