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External constraints and endogenous growth: Why didn't some countries benefit from capital flows?

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ABSTRACT

Empirical evidence on the growth benefits of capital inflows is mixed. The growth benefits accruing from capital inflows also appear to be larger for high savings countries. We explain this phenomenon using an OLG model of endogenous growth in open economies with borrowing constraints that can generate both positive and negative growth effects of capital inflows. The amount an economy can borrow is restricted by an endogenous enforcement constraint. In our setting, with physical capital and a pay-as-you-go pensions system, the steady state is unique. However, it can either be constrained or unconstrained. In a constrained economy, opening up to equity and FDI inflows can be bad for growth because it makes the domestic interest rate too low, which endogenously tightens borrowing constraints. Agents decrease savings and investment in productivity-enhancing activities resulting in lower growth. Results are reversed in an unconstrained economy. We also provide a quantitative analysis of these constraints and some policy implications.

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1. Introduction

The effect of capital inflows on growth during the period of financial globalization in the world economy has attracted a lot of interest in recent years. This interest has been reinforced by the decline and lack of recovery in cross-border capital flows for rich and middle income countries after the Global Financial Crisis.[1] Whether these trends will have long-run consequences for growth is an open question. Textbook economic theory would predict that capital inflows should be conducive to growth as capital moves towards economies with better investment opportunities and is a source of technological spillovers. However, empirical evidence has failed to find a robust association between these variables. A substantial body of empirical evidence has emerged in recent years[2] showing that the growth impact of capital flows appears elusive. The impact depends on variables such as the level of economic development, financial depth, institutional quality, and the nature of capital flows. Also, most gains are associated to TFP growth rather than capital accumulation. The external asset position of countries also appears to matter. A puzzling observation commonly found in the literature is that there is a positive correlation between net capital outflows and growth (see Prasad et al., 2007). Countries running current account surpluses and with higher savings rates grew faster than capital importing countries, leading to the so-called "capital allocation puzzle".[3]

We present a model that attempts to explain this evidence by focusing on the role played by international credit constraints within an overlapping generations (OLG) endogenous growth setting. The model is able to generate either positive or negative growth effects of capital inflows as well as a role for domestic savings for the success of liberalization policies. Contrary to the emphasis in much of the previous literature, our focus here is on countries whose autarky interest rate is above the world interest rate such that, when opening up, they would run current account deficits. In this sense, our approach departs from the literature on the Lucas paradox, but complements it by analyzing the growth effects of capital inflows in deficit economies. The endogenous growth setting also allows us to discuss long-run growth rather than simply transitional dynamics. The model departs from the small open economy (SOE) setting assuming that foreign investment is restricted to be a percentage of the capital stock of the economy.[4] This restriction is exogenous, and we use changes in it to model capital account liberalizations. However, the amount agents can borrow in international credit markets is endogenously determined.[5] In this framework, agents cannot commit with collateral and there are enforcement constraints that determine how much agents can borrow on credit markets. Our endogenous growth setting has a reproducible factor that generates externalities and leads to permanent growth in steady state.[6] For simplicity, we will call this factor "human-capital". We also introduce physical capital accumulation and a pay-as-you-go pension system. This allows us to have determinacy and a unique steady state which can either be constrained or unconstrained and the impact of capital flows on growth depends on the nature of the steady state.

Our model is better thought of as representing the case of an emerging market with high domestic marginal product of capital and with a history of past debt commitment problems potentially preventing it from borrowing optimally. The effect of opening up to capital inflows will depend on the steady state, which is a function of the savings rate, human capital externalities, and the pensions system among other variables. The intuition behind this result is that a rise in foreign investment inflows tends to increase physical capital and thus lower its marginal product. Since we focus on the case where the domestic interest rate exceeds the world interest rate, agents borrow in international credit markets to finance investment in human capital. When they enter the economy, agents choose their level of education financed by a credit. Since they cannot commit, they can choose to either

[1] See McKinsey Global INstitute (2013).
[2] See, among others, Aizenman and Sushko (2011), Beckaert et al. (2005, 2011), Kose et al. (2011, 2009), Obstfeld (2009), and Prasad et al. (2007).
[3] See Gourinchas and Jeanne (2013).
[4] Foreign investment in our model is a claim on the physical capital stock of the country, which includes FDI and equity inflows.
[5] See Azariadis and Lambertini (2003) and Kehoe and Levine (1993).
[6] See De La Croix and Michel (2007).