Inflation, financial development, and economic growth

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Abstract

A simple endogenous growth model is developed to illustrate the important role played by inflation in determining the effects of financial development on economic growth. In the model, money is needed for loan transactions and the operations of financial markets are subject to informational imperfections. Results demonstrate that if a government's spending share is relatively large, then multiple equilibria arise under which financial development, measured by a decrease in the monitoring cost, is shown to *raise* inflation and *reduce* economic growth for countries with relatively high initial inflation rates. Only when initial inflation rates are relatively low will financial development *reduce* inflation and *promote* growth. Effects of an expansion policy in which the government raises its spending share on equilibrium inflation and economic growth are also examined.
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1. Introduction

Stimulated by the development of the endogenous growth model, the last decade has witnessed a resurgence of interest in the relationship between financial development and economic growth. For example, recent studies (as in Bose & Cothren, 1996, 1997; Saint-Paul,

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1992) have developed theoretical models of endogenous growth to demonstrate how the development of financial markets eases informational frictions in financial markets, enhances the economy's efficiency of resource allocations, and thereby fosters economic growth.[1] On the empirical side, a significantly positive correlation between indicators of financial development and economic growth has been reported by King and Levine (1993a, 1993b) and Levine and Zervos (1998).

While recent theoretical and empirical literature has concluded that financial development promotes economic growth, some empirical studies, such as De Gregorior and Guidotti (1995), have found that financial development significantly *reduces* economic growth for countries in Latin America during the 1970s and the 1980s, the time period when countries there experienced relatively high inflation rates. This has led to the World Banks' Operating Directive on the financial sector to recommend developing countries not to pursue financial reforms unless their inflation rates are sufficiently low.[2] Apparently, a possibility that high inflation could adversely affect the operations of financial markets and thus change the relationship between financial development and economic growth arises. Indeed, the empirical study by Boyd, Levine, and Smith (2001) has documented that inflation is negatively correlated with the performance of financial markets. This possibility has been ignored by most theoretical literature. The purpose of this paper is to construct a model that may be able to highlight the important roles played by inflation in determining the effects of financial development on economic growth.

To this end, a simple endogenous growth of a three-period-lived overlapping generations (OG) model with informational imperfections existing in financial markets is developed. More specifically, a framework in which both adverse selection and costly state verification problems arise due to informational problems is considered. The presence of the adverse selection problem gives rise to credit rationing and the costly state verification problem requires the lender, with a loss in real resources, to verify the borrower when a failure of project is claimed. I then follow Di Giorgio (1999) by interpreting a decrease in the verification cost as financial development. Indeed, as pointed out by Pagano (1993), financial institutions absorb resources in the process of transferring funds from savers to borrowers and the development of financial markets is able to enhance the efficiency of financial institutions and reduce this linkage of resources. Furthermore, the government in this model relies on printing money to finance its deficits. To allow money valued in this model, this paper constructs a framework which results in a cash-in-advance (CIA) constraint in any trade between lenders and borrowers. Due to this constraint, loan transactions have to be finalized one period in advance.

In this framework, both inflation and financial development influence the amount of credit rationing in financial markets.[3] As an economy's capital investment is financed through

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[1] For a survey, see Beci and Wang (1997).

[2] See Boyd, Levine, and Smith (1996) for this point.

[3] Recent theoretical studies have modeled that inflation is the only force affecting the operations of financial markets as well as the amount of credit rationing. See the discussion below.