

Editor's Introduction

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The Twenty-Seventh Economic Policy Conference, held November 7 and 8, 2002, focused on research that examines the influence of financial markets and institutions on real economic activity. While some economists trace this literature back to Schumpeter (1949, first published in 1912), Gurley and Shaw (1955), and Goldsmith (1969), published research on this topic has grown rapidly in recent years. This conference volume is designed to examine various facets of this literature through six articles by authors who have published their research on finance and real economic activity, as well as through the comments of their discussants.

THEORETICAL FOUNDATION

Most of the recent research on the influence of finance on real economic activity is empirical. Major challenges for contributors to this empirical literature include measuring the development of financial systems and devising statistical tests that imply causality running from the development of financial systems to real economic activity, rather than the development of financial systems in response to growth in real economic activity. Another strand of the literature on finance and real economic activity, however, examines the theoretical foundation for an influence of financial markets and institutions on real economic activity. Bruce Smith was a major contributor to this theoretical literature. In fall 2001, Bruce agreed to write a theoretical paper for the conference, jointly with his wife and co-author, Valerie Bencivenga. Bruce died in the summer of 2002, but Valerie presented the paper at the conference and edited the paper for this conference volume.

Theirs is the first article in this conference volume. In the article, they develop a theoretical model in which monetary policy affects the incentives of individuals to use banking services. In their model,

the use of banking services influences economic growth. Their results suggest that monetary policy can exert an important influence on both the development of national financial systems and real economic development.

Franklin Allen, as discussant of the Smith-Bencivenga article, raises a series of questions about the influence of monetary policy on the development of financial systems and economic growth under alternative assumptions about their theoretical model. In addition, Allen asks for empirical evidence that monetary policy influences the development of financial systems. He notes that they cite the rapid development of financial systems in various South American nations in the 1980s and 1990s after these nations achieved substantial reductions in inflation rates. Allen asks whether there is evidence to separate the influence of transactions costs on the development of financial systems from the influence of monetary policy.

DEVELOPMENT OF FINANCIAL SYSTEMS AND ECONOMIC GROWTH

Ross Levine surveys the empirical literature on the development of national financial systems and economic growth. He focuses on studies that use three methods: first, cross-country regressions in which the dependent variable is a measure of long-run economic growth in each nation in the study and the independent variables include a measure of the development of the financial system in each nation; second, panel studies that combine cross-section and time-series data on measures of development in financial systems and measures of economic growth; and third, micro studies of the association between access to funds and growth at the industry or firm level. Levine notes that these studies lead to three conclusions:

1. Countries with better-developed financial systems tend to grow faster.
2. This association does not appear to reflect simultaneity between finance and growth.

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3. Better-functioning financial systems ease the external financing constraint that impedes expansion at the firm or industry level.

Levine also concludes that the empirical research on the development of financial systems and growth is developing a wide array of evidence about the laws, regulations, and policies that promote the development of national financial systems and economic growth.

In his comment on Levine, Luigi Zingales acknowledges that in recent years there has been a great deal of effort devoted to understanding the influence of financial system development on economic growth. He chooses to focus on reasons why it continues to be difficult to draw policy conclusions from this literature. He identifies six weak links in the development of this literature for purposes of making recommendations to government policymakers:

1. Measures of development of national financial systems are highly correlated with measures of good government institutions, including facets such as enforcement of property rights. It is difficult to determine which aspects of government institutions or development of financial systems are singularly important as determinants of economic growth. Possibilities of omitted variables in other studies raise questions about the use of the studies for policy recommendations.
2. A good measure of financial development would reflect the ease with which entrepreneurs can gain access to funds to finance sound projects. The measures of development of financial systems are not designed to reflect this aspect of the performance of financial systems.
3. For purposes of establishing policies to promote growth, it is important to understand the channels through which financial development influences growth.
4. With national financial markets increasingly integrated with the financial markets of other nations, why is the development of domestic financial institutions important?
5. The literature focuses primarily on aggregate economic growth. There are other features of economic activity that are of interest when we consider the effects of the development of financial systems, including the degree of competition among firms in the economy,

social mobility, and the distribution of income among households.

6. The literature gives limited guidance on the nature of government policies that promote the development of financial systems.

DATING THE LIBERALIZATION OF EQUITY MARKETS IN EMERGING-MARKET ECONOMIES

One approach to estimating the effects of financial market development on real economic activity is to estimate the effects of important changes in the regulation of national financial institutions. The authors of the third article in the conference volume, Geert Bekaert, Campbell R. Harvey, and Christian T. Lundblad, make the case that equity market liberalizations are important changes in national financial regulation. Equity market liberalizations give foreign investors the opportunity to invest in domestic equity securities and give domestic investors the right to transact in foreign equity securities. To estimate the effects of equity market liberalizations on real economic activity, it is necessary to identify the appropriate dates of the liberalizations. This article presents some of the work of the authors in an ongoing research agenda on the real economic impacts of equity market liberalizations. In many emerging-market nations, equity market liberalizations have occurred in various stages. The primary contribution of the authors to this conference volume involves an analysis of the nature of market liberalizations on various dates for a large number of emerging-market nations. The authors also present some of their empirical results that indicate positive effects of equity market liberalizations on economic growth in emerging-market nations.

Peter Blair Henry, the discussant of the Bekaert, Harvey, and Lundblad article, has been an active contributor to the literature on the effects of equity market liberalizations in emerging-market nations. His comments focus on the magnitude of the estimated effect of equity market liberalizations on economic growth in the article. Their evidence indicates that the decline in the cost of capital that results from equity market liberalization is large enough to increase the growth rate of gross domestic product per capita by 1 percentage point per annum. Henry concludes, on the basis of growth theory, that given the estimates of the effects of liberalization on the cost of capital in the emerging-market economies,

the estimated effects of liberalizations on economic growth are too large. Henry concludes that equity market liberalizations in emerging-market nations tend to occur around the same time as other policy changes that raise total factor productivity. His comments imply that to some extent the changes in national economic growth that Bekaert, Harvey, and Lundblad attribute to equity market liberalizations actually reflect additional reforms in the emerging-market nations that tended to occur around the time of the equity market liberalizations.

LESSONS FROM ECONOMIC HISTORY

Peter Rousseau finds that, while economic historians and macroeconomists have studied the influence of finance on economic growth, their assumptions and methods have been different. Studies of the history of economic development in individual countries have convinced economic historians that the development of financial systems has tended to lead to faster economic growth. Economic historians tend to ask questions about the *means* through which the development of financial systems promoted faster growth and the *magnitude* of the effect. Macroeconomists, in contrast, tend to ask *whether* the development of financial systems promoted faster economic growth, using cross-country and time-series regressions designed to test the hypothesis that finance *causes* growth.

Rousseau attempts to narrow this gap between the assumptions and methods of economic historians and macroeconomists by applying the statistical methods used by macroeconomists to historical data on finance and growth for several nations. He finds evidence that is consistent with the hypothesis that the development of national financial systems led to faster economic growth.

In discussing Rousseau's article, Eugene White raises questions about bias and missing variables. This issue of bias involves the choice of countries for the econometric analysis. White maintains that Rousseau has selected some of the success stories. The relationship between finance and growth might be substantially different for other nations during periods in which they did not achieve rapid economic development.

The issue of missing variables involves the idea that national financial systems tended to develop rapidly during periods in which other types of changes in national economies made the conditions for faster economic growth more likely. White emphasizes this point in comments on the changes

in England that facilitated the Industrial Revolution. This comment by White is similar to the comment by Henry on the article by Bekaert, Harvey, and Lundblad: Major changes in national financial systems tend to occur around the same time as other changes in government policy that have the potential to affect total factor productivity and, therefore, the pace of economic growth. The challenge for estimating the effects of finance on growth includes isolating the partial effect of changes in national financial systems, holding constant other determinants of growth.

BANKING STRUCTURE AND REAL ECONOMIC ACTIVITY

In his discussion of the Levine article, Zingales emphasizes the value of evidence about the effects of finance on growth derived from "natural experiments." He cites research by Jayaratne and Strahan (1996) as an example of analysis based on natural experiments, which involved the lifting of restrictions on bank branching by U.S. states at various points in time.

In the fifth article in the conference volume, Philip Strahan summarizes the results of his research agenda on quantifying the real economic impacts of a major change in banking regulation in the United States: relaxation of restrictions at the state level on bank branching. States lifted restrictions on branching at various points in time beginning in the early 1980s. The fact that these changes occurred at different points in time makes it possible for Strahan to estimate the effects of eliminating branching restrictions on measures of real economic activity at the state level using pooled time-series, cross-section analysis.

Strahan finds that the rate of state economic growth increased after states lifted their restrictions on branch banking. He finds that these effects of deregulation are especially pronounced for entrepreneurial activity. In addition, the variability of state income declined after states lifted restrictions on interstate banking. Strahan interprets these results as evidence that interstate banking tended to reduce the sensitivity of state income to shocks to the capital of banks headquartered in the individual states.

David Wheelock, discussant of Strahan's article, uses his background as an economic historian to relate the analysis of Strahan to analysis of the effects of bank branching restrictions on economic

activity during periods prior to the sample period of Strahan's analysis. Wheelock also considers factors that might account for the large estimated impact of branching restrictions on state economic growth in Strahan's analysis. His empirical results indicate that removing restrictions on statewide branching increased the average growth rate of state real per capita income by 33 percent, and this effect on growth persisted for five years after deregulation. Wheelock notes a regional pattern in state branching deregulation. One possible explanation for the pattern of the timing of banking deregulation and economic growth is that states tended to lift restrictions on branch banking when the growth in state per capita income was below trend. The increase in economic growth after banking deregulation might reflect a return of state per capita growth to trend after deregulation. In the version of the article published in this conference volume, Strahan says that he adjusted for such influences, and his results remain unchanged.

In the sixth article of this conference volume, Nicola Cetorelli examines the influence of banking competition on the growth of employment in industrial firms in the start-up phase and in more mature firms. His work is based on the framework of Petersen and Rajan (1995). While he characterizes the article in this conference volume as exploratory, Cetorelli is able to draw some tentative conclusions from the empirical results. Greater banking competition appears to promote job creation among industrial firms at the start-up stage and permit these start-up firms to prosper in the immediate wake of their entry. Greater competition among banks, however, accelerates the exit of the more

mature industrial firms. This finding involving the rate of exit of mature firms is consistent with the theory that bank market power can create a financial barrier to entry in product markets.

In his remarks as discussant of the Cetorelli article, Raghuram Rajan discusses the challenges that researchers face in measuring the effects of banking competition on entry into nonfinancial industries, and he surveys the literature on methods of dealing with these challenges. Rajan describes Cetorelli's approach as promising.

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