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Banks as Catalysts for Industrialization[1]

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We provide a new theory of the role of banks as catalysts for industrialization. In their influential analysis of continental European industrialization, Gerschenkron and Schumpeter argued that banks promoted the creation of new industries. We formalize this role of banks by introducing financial intermediaries into a "big push" model. We show that banks may act as catalysts for industrialization provided they are sufficiently large to mobilize a critical mass of firms and that they possess sufficient market power to make profits from coordination. The theory provides simple conditions that help explain why banks seem to play a creative role in some but not in other emerging markets. The model also shows that universal banking helps to reduce the cost of acting as catalyst. *Journal of Economic Literature* Classification Numbers: G21, N2, O14, O16.
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1. INTRODUCTION

A significant problem in the study of emerging markets is that there are relatively few data points. It is therefore particularly important to go back in history

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to learn from all available experiences. Historically, economists accorded great importance to the role of banks in the development of new markets and industries. The influential work of Gerschenkron (1962) and Schumpeter (1934, 1939), for example, placed banks at the center of economic growth. Their accounts of the role of banks, however, differ in some important ways from our modern theories of banking, which emphasize the role of banks in screening and monitoring firms. In the modern view, the impetus for economic growth is generated in the real economy, and the banking system provides some important, but ancillary, services. The work of Schumpeter, Gerschenkron and others, however, is somewhat bolder. It accords banks a more active and creative role, where banks are central actors of the real economy who act as catalysts for industrialization and growth. Because this view does not fit well with modern banking theory, it has become almost forgotten. Yet it emerged from a careful study of industrialization in several European countries that were arguably some of the most successful emerging economies ever. What can a modern-day economist make of the notion of banks as catalysts for economic activity?

Gerschenkron related the creative role of banks specifically to the so-called catch-up problem. He argued that the main challenge for achieving rapid economic growth in 19th century continental Europe was coordination of industrial activity. Britain had already pioneered industrialization, and the issue in continental Europe was to mobilize resources to follow its example. Following the seminal work by Murphy *et al.* (1989), a recent literature on big-push models has formalized the notion of catch-up economy. This literature, reviewed by Matsuyama (1995a), has focused on a variety of positive externalities between investments in order to derive the existence of multiple Pareto-rankable equilibria. In the typical model, a low equilibrium is characterized by a self-perpetuating belief that no industrialization occurs, whereas a high equilibrium is sustained by a self-fulfilling expectation that industrialization will occur.

While big-push models have been used to explain periods of rapid industrialization, it may come as a surprise that the role of banks has not been addressed in this literature. In fact, big-push models study the conditions under which an economy may find itself stuck in a low equilibrium, but pay little attention to which institutions may remedy the coordination failure which generates the low equilibrium itself. We are thus left with some important open questions. Can banks affect the economy-wide equilibrium? What are the theoretical foundations for the role of banks as catalysts for industrialization? What does it mean to create new industries or to be a catalyst for growth? And under what circumstances would banks want to take such an active role in the economy?

This paper sets out to provide a modern economic understanding of the role of banks as catalysts for industrialization in emerging economies. The paper breaks out into three parts. We want to build a theory that is informed by history. In the first part of the paper we thus review historic evidence that suggests an active role for banks. Based upon the work of Schumpeter, Gerschenkron, and others, we provide historic evidence from three continental European countries that experienced