

Commentary

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Seeking to narrow the gap between two parallel literatures, Peter Rousseau makes a welcome addition to studies searching for links between financial development and growth. One approach, employed by macroeconomists, uses cross-sectional and panel data on the contemporary world to identify the existence of a relationship between financial development and growth. Economic historians have taken a different approach, concentrating on historical case studies and endeavoring to find the pathways and magnitude of the relationship. Rousseau combines the historian's case study approach with the macroeconomist's techniques. His case studies of the first modernizing economies are valuable because it is widely held that the greatest financial impulse to growth came in the early stages of development. The first success stories of modern economic growth have the benefit of large mature literatures.

Although modern financial markets first took shape in the Netherlands, Rousseau's first case, the most important one is Great Britain, his second case. Economic historians have long wrestled with the question of why Britain was first to industrialize. In the vast literature spawned by this question, there is considerable attention to the role of finance in creating the 19th century's "workshop of the world." But, before considering this relatively narrow issue, it is important to remember that Britain was not simply the first country to industrialize and achieve high rates of growth in its leading sectors. It was also the first country to modernize its government, changing how taxes were collected and forming a modern capital market for government debt (Brewer, 1990; Neal, 1990; White, 2001). Its tax-smoothing fiscal policy from the early 18th century onward left continental powers in envy and earned the admiration of today's macroeconomists (Barro, 1987). Furthermore, in addition to having a dynamic economy and an efficient macroeconomic policy regime,

it became a military powerhouse—thanks, in part, to the carefully designed incentives for the operation of its navy (Allen, 2002).

Thus, Britain was the first modern nation in not one, but many dimensions. This astonishing achievement led contemporaries and later historians to make comparisons with Britain's continental rivals, principally France. French observers in the late 18th century found it difficult to believe that France's centuries-long rival had bypassed her. It was all the more shocking because, at the beginning of the 18th century, France looked good by most comparisons. A population of 19 million (vs. Britain's 7 million), a per capita gross domestic product (GDP) comparable with Britain's, a thriving manufacturing sector, and a substantially lower average per capita tax burden gave France a good position initially (White, 2001). Britain's quick success appears puzzling until one looks carefully at the preconditions for economic growth.

As contemporary research on the connection between finance and growth has discovered, many of the clues to growth are not found in the statistics but in the laws, regulations, and customs that govern economic activity. Looking at output, labor, natural resources, technology, and capital, we can see whether the markets were competitive (allowing for price flexibility and freedom of entry and exit) and whether there were well-protected property and contract rights. By the middle of the 18th century, Britain was not perfect but was well ahead of France by most of these measures, with the rest of the continent much further behind. Simply put, Britain was much closer to its production possibilities frontier and more able to exploit technological change because it had created markets and incentive structures for its pre-industrial economy. It had accomplished many of the institutional changes that the International Monetary Fund and World Bank might recommend to a developing country today. The main effects of these institutional characteristics point in the same direction as the newer research on financial development and growth.

The point here is that the conditions that allow capital markets to grease the wheels of economic

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growth are also the conditions that ensure that other markets work. What we know from history is that, if one market meets the preconditions, it is likely others will, because these changes are part of an economywide overhaul. Rousseau's statement—that it was no coincidence that England, with the key components of a financial system in place by 1750, was poised to tackle industrialization next—is too modest an assessment. Britain had its other factor, goods, and services markets set up for growth, too.

To return to Rousseau's first case, the Netherlands, we are confronted with a country that had become the center of world capital markets, well before industrialization. Financial innovation and market integration helped build many of the standard features of financial systems—from banking to stock exchanges. This development was accomplished at a time when Europe and the Netherlands were embarked on what is known as a “commercial revolution,” linking and expanding markets for goods and services within Europe and around the world. The question here is whether financial development in the Netherlands helped to spur on the commercial revolution of the 17th century.

There is a problem in using contemporary macroeconomic techniques to examine the links between financial development and the industrial revolution or the commercial revolution, namely, the absence of macroeconomic time series for the 17th and 18th centuries, well before the advent of national income accounting. What Rousseau has found are data for the monopoly international trading companies, the Dutch East India Company (VOC) and the British East India Company (EIC), and for the privileged banks, the Bank of Amsterdam and the Bank of England. These four companies were the giant chartered corporations of their day and trading in their securities dominated the exchanges (Neal, 1990). Whether studying the connection between these trading companies and banks helps us to gain some insight into the influence of finance on economic growth depends first on the importance of foreign trade in economic growth at the time and second on whether the relationship between a monopoly trading company and a highly privileged bank tells us much about the financing of growth.

In the case of Britain, the current wisdom among economic historians is that foreign trade was not central to the country's move to a higher growth path in the first industrial revolution (Crouzet, 2001; Cameron and Neal, 2003). Furthermore, the early

stages of the industrial revolution were not centered in London or southern England, where the EIC and Bank of England operated, but in northern areas, where cotton mills and iron foundries were located. From company and family records, scrutinized by historians, we find that much of the financing for these enterprises—which were small in comparison with the EIC and the Bank of England—came from informal networks and local bankers. The potential link between financial development and the commercial revolution appears stronger because Amsterdam, the home of the Bank of Amsterdam, was also the trading base for the VOC.

As far as the second question is concerned, Rousseau needs to provide a stronger argument for why the relationship between highly privileged financial and non-financial companies should be of interest. The activities of the VOC and the Dutch bank could well have been closely linked for reasons other than some inherent relationship between finance and growth. The Dutch economic elite had influence in both institutions and there appears to have been a considerable overlap between the two in terms of stockholders and directors. Both institutions were intended to serve their commercial interests and the state. It is hard to believe that a privileged trading company created by the state could be capital constrained when the state also created the privileged bank.

By selecting Britain and the Netherlands, Rousseau has perhaps introduced some bias into his study, as those two nations were the success stories. In addition to the British and Dutch East India companies, there was a French East India Company, which was a notable failure in spite of the privileges that it enjoyed. Was this failure due to the failure of French entrepreneurship, or to the French navy to safeguard the seas, or perhaps to the absence of adequate financing? The Bank of England was founded in 1697 and the Bank of Amsterdam in 1602. During John Law's effort to reform royal finances, the French finally created the Banque Royale in 1716; but the collapse of the Mississippi bubble left the country with a profound distaste for banks (White, 2001). In the next half-century, private banks and informal networks, including the notaries, were the only sources of finance. An institution parallel to the Dutch and British banks only reappeared with the establishment of the Discount Bank in 1776. But this bank, primarily serving private bankers rather than commerce or industry, dissolved during the French Revolution; a permanent institu-

tion was put in place only with the creation of the Bank of France in 1800. French money and capital markets at the time have been generally and correctly characterized as inferior to their British counterparts. Using government financial development as a yardstick, there was no equivalent of standard short-term British instruments, such as Navy bills or Treasury notes. Instead, the French government was forced to rely on privately contracted tax farmers for advances against taxes. Long-term government markets were also limited. The broad deep market for the British consol did not exist in France, which attempted to use heterogeneous and complicated life annuities for long-term financing. Although it may not be testable because of a lack of data, the absence of a well-developed financial system suggests that French trade could have been potentially weakened, offering support for Rousseau's conjecture about the role of finance in British and Dutch commercial development.

Turning to the empirical evidence for the Netherlands, Rousseau finds that neither trade nor money Granger-cause bank credit and that bank credit Granger-causes money shipments, suggesting that more credit had a positive effect on the VOC's commercial activity. Bank of Amsterdam credit appears to drive VOC voyages but not the other way around. In addition, Rousseau finds that Tobin's Q explains VOC investment, and neither bank credit nor VOC debt adds significantly to explaining VOC investment. He concludes that temporary credit conditions at the bank did not alter the capital budgeting decisions and that the Amsterdam market was deep enough for the VOC to secure funds based on its shadow price. Yet, as already noted, this relationship may not be so surprising for two interconnected privileged firms. The other issue, well beyond the scope of this paper, is why, if the financial markets in the Netherlands were so brilliant and the country was economically sophisticated in many other aspects, did the first industrial surge occur in Britain and not the Netherlands?

For Britain, Rousseau obtains similar results for 1710-45, showing that financing constraints did not bind the EIC and that Tobin's Q Granger-causes investment. He concludes that the EIC was not limited by the availability of finance and there was a preexisting well-developed financial market. The same caveats apply here except that the EIC played a much smaller role in the British economy than the VOC played in the Dutch economy.

For Britain, Rousseau also has annual data on

industrial production, international trade (the sum of imports and exports), and the Bank of England liabilities for 1728-1850. He finds some econometric evidence that the bank's liabilities Granger-cause industrial production—or in his words that “finance moved before output.” However, there is a problem with this interpretation because industrial production may cause trade and trade may cause bank lending. Perhaps the biggest omission from this exercise is the factor that causes the biggest fluctuations in the financial markets and the whole economy: war. The huge increases in financial aggregates are not related to growth of the private sector but to war finance and the needs of the government (Bordo and White, 1991).

For the 19th century, more modern data are available. Rousseau breaks his study into two periods—before and after 1850, reflecting the quality and availability of data. For the earlier period in the United States, the data for 1790-1850 look more like a modern economy. It appears here that the money stock and the number of listed securities cause investment but not the other way around. The impulse response results show that they are also important for trade. Rousseau concludes that for the United States “finance-led” growth has some credibility. He finds similar results for Japan in the period 1880-1913, with financial assets driving private investment. For the second period, 1850-1929, Rousseau has a data set of 17 countries, enough to allow a cross-section analysis. The results are very similar to those found by King and Levine (1994) for the post-World War II period. The most interesting finding is that output is more responsive in the pre-1930 period, suggesting that financial factors matter more in the early stages of economic development.

While using nontraditional data for the Netherlands and Britain raises some potential problems, Rousseau's analysis of newly assembled data sets strengthens the view that finance is important for economic growth, providing evidence of larger effects for earlier stages of growth. Yet, the development of financial markets was the product of broader trends that established well-functioning markets for goods and factors across the economy. Explaining this change is a much greater challenge.

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