The Impact of Foreign Bank Entry on Domestic Firm Performance:
The Case of China

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Abstract

In this paper, we study the relationship between foreign bank entry and productivity growth of manufacturing firms in China.

Traditionally, the Chinese banking sector has been dominated by four state-owned commercial banks (the "Big 4"), namely, the Bank of China, the Agriculture Bank of China, the Construction Bank of China, and the Industrial and Commercial Bank of China. These banks in general have worse performance in terms of profitability, efficiency, and asset quality (Lin and Zhang, 2009 JBF). After China's accession to the World Trade Organization (WTO) in 2001, foreign banks can enter China's local currency market in phases and compete with local banks. Foreign banks, being more efficient than local banks, should bring in more competition in the banking sector. Two natural questions arise: (1) Does foreign bank entry after China's accession to WTO affect the growth of manufacturing firms? (2) Do industries with different reliance on external finance benefit (or suffer) differently from foreign bank entry?

The existing theoretical literature suggests a non-trivial relationship between banking market structure and growth. For example, Pagano (1993 EER) shows, in an endogenous growth model, that credit market competition enhances firms' access to credit. In other words, banking sector competition should promote firm growth; but Petersen and Rajan (1995 QJE) argue that banks with market power can internalize the benefits of assisting the financially-constrained firms (especially young firms). Therefore, when firms are more financially dependent, they should benefit more when banking market concentration is higher. Empirically, studies using industry-level data

also show mixed results: firm growth can not only be positively or negatively related to banking competition, but also depend on the firm's reliance on external finance. For example, Cetorelli and Gambera (2001 JF) conduct an industry-level analysis using international data. They find that bank concentration has a negative impact on industry growth. However, bank concentration promotes growth of those industries that are more dependent on external finance. On the contrary, Claessens and Laeven (2005 JEEA) use industry-level data in 16 European countries and find that bank competition has a positive impact on growth of more financially dependent industries. More recently, Inklaar, Koetter, and Noth (2011 WP) use firm-level data from Germany and find that bank competition has a positive effect on growth in industries with low external dependence but the relationship becomes negative for industries with high external dependence.

One main limitation of existing studies using industry-level data is that such data do not capture firm dynamics such as firm entry and exit decisions. In the Chinese context, other current firm-level studies mainly focus on the effect of banking market structure on samples of listed firms, and results of these studies may not be representative of the whole economy. For example, Lin (2011 JBF) uses a sample of 1,085 non-financial firms listed on Shanghai or Shenzhen stock exchange during 2001-2005 to examine the effect of foreign bank entry after China's accession to WTO on domestic firms' access to bank credit.

In this paper, we use the firm-level data from Annual Survey of Industrial Production obtained from the National Bureau of Statistics of China for empirical analysis. This data set covers all state-owned and non-state-owned manufacturing firms having sales over 5 millions RMB. The sample period is between 1998 and 2007, with number of firm observations ranging from about 160,000 (in 1998) to about 330,000 (in 2007). This unbalanced panel of firms represents about 90% of the gross total output in the manufacturing industries. Several variables (including number of firms, value-added, sales, output, employment, and export) in this data set aggregate closely to the totals for the same set of variables reported in various Chinese Statistical Yearbooks (see Brandt, Van Biesebroeck, and Zhang 2011 JDE).

In the empirical analysis, we use the value-added production function estimation method developed by Levinsohn and Petrin (2003 REStud) to compute total factor productivity (TFP). To measure foreign bank entry, we use a binary variable indicating whether foreign banks are allowed to do local-currency business with domestic firms. For example, by end of 2001, foreign banks are allowed to enter Shanghai, Shenzhen, Tianjin, and Dalian; and the foreign bank dummy equals to 1 for these regions from 2002 onwards. We find that this foreign bank dummy is positively associated with higher competition, measured by a lower concentration ratio, a lower Herfindhal-Hirschman Index, and a lower H-statistic (Panzar and Rosse, 1987 JIE). We follow Rajan and Zingales (1998 AER) and use the fraction of capital investment that cannot be financed by internal cash to measure an industry's financial dependence.

We regress TFP growth on the foreign bank dummy as well as its interaction with the industry's financial dependence. In our preliminary analysis, we find, using various industry-level and firm-level regressions, that (1) foreign bank entry is negatively related to TFP growth, and (2) industries with higher dependence on external finance grow relatively faster with foreign bank entry. These results provide further firm-level evidence on the relationship between banking market structure and growth, especially in the Chinese context.