The China Syndrome Affects Banks:

The Credit Supply Channel of Foreign Import

Competition

ONLINE APPENDIX

Sergio Mayordomo and Omar Rachedi*

*Mayordomo, sergio.mayordomo@bde.es, Banco de España; Rachedi (corresponding author), omar.rachedi@esade.edu, ESADE Business School, Universitat Ramon Llull.

A.1 Descriptive Statistics

This section reports two tables which resume the characteristics of the sample studied in the paper.

Panel A of Table A.1 shows the descriptive statistics associated to the values of the sectoral exposure to Chinese imports $\Delta IP_{s,2000-2006}$ for all the firms operating in the exposed manufacturing sectors. We do not report the statistics for non-exposed companies as in this case it equals to zero. Panel B reports the descriptive statistics on the change in log credit between 2000 and 2006 at the bank-firm level, with information also at the sectoral level. Panel C reports the descriptive statistics on other selected firm variables, that is, firm total assets, the ratio of equity over firm total assets, the ratio of liquid assets over firm total assets, the return on assets (ROA), and the fraction of non-performing loans.

Table A.2 shows that there is no statistically significant difference in a set of key observable variables for the banks with either low or high exposure to Chinese import competition. In this case, we focus on bank total assets, the ratio of bank liquid assets over total liabilities, the ratio of bank equity over total liabilities, the fraction on non-performing loans, profitability measured in terms of the return on assets (ROA), and finally the average share of credit for a specific province-sector combination.

[**Table A1 here**]

[**Table A2 here**]

A.2 The Role of Bank Sector Market Share

The results of Table 2 showing that banks exposed to foreign imports reduced credit supply to firms competing with Chinese goods differ from the mechanism of Giannetti and Saidi (2019), in which high-market-share lenders dampen the reduction in credit supply to distressed industries. If we use the terminology of De Jonghe et al. (2020), our measure of bank exposure is the bank specialization in a given set of sectors (i.e., the share of bank credit toward the industries competing with Chinese goods over total bank credit). Instead, Giannetti and Saidi (2019) look at the bank sector market share (i.e., the share of bank credit over total credit within a sector). In this section, we show that the reduction in credit supply to firms competing with Chinese goods is concentrated among banks with high degrees of specialization and low market shares in these sectors, consistently with the findings of Giannetti and Saidi (2019).

To do so, Columns 1 and 2 of Table A.3 report the results of cross-sectional regression of equation (7) estimated only across exposed manufacturing firms, whereas Columns 3 and 4 focus on the credit between exposed manufacturing firms and banks with low-market-shares in these industries, defined as the banks with the market shares in the lowest quartile of the distribution of market shares across all Spanish financial institutions. The results highlight that in the sample of low-market-share banks the coefficients of the interaction between banks' exposure to Chinese imports $\Delta IP_{b,2000-2006}$ and the sectoral exposure to China $\Delta IP_{s,2000-2006}$ is between twice and thrice as large as the values estimated on the entire sample of banks.

[**Table A3 here**]

A.3 Panel Evidence

Our baseline regression exploits cross-sectional variation in bank-firm credit between 2000 and 2006, following a similar econometric approach as that used throughout the China shock literature (Autor et al., 2013, 2014, 2020; Acemoglu et al., 2016; Barrot et al., 2018). This allows us to better compare and place our study within the benchmarks of this strand of the literature. This section validates the cross-sectional results by studying a panel of bank-firm-year credit information, which allows us to saturate the regression with additional firm-time, bank-time, and bank-firm fixed effects.

More specifically, we run the following regression at the annual frequency between 2000 and 2006

$$\text{(A.1)} \qquad \Delta C_{b,f,s,t} = \beta_1 \Delta IP_{b,t} + \beta_2 \Delta IP_{b,t} \times \Delta IP_{s,t} + \mathbf{X}'_{\mathbf{b},\mathbf{t}} \gamma + \delta_{f,t} + \delta_{b,f} + \epsilon_{b,f,s,t}$$

where $\delta_{f,t}$ are firm-time fixed effects that absorb any time variation in firms' credit demand and $\delta_{b,f}$ are firm-bank fixed effects that capture any bank specialization, as well as any change in credit, driven by the specifics of firm-bank relationships.

The regression (A.1) includes yearly observations for both banks' exposure, $\Delta IP_{b,t}$, and sectoral exposure to China, $\Delta IP_{s,t}$. We estimate the regression with OLS methods, as well as by instrumenting banks' and sectoral penetration indexes based on trade flows of non-E.U. advanced economies, $\Delta IP^{\star}_{b,t}$ and $\Delta IP^{\star}_{s,t}$, respectively.[1] In addition, we also estimate an alternative specification that replaces the bank controls with bank-time fixed effects, $\delta_{b,t}$, thus absorbing banks' time-varying exposure to China. Similar to the cross-sectional analysis, the introduction of bank-time fixed effects barely increases the R^2 of the regressions.

The results of Table A.4 highlight that the findings of the cross-sectional regression shown in Table 2 also hold on in this highly saturated panel setting.

[Table A4 here]

---

[1]In this panel setting, we cannot leverage shipping costs as an instrument, since they do not vary over time.

A.4 Extensive and Intensive Margins

In the baseline analysis, we show that exposed banks reduced their supply of credit to firms competing with China, while rebalancing their loan portfolios toward firms not exposed to Chinese imports. In this section, we investigate whether exposed banks changed their credit supply policies at the extensive margin, by establishing new lending relationships while ending old ones, or at the intensive margin, such that exposed banks altered the amount of credit which is granted to firms with established relationships.

To isolate the role of the extensive margin, we run a regression similar to that of equation (7), with the only difference being in the way in which we define the dependent variable. Specifically, we consider an indicator function which equals 1 in case we observe the establishment of a new credit relationship with a given bank and given firm between 2000 and 2006. Instead, we isolate the role of the intensive margin by looking into the change in lending over the period 2000-2006 between a given bank and a given firm, conditional on this bank-firm pair being already established in the year 2000.

Tables A.5 and A.6 show that the drop in credit supply toward firms in the exposed manufacturing industries worked through both the extensive and intensive margins, respectively. The same applies to the portfolio rebalancing toward the firms operating in non-exposed industries.

[**Table A5 here**]

[**Table A6 here**]

A.5 Alternative Demand Controls

In the baseline analysis, we identify the change in credit supply associated with bank exposure to import penetration through multi-bank firms, as in Khwaja and Mian (2008). Namely, we saturate the cross-sectional regression with firm fixed effects, so that we can leverage the variation of bank-firm credit within any given firm. In this way, the firm fixed effects absorb the unobserved firm credit demand, and any remaining variation in lending comes from supply motives. This identification of the credit supply channel hinges on two key conditions. First, we assume that firms' demand of credit does not vary across banks. Second, we assume that banks' credit supply does not vary systematically across firms.

In this section, we show that our results on the credit supply channel of foreign import competition are robust to two alternative settings for the identification of credit supply. In the first one, we follow Chakraborty et al. (2018) and rather than focusing only on multi-bank, we look at all firms and absorb credit demand with the combination of firm controls and (three-digit)sector-size fixed effects. In this case, the identification strategy posits that within each three-digit industry/size bin and conditional on firm characteristics, any variation in bank-firm credit is due to credit supply motives. In the second one, we saturate even further the regressions and consider (three-digit)sector-size-province fixed effects, in the spirit of Lin and Paravisini (2013) and Degryse et al. (2019). In this way, we can address the limitations of the firm fixed effect approach to absorb credit demand in the presence of firm- and sector-specific patterns in credit supply due to bank specialization, as highlighted by Paravisini et al. (2020).

Table A.7 shows that the main conclusions of our analysis do not change if we absorb firm credit demand with these two alternative strategies.

[**Table A7 here**]

A.6 Evidence at the Firm Level

Our baseline cross-sectional regressions look at the effects of banks' exposure to Chinese import penetration on the change in the supply of credit in a given bank-firm pair. This level of analysis let us exploit within-firm credit variation and identify banks' credit supply. However, the drop in the supply of credit between a given exposed bank and a given exposed firm could be offset if the firm manages to borrow from other banks in our sample. To verify whether the changes in bank exposure to China altered the overall credit of firms, we run the following regression at the firm level using only the sample of multi-bank firms

$$(A.2) \qquad \Delta C_{f,s,2000-2006} = \beta_1 \Delta I\hat{P}_{b,2000-2006} + \beta_2 \Delta I\hat{P}_{b,2000-2006} \times \Delta IP_{s,2000-2006} + \dots$$
$$\dots + \mathbf{X}'_{\mathbf{f,s,2000}}\beta_3 + \mathbf{X}'_{\mathbf{s,2000}}\beta_4 + \hat{\delta}_f + \delta_{\text{PROV}} + \delta_{\text{S1DIG.}} + \epsilon_{f,s,2000-2006},$$

where $\Delta I\hat{P}_{b,2000-2006}$ is firm-level banks' exposure to China, as in equation (15).

The regression also includes a set of firm characteristics $\mathbf{X}'_{\mathbf{f,s,2000}}$, which consist of leverage, the liquidity ratio, the return on assets, and size measured in terms of assets, a set of sector characteristics $\mathbf{X}'_{\mathbf{s,2000}}$, which consist of the sectoral averages of each firm control, and both sectoral and province fixed effects, that is, $\delta_{\text{S1DIG.}}$ and δ_{PROV}. Since our focus is now at the firm level, we cannot employ anymore firm fixed effects, which implies that the estimated change in credit supply could be biased if banks' exposure correlates with firms' credit demand. To address this concern, we follow Bonaccorsi di Piatti and Sette (2016), Cingano et al. (2016), and Jimenez et al. (2020), and add to the regression the firm fixed effect $\hat{\delta}_f$ as estimated in the bank-firm-level regression (7). The inclusion of the estimated fixed effect let us control explicitly for potential changes in credit demand of the firms exposed to Chinese competition. Columns 1 - 4 in Table A.8 confirm that even at the firm level we observe a drop in the amount of lending to exposed manufacturing companies, and a rise in the supply of credit to firms in non-exposed industries.

[**Table A8 here**]

A.7 Evidence at the Bank Level

This section looks at the changes in the total amount of lending at the bank level. Indeed, the results of the cross-sectional regressions at the bank-firm-level do not reveal whether either banks' exposure to Chinese competition caused a decline in the total amount of bank corporate loans, or banks did not change the size of their balance sheets, and offset the reduction in the supply of credit to exposed manufacturing firms with an increase in lending to non-exposed industries. To evaluate the effects of banks' exposure to import competition on the size of bank corporate loan portfolios, we run the following regression at the bank level

$$(A.3) \qquad \Delta C_{b,2000-2006} = \beta_1 \Delta IP_{b,2000-2006} + \mathbf{X}'_{\mathbf{b},\mathbf{2000}} \beta_2 + \hat{\delta}_b + \epsilon_{b,2000-2006}.$$

The regression includes not only the same set of bank controls of regression (7), but also the estimated firm fixed effects to control for any possible variation in firm credit demand. Given the estimates of firm fixed effects of regression (7), we define the new set of fixed effects $\hat{\delta}_b$ as

$$(A.4) \qquad \hat{\delta}_b = \frac{\sum_f C_{b,f,s,2000} \times \hat{\delta}_f}{\sum_f C_{b,f,s,2000}},$$

which weight the estimated firm fixed effects $\hat{\delta}_f$ by the share of credit of the bank-firm pair on the overall size of bank corporate loans.

Column 1 of Table A.9 shows that the coefficient that relates the changes in the overall bank corporate loans to bank exposure to Chinese imports is not statistically significant. This finding corroborates the evidence of Figure 3, pointing out that exposed banks did not shrink their balance sheets vis-à-vis non-exposed banks, but rather offset the reduction in the supply of credit to exposed manufacturing firms by lending more to industries with no competition threat from China.

A similar result holds in case we estimate the regression (A.3) by replacing as the dependent variable the change in total credit, $\Delta C_{b,2000-2006}$, with bank profitability measured in terms of return on assets, $\Delta ROA_{b,2000-2006}$. Column 2 shows that banks more exposed to China

did not experience a differential behavior in terms of profitability. Once again, this finding confirms that banks' portfolio rebalancing out of exposed industries managed to shield banks' profitability from the negative effects of the rising Chinese import competition.

[**Table A9 here**]

A.8 Placebo Exercise

Section IV.A shows that the rebalancing of bank loan portfolios toward construction firms holds above and beyond banks' exposure to the contemporaneous housing boom. In this section, we provide further evidence corroborating the fact that the surge in the supply of credit to the construction sector due to Chinese import competition does not capture any confounding dynamics driven by the marked housing boom that characterized the Spanish economy in the early 2000s.

To do so, we run a placebo exercise: we change the definition of banks' exposure by focusing on bank specialization in those manufacturing firms which operate in sectors that have *not* been affected by Chinese import competition (i.e., firms within non-exposed manufacturing industries), and evaluate whether also this alternative measure implies a change in credit across sectors from 2000 to 2006. More precisely, we compute banks' exposure to the manufacturing firms not competing with Chinese imports as

$$(A.5) \qquad SPEC_b^{\text{NON\_EXP\_MANUF}} = \frac{\sum_{f \in \text{NON\_EXP\_MANUF}} C_{b,f,2000}}{\sum_f C_{b,f,2000}}.$$

Table A.10 reports the results of this placebo. Importantly, we consider the interaction of the specialization measures with three dummy variables that indicate whether a firm operates in either the services sector, the construction sector, or the non-exposed manufacturing sector. Thus, the category of reference is the exposed manufacturing industry. We find that the specialization in non-exposed manufacturing firms led to a larger supply of credit to firms which operated exactly in these very same industries, corroborating the fact that our measure does capture patterns of bank specialization in lending across sectors. However, there is no reallocation whatsoever to other sectors, and especially to construction firms. This finding confirms that the portfolio switching toward the construction sector did depend on banks' exposure to Chinese imports, and that our empirical strategy isolates the role of rising foreign imports on banks' credit supply policies.

[Table A10 here]

A.9 Further Evidence on the Real Effects

This section provides two pieces of additional evidence on the real effects of the credit supply channel of foreign import competition. In the first one, we replicate the analysis of Table 10 on the response of employment by saturating further the regression with three-digit industry fixed effects. In the second one, we focus on a different real outcome, and study the response of investment at the extensive margin.

With respect the analysis of employment, we extend the specification of regression (14) by substituting the one-digit industry fixed effects with the more granular three-digit industry fixed effects, as follows

$$(A.6) \qquad \Delta Y_{f,s,2000-2006} = \beta_1 \Delta \hat{IP}_{b,2000-2006} + \mathbf{X}'_{\mathbf{f,s,2000}} \gamma_1 + \delta_s + \delta_{\text{PROV}} + \hat{\delta}_f + \epsilon_{f,2000-2006},$$

where $\Delta Y_{f,s,2000-2006}$ is the change in employment between the years 2000 and 2006 of firm f operating in sector s, $\Delta \hat{IP}_{b,2000-2006}$ is the firm-level variable that captures banks' exposure to Chinese imports, $\mathbf{X}_{\mathbf{f,s,2000}}$ are firm-level controls as in regression (14), δ_s denotes the three-digit industry fixed effects, δ_{PROV} are province fixed effects, and $\hat{\delta}_f$ are the estimate fixed effects that are used as credit demand controls in the spirit of Bonaccorsi di Piatti and Sette (2016), Cingano et al. (2016), and Jimenez et al. (2020). In this specification, the industry fixed effects δ_s absorb the role of firms' direct exposure to Chinese imports $IP_{s,2000-2006}$, and thus allow us to estimate the real effect of the credit supply channel of foreign import competition $\Delta \hat{IP}_{b,2000-2006}$ on employment within any three-digit sector.

Table A.11 reports the result of this specification, and confirms that – even within any three-digit industry – banks' exposure to Chinese imports has led to an additional drop in the employment of exposed manufacturing firms, whereas it implied an increase in the real outcome of construction firms. This finding confirms that the credit supply channel of foreign import competition has amplified the negative effects of rising Chinese goods on manufacturing firms, while generating a positive spillover into non-exposed industries, and more specifically to

construction companies.

[**Table A11 here**]

Then, in the second piece of evidence, we look at an additional real outcome, that is, investment. More precisely, we look at the effect of rising Chinese imports on the investment at the extensive margin, defined as the fraction of firms that incur in investment expenditures. We have also looked at the overall investment as a dependent variable, but find no effect due to the credit channel of rising import competition.[2] The fact that we find action at the extensive margin but not in overall investment implies that the credit channel of foreign import competition did not affect the intensive margin of investment, that is, the decision of firms that were already incurring positive investment spells. This result is consistent, however, with the empirical evidence at the micro-level on investment, which points out the predominant relevance of the extensive margin of investment in understanding aggregate investment dynamics. For instance, Doms and Dunne (1998) report that around 40% of the typical plant's total investment expenditure over a two decade sample is concentrated into a *single* large investment spell. In addition, Gourio and Kashyap (2007) show that the cyclical fluctuations in the investment rate of U.S. manufacturing companies are driven by variations in the number of firms experiencing investment spikes.

In addition, our measure of investment expenditures also incorporates any cost related to innovation activities. Bloom et al. (2016) and Hombert and Matray (2018) provide evidence showing that firms managed to circumvent the negative effects of rising Chinese import competition by increasing substantially their R&D and innovation expenditures, and more in general any IPP investment. In this way, exposed manufacturing firms put downward pressure on the catch-up of Chinese companies. Since firms incurring in R&D expenditures are those mature companies that typically already engage in large investment expenditures, the variation in IPP investment could counteract the negative effects of Chinese competition on overall investment, and thus explain the lack of result at the overall investment level.

---

[2]The results for the case of overall investment are available upon request.

With the definition of changes in the extensive margin of investment as a new dependent variable, we run a regression similar to the setting described in equation (14). Table A.12 reports the results of this exercise, and shows that the number of firms incurring positive investment spells did shrink among those exposed manufacturing companies that received credit from exposed banks. That is, the drop in credit supply to exposed manufacturing firms did reduce investment at the extensive margin in that sector. Instead, we again observe a positive effect on the real outcome of the construction sector: the number of construction firms experiencing positive investment spells increased due to the rebalancing of banks' loan portfolios.

[**Table A12 here**]

Overall, this section confirms that the reduction in the supply of credit toward firms in exposed manufacturing industries generate a further drop in firms' economic activity, whereas the reallocation of bank lending toward non-exposed sectors generated a rise in the economic activity of construction firms.

References

Acemoglu, D.; D. Autor; D. Dorn; G. Hanson; and B. Price. " Import Competition and the Great U.S. Employment Sag of the 2000s." *Journal of Labor Economics*, 34 (2016),141–198.

Autor, D.; D. Dorn; and G. Hanson. "The China Syndrome: Local Labor Market Effects of Import Competition in the United States." *American Economic Review*, 103 (2013), 2121–2168.

Autor, D.; D. Dorn; G. Hanson; G. Pisano; and P. Shu. "Foreign Competition and Domestic Innovation: Evidence from U.S. Patents." *American Economic Review: Insights*, 2 (2020), 357–374.

Autor, D.; D. Dorn; G. Hanson; and J. Song. "Trade Adjustment: Worker Level Evidence." *Quarterly Journal of Economics*, 129 (2014), 1799–1860.

Barrot, J.-N.; E. Loualiche; M. Plosser; and J. Sauvagnat. "Import Competition and Household Debt." Working Paper, Bocconi University (2018).

Bloom, N.; M. Draca; and J. Van Reenen. "Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT, and Productivity." *Review of Economic Studies*, 83 (2016), 87–117.

Bonaccorsi di Piatti, E., and E. Sette. "Did the Securitization Market Freeze Affect Bank Lending During the Financial Crisis? Evidence from a Credit Register." *Journal of Financial Intermediation*, 25 (2016), 54–76.

Chakraborty, I.; I. Goldstein; and A. MacKinlay. "Housing Price Booms and Crowding-out Effects in Bank Lending." *Review of Financial Studies*, 31 (2018), 2806–2853.

Cingano, F.; F. Manaresi; and E. Sette. "Does Credit Crunch Investment Down? New Evidence on the Real Effects of the Bank-Lending Channel." *Review of Financial Studies*, 29 (2016), 2737–2773.

Degryse, H.; O. De Jonghe; S. Jakovljevic; K. Mulier; and G. Schepens. "Identifying Credit Supply Shocks with Bank-Firm Data: Methods and Applications." *Journal of Financial*

Intermediation, 40 (2019), 100813.

De Jonghe, O.; H. Dewachter; K. Mulier; S. Ongena; and G. Schepens. "Some Borrowers are More Equal than Others: Bank Funding Shocks and Credit Reallocation." *Review of Finance*, 24 (2020), 1–43.

Doms, M., and T. Dunne. Capital Adjustment Patterns in Manufacturing Plants. *Review of Economic Dynamics*, 1 (1998), 409–429.

Giannetti, M., and F. Saidi. "Shock Propagation and Banking Structure." *Review of Financial Studies*, 32 (2019), 2499–2540.

Gourio, F., and A. Kashyap. "Investment Spikes: New Facts and a General Equilibrium Exploration." *Journal of Monetary Economics*, 54 (2007), 1–22.

Hombert, J., and A. Matray. "Can Innovation Help U.S. Manufacturing Firms Escape Import Competition from China?" *Journal of Finance*, 73 (2018), 2003–2039.

Jimenez, G.; A. Mian; J.-L. Peydro; and J. Saurina. "The Real Effects of the Bank Lending Channel." *Journal of Monetary Economics*, 115 (2020), 162–179.

Khwaja, A. and A. Mian. "Tracing the Impact of Bank Liquidity Shocks: Evidence from an Emerging Market." *American Economic Review*, 98 (2008), 1413–1442.

Paravisini, D.; V. Rappoport; and P. Schnabl. "Specialization in Bank Lending: Evidence from Exporting Firms." Working Paper, London School of Economics (2020).

Table A.1: Descriptive Statistics.

Note: Panel A reports the measure of sectoral exposure to Chinese imports for the firms operating in the exposed manufacturing industries. We do not report the statistics for non-exposed companies as in this case it equals to zero. Panel B reports the descriptive statistics on the change in log credit between 2000 and 2006 at the bank-firm level, with information also at the sectoral level. Panel C reports the descriptive statistics on other selected firm variables, that is, firm total assets, the ratio of equity over firm total assets, the ratio of liquid assets over firm total assets, the return on assets (ROA), and the fraction of non-performing loans. P5 denotes the fifth percentile, P95 denotes the ninety-fifth percentile, SD is the standard deviation, and N is the number of observations.

	Mean	Median	P5	P95	SD	N
Panel A. $\Delta IP_{s,2000-2006}$						
Exposed Manufacturing Firms	0.13	0.11	0.01	0.86	0.16	84,896
Panel B. $\Delta \text{Log} (\text{CREDIT}_{2000-2006})$						
All Firms	0.13	0.11	-0.79	0.97	0.56	300,579
Exposed Manufacturing Firms	0.11	0.08	-0.80	0.96	0.56	84,896
Non-Exposed Manufacturing Firms	0.12	0.10	-0.77	0.93	0.55	111,113
Services Firms	0.14	0.14	-0.76	0.96	0.56	45,144
Construction Firms	0.17	0.16	-0.84	1.07	0.61	59,425
Panel C. Firm Characteristics						
TOTAL_ASSETS (TA) (,000)	5,695.79	472.72	46.87	6,641.00	40,705.06	92,350
EQUITY/TA	0.25	0.22	-0.10	0.74	0.27	92,350
LIQUID_ASSETS/TA	0.09	0.04	-0.01	0.36	0.14	92,350
ROA	0.02	0.03	-0.12	0.21	0.26	92,350
FRACTION_OF_NPLs	0.03	0.00	0.00	0.00	0.17	92,350

Table A.2: Bank Import Penetration and Bank Characteristics

Note: This table reports bank characteristics for banks with high exposure to China, defined as the banks in the top quartile in terms of bank exposure to Chinese imported goods $\Delta IP_{b,2000-2006}$, and banks with low exposure to China, defined as the banks in the lowest three quartiles in terms of bank exposure to Chinese imported goods $\Delta IP_{b,2000-2006}$. The bank characteristics are the log of total assets, the ratio of liquid assets over total liabilities in percentage values, the ratio of equity over total liabilities in percentage values, the fraction of non-performing loans (NPLs) in percentage values, the return on assets (ROA) in percentage values, and the average share of banks' overall total corporate credit loans which is concentrated at the province-sector level in percentage values. The last column reports the difference between the values in bank characteristics across the two groups of banks, with the values in brackets reporting the standard errors associated with a test of difference in the means.

	Banks with Low Exposure to China	Banks with High Exposure to China	Difference
TOTAL_ASSETS (log)	13.26	13.70	-0.44 (0.40)
LIQUID_ASSETS/TOTAL_LIABILITIES (%)	14.26	14.24	0.02 (1.62)
EQUITY/TOTAL_LIABILITIES (%)	9.61	9.04	0.57 (1.11)
NPLs (%)	1.70	1.35	0.35 (0.24)
ROA (%)	0.82	0.91	-0.09 (0.07)
AVERAGE_CREDIT_SHARE AT_PROVINCE-SECTOR_LEVEL (%)	20.43	17.20	3.23 (2.14)

Table A.3: Bank Sector Market Share and the Credit Supply to Exposed Manufacturing.

Note: This table reports the results of a cross-sectional regression in which the dependent variable is $\Delta C_{b,f,s,2000-2006}$, the log-change in the credit between bank b and firm f operating in exposed manufacturing industries between 2000 and 2006. The independent variables are the change in bank import penetration $\Delta IP_{b,2000-2006}$ and its interaction with the change in sectoral import penetration $\Delta IP_{s,2000-2006}$, as well as bank controls as in Table 2. The regression includes firm fixed effects. Column 1 reports the results for the case in which the regression is estimated using OLS on the baseline sample with all banks lending to exposed manufacturing firms. Column 3 reports a similar result focusing on a sample of low-market-share banks, that is, banks which are in the lowest quartile of market shares in each of the exposed manufacturing industries, where the market share is the share of bank credit in a sector over the overall credit of that sector. Columns 2 and 4 report the results for the case in which the regression is estimated using IV, in which the change in bank exposure to Chinese imports $\Delta IP_{b,2000-2006}$ and the change in the sectoral exposure to Chinese imports $\Delta IP_{s,2000-2006}$ are instrumented using $\Delta IP^{\star}_{b,2000-2006}$ and $\Delta IP^{\star}_{s,2000-2006}$, respectively. These instruments are derived by exploiting the change in the sectoral import penetration of a pool of non-E.U. advanced economies. In all cases, standard errors double-clustered at the bank and sector levels are reported in brackets. *, **, and *** indicate statistical significance at the 10%, 5% and 1%, respectively.

Dependent Variable: $\Delta C_{b,f,s,2000-2006}$ in Exposed Manufacturing Firms

	All Banks		Low-Market-Share Banks	
	1 OLS	2 IV	3 OLS	4 IV
$\Delta IP_{b,2000-2006}$	0.83 (0.74)	1.67** (0.79)	0.95 (1.06)	2.03 (1.41)
$\Delta IP_{b,2000-2006} \times \Delta IP_{s,2000-2006}$	-10.31* (6.23)	-17.23* (9.89)	-23.49** (11.46)	-40.45*** (14.63)
Firm Fixed Effects	YES	YES	YES	YES
Bank Controls	YES	YES	YES	YES
R^2	0.41	–	0.47	–
Observations	75,395	75,395	28,748	28,748

Table A.4: Banks' Exposure to China and Credit Supply - Panel Evidence.

Note: This table reports the results of a panel regression in which the dependent variable is $\Delta C_{b,f,s,t}$, the log-change in the credit between bank b and firm f at time t for yearly observation between 2000 and 2006, and the independent variables are the change in banks' import penetration $\Delta IP_{b,t}$ and its interaction with the change in sectoral import penetration $\Delta IP_{s,t}$, as well as bank controls as in Table 2. All specifications include firm-time fixed effects and firm-bank fixed effects. Columns 1 and 3 report the results for the case in which the regression is estimated using OLS. Columns 2 and 4 report the results for the case in which the regression is estimated using IV, in which the change in banks' exposure to Chinese imports $\Delta IP_{b,t}$ and the change in the sectoral exposure to Chinese imports $\Delta IP_{s,t}$ are instrumented using $\Delta IP^{\star}_{b,t}$ and $\Delta IP^{\star}_{s,t}$, respectively. These instruments are derived by exploiting the change in the sectoral import penetration of a pool of non-E.U. advanced economies. Columns 3-4 substitute bank controls with bank-time fixed effects, which absorb the estimation of the variable $\Delta IP_{b,t}$. In all cases, standard errors double-clustered at the bank and sector levels are reported in brackets. ** and *** indicate statistical significance at the 5% and 1% levels, respectively.

	Dependent Variable: $\Delta C_{b,f,s,t}$			
	1 OLS	2 IV	3 OLS	4 IV
$\Delta IP_{b,t}$	3.30*** (1.11)	5.29** (2.58)		
$\Delta IP_{b,t} \times \Delta IP_{s,t}$	-18.62** (8.53)	-26.11*** (9.71)	-13.19** (6.48)	-22.81** (10.07)
Firm-Time Fixed Effects	YES	YES	YES	YES
Firm-Bank Fixed Effects	YES	YES	YES	YES
Bank-Time Fixed Effects	NO	NO	YES	YES
Bank Controls	YES	YES	NO	NO
R^2	0.70	–	0.71	–
Observations	1,441,987	1,441,987	1,441,987	1,441,987

Table A.5: Bank Exposure to China and Credit Supply - Extensive Margin.

Note: This table reports the results obtained by the cross-sectional regressions of Table 2, with the only difference being the way in which we define the dependent variable. Specifically, we consider a dummy variable that equals 1 if between 2000 and 2006 we observe a new bank-firm pair which was not established as of 2000, that is, the change in credit at the extensive margin. Columns 1 and 3 are estimated with OLS methods. Instead, Columns 2 and 4 report the results for the case in which the regression is estimated using IV, in which the change in bank exposure to Chinese imports $\Delta IP_{b,2000-2006}$ and the change in the sectoral exposure to Chinese imports $\Delta IP_{s,2000-2006}$ are instrumented using $\Delta IP^{\star}_{b,2000-2006}$ and $\Delta IP^{\star}_{s,2000-2006}$, respectively. These instruments are derived by exploiting the change in the sectoral import penetration of a pool of non-E.U. advanced economies. *, **, and *** indicate statistical significance at the 10%, 5% and 1%, respectively.

	1 OLS	2 IV	3 OLS	4 IV
$\Delta IP_{b,2000-2006}$	0.31* (0.17)	0.45** (0.21)		
$\Delta IP_{b,2000-2006} \times \Delta IP_{s,2000-2006}$	-19.84*** (5.63)	-22.02*** (6.51)	-19.55*** (5.51)	-22.53*** (6.44)
Firm Fixed Effects	YES	YES	YES	YES
Bank Controls	YES	YES	NO	NO
Bank Fixed Effects	NO	NO	YES	YES
R^2	0.51	–	0.52	–
Observations	249,782	249,782	249,782	249,782

Table A.6: Bank Exposure to China and Credit Supply - Intensive Margin.

Note: This table reports the results obtained by the cross-sectional regressions of Table 2, with the only difference being the way in which we define the dependent variable. Specifically, we consider the change in credit of a given bank-firm pair between 2000 and 2006, conditional on observing the bank-firm pair as already established as of 2000, that is, the change in credit at the intensive margin. Columns 1 and 3 are estimated with OLS methods. Instead, Columns 2 and 4 report the results for the case in which the regression is estimated using IV, in which the change in bank exposure to Chinese imports $\Delta IP_{b,2000-2006}$ and the change in the sectoral exposure to Chinese imports $\Delta IP_{s,2000-2006}$ are instrumented using $\Delta IP^{\star}_{b,2000-2006}$ and $\Delta IP^{\star}_{s,2000-2006}$, respectively. These instruments are derived by exploiting the change in the sectoral import penetration of a pool of non-E.U. advanced economies. *, **, and *** indicate statistical significance at the 10%, 5% and 1%, respectively.

	1 OLS	2 IV	3 OLS	4 IV
$\Delta IP_{b,2000-2006}$	1.67*** (0.38)	2.07*** (0.40)		
$\Delta IP_{b,2000-2006} \times \Delta IP_{s,2000-2006}$	-14.72** (6.80)	-19.20** (8.92)	-15.02** (6.68)	-21.35** (8.96)
Firm Fixed Effects	YES	YES	YES	YES
Bank Controls	YES	YES	NO	NO
Bank Fixed Effects	NO	NO	YES	YES
R^2	0.43	–	0.45	–
Observations	132,025	132,025	132,025	132,025

Table A.7: Bank Exposure to China and Credit Supply - Alternative Credit Demand Controls.

Note: This table reports the results obtained by the cross-sectional regressions of Table 2, with the only difference being the way in which we control for firms' credit demand. Specifically, Columns 1 − 4 use all firms and control for demand with the combination of sector-size fixed effects and firms covariates, which consist of leverage, the liquidity ratio, the return on assets, and size measured as the logarithm of assets. Columns 5 − 8 consider all firms and control for demand with the combination of sector-province-size fixed effects and firms covariates. Columns 1, 2, 5, and 6 use bank controls, whereas Columns 3, 4, 7, and 8 introduce bank fixed effects. Columns 1, 3, 5, and 8 are estimated with OLS methods. Instead, Columns 2, 4, 6, and 8 report the results for the case in which the regression is estimated using IV, in which the change in bank exposure to Chinese imports $\Delta IP_{b,2000-2006}$ and the change in the sectoral exposure to Chinese imports $\Delta IP_{s,2000-2006}$ are instrumented using $\Delta IP^{\star}_{b,2000-2006}$ and $\Delta IP^{\star}_{s,2000-2006}$, respectively. These instruments are derived by exploiting the change in the sectoral import penetration of a pool of non-E.U. advanced economies. *, **, and *** indicate statistical significance at the 10%, 5% and 1%, respectively.

Dependent Variable: $\Delta C_{b,f,s,2000-2006}$

	1 OLS	2 IV	3 OLS	4 IV	5 OLS	6 IV	7 OLS	8 IV
$\Delta IP_{b,2000-2006}$	1.56***	1.67***			1.68***	2.00***		
	(0.23)	(0.26)			(0.24)	(0.26)		
$\Delta IP_{b,2000-2006} \times \Delta IP_{s,2000-2006}$	-13.00***	-16.32**	-15.22***	-19.79***	-11.51**	-15.72**	-12.66***	-17.75***
	(4.50)	(6.72)	(4.48)	(6.61)	(4.91)	(6.31)	(4.90)	(6.32)
Sector-Size Fixed Effects	YES	YES	YES	YES	NO	NO	NO	NO
Sector-Province-Size Fixed Effects	NO	NO	NO	NO	YES	YES	YES	YES
Firm Fixed Effects	NO	NO	NO	NO	NO	NO	NO	NO
Firm Controls	YES	YES	YES	YES	YES	YES	YES	YES
Bank Controls	YES	YES	NO	NO	YES	YES	NO	NO
Bank Fixed Effects	NO	NO	YES	YES	NO	NO	YES	YES
R^2	0.23	–	0.24	–	0.30	–	0.32	–
Observations	300,502	300,502	300,502	300,502	295,677	295,677	295,677	295,677

Table A.8: Bank Exposure to China and Credit Supply - Firm-Level Evidence.

Note: This table reports the results of a cross-sectional regression in which the dependent variable is $\Delta C_{f,s,2000-2006}$, the change in the credit of firm f in sector s between 2000 and 2006, and the independent variables are the change in bank import penetration defined at the firm-level $\Delta I\hat{P}_{b,2000-2006}$ and its interaction with the change in sectoral import penetration $\Delta IP_{s,2000-2006}$, as well as firm controls as in Table A.7, sector controls defined as the sector average of the variables used as firm controls, one-digit sector fixed effects, province fixed effects, and credit demand controls in the form of the estimated firm fixed effect from the bank-firm-level regressions. In both columns, standard errors. In all cases, standard errors clustered at the firm level are reported in brackets. ** and *** indicate statistical significance at the 5% and 1%, respectively.

	Dependent Variable: $\Delta C_{f,s,2000-2006}$	
	1 OLS	2 IV
$\Delta I\hat{P}_{b,2000-2006}$	6.13*** (1.58)	8.73*** (1.69)
$\Delta I\hat{P}_{b,2000-2006} \times \Delta IP_{s,2000-2006}$	-23.26** (11.06)	-41.02** (19.79)
One-digit Sector Fixed Effects	YES	YES
Province Fixed Effects	YES	YES
Credit Demand Controls	YES	YES
Firm Controls	YES	YES
Three-digit Sector Controls	YES	YES
R^2	0.34	–
Observations	98,270	98,270

A.23

Table A.9: Banks' Exposure to China, Credit Supply, and Profitability - Bank-Level Evidence.

Note: This table reports the results of a cross-sectional regression in which the dependent variable in Column 1 is $\Delta C_{b,2000-2006}$, the change in the credit of bank b between 2000 and 2006, whereas the dependent variable in Column 2 is $\Delta ROA_{b,2000-2006}$, the change in the profitability of bank b between 2000 and 2006. The independent variables are the change in bank import penetration $\Delta IP_{b,2000-2006}$, and bank controls, such as the size of the balance sheet, the liquidity ratio, leverage, the fraction of NPLs, ROA, sector specialization, province specialization, relationship lending, and estimated firm fixed effects from the bank-firm-level regressions, which are then defined at the bank level by weighting the fixed-effect of each firm with the share of credit of that firm over the overall credit position of the bank. In this case, standard errors clustered at the bank level are reported in brackets. $\star$, $\star\star$, and $\star\star\star$ indicate statistical significance at the 10%, 5% and 1%, respectively.

Dependent Variable:	$\Delta C_{b,2000-2006}$	$\Delta ROA_{b,2000-2006}$
	All Banks	All Banks
	1 OLS	2 OLS
$\Delta IP_{b,2000-2006}$	10.24 (6.50)	0.01 (0.02)
Credit Demand Controls	YES	YES
Bank Controls	YES	YES
R^2	0.12	0.27
Observations	162	162

Table A.10: Placebo Exercise.

Note: This table reports the results of cross-sectional regressions at the bank-firm level as in Table 5, in which the main independent variable is bank specialization in non-exposed manufacturing firms $SPEC_b^{\text{NON\_EXP\_MANUF}}$, defined as the share of credit to these firms in the overall bank corporate loan portfolio, as of 2000, and its interaction with three dummy variables, $\mathbb{I}_{\text{SERV}_s}$, $\mathbb{I}_{\text{CONSTR}_s}$, and $\mathbb{I}_{\text{NON\_EXP\_MANUF}_s}$. These dummies equal 1 in case a firm belongs to the services sector, the construction sector, and the non-exposed manufacturing sector, respectively. $\star$, $\star\star$, and $\star\star\star$ indicate statistical significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: $\Delta C_{b,f,s,2000-2006}$	
	1 OLS	2 OLS
$SPEC_b^{\text{NON\_EXP\_MANUF}}$	0.01 (0.32)	
$SPEC_b^{\text{NON\_EXP\_MANUF}} \times \mathbb{I}_{\text{SERV}_s}$	0.04 (0.04)	0.03 (0.04)
$SPEC_b^{\text{NON\_EXP\_MANUF}} \times \mathbb{I}_{\text{CONSTR}_s}$	0.02 (0.03)	-0.01 (0.03)
$SPEC_b^{\text{NON\_EXP\_MANUF}} \times \mathbb{I}_{\text{NON\_EXP\_MANUF}_s}$	0.06* (0.04)	0.06** (0.03)
Firm Fixed Effects	YES	YES
Bank Controls	YES	NO
Bank Fixed Effects	NO	YES
R^2	0.46	0.48
Observations	249,782	249,782

Table A.11: Real Effects - Employment - three-digit Sector Fixed Effects.

This table reports the results of a cross-sectional regression in which the dependent variable is the change in employment of firm f in sector s between 2000 and 2006, and the independent variables are the change in bank import penetration defined at the firm level $\Delta I\hat{P}_{b,2000-2006}$, firm controls as in Table 1, three-digit sector fixed effects, province fixed effects, and credit demand controls in the form of the estimated firm-fixed effect from the bank-firm-level regressions. In all cases, standard errors clustered at the industry-location level are reported in brackets. * and ** indicate statistical significance at the 10% and 5%, respectively.

	Dependent Variable: ΔEmployment$_{f,s,2000-2006}$			
	Exposed Manufacturing	Non-Exposed Manufacturing	Services	Construction
	1 IV	2 IV	3 IV	4 IV
$\Delta I\hat{P}_{b,2000-2006}$	-0.61** (0.27)	0.13* (0.08)	0.15 (0.10)	0.47** (0.22)
Credit Demand Controls	YES	YES	YES	YES
Firm Controls	YES	YES	YES	YES
Three-digit Sector Fixed Effects	YES	YES	YES	YES
Province Fixed Effects	YES	YES	YES	YES
Observations	23,555	35,441	15,181	18,173

Table A.12: Real Effects - Investment at the Extensive Margin.

This table reports the results of a cross-sectional regression in which the dependent variable is a dummy variable that equals 1 if firm f in sector s experiences a positive investment expenditure between the years 2000 and 2006, and the independent variables are the change in bank import penetration defined at the firm level $\Delta I\hat{P}_{b,2000-2006}$, the change in sectoral import penetration $\Delta IP_{s,2000-2006}$, firm controls as in Table 1, sector controls defined as the three-digit sector average of the variables used as firm controls, one-digit sector fixed effects, province fixed effects, and credit demand controls in the form of the estimated firm-fixed effect from the bank-firm-level regressions. In all cases, standard errors clustered at the industry-location level are reported in brackets. *, **, and *** indicate statistical significance at the 10%, 5% and 1%, respectively.

	Dependent Variable: $\mathbb{I}_{\text{Investment}_{f,s,2000-2006}>0}$			
	Exposed Manufacturing	Non-Exposed Manufacturing	Services	Construction
	1 IV	2 IV	3 IV	4 IV
$\Delta I\hat{P}_{b,2000-2006}$	-0.68* (0.39)	0.39 (0.40)	0.23 (0.18)	1.99*** (0.52)
$\Delta IP_{s,2000-2006}$	-0.14* (0.07)			
Credit Demand Controls	YES	YES	YES	YES
Firm Controls	YES	YES	YES	YES
Three-digit Sector Controls	YES	YES	YES	YES
One-digit Sector Fixed Effects	YES	YES	YES	YES
Province Fixed Effects	YES	YES	YES	YES
Observations	24,310	35,283	16,006	20,379