# A Appendix

## A.1 ERPT in Export Prices

In this section, we investigate the ERPT in export prices. The regression specification is as follows:

$$\Delta \ln(P_{ijk(t-1,t)}) = \alpha_0 + \sum_{h=0}^{3} \alpha_{1h} \Delta \ln(RER_{j(t-h-1,t-h)}) + \alpha_2 \, Mode_{ijkt} + \mu_{ij} + \eta_k + \lambda_t + \epsilon_{ijkt} \quad \text{(A1)}$$

Here, $P_{ijkt}$ is the export price (yuan) of product $i$ to country $j$ for firm $k$ at time $t$. $RER_{jt}$ is the real exchange rate between country $j$ and China at time $t$. $Mode_{ijkt}$ is a dummy for the trade mode. If the product is traded under the PA mode, then $Mode_{ijkt}$ is 0 and otherwise 1. $\mu_{ij}$ measures the product-country fixed effect, $\eta_k$ measures the firm fixed effect and $\lambda_t$ measures the time fixed effect. We take both export prices and real exchange rates in the first difference of log forms. $\sum_{h=0}^{3} \alpha_{1h}$ measures the cumulative three-month ERPT and is supposed to be negative. When Chinese yuan appreciates, the export price (yuan) should be decrease. In processing trade, the export price is decided when the contract is signed, after which the inputs are imported. Thus, we suspect that the ERPT in export prices would be lower than that in import prices. Table A1 presents the results. When Chinese yuan appreciates by 10%, the export price decreases by 0.9% (column 1). Compared with the ERPT in import prices (Table 5), this coefficient is smaller and insignificant. Li et al. (2015a) also investigate the ERPT in export prices using both ordinary and processing trade data. Their regression is at the firm-product-country-year level. They find that, with a 10% appreciation of Chinese yuan, export price drops by 0.35%. The coefficient in their paper is even smaller than ours. The difference might come from trade mode or time frequency.

## A.2 ERPT in Import Prices, Cluster by Country-Month

The key explanatory variable of regression (2) is the real exchange rate, which is measured at the country-month level. In the main text, we cluster the standard errors by country. In this section, we re-run regression (2) for each ownership type and cluster the standard errors by country-month as a robustness check. The results in Table A2 are similar to that in Tables 5 and 6. Thus, our benchmark results are robust. That is, the ERPT is lower

Table A1: ERPT in Export Prices

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | | | **Dependent Variable: $\Delta\ln$(Price)** | | |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| $\Delta\ln$(RER) | -0.0914 | -0.0663 | -0.0512 | -0.1568 | -0.0800 |
| | (1.99) | (1.96) | (0.39) | (2.13) | (1.7) |
| Trade Mode | -0.000256 | -0.000710 | -0.000138 | 0.00410** | -0.00125 |
| | (-0.34) | (-0.71) | (-0.08) | (2.05) | (-0.92) |
| Observations | 7,968,253 | 1,953,081 | 345,260 | 1,777,269 | 3,878,847 |
| R-squared | 0.009 | 0.010 | 0.029 | 0.017 | 0.011 |
| Product-Country FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Firm FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cluster By Country | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:* This table shows the cumulative three-month ERPT in export prices.
1. Product is at the HS6 level. Trade mode is a dummy variable which equals 1 if the product is imported through the IA mode and 0 otherwise.
2. Price is denominated in yuan and the RER indicates the real exchange rate between the import source country and China. An increase in the real exchange rate implies an appreciation of the yuan.
3. F-statistics are shown in parentheses for $\Delta\ln$(RER), and t-statistics are shown in parentheses for Trade Mode.
4. *Significant at 10%; **significant at 5%; ***significant at 1%.

under the IA mode than under the PA mode for joint-owned and foreign-owned assembly firms. The EPRT is higher under the IA mode than under the PA mode for state-owned and private-owned assembly firms, though that result is not statistically significant.

## A.3 Bilateral Exchange Rate and Exchange Rate Between U.S. Dollar and Chinese Yuan

Boz et al. (2017) emphasizes the role of U.S. dollar exchange rate rather than bilateral exchange rate in price pass-through. Most trade flow in China is invoiced in U.S. dollar. In order to investigate which one is more important, bilateral exchange rate or exchange rate between U.S. dollar and Chinese yuan, we include both exchange rates in our estimation. The regression specification is as follows:

$$\Delta\ln(P_{ijk(t-1,t)}) = \alpha_0 + \sum_{h=0}^{3}\alpha_{1h}\Delta\ln(RER_{j(t-h-1,t-h)}) + \sum_{h=0}^{3}\alpha_{2h}\Delta\ln(RER_{u(t-h-1,t-h)})$$
$$+ \alpha_3\ Mode_{ijkt} + \mu_{ij} + \eta_k + \lambda_t + \epsilon_{ijkt} \tag{A2}$$

## Table A2: ERPT in Import Prices, Cluster by Country-Month

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | current month | | cumulative three-month | |
| **Panel A: Full Sample** | | | | |
| $\Delta\ln(RER)$ | -0.0145 | -0.0302 | -0.2227*** | -0.2629*** |
| | (-0.639) | (-0.923) | (31.19) | (19.94) |
| $\Delta\ln(RER) \times$ Trade Mode | | 0.0261 | | 0.0681 |
| | | (0.898) | | (1.69) |
| Trade Mode | 0.00155 | 0.00153 | 0.00152 | 0.00147 |
| | (0.954) | (0.939) | (0.932) | (0.909) |
| Observations | 12,808,500 | 12,808,500 | 12,808,500 | 12,808,500 |
| R-squared | 0.005 | 0.005 | 0.005 | 0.005 |
| **Panel B: State-owned** | | | | |
| $\Delta\ln(RER)$ | 0.0121 | 0.0149 | -0.1262* | -0.0927 |
| | (0.34) | (0.45) | (3.44) | (1.82) |
| $\Delta\ln(RER) \times$ Trade Mode | | -0.0191 | | -0.2268 |
| | | (-0.16) | | (1.17) |
| Trade Mode | 0.00203 | 0.00205 | 0.00202 | 0.00216 |
| | (0.51) | (0.52) | (0.51) | (0.55) |
| Observations | 2,536,094 | 2,536,094 | 2,536,094 | 2,536,094 |
| R-squared | 0.007 | 0.007 | 0.007 | 0.007 |
| **Panel C: Private-owned** | | | | |
| $\Delta\ln(RER)$ | -0.0713 | -0.121 | -0.3339* | -0.2907 |
| | (-0.799) | (-1.285) | (3.25) | (2.16) |
| $\Delta\ln(RER) \times$ Trade Mode | | 0.217 | | -0.2072 |
| | | (1.297) | | (0.43) |
| Trade Mode | -0.00686 | -0.00721 | -0.00683 | -0.00688 |
| | (-0.829) | (-0.875) | (-0.826) | (-0.837) |
| Observations | 411,180 | 411,180 | 411,180 | 411,180 |
| R-squared | 0.023 | 0.023 | 0.023 | 0.023 |
| **Panel D: Joint-owned** | | | | |
| $\Delta\ln(RER)$ | 0.0198 | -0.0361 | -0.2978*** | -0.5195*** |
| | (0.564) | (-0.462) | (23.53) | (15.88) |
| $\Delta\ln(RER) \times$ Trade Mode | | 0.0792 | | 0.3159** |
| | | (1.003) | | (5.30) |
| Trade Mode | -0.000109 | -0.000254 | -0.000204 | -0.000701 |
| | (-0.0346) | (-0.0795) | (-0.0645) | (-0.224) |
| Observations | 3,015,715 | 3,015,715 | 3,015,715 | 3,015,715 |
| R-squared | 0.007 | 0.007 | 0.007 | 0.007 |
| **Panel E: Foreign-owned** | | | | |
| $\Delta\ln(RER)$ | -0.0418 | -0.0803 | -0.2216*** | -0.3165*** |
| | (-1.610) | (-1.490) | (22.38) | (-11.82) |
| $\Delta\ln(RER) \times$ Trade Mode | | 0.0495 | | 0.1258 |
| | | (0.954) | | (1.89) |
| Trade Mode | 0.00294 | 0.00293 | 0.00292 | 0.00294 |
| | (1.190) | (1.187) | (1.178) | (1.190) |
| Observations | 6,835,528 | 6,835,528 | 6,835,528 | 6,835,528 |
| R-squared | 0.005 | 0.005 | 0.005 | 0.005 |
| Product-Country FE | ✓ | ✓ | ✓ | ✓ |
| Firm FE | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ |
| Cluster By Country-Month | ✓ | ✓ | ✓ | ✓ |

Dependent Variable: $\Delta\ln$(Price)

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:*
1. Product is at the HS6 level. Trade mode is a dummy variable which equals 1 if the product is imported through the IA mode and 0 otherwise.
2. Price is denominated in yuan and the RER indicates the real exchange rate between the import source country and China. An increase in the real exchange rate implies an appreciation of the yuan.
3. The first two columns, current month ERPT, show the responses of price adjustments to the RER change in the current month.
4. The last two columns, cumulative three-month ERPT, present the responses of price adjustments to the RER change in the current month as well as in the past three months. F-statistics are shown in parentheses for $\Delta\ln$(RER) and $\Delta\ln$(RER)×Trade Mode in these two columns. t-statistics are shown in parentheses for the other variables and for variables in other columns.
5. *Significant at 10%; **significant at 5%; ***significant at 1%.

## Table A3: ERPT in Import Prices: Bilateral and US Exchange Rates

| | Dependent Variable: $\Delta \ln$(**Price**) | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| $\Delta \ln$(Bilateral RER) | -0.2908*** | -0.2190*** | -0.3729*** | -0.3805*** | -0.2698*** |
| | (12.37) | (7.74) | (12.25) | (13.35) | (13.80) |
| $\Delta \ln$(US RER) | 0.0193 | 0.0078 | -0.5469* | 0.0318 | 0.0404 |
| | (0.03) | (0.00) | (3.50) | (0.01) | (0.20) |
| Observations | 12,808,500 | 2,536,094 | 411,180 | 3,015,715 | 6,835,528 |
| R-squared | 0.005 | 0.007 | 0.023 | 0.007 | 0.005 |
| Product-Country FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Firm FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cluster By Country | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:* This table shows the cumulative three-month ERPT in import prices.
1. Product is at the HS6 level.
2. Price is denominated in yuan and the RER indicates the real exchange rate between the import source country and China. An increase in the real exchange rate implies an appreciation of the yuan.
3. F-statistics are shown in parentheses.
4. *Significant at 10%; **significant at 5%; ***significant at 1%.

Here, $P_{ijkt}$ is the import price (yuan) of product $i$ from country $j$ for firm $k$ at time $t$. $RER_{jt}$ is the real exchange rate between country $j$ and China at time $t$. $RER_{ut}$ is the real exchange rate between US and China at time $t$. $Mode_{ijkt}$ is a dummy for the trade mode. If the product is traded under the PA mode, then $Mode_{ijkt}$ is 0 and otherwise 1. $\mu_{ij}$ measures the product-country fixed effect, $\eta_k$ measures the firm fixed effect and $\lambda_t$ measures the time fixed effect. Since $RER_{ut}$ only has time variation, we control month fixed effect instead of year-month fixed effect. The result is presented in Table A3. When we include both bilateral and U.S. dollar exchange rates, only the former is significant. This finding based on firm information is different from what Boz et al. (2017) observe using country level aggregates. Our results suggest that the bilateral exchange rate plays a more important role on pass-through rather than the invoice currency in Chinese processing trade. Thus, we focus on the bilateral exchange rate in this study.

## A.4 Real Exchange Rate Decomposition

The sources of real exchange rate movements can come from either nominal exchange rate fluctuations or relative CPI changes. Thus, we decompose the real exchange rate into two

parts: the nominal exchange rate and the relative CPI, and investigate which plays a larger role. The regression specification is as follows:

$$\Delta \ln(P_{ijk(t-1,t)}) = \alpha_0 + \sum_{h=0}^{3} \alpha_{1h}\Delta \ln(NER_{j(t-h-1,t-h)}) + \sum_{h=0}^{3} \alpha_{2h}\Delta(CPI_{China}/CPI_j)_{t-h-1,t-h}$$
$$+ \alpha_3 \ Mode_{ijkt} + \mu_{ij} + \eta_k + \lambda_t + \epsilon_{ijkt}$$
$$(A3)$$

Here, $P_{ijkt}$ is the import price (yuan) of product $i$ from country $j$ for firm $k$ at time $t$. $NER_{jt}$ is the nominal exchange rate between country $j$ and China at time $t$. $(CPI_{China}/CPI_j)_t$ is the relative CPI between China and country $j$ at time $t$. $Mode_{ijkt}$ is a dummy for the trade mode. If the product is traded under the PA mode, then $Mode_{ijt}$ is 0 and otherwise 1. The result is presented in Table A4. When nominal exchange rate appreciates, the price decreases. When the relative CPI in China is higher, the price increases but insignificant. Thus, price changes are mainly driven by nominal exchange rate changes compared to relative CPI change.[25]

## A.5   Summary of Intermediary Companies

In this section, we present some facts about intermediary companies in processing trade. Panel A in Table A5 shows that the share of intermediary companies remains stable from 2000 to 2006. In 2000, the share of intermediary companies was 7.79%, and this decreased slightly to 7.27% in 2006. However, the total values imported by intermediary companies decreased significantly. In 2000, intermediary companies imported around 20% of total goods but in 2006, these firms imported only 8.4% of total goods. This finding implies that the role of intermediary companies was in decline. Some assembly firms no longer need intermediary services and can directly establish connections with foreign firms.

Panels B and C show that intermediary companies differ from non-intermediary companies in processing trade modes. Around 82% of non-intermediary companies were engaged in the IA mode in 2006 and the import value was more than 77%. Only 73% of intermediary

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[25]The coefficient of relative CPI changes is positive and significant only for private-owned assembly firms which may suggest that firms of different ownership have different source location preferences for their imported inputs.

Table A4: RER Decomposition: NER and Relative CPI

| | Dependent Variable: $\Delta\ln$(Price) | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| $\Delta\ln$(NER) | -0.2290*** | -0.1313* | -0.2835** | -0.3060*** | -0.2293*** |
| | (9.83) | (2.93) | (5.16) | (12.26) | (10.48) |
| $\Delta\ln$(Relative CPI) | 0.0911 | -0.1003 | 0.8132* | 0.1191 | 0.1128 |
| | (0.62) | (0.34) | (3.07) | (0.39) | (1.09) |
| Observations | 12,808,500 | 2,536,094 | 411,180 | 3,015,715 | 6,835,528 |
| R-squared | 0.005 | 0.007 | 0.023 | 0.007 | 0.005 |
| Product-Country FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Firm FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cluster By Country | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:* This table shows the decomposition of ERPT in import prices.
1. Product is at the HS6 level.
2. Price is denominated in yuan and the NER indicates the nominal exchange rate between the import source country and China. An increase in the nominal exchange rate implies an appreciation of the yuan.
3. An increase in the relative CPI implies the inflation is higher in China.
4. F-statistics are shown in parentheses.
5. *Significant at 10%; **significant at 5%; ***significant at 1%.

companies were engaged in the IA mode and the total value was less than 25%. This finding implies that firms that cooperate with intermediary companies prefer to participate in the PA mode. Some small firms cannot directly receive orders from foreign firms, and intermediary companies can supply such matching services. At the same time, these small firms do not have international market networks or cannot bear exchange rate risks, and thus they are engaged only in the PA mode.

Table A6 shows the import value share of ownership for both non-intermediary and intermediary companies. Before 2003, state-owned intermediary companies import over 99% inputs in terms of values. In September 2003, China began to relax the regulation on direct trade rights and the capital requirement to become a intermediary company decreased from five million yuan to one million yuan. Thus, the value share by private-owned intermediary jumped in 2003. The value shares of joint-owned and foreign-owned intermediary are negligible.

Table A5: Summary of Intermediary and Non-intermediary Companies

| | Share of Firm Number | | Value[1] | |
|---|---|---|---|---|
| **Panel A: Full Sample** | | | | |
| Year | Non-Intermediary | Intermediary | Non-Intermediary | Intermediary |
| 2000 | 92.21% | 7.79% | 611 | 154 |
| 2001 | 92.33% | 7.67% | 679 | 163 |
| 2002 | 92.88% | 7.12% | 788 | 166 |
| 2003 | 93.08% | 6.92% | 1,160 | 183 |
| 2004 | 93.01% | 6.99% | 1,610 | 210 |
| 2005 | 94.19% | 5.81% | 2,010 | 210 |
| 2006 | 92.73% | 7.27% | 2,330 | 214 |
| **Panel B: Non-Intermediary** | | | | |
| Year | PA | IA | PA | IA |
| 2000 | 24.56% | 85.80% | 162 | 555 |
| 2001 | 26.75% | 84.30% | 181 | 618 |
| 2002 | 27.30% | 83.04% | 187 | 719 |
| 2003 | 27.12% | 83.06% | 240 | 1,060 |
| 2004 | 27.82% | 82.71% | 369 | 1,500 |
| 2005 | 28.33% | 81.93% | 494 | 1,860 |
| 2006 | 27.49% | 82.24% | 582 | 2,030 |
| **Panel C: Intermediary** | | | | |
| Year | PA | IA | PA | IA |
| 2000 | 57.15% | 81.06% | 146 | 114 |
| 2001 | 57.38% | 80.74% | 155 | 122 |
| 2002 | 57.43% | 80.71% | 159 | 144 |
| 2003 | 57.32% | 76.71% | 173 | 103 |
| 2004 | 56.20% | 76.92% | 195 | 81.4 |
| 2005 | 55.13% | 76.17% | 196 | 77.3 |
| 2006 | 54.37% | 73.42% | 201 | 66.3 |

**Data Sources**: The "Chinese Customs Export and Import Database".

*Notes:* This table shows the summary of intermediary and non-intermediary companies.
1. The unit is in billion yuan.
2. Since a assembly firm in China can be engaged in both trade modes, the sum of shares of PA and IA modes is larger than 1.

Table A6: Intermediary Companies and Ownership

| | Share of Value | | | |
|---|---|---|---|---|
| Year | State-owned | Private-owned | Joint-owned | Foreign-owned |
| **Panel A: Non-Intermediary** | | | | |
| 2000 | 7.23% | 0.12% | 40.79% | 51.85% |
| 2001 | 6.92% | 0.30% | 37.43% | 55.35% |
| 2002 | 6.02% | 0.66% | 32.51% | 60.82% |
| 2003 | 5.12% | 1.01% | 28.19% | 65.67% |
| 2004 | 4.91% | 1.32% | 25.75% | 68.01% |
| 2005 | 4.93% | 1.81% | 22.84% | 70.42% |
| 2006 | 4.90% | 1.80% | 21.14% | 72.15% |
| **Panel B: Intermediary** | | | | |
| 2000 | 99.75% | 0.06% | 0.13% | 0.06% |
| 2001 | 99.66% | 0.13% | 0.14% | 0.06% |
| 2002 | 99.12% | 0.74% | 0.09% | 0.06% |
| 2003 | 89.29% | 10.58% | 0.04% | 0.09% |
| 2004 | 84.79% | 15.1% | 0.03% | 0.08% |
| 2005 | 83.67% | 16.17% | 0.02% | 0.14% |
| 2006 | 79.88% | 19.86% | 0.01% | 0.25% |

**Data Sources**: The "Chinese Customs Export and Import Database".

*Notes:* This table shows the import value share of ownership for both non-intermediary and intermediary companies.

## A.6 Source of Origin

Existing studies (Manova and Zhang, 2012) argue that the quality of product is different across countries and the bargaining position of assembly firms also may vary across countries. Thus, we divide sources of origin into two groups: developed and developing countries.[26] Then, we investigate ERPT for these two groups. Table A7 shows that the result is robust for developed countries and the coefficient of ERPT is insignificant for developing countries. This means that exchange rate risk is almost zero for assembly firms in China when they import inputs from developing countries. One possibility is that assembly firms in China have a strong bargaining position when they import inputs from developing countries.

## A.7 Alternative Industry Classification

In the main text, we use the HS2 code that comprises at least 50% of all export values to classify the industry that a firm belongs to. We drop those firms that do not have any HS2

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[26]The developed countries (regions) include 34 OECD countries plus Hong Kong and Taiwan.

## Table A7: ERPT in Import Prices: Source of Origin

| | Dependent Variable: $\Delta\ln$(Price) | | | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| **Panel A: Developed Countries** | | | | |
| ln(RER) | -0.1030 | -0.1865 | -0.5298*** | -0.3562*** |
| | (1.92) | (2.24) | (7.71) | (7.63) |
| ln(RER) × Trade Mode | -0.2240 | -0.3023 | 0.2964* | 0.1210* |
| | (1.93) | (1.36) | (3.62) | (2.90) |
| Trade Mode | 0.00214 | -0.00685* | -0.000459 | 0.00319*** |
| | (1.24) | (-1.80) | (-0.17) | (3.70) |
| Observations | 2,267,595 | 360,266 | 2,752,931 | 6,172,677 |
| R-squared | 0.007 | 0.024 | 0.007 | 0.005 |
| **Panel B: Developing Countries** | | | | |
| ln(RER) | -0.1259 | -0.8178*** | -0.5087 | 0.0470 |
| | (0.64) | (15.57) | (1.05) | (0.05) |
| ln(RER) × Trade Mode | 0.2415 | 0.6914 | 0.4237 | -0.0730 |
| | (0.64) | (2.54) | (0.87) | (0.14) |
| Trade Mode | -0.00958 | -0.00730* | -0.00893** | 0.00147 |
| | (-0.89) | (-1.71) | (-2.55) | (0.40) |
| Observations | 268,086 | 50,643 | 261,874 | 661,275 |
| R-squared | 0.012 | 0.024 | 0.014 | 0.009 |
| Product-Country FE | ✓ | ✓ | ✓ | ✓ |
| Firm FE | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ |
| Cluster By Country | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:* This table shows the cumulative three-month ERPT in import prices by source of origin.
1. Product is at the HS6 level. Trade mode is a dummy variable which equals 1 if the product is imported through the IA mode and 0 otherwise.
2. Price is denominated in yuan and the RER indicates the real exchange rate between the import source country and China. An increase in the real exchange rate implies an appreciation of the yuan.
3. The developed countries (regions) include 34 OECD countries plus Hong Kong and Taiwan.
4. F-statistics are shown in parentheses for $\Delta\ln$(RER) and $\Delta\ln$(RER)×Trade Mode and t-statistics are shown in parentheses for the other variables.
5. *Significant at 10%; **significant at 5%; ***significant at 1%.

Table A8: Exchange Rate Risk and Mode Choice

| | Dependent Variable: PA Ratio | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| **Panel A: Benchmark** | | | | | |
| $ERR_{-1}$ | 2.759*** | 0.333 | 3.265*** | 3.740*** | 2.214*** |
| | (0.211) | (0.354) | (0.786) | (0.292) | (0.279) |
| *Beta* | 0.0452 | 0.00605 | 0.0422 | 0.0656 | 0.0348 |
| Observations | 169,752 | 17,611 | 8,544 | 50,891 | 92,596 |
| R-squared | 0.331 | 0.345 | 0.335 | 0.371 | 0.400 |
| **Panel B: Only Non-intermediary Companies** | | | | | |
| $ERR_{-1}$ | 2.893*** | 0.524 | 3.244*** | 3.735*** | 2.185*** |
| | (0.222) | (0.467) | (0.847) | (0.292) | (0.278) |
| *Beta* | 0.0478 | 0.00987 | 0.0444 | 0.0655 | 0.0343 |
| Observations | 158,904 | 8,933 | 6,485 | 50,864 | 92,504 |
| R-squared | 0.351 | 0.361 | 0.380 | 0.371 | 0.400 |
| **Panel C: Only Non-intermediary Companies & Alternative ERR** | | | | | |
| $ERR_{-1}$ | 2.376*** | 0.375 | 3.190*** | 2.589*** | 1.896*** |
| | (0.142) | (0.532) | (0.871) | (0.217) | (0.195) |
| *Beta* | 0.0400 | 0.00677 | 0.0445 | 0.0476 | 0.0302 |
| Observations | 158,768 | 8,884 | 6,399 | 50,862 | 92,503 |
| R-squared | 0.351 | 0.362 | 0.382 | 0.369 | 0.400 |
| Prefecture FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Industry FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database" and IFS.

*Notes:* This table shows the impact of exchange rate risk on mode choice.
1. Alternative $ERR$ is defined as the exchange rate fluctuation in the past six months.
2. Robust standard errors in parentheses.
3. *Significant at 10%; **significant at 5%; ***significant at 1%.

code that is at least 50% of all export values. The export values of these dropped firms account for about 20% of all export values. In order to solve the sample selection concern, in this section we use another way to classify the industry for firms as a robustness check. We use the HS2 code that comprises the highest export values to represent the industry for firms. The results, which are presented in Tables A8-A10, remain robust.

Table A9: Exchange Rate Risk and Mode Choice: Local Financial Development

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | | | Dependent Variable: PA Ratio | | |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| **Panel A: Benchmark** | | | | | |
| $ERR_{-1}$ | 5.166*** | 0.768 | 3.558 | 6.426*** | 4.837*** |
| | (0.778) | (2.053) | (2.530) | (1.249) | (0.859) |
| $ERR_{-1} \times$ Loans/GDP | -1.423** | 1.324 | -0.242 | -1.071 | -2.020*** |
| | (0.696) | (1.831) | (2.361) | (0.909) | (0.702) |
| ln(GDP) | -0.00805 | -0.0170 | -0.218** | -0.0107 | -0.00326 |
| | (0.00823) | (0.0884) | (0.0921) | (0.0157) | (0.00947) |
| ln(GDP per Capita) | 0.00102 | 0.0163 | 0.00731 | 0.00746 | -0.00167 |
| | (0.00358) | (0.0141) | (0.0204) | (0.00565) | (0.00443) |
| Observations | 110,772 | 5,030 | 5,779 | 31,758 | 68,133 |
| R-squared | 0.355 | 0.358 | 0.372 | 0.368 | 0.396 |
| **Panel B: Without Shanghai and Beijing** | | | | | |
| $ERR_{-1}$ | 5.865*** | -0.416 | 4.934* | 7.156*** | 5.758*** |
| | (0.751) | (2.436) | (2.976) | (1.502) | (0.917) |
| $ERR_{-1} \times$ Loans/GDP | -2.503*** | 2.130 | -2.023 | -2.187* | -3.373*** |
| | (0.663) | (2.431) | (3.009) | (1.246) | (0.846) |
| ln(GDP) | -0.0122 | -0.0360 | -0.195** | -0.0109 | -0.00494 |
| | (0.00867) | (0.0960) | (0.0946) | (0.0163) | (0.0101) |
| ln(GDP per Capita) | -0.000621 | 0.0172 | 0.0271 | 0.00798 | -0.00149 |
| | (0.00403) | (0.0164) | (0.0232) | (0.00713) | (0.00509) |
| Observations | 99,962 | 4,503 | 5,357 | 27,183 | 62,846 |
| R-squared | 0.371 | 0.367 | 0.372 | 0.390 | 0.417 |
| **Panel C: Only Coastal Provinces Exclude Shanghai** | | | | | |
| $ERR_{-1}$ | 6.884*** | 1.094 | 6.761** | 8.401*** | 5.914*** |
| | (0.852) | (3.135) | (3.157) | (1.718) | (0.955) |
| $ERR_{-1} \times$ Loans/GDP | -3.194*** | 0.932 | -3.510 | -3.187** | -3.451*** |
| | (0.732) | (3.171) | (3.159) | (1.390) | (0.877) |
| ln(GDP) | -0.00951 | 0.00236 | -0.189* | -0.0126 | -0.00420 |
| | (0.00874) | (0.117) | (0.101) | (0.0167) | (0.0101) |
| ln(GDP per Capita) | 0.00169 | 0.0228 | 0.0307 | 0.0109 | -0.00112 |
| | (0.00422) | (0.0200) | (0.0245) | (0.00766) | (0.00517) |
| Observations | 95,669 | 3,663 | 4,958 | 25,557 | 61,471 |
| R-squared | 0.374 | 0.354 | 0.368 | 0.386 | 0.415 |
| Prefecture FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Industry FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database", IFS and "China City Statistical Yearbook".

*Notes:* This table shows the impact of exchange rate risk on mode choice.
1. We exclude intermediary companies from the sample.
2. Robust standard errors in parentheses.
3. *Significant at 10%; **significant at 5%; ***significant at 1%.

Table A10: Exchange Rate Risk and Mode Choice: Industry Liquidity

| | Dependent Variable: PA Ratio | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | **All** | **State-owned** | **Private-owned** | **Joint-owned** | **Foreign-owned** |
| $ERR_{-1}$ | -9.254*** | -3.098 | -5.222 | -9.894*** | -9.801*** |
| | (1.295) | (2.350) | (3.885) | (1.910) | (1.179) |
| $ERR_{-1} \times LQ$ | 85.91*** | 21.85 | 61.87** | 97.29*** | 85.17*** |
| | (9.574) | (15.16) | (27.52) | (13.21) | (8.290) |
| Observations | 158,645 | 8,881 | 6,412 | 50,800 | 92,438 |
| R-squared | 0.325 | 0.291 | 0.324 | 0.342 | 0.383 |
| Prefecture FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Industry FE | ✓ | ✓ | ✓ | ✓ | ✓ |
| Time FE | ✓ | ✓ | ✓ | ✓ | ✓ |

**Data Sources**: The "Chinese Customs Export and Import Database", IFS and "U.S. Compustat".

*Notes:* This table shows the impact of exchange rate risk on mode choice.
1. We exclude intermediary companies from the sample.
2. Robust standard errors in parentheses.
3. *Significant at 10%; **significant at 5%; ***significant at 1%.