

A1 Appendix - for online publication

A1.1 Additional background

This section provides additional details about China's WTO accession, supplementing Section 2. It may be useful to describe the continuous variation over time in tariffs imposed on Chinese exports by trading partners. On average during this period, the U.S. is the destination for approximately 20% of Chinese exports, followed by the European Union at 17%, Japan at 12%, Korea at 5% and Taiwan at 2%. It is evident in Figure 2b that the estimated tariffs imposed by Korea are highest, but show no significant trend. Tariffs imposed by the U.S. and Taiwan decline gradually, and the tariffs imposed by Japan and the EU are roughly constant. In all cases, there is no evidence of any dramatic shifts in tariff rates at the point of China's WTO accession.

Figure A1 in the Appendix provides an alternate representation of the evolution of both domestic tariffs and trading partner tariffs over time, utilizing county-level employment weights provided by the 1990 census to calculate a county-level weighted average tariff and then reporting the mean weighted county-level tariff by year over time. (These average county-level tariffs will subsequently be employed as control variables in the regressions of interest.) The graphs are largely similar, except that the tariffs imposed by Korea on Chinese imports appear much higher, reflecting Korea's extremely high tariffs on agricultural exports from China.

With respect to the reduced uncertainty in the U.S. market post-WTO, in October 2000, Congress passed a bill that granted permanent NTR status to China, effective as of January 1, 2002. The EU had granted China permanent NTR status much earlier (effective in 1980); thus, China did not face any tariff uncertainty in this market either before or after its WTO accession (Pierce and Schott 2016). The permanency of China's NTR status in other markets is ambiguous, but the descriptive evidence generally suggests there were no dramatic changes in the status of China's exports to other markets during this period, and analysts have noted that WTO members other than the U.S. had already provided China with permanent MFN

status prior to its accession to the WTO (Rumbaugh and Blancher 2004). Moreover, growth in China’s total exports showed a trend almost exactly parallel to the observed growth in exports to the U.S., as evident in Figure 1d, consistent with the hypothesis that the increase in exports to other markets was minimal.

A1.2 Missing data

Data can be missing from the county-level panel for two reasons: counties cannot be matched between the census and the provincial yearbooks, and counties are matched to the yearbooks but specific indicators are not available. First, some counties that are observed in the census do not appear in provincial yearbooks at all; these are disproportionately counties that are part of the urbanized areas of larger, prefecture-level cities, as some provinces omit data for these areas. To provide more systematic evidence about the characteristics of these missing counties, we estimate the following specification at the county level in which county covariates as observed in the 1990 census are regressed on a dummy variable equal to one if the county is missing, as well as province fixed effects. Standard errors are clustered at the province level. (Note the total sample for these regressions includes the 1994 units observed in the 1990 census in the provinces of interest; one county has some missing data for covariates of interest, and thus does not appear in all regressions. In the 1990 census, unlike subsequent censuses, data for prefecture-level cities are reported only at the prefecture level, not for the constituent county-level units. Accordingly, each prefecture-level city enters only once as an aggregate unit.)

$$Y_{ifp}^{1990} = \beta Missing_{ifp} + \omega_p + \epsilon_{ifp} \quad (6)$$

The results are reported in Table A2, employing six covariates: total population, the percentage of households including children, the percentage of households including elderly, the percentage of individuals who received a post-primary education, the percentage of individuals with an agricultural registration, and the percentage of individuals working in the

non-primary (secondary and tertiary) sectors. We can observe that counties missing from the sample are characterized by larger populations, higher levels of education, and a greater concentration of labor outside of agriculture, consistent with the hypothesis that these are more urbanized counties.

Second, for those counties observed in provincial yearbooks, different provinces in different years opt to report different indicators at the county level in their yearbooks. As a result, the number of observations varies significantly for different variables, as evident from the summary statistics. Thus (for example) Guangdong consistently reports employment data by sector for all counties for all years; Shanxi does not report employment data by sector for any county in any year. It is never the case that in the same yearbook (corresponding to a single province-year), a particular indicator is reported for some counties and not for others. The indicators that are reported most infrequently include employment at the sector level and exports, while indicators reported near-universally include gross domestic product, total employment, population, and agricultural inputs and production.²⁴

Again, to provide more systematic evidence, we estimate the following specification, in which the dependent variable is the number of observations for a particular variable observed for a particular county, and the independent variables include the same county-level covariates as observed in the 1990 census.

$$Obs_{ifp} = \xi X_{ifp}^{1990} + \omega_p + \epsilon_{ifp} \quad (7)$$

For counties that are missing, the number of observations is set at zero. The results are reported in Table A3, and we again observe that the number of observations is in general lower for more populous counties, and higher for those that are more agricultural and have a lower proportion of employment outside the primary sector. This is consistent with more

²⁴In particular, a strong positive correlation exists between the probability of reporting any data on export sales value and county-level GDP, and six relatively poor provinces (Shanxi, Sichuan, Guizhou, Shaanxi, Gansu, and Qinghai) report almost no data on exports.

urban and industrialized counties being generally underrepresented in the sample.

In the bottom of the table, we also report the average number of observations per county for each variable, conditional on reporting any data. The main years represented in the sample are the 18 years from 1996 to 2013 inclusive, though a very small number of counties report data for 1994 and 1995. The average number of observations per county is considerably lower for all outcomes other than GDP, for which the average is 17 years per county. However, conditional on reporting any data, counties generally report at least eight years of data for the key variables of interest, excluding only exports.

A1.3 More details on primary results

The coefficients for the full set of control variables for the main results are reported in Tables A7 through A9. In general, there is evidence of more rapid substitution away from agriculture in counties that benefit more from MFA quota reductions, and slower growth in secondary production in counties more exposed to a decline in domestic tariff rates and an increase in competition from imports. The coefficients on the post-contract interaction and the time-varying NTR rate are generally insignificant, and varying in sign. These patterns are consistent with the hypothesis that, while other trade reforms in this period were relevant for the evolution of county-level outcomes, no other policy shift had a positive effect on county-level expansion of exports and secondary production as large as that produced by reduced uncertainty in the U.S. market. In some specifications, the coefficients on the domestic tariff rate are large in magnitude; however, as previously noted the majority of the reduction in domestic tariffs was observed prior to WTO accession, and the sign of the coefficient suggests a negative shock from domestic tariff reduction, rather than a positive shock.²⁵

²⁵A seeming anomaly can be observed here in that the proportion of firms licensed to export is negatively correlated with GDP. In the cross-section, we observe the expected positive correlation between the proportion of firms exporting and county-level GDP prior to 2004 (when export licensing requirements were eliminated). However, when county fixed effects are included, counties that show larger increases over time in export licensing are, mechanically, those with initially lower levels of export licensing, given that the maximum value for this variable is one. These counties with low initial export license levels are also characterized by slower GDP growth. In addition, the positive coefficient on the NTR rate

In addition, this analysis can be extended to present some evidence regarding heterogeneous effects, identifying counties concentrated in industries that should show a more robust response to the reduction of tariff uncertainty. In particular, we focus on counties that are more capital-intensive, counties concentrated in industries that export a higher proportion of their output to the U.S., and counties that are more proximate to ports.²⁶ Since capital investments are generally irreversible, counties with an initially higher concentration of capital-intensive industries are likely to respond more robustly to the reduction in tariff uncertainty. Similarly, the effect of reduced tariff uncertainty is likely to be larger for counties that specialize in industries exporting a higher proportion of their output to the U.S. *ex ante*, as well as for counties that are more proximate to ports and thus face a lower transaction cost of exporting.

While the county-level panel does not include any detailed information about capital investment that would allow for a direct test of this hypothesis, we can examine heterogeneous effects with respect to capital intensity of the industries observed in the county at baseline. Using a capital intensity variable constructed from a survey of large firms (described in more detail in Section 4.3), we calculate average capital intensity for non-state owned firms at the industry level in 1998, the first year of the panel, and construct a county-level proxy for capital intensity in the (non-SOE) secondary sector using the 1990 employment weights.²⁷ We then re-estimate equation (3) for counties below and above the baseline median level of capital intensity; to increase power, we use the simple specification without controls.

Similarly, the export data available at the county level do not report the destination of

in the specification for exports is of the opposite sign from what is expected; this primarily reflects the small sample of counties reporting export data.

²⁶There are thirteen Chinese ports that are among the largest 50 ports in the world by shipping volume; the five largest of these are Shanghai, Shenzhen, Ningbo-Zhoushan, Hong Kong, and Guangzhou. Data on their geographic coordinates is drawn from the China Geo-Explorer offered by the University of Michigan China data Center.

²⁷Information about capital intensity in the primary sector is not available, and thus it is excluded from this analysis.

these exports. However, we can use the available UNCOMTRADE data on Chinese exports at the product-destination level to calculate the proportion of exports destined for the U.S. by industry in 1996, the first sample year. We then generate a county-specific weighted average, under the assumption that the proportion of exports directed to the U.S. is balanced across counties. Insofar as this assumption is not fully accurate, this estimate is an imprecise proxy for county exports to the U.S.

We then again re-estimate equation (3) for counties below and above the baseline median level of U.S. export share. Finally, we calculate for each county the average distance between the centroid of the county and the five largest Chinese container ports. We then characterize a county as either non-proximate to a port (above the median of the cross-county distribution of average port distance) or proximate (below the median), and re-estimate equation (3) for both subsamples.

The graphical results are presented in Figure A5. For counties below the median level of capital intensity at baseline, there is little evidence of any significant effects of the elimination of tariff uncertainty; by contrast, the effects are large and significant post-2001 for counties above the median level of capital intensity. A similar pattern is observed for counties below and above the median U.S. export share, and counties that are non-proximate and proximate to major ports.

The regression analogues to these results are reported in Columns (3) through (8) of Table A13. In Columns (3), (5), and (7) we observe no significant coefficients for low-capital intensity, low-U.S. share and non-port proximate counties. Columns (4), (6) and (8) report the results for high-capital intensity, high-U.S. share and port-proximate counties, and show coefficients that are insignificant in the pre-period, followed by positive and significant coefficients post-2001. If we again test the equality of coefficients pre- and post-WTO, the hypothesis that the pre and post coefficients are equal can uniformly be rejected for these specifications. This suggests that as expected, the effects are concentrated in counties for which uncertainty was more likely to be a binding constraint on capital investment, counties

in which uncertainty was highly salient due to the presence of exporters focusing on the U.S. market, and counties in which the transaction costs of exporting were lower.

A1.4 Prefecture-level cities in the 1990 and 2000 censuses

As previously noted, the 1990 census has one unusual characteristic that differentiates it from subsequent census rounds (2000 and 2010) and from the provincial yearbooks: data for prefecture-level cities are reported only at the prefecture level, not for the constituent county-level units. In some cases, provincial yearbooks report data for these county-level units of prefecture cities. Accordingly, a single census observation can in these cases be linked to multiple county-level observations in subsequent waves of yearbook data.

In addition, given that the 1990 and 2000 census waves report data differently for prefecture-level cities, it is useful to briefly elaborate on the construction of the NTR gap using the 2000 employment data. A prefecture is a level of geographic aggregation intermediate between a province and a county, comprising six counties on average; in addition, larger cities (e.g., provincial capitals) generally have the status of a prefecture. In that case, the prefecture-level city is nonetheless comprised of county-level units. For illustration, we will denote a prefecture-level city as City A, comprised of county-level units B, C and D.

In the 1990 census, employment data for prefecture-level cities is reported for the entire area, prefecture-level city A. (Rural prefectures have data reported for the constituent counties in the 1990 census.) By contrast, in the outcome data (provincial statistical yearbooks) as well as in the 2000 census, data is uniformly reported at the level of the county unit; thus prefecture city A would appear as county-level units B, C and D. In our sample, we link these units by matching the appropriate prefecture and county codes. The NTR gap constructed using 1990 employment data for prefecture city A is assigned to constituent units B, C, and D, and since the corresponding county codes are identical, the clustering takes into account this common shock.

To construct the NTR gap using 2000 employment data in parallel, we again use aggregates of employment data at the level of the prefecture-level city for those cities that are

observed only as aggregates in the 1990 employment data. The estimated coefficients are also consistent if we estimate the 2000 weights for each constituent county B, C, and D, and employ these shocks in the analysis.

A1.5 Addressing measurement error

To address the potential challenge introduced by measurement error or selective misreporting in county yearbook data, we can employ two strategies. We first re-estimate the results employing as the dependent variable the average night lights index within county borders as a proxy for the intensity of local economic activity.²⁸ We observe a correlation of .65 between the night lights index and county GDP, and when the primary specification is re-estimated using the night lights index as a dependent variable, the estimated coefficient suggests that a county at the median level of tariff uncertainty shows evidence of a 17% relative increase in night brightness post-2001 compared to a county at the minimum level of tariff uncertainty, significant at the one percent level. The robustness of our results suggests that bias due to misreporting is of limited importance.

We also conduct an additional test to evaluate whether there may be selective misreporting in statistical yearbooks that could be correlated with the shock of interest. We focus on county-level GDP, and construct a balanced panel of the counties for which GDP data is reported every year between 1998 and 2010.²⁹ We then calculate a province-year level sum of

²⁸To generate county-level averages of night lights data, high-resolution light density data was downloaded from <http://ngdc.noaa.gov/eog/dmsp/downloadV4composites.html>. ArcMAP was used to process the files. They were converted from raster to GRID files, and averaged across the two sets of data available for each year. Gas flares were removed by using the China gas flares shapefile. The average night light intensity observed within each county boundary was then calculated using the zonal statistics function and the shape file corresponding to the 2010 county boundaries. The night lights variable ranges from 0 to 63 across counties for each year, based on the highest and lowest brightness captured on the satellite images.

²⁹These years are employed as the start point and end point of the period because availability of data contracts sharply before 1998 and after 2010. 20 provinces are represented in the balanced panel for 13 years each, yielding a sample of 260 observations; the provinces that are dropped do not have any counties reporting GDP data for this full period.

GDP, adjust this sum to reflect the percentage of total employment within a given province represented in the balanced panel of counties, and calculate a variable denoted “GDP gap” equal to the percentage gap between this figure and total reported GDP at the provincial level according to the National Bureau of Statistics. The GDP gap is thus designed to capture any systematic misreporting in county statistics.

To evaluate whether the GDP gap is correlated with the shock of interest, we regress the gap at the province-year level on the NTR gap and the post-NTR interaction, with and without province and year fixed effects and additional controls. The results are reported in Table A19 in the Appendix, and show uniformly insignificant results. This suggests that there is no evidence of systematic variation in the quality of GDP reporting that is correlated with cross-provincial variation in the NTR gap.

A1.6 Calculations for aggregate effects

Effects on aggregate productivity First, in order to estimate the effect on aggregate productivity generated by the reduction in uncertainty post-WTO accession, we utilize data from the National Bureau of Statistics on value-added per sector (primary, secondary and tertiary) and employment per sector. This data is available from 1999 forward (value-added per sector was not reported prior to 1999), and we calculate the average for 1999–2001, corresponding to the pre-WTO period.

Second, we adjust these estimates of value-added per worker to take into account variation across sectors in the level of human capital. The county-level census reports only average levels of educational attainment per county, not per sector. Accordingly, we draw on a different source of data: the CHIP (Chinese Household Income Project) surveys for both rural and urban individuals in 1995 and 2002. (This corresponds to the two rounds of data collection that are immediately prior to the WTO; we exclude the data from 1988, given that educational levels changed dramatically over the subsequent decade.) We observe that among individuals of working age (between 18 and 65), average educational attainment is 5.76 years in the primary sector, 9.69 years in the secondary sector, and 10.72 years in

the tertiary sector. We then follow Gollin et al. (2014) and McCaig and Pavcnik (2018) in calculating the average level of human capital in the sector as $\exp(r * Y_s)$, where r is the estimated rate of return on schooling, pegged at 10 percent, and Y_s is average years of schooling in the sector. We then adjust estimated value-added by the level of human capital in each sector. Using these adjusted measures yields a value-added gap between the secondary and primary sector of 3.95 (i.e., value-added per worker in the secondary sector is nearly four times higher than value-added per worker in the primary sector).³⁰

Third, we calculate sectoral labor shares using aggregate employment data provided by the National Bureau of Statistics prior to and including 2001, again corresponding to the pre-WTO period. The labor shares are 50% in the primary sector, 23% in the secondary sector, and 27% in the tertiary sector.

Fourth, we calculate the magnitude of the shift of labor from the primary to the secondary sector that the mean county will experience. The results reported in Table 1 suggest a decline of .069 log points in agricultural employment and .072 log points in primary employment; the latter is noisily estimated, and estimated for a smaller sample of county-year observations. Hence, we use the coefficient estimate for agricultural employment and calculate the percentage change in agricultural employment implied for a county with the mean level of agricultural employment in the pre-WTO period (160.664, in thousands of workers). The mean effect implies a 30% decline in agricultural employment.³¹ In line with the evi-

³⁰More specifically, we calculate the average level of human capital in the primary and secondary sectors as $\exp(0.1 * 5.78) = 1.78$ and $\exp(0.1 * 9.69) = 2.64$, and then adjust the value added in each sector by dividing each figure to the sector-specific average level of human capital ($4.21/1.78 = 2.36$ for the primary sector, $24.63/2.64 = 9.34$ for the secondary sector). The ratio of these adjusted measures of value added by human capital yields 3.95 (the ratio of $9.34/2.36$). Unfortunately, while the CHIP data provides some details about hours worked in non-agricultural employment, agricultural households do not report estimated hours worked. Accordingly, we are not able to implement a similar correction for differences in hours worked across sectors.

³¹The specific calculation involves taking the log of mean agricultural employment and subtracting the decline implied by our coefficient estimate ($\ln(160.664) - 0.069 * \ln(160.664)$), converting this to the level figure, and then calculating its percentage change ($(113.164 -$

dence presented in Table 1, we assume these workers transition to the secondary sector. In addition to calculating the mean effect implied by the coefficient estimate, we calculate a lower bound effect using the 95% confidence interval.³²

The calculation conducted to generate the estimated productivity effect can be described as follows. Note that $\frac{VA}{L}$ denotes value-added per worker in the specified sector, and Sh denotes the employment share in the specified sector. The estimated effect using the coefficient point estimate can be calculated as follows.

$$.3 * \left(\frac{VA}{L}_{sec} - \frac{VA}{L}_{prim} \right) / \left(\frac{VA}{L}_{prim} * Sh_{prim} + \frac{VA}{L}_{sec} * Sh_{sec} + \frac{VA}{L}_{tert} * Sh_{tert} \right) \quad (8)$$

This calculation yields an increase in productivity of 38%. If the same calculation is done using the lower bound of the coefficient estimate, this results in an increase in productivity of 10%.³³

Local GDP growth In order to conduct a simple back-of-the-envelope calculation estimating the contribution of the export shock captured by the NTR gap to total growth over this period, we must first make some assumptions about the magnitude of the decrease in uncertainty experienced by the average county between the pre and the post period. First, we assume that uncertainty captured by the NTR gap is reduced to zero in the post-WTO period, a decrease of 2.9 standard deviations. Second, we calculate the implied increase in GDP (.12 log points) and secondary GDP (.10 log points) predicted for the mean county in the post-WTO period, and compare these implied increases to the mean overall growth in each measure observed in the sampled counties in this period. We calculate the mean growth rates across all counties that report the indicators of interest; the mean county shows growth

160.664)/160.664).

³²The lower bound of the coefficient estimate is 0.016 (0.069 – (1.96 * 0.027)).

³³The calculations involve the following: $0.30 * (9.34 - 2.36) / (0.5 * 2.36 + 0.23 * 9.34 + 0.27 * 7.87)$ for the mean effect, and $0.08 * (9.34 - 2.36) / (0.5 * 2.36 + 0.23 * 9.34 + 0.27 * 7.87)$ for the lower bound.

in total GDP of 1.21 log points, and in secondary GDP of 1.12 log points. We then estimate that growth driven by the WTO accession shock accounts for approximately $\frac{.12}{1.21} = 9.9\%$ of all total GDP growth, and $\frac{.10}{1.12} = 8.9\%$ of secondary growth.

It should be noted that these estimates reflect a number of underlying assumptions and should be considered merely illustrative. However, they do suggest that the effects of export expansion driven by the reduction in uncertainty are non-trivial in magnitude.

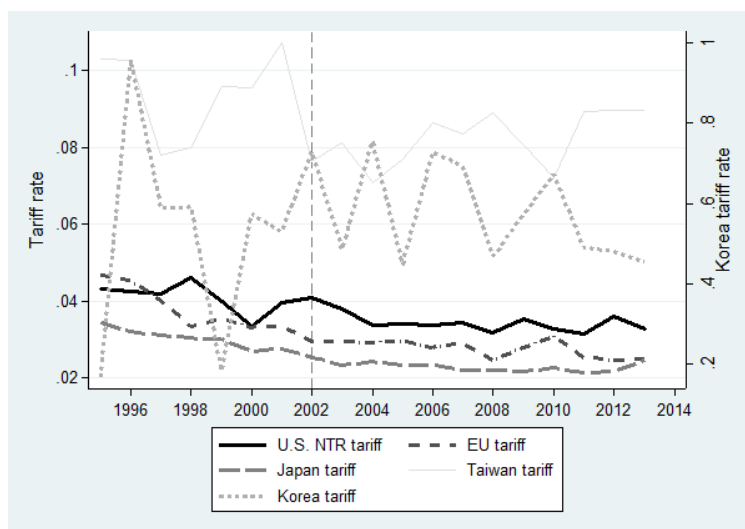
A1.7 Appendix Figures and Tables

FIGURE A1: VARIATION IN TARIFF POLICY ACROSS COUNTIES AND OVER TIME

(A) China's Import Tariffs Over Time

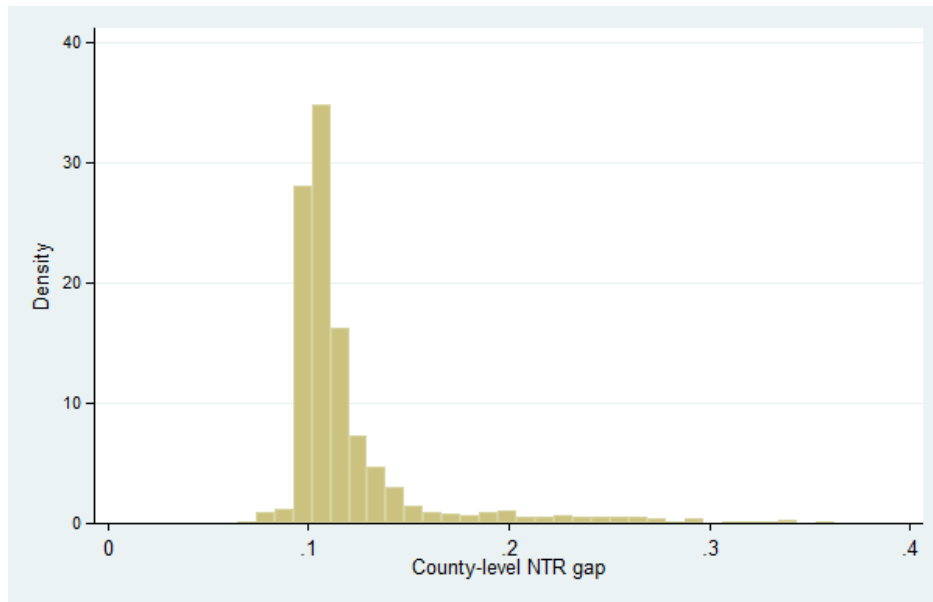


(B) Major Trading Partners' Tariffs Over Time



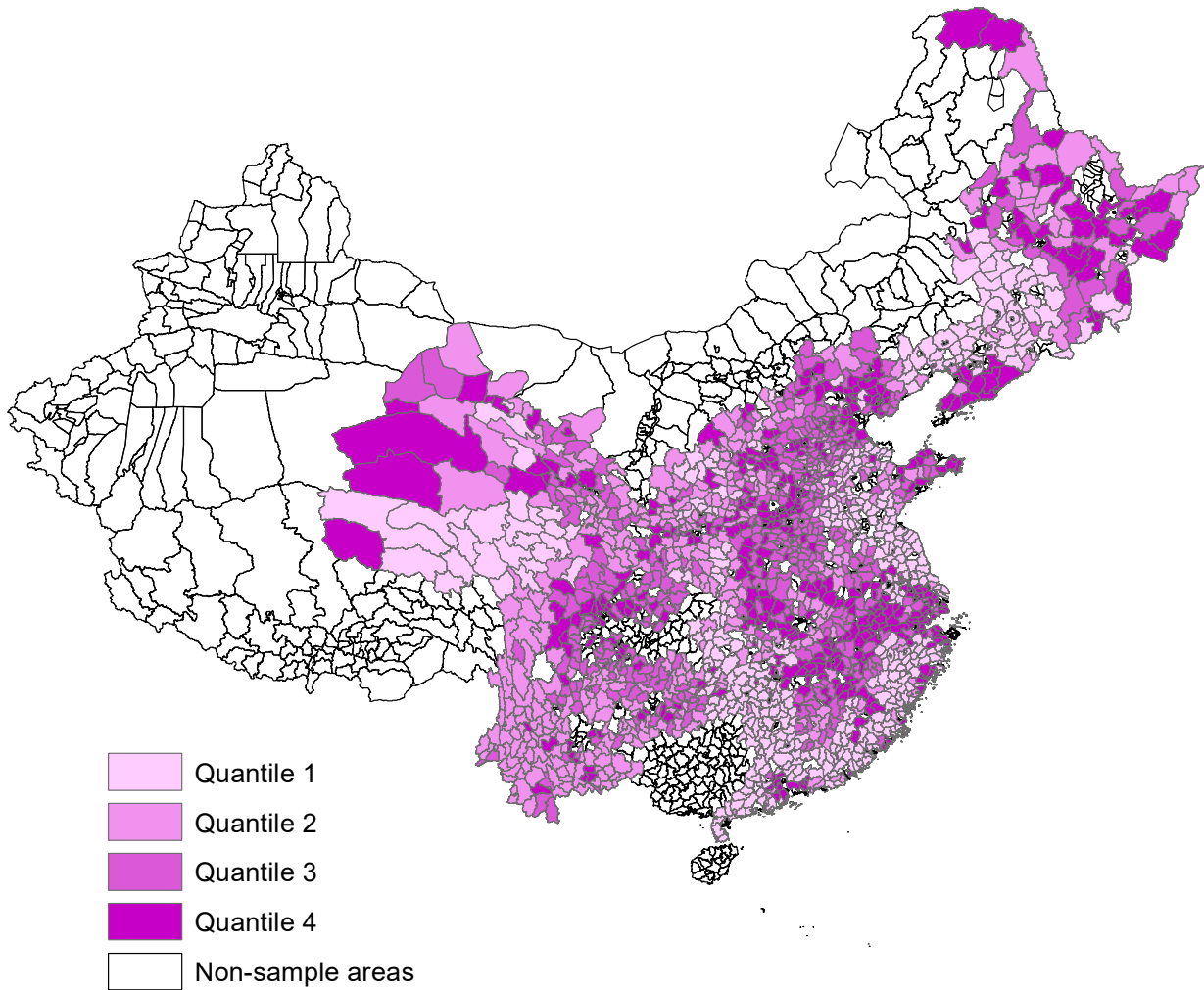
Notes: The first subfigure shows the average domestic import tariff and the second subfigure shows the mean tariffs imposed on Chinese exports by major trading partners. For each variable, we calculate the average county-level weighted average tariff, using tariffs by industry and employing as weights the county-level employment share of each industry as reported in the 1990 census. We then report the mean weighted tariff over all counties in each year. Tariff data is obtained from the WITS-TRAINS database.

FIGURE A2: NTR GAP AT THE COUNTY LEVEL



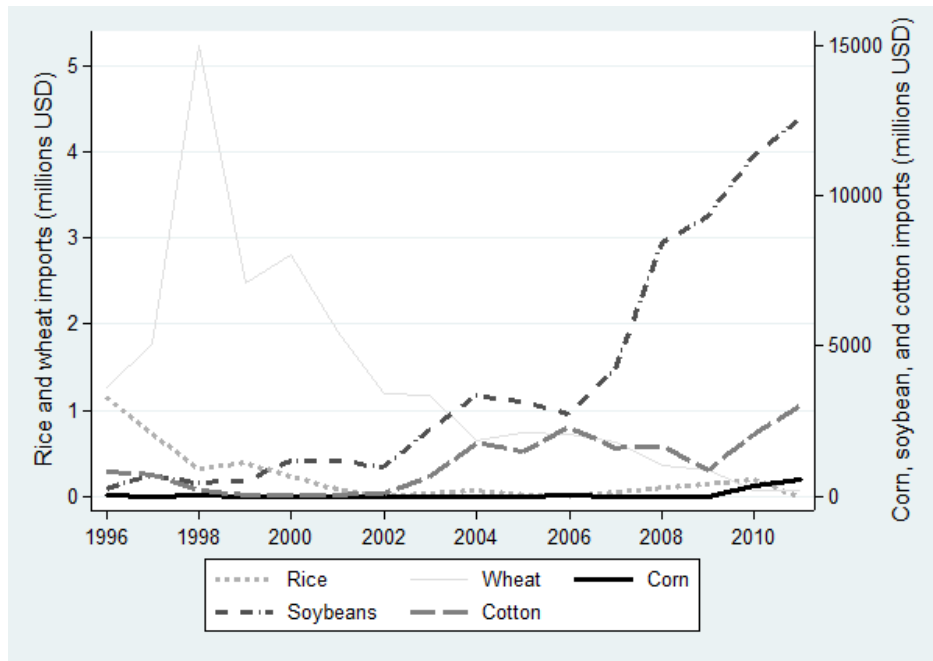
Notes: The figure is a histogram of the gap between normal trade relations (NTR) tariffs and non-NTR tariffs, calculated at the county level utilizing industry employment shares as reported in the 1990 census as weights.

FIGURE A3: NTR GAP BY COUNTY



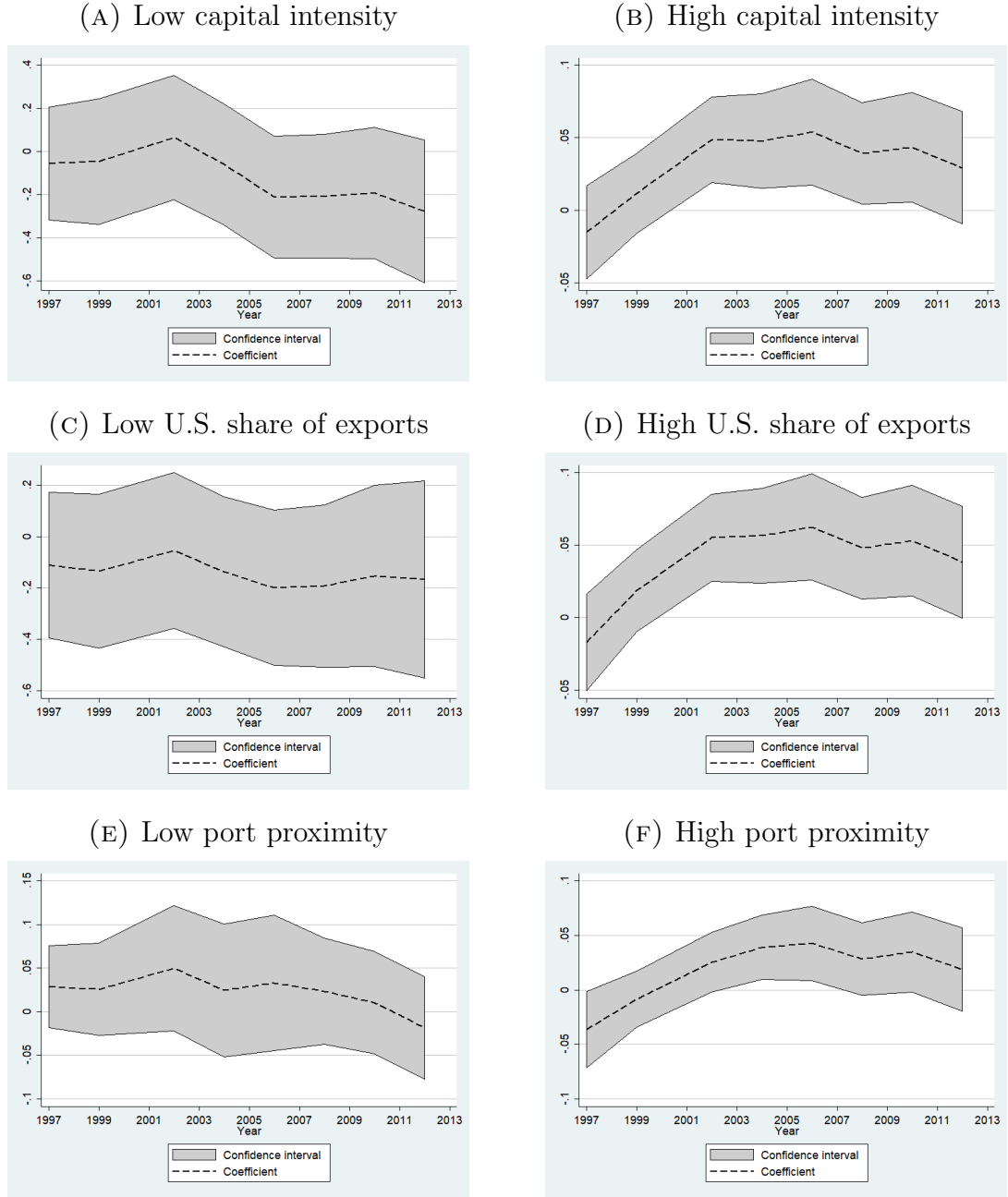
Notes: This figure shows the NTR gap at the county level, utilizing the residuals from the gap regressed on provincial fixed effects. Areas not shaded are out of sample. This includes the autonomous regions (Inner Mongolia, Guangxi, Ningxia, Tibet, and Xinjiang) and counties that cannot be matched between the county-level census data and the provincial yearbooks.

FIGURE A4: CHINA'S AGRICULTURAL IMPORTS FROM THE U.S.



Notes: This figure shows the evolution of Chinese imports of agricultural products from the U.S. during the period of interest in the primary analysis.

FIGURE A5: ESTIMATED DIF-IN-DIF COEFFICIENTS: HETEROGENEOUS EFFECTS



Notes: These graphs report the coefficients on the interaction of dummy variables for each two-year interval and the county-level NTR gap, standardized to have mean zero and standard deviation one. The specifications estimated include province-year and county fixed effects, and province-year fixed effects interacted with an urban dummy; standard errors are estimated employing clustering at the county level, and the regressions are weighted with respect to baseline county-level employment.

In Figures A5a and A5b, the sample is restricted to counties below (above) median baseline capital intensity. In Figures A5c and A5d, the sample is restricted to counties below (above) median baseline share of exports to the U.S. In Figures A5e and A5f, the sample is restricted to counties below (above) median proximity to the five largest ports.

TABLE A1: SUMMARY STATISTICS

Variable	Mean (log)	Mean (level)	Min. (level)	Max. (level)	Obs.	Num. counties
Primary emp.	4.89	181.33	.6	779	3214	354
Ag emp.	4.32	159.94	0	3681	21539	1619
Secondary emp.	3.80	101	.04	1708.53	4523	1235
Tertiary emp.	3.99	86.72	.5	1169.02	4659	1235
Total pop.	5.94	519.67	.8	6850.02	28867	1642
Total emp.	5.26	256.92	3.4	1550.4	19972	1440
Exports	4.93	1184.65	0	190204.6	5337	1017
GDP	7.95	9813.69	.1	611638.25	29782	1688
GDP per capita	8.79	9942.79	0	254907.92	26903	1609
Primary	6.4	1119.97	3.39	18743.66	15673	1496
Secondary	6.88	6937.37	.06	6295413.3	15688	1496
Tertiary	6.74	5979.91	.69	4403172.2	15616	1496
Sown area	3.63	64.76	0	1620.79	8328	989
Agri. machine	2.9	37.76	0	1669.41	28246	1637
Grain output	4.99	247.81	0	5600.1	28277	1627
Cash output	2.91	46.74	0	2377.79	26823	1574
Grain	3.51	56924.16	0	2305598	7169	885

Notes: This table reports the mean in logs, mean in levels, minimum, maximum, number of observations and number of counties reporting any observations for key variables. Total population and employment is reported in thousands of persons. Exports and GDP are reported in millions of yuan and GDP per capita in yuan, deflated to 2000 constant prices. Sown area is reported in thousands of hectares; agricultural machinery power used is reported in 10,000 kilowatts. Grain production and cash crop production are reported in thousands of tons, and grain yield is reported in tons per hectare.

TABLE A2: COUNTIES MISSING FROM THE PROVINCIAL YEARBOOKS

	Pop. (1)	Hh incl. children (2)	Hh incl. elderly (3)	Post primary educ. (4)	Prop. agri. (5)	Prop. non-prim. empl. (6)
Missing dummy	226877.700 (63938.950)***	-.0006 (.007)	.010 (.005)*	.119 (.016)***	-.217 (.052)***	.229 (.057)***
Mean dep. var. Obs.	520671.43 1994	.24 1993	.2 1993	.34 1994	.83 1993	.28 1994

Notes: The dependent variables are variables reported in the 1990 census: county population, the percentage of households including children age 0-7, the percentage of households including elderly members, the proportion of adults with post-primary education, the proportion of the population designated as agricultural, and the proportion of the population working in the secondary and tertiary sectors. The independent variable is equal to one if the county is missing from the provincial yearbooks; all specifications include province fixed effects and standard errors clustered at the province level. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A3: NUMBER OF OBSERVATIONS AND INITIAL COUNTY CHARACTERISTICS

	Number of observations					
	GDP	Primary	Secondary	Tertiary	Exports	Emp.
	(1)	(2)	(3)	(4)	(5)	(6)
Pop	-.002 (.0003)***	-.0006 (.0002)***	-.0006 (.0002)***	-.0006 (.0002)***	.00002 (.0002)	-.0002 (.0001)**
Prop children	-3.570 (5.364)	-1.281 (3.255)	-1.284 (3.255)	-1.362 (3.241)	-9.913 (2.963)***	4.894 (1.943)**
Prop elderly	14.761 (8.161)*	4.095 (4.951)	4.117 (4.953)	4.108 (4.931)	8.359 (4.507)*	-1.995 (2.956)
Post-primary	-5.702 (2.019)***	-3.027 (1.225)**	-3.039 (1.225)**	-2.999 (1.220)**	7.643 (1.115)***	-2.742 (.731)***
Prop agri	13.520 (2.076)***	3.722 (1.260)***	3.711 (1.260)***	3.685 (1.254)***	9.323 (1.147)***	1.704 (.752)**
Prop non-prim	-4.501 (1.836)**	-3.654 (1.114)***	-3.652 (1.114)***	-3.663 (1.110)***	.493 (1.014)	.757 (.665)
Mean (Obs. > 0)	16.92	9.77	9.77	9.73	5.24	8.74
Obs.	1993	1993	1993	1993	1993	1993

Notes: The dependent variable is the number of observations observed at the county level for the specified variable. The independent variables are a series of county characteristics observed at baseline: the fraction of the population engaged in primary employment, the total population, and the fraction of the population with post-primary education (all observed in the 1990 census); GDP in the first year in which the county is observed in a provincial yearbook; and a dummy for an urban county. All specifications include prefecture fixed effects. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A4: CONCORDANCE BETWEEN CHINESE CENSUS INDUSTRY CATEGORIES, ISIC AND SIC

<i>Chinese Census Industry:</i>		<i>ISIC Revision 3:</i>		<i>SIC:</i>	
Codes	Labels	2-Digit	3-Digit	2-Digit	3-Digit
90136	Farming		11	1	
90137	Forestry	2		8	
90138	Animal Husbandry		12	2	
90139	Fishery	5		9	
90140,	Agricultural Services		11	7	
90141					
90142	Coal Mining and Dressing	10		12	
90143	Extraction of Petroleum and Natural Gas	11		13	
90144	Mining and Dressing of Ferrous Metals	12			101
90145	Mining and Dressing of Nonferrous Metals	13			102, 103, 104, 105, 106, 107, 108, 109
90146	Mining and Dressing of Nonmetal Minerals		141		141
90147,	Mining and Dressing of		142		142, 143, 144, 145,
90148	Other Minerals				146, 147, 148, 149
90149	Logging and Transport of Wood and Bamboo	2			241
90151	Food Processing		151, 152, 153, 154		201, 202, 203, 204, 205, 206, 207, 209
90152	Beverages		155		208
90153	Tobacco	16		21	
90155	Textiles	17		22	
90156	Garments and Other Fiber Products	18		23	
90157	Leather, Furs, Down and Related Products	19		31	
90158	Timber Processing, Bamboo, Cane, Palm Fiber and Straw Products	20		24	
90159	Furniture Manufacturing		361	25	

Notes: This table reports the industry categories and their labels in the 1990 Chinese Census that can be matched to ISIC Revision 3 codes and SIC codes. Three-digit codes represent more disaggregated industry categories compared to two-digit codes. All industry categories reported in the Chinese Census are matched to two- or three-digit codes in ISIC or SIC codes. The category of cultural, educational, and sporting goods (90162, 90163) does not match to the ISIC or SIC codes, and is therefore excluded.

TABLE A5: CONCORDANCE BETWEEN CHINESE CENSUS INDUSTRY CATEGORIES, ISIC AND SIC (CONT.)

<i>Chinese Census Industry:</i>		<i>ISIC Revision 3:</i>		<i>SIC:</i>	
Codes	Labels	2-Digit	3-Digit	2-Digit	3-Digit
90160	Paper-making and Paper Products	21		26	
90161	Printing and Record Medium Reproduction	22		27	
90165, 90166	Petroleum Processing and Coking	23		29	
90167	Raw Chemical Materials and Chemical Products		241, 242		281, 283, 284, 285, 286, 287, 288, 289
90168	Medical and Pharmaceutical Products	33			384
90169	Chemical Fiber		243		282
90170	Rubber Products		251		301, 302, 303, 304, 305, 306
90171	Plastic Products		252		308
90172	Nonmetal Mineral Products	26		32	
90173	Smelting and Pressing of Ferrous Metals		271		331, 332
90174	Smelting and Pressing of Nonferrous Metals		272		333, 334, 335, 336, 337, 338, 339
90175	Metal Products	28			341, 342, 343, 344, 345, 346, 347, 349
90176	Ordinary Machinery		291, 293		351, 352, 353, 354
90177	Transport Equipment	34, 35		37	
90178	Electric Equipment and Machinery	31			361, 362, 363, 364, 365
90179	Electronic and Telecommunications Equipment	32			366, 367, 368, 369
90180	Instruments, Meters, Cultural, and Office Machinery	30		38	
90181	Other Manufacturing		369	39	

Notes: This table reports the industry categories and their labels in the 1990 Chinese Census that can be matched to ISIC Revision 3 codes and SIC codes. Three-digit codes represent more disaggregated industry categories compared to two-digit codes. All industry categories reported in the Chinese Census are matched to two- or three-digit codes in ISIC or SIC codes. The category of cultural, educational, and sporting goods (90162, 90163) does not match to the ISIC or SIC codes, and is therefore excluded.

TABLE A6: NTR GAP BY INDUSTRY

<i>Subsectors</i>	<i>NTR gap</i>
Coal Mining and Dressing	.000
Mining and Dressing of Ferrous Metals	.000
Fishery	.012
Extraction of petroleum and Natural Gas	.059
Mining and Dressing of Nonferrous Metals	.061
Animal Husbandry	.076
Petroleum Processing and Coking	.088
Farming	.096
Agricultural Services	.096
Forestry	.123
Logging and Transport of Wood and Bamboo	.123
Mining and Dressing of Other Minerals	.128
Food Processing	.134
Mining and Dressing of Nonmetal Minerals	.175
Smelting and Pressing of Ferrous Metals	.199
Beverages	.201
Timber Processing, Bamboo, Cane, Palm Fiber and Straw Products	.206
Rubber Products	.217
Transport Equipment	.222
Smelting and Pressing of Nonferrous Metals	.231
Printing and Record Medium Reproduction	.242
Raw Chemical Materials and Chemical Products	.269
Leather, Furs, Down and Related Products	.283
Papermaking and Paper Products	.284
Cultural, Educational and Sports Goods	.305
Nonmetal Mineral Products	.309
Tobacco	.317
Instruments, Meters, Cultural and Office Machinery	.321
Electric Equipment and Machinery	.334
Electronic and Telecommunications Equipment	.338
Ordinary Machinery	.363
Metal Products	.384
Chemical Fiber	.383
Plastic Products	.420
Furniture Manufacturing	.424
Medical and Pharmaceutical Products	.425
Other Manufacturing	.426
Garments and Other Fiber Products	.457
Textiles	.523

Notes: This table reports the NTR gap by industry for each tradable subsector reported in the 1990 Chinese county census.

TABLE A7: EXPORTS AND GDP, FULL RESULTS

	Exports (1)	Primary (2)	Secondary (3)	Tertiary (4)	GDP (5)	Per capita (6)
Post x NTR gap	.197 (.081)**	.005 (.018)	.033 (.015)**	.025 (.014)*	.040 (.012)***	.030 (.016)*
Post x Contract	.030 (.105)	.023 (.037)	-.093 (.033)***	-.111 (.028)***	-.010 (.022)	.030 (.023)
MFA	-.043 (.030)	-.080 (.025)***	.001 (.008)	-.014 (.007)*	.008 (.007)	-.003 (.007)
Tariff	.425 (.565)	-.042 (.099)	.001 (.092)	.094 (.091)	.104 (.056)*	.106 (.066)
License	-.086 (.245)	.056 (.043)	-.117 (.053)**	.027 (.039)	-.084 (.031)***	-.059 (.030)**
NTR rate	.378 (.114)***	.011 (.030)	-.057 (.022)***	-.0002 (.018)	-.001 (.016)	.004 (.019)
Obs.	5158	14722	15688	15375	29782	26339

Notes: The primary independent variable is the interaction of a post-2001 dummy and the standardized county NTR gap. The specification also includes a number of control variables: an interaction of the post dummy and a dummy for high contract intensity, SOE quantile-year interactions, the industry-weighted MFA quota fill rate, the industry-weighted national tariff rate, the industry-weighted percentage of firms licensed to export, and the industry-weighted time-varying NTR rate. Province-year and county fixed effects are included, and the province-year fixed effects are interacted with an urban dummy. Standard errors are clustered by county, and the regressions are weighted with respect to baseline employment. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A8: EMPLOYMENT, FULL RESULTS

	Primary (1)	Agri. (2)	Secondary (3)	Tertiary (4)	Total emp. (5)	Total pop. (6)
Post x NTR gap	-.072 (.050)	-.069 (.027)**	.257 (.102)**	.096 (.116)	.0004 (.012)	.013 (.006)**
Post x Contract	.060 (.063)	-.098 (.039)**	-.119 (.102)	-.073 (.099)	-.034 (.013)**	-.044 (.011)***
MFA	-.043 (.016)***	.044 (.025)*	.020 (.029)	.004 (.027)	.022 (.006)***	.014 (.009)
Tariff	-.080 (.174)	.034 (.059)	.005 (.267)	.261 (.194)	-.003 (.034)	.021 (.021)
License	.022 (.058)	-.052 (.040)	.144 (.109)	.147 (.114)	-.048 (.013)***	-.037 (.013)***
NTR rate	.022 (.032)	-.040 (.032)	-.052 (.070)	.055 (.047)	.002 (.010)	-.028 (.016)*
Obs.	4577	21532	5660	5802	19972	28867

Notes: The primary independent variable is the interaction of a post-2001 dummy and the standardized county NTR gap. The specification also includes a number of control variables: an interaction of the post dummy and a dummy for high contract intensity, SOE quantile-year interactions, the industry-weighted MFA quota fill rate, the industry-weighted national tariff rate, the industry-weighted percentage of firms licensed to export, and the industry-weighted time-varying NTR rate. Province-year and county fixed effects are included, and the province-year fixed effects are interacted with an urban dummy. Standard errors are clustered by county, and the regressions are weighted with respect to baseline employment. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A9: AGRICULTURAL INVESTMENT, FULL RESULTS

	Sown area (1)	Agri. machine (2)	Grain (3)	Cash (4)	Grain yield (5)
Post x NTR gap	-.037 (.020)*	-.085 (.024)***	-.126 (.038)***	-.053 (.025)**	-.042 (.022)*
Post x Contract	-.025 (.034)	-.005 (.027)	.055 (.032)*	.027 (.034)	.022 (.040)
MFA	.005 (.017)	-.068 (.014)***	-.066 (.021)***	-.011 (.013)	-.014 (.016)
Tariff	-.083 (.090)	-.158 (.078)**	-.198 (.102)*	.020 (.086)	.159 (.139)
License	.056 (.034)*	.028 (.038)	.043 (.036)	-.042 (.039)	-.085 (.046)*
NTR rate	-.045 (.037)	.003 (.021)	-.028 (.038)	-.044 (.024)*	-.061 (.082)
Obs.	8322	28149	28161	26818	7168

Notes: The primary independent variable is the interaction of a post-2001 dummy and the standardized county NTR gap. The specification also includes a number of control variables: an interaction of the post dummy and a dummy for high contract intensity, SOE quantile-year interactions, the industry-weighted MFA quota fill rate, the industry-weighted national tariff rate, the industry-weighted percentage of firms licensed to export, and the industry-weighted time-varying NTR rate. Province-year and county fixed effects are included, and the province-year fixed effects are interacted with an urban dummy. Standard errors are clustered by county, and the regressions are weighted with respect to baseline employment. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A10: ADDITIONAL RESULTS ON AGRICULTURAL EMPLOYMENT AND OUTPUT

	Agri. emp. (1)	Sown area (2)	Grain (3)	Cash (4)	Primary GDP (5)
Panel A: Persistent effects over time					
Post x NTR gap	-.063 (.026)**	-.036 (.022)*	-.121 (.040)***	-.028 (.023)	.008 (.018)
Post-2008 x NTR gap	-.068 (.015)***	-.035 (.014)**	-.029 (.040)	-.068 (.018)***	-.042 (.016)**
Obs.	21532	8322	28161	26818	14722
Panel B: Local agglomeration effects					
Post x NTR gap	-.028 (.025)	.009 (.012)	-.059 (.022)***	-.047 (.016)***	.012 (.022)
Post x NTR gap (prefecture)	-.062 (.018)***	-.059 (.030)**	-.0002 (.018)	.005 (.018)	.007 (.018)
County x pref. int.	.008 (.006)	-.035 (.019)*	-.041 (.018)**	-.002 (.011)	-.011 (.005)**
Obs.	21663	8481	28406	26887	15098

Notes: In Panel A, the primary independent variable is the interaction of a dummy variable equal to one for the post–2001 period and the county-level gap between NTR tariffs and the non-NTR rates, standardized to have mean zero and standard deviation one; the second independent variable is an interaction of a dummy variable for the post–2008 period and the same county-level gap. In Panel B, the independent variables include the county-level shock, the average shock within the prefecture, and the interaction of the two. The specifications also include the same control variables and standard errors as the primary specifications reported in Tables A7 through A9. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A11: ROBUSTNESS CHECKS - EMPLOYMENT

	Primary (1)	Agri. (2)	Secondary (3)	Tertiary (4)	Total emp. (5)	Total pop. (6)
Panel A: NTR gaps estimated using 2000 employment weights						
Post x NTR gap	-.045 (.051)	-.078 (.028)***	.159 (.064)**	-.065 (.057)	.022 (.007)***	-.0004 (.005)
Obs.	3199	21520	4489	4625	19972	28820
Panel B: NTR gaps estimated assigning non-tradables zero weights						
Post x NTR gap	-.020 (.046)	-.030 (.014)**	.122 (.054)**	.040 (.044)	.008 (.007)	.003 (.005)
Obs.	3214	21532	4523	4659	19972	28867
Panel C: Main specification controlling for pre-trends in employment						
Post x NTR gap	-.046 (.073)	-.094 (.030)***	.328 (.133)**	.221 (.123)*	.004 (.012)	.017 (.008)**
Obs.	3194	21532	4507	4643	19972	28855

Notes: The base specification and the dependent variables are identical to those described in Tables A7 through A9. In Panel A, the NTR gap is estimated using 2000 census employment weights. In Panel B, the NTR gap is estimated using 1990 census employment weights and assigning the non-tradable sector a zero weight. In Panel C, the long-difference in primary and non-primary employment between 1990 and 2000 interacted with a post dummy is included. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A12: ROBUSTNESS CHECKS - AGRICULTURE

	Sown area	Agri. machine	Grain	Cash	Grain yield
	(1)	(2)	(3)	(4)	(5)
Panel A: NTR gaps estimated using 2000 employment weights					
Post x NTR gap	-.034 (.019)*	-.089 (.021)***	-.131 (.028)***	-.053 (.016)***	-.046 (.021)**
Obs.	8291	28123	28122	26818	7140
Panel B: NTR gaps estimated assigning non-tradables zero weights					
Post x NTR gap	.015 (.016)	-.115 (.012)***	-.116 (.031)***	-.033 (.015)**	.007 (.017)
Obs.	8322	28149	28161	26818	7168
Panel C: Main specification controlling for pre-trends in employment					
Post x NTR gap	-.011 (.024)	-.078 (.026)***	-.125 (.051)**	-.053 (.026)**	-.040 (.028)
Obs.	8322	28149	28141	26818	7144

Notes: The base specification and the dependent variables are identical to those described in Tables A7 through A9. In Panel A, the NTR gap is estimated using 2000 census employment weights. In Panel B, the NTR gap is estimated using 1990 census employment weights and assigning the non-tradable sector a zero weight. In Panel C, the long-difference in primary and non-primary employment between 1990 and 2000 interacted with a post dummy is included. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A13: EVIDENCE AROUND TIMING

	GDP							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
NTR gap x 97-98	-.025 (.024)	-.018 (.017)	-.056 (.159)	-.015 (.020)	-.110 (.173)	-.017 (.020)	.004 (.019)	-.030 (.029)
NTR gap x 99-01	-.003 (.019)	-.004 (.014)	-.046 (.178)	.012 (.017)	-.135 (.183)	.019 (.017)	.023 (.018)	.003 (.022)
NTR gap x 02-03	.027 (.022)	.031 (.016)*	.065 (.176)	.049 (.018)***	-.054 (.185)	.055 (.018)***	.005 (.023)	.050 (.023)**
NTR gap x 04-05	.050 (.024)**	.034 (.017)**	-.060 (.171)	.048 (.020)**	-.137 (.178)	.056 (.020)***	-.006 (.024)	.055 (.024)**
NTR gap x 06-07	.061 (.024)**	.041 (.019)**	-.212 (.173)	.054 (.022)**	-.200 (.184)	.062 (.022)***	-.020 (.027)	.068 (.025)***
NTR gap x 08-09	.043 (.023)*	.028 (.018)	-.208 (.176)	.039 (.021)*	-.192 (.192)	.048 (.021)**	-.019 (.026)	.052 (.025)**
NTR gap x 10-11	.053 (.024)**	.034 (.020)*	-.193 (.185)	.043 (.023)*	-.154 (.215)	.053 (.023)**	-.026 (.024)	.063 (.026)**
NTR gap x 12-13	.043 (.026)*	.017 (.020)	-.279 (.202)	.029 (.024)	-.167 (.234)	.038 (.024)	-.047 (.025)*	.052 (.028)*
Sample	Full		Low cap. int.	High cap. int.	Low U.S. share	High U.S. share	Low port prox.	High port prox.
Additional controls	Yes	No	No	No	No	No	No	No
Obs.	29782	30390	15892	14498	15902	14488	15200	15002

Notes: The primary independent variable is the interaction of the county-level NTR gap, standardized to have mean zero and standard deviation one, and a series of dummy variables capturing two-year intervals. The dependent variable is the log of county-level GDP. Standard errors are estimated employing clustering at the county level, and the regressions are weighted with respect to baseline employment.

In Column (1), the specification also includes the same control variables reported in the specifications in Tables A7 through A9. The specifications reported in Columns (2) through (6) include only county and province-year fixed effects, and province-year fixed effects interacted with an urban dummy. Column (3) reports the results for counties below the median of baseline capital intensity in non-state owned enterprises; Column (4) reports the results for counties above median baseline capital intensity for non-SOEs. Column (5) reports the results for counties below the median of baseline U.S. share of total exports; Column (6) reports the results for counties above median U.S. export share. Column (7) reports the results for counties characterized by low port proximity, or above the median of average distance to the five largest ports; Column (8) reports the results for counties characterized by high port proximity, or below the median of average distance. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A14: ADDITIONAL TESTS OF BIAS DUE TO PRE-TRENDS

	Exports (1)	Primary (2)	Secondary (3)	Tertiary (4)	GDP (5)	Per capita (6)
Panel A: Differential trends by NTR gap quartile						
Post x NTR gap	.154 (.083)*	.004 (.018)	.037 (.015)**	.029 (.014)**	.044 (.012)***	.028 (.016)*
Obs.	5158	14722	15688	15375	29782	26333
Panel B: Differencing out pre-trends in GDP						
Post x NTR gap	.178 (.084)**	-.034 (.016)**	.043 (.021)**	.018 (.021)	.039 (.016)**	.056 (.016)***
Obs.	4978	13120	13607	13410	27257	25118

Notes: The base specification and the dependent variables are identical to those described in Tables A7 through A9. In Panel A, we characterize counties with respect to the quartile of the NTR gap and add additional time trends with respect to each quartile. In Panel B, we manually construct the county-level pre-WTO difference in GDP from 1997 to 2001, and include an interaction term between this pre-WTO difference and the post dummy. Asterisks indicate significance at the ten, five and one percent level.

TABLE A15: ADDITIONAL PROVINCE-LEVEL DATA

	Exports (1)	Foreign capital used (2)	Foreign loans (3)	Direct FDI (4)
Post x NTR gap	.211 (.111)*	.322 (.085)***	.517 (.266)*	.617 (.117)***
Obs.	384	278	217	382

Notes: The primary independent variable is the interaction of a post-2001 dummy and the standardized province NTR gap. The specification also includes a number of control variables, all calculated as the mean across counties within the province: an interaction of the post-reform indicator variable and a time-invariant dummy capturing whether the county is characterized by high contract intensity industries, the industry-weighted MFA quota fill rate for county-produced goods, the industry-weighted national tariff rate for imports of county-produced goods, the industry-weighted percentage of firms licensed to export, and the industry-weighted time-varying NTR rate. Province and year fixed effects are included. Standard errors are estimated employing clustering at the province level.

The dependent variables include exports, foreign capital used, foreign loans, and direct FDI at the province level, are reported as the log of constant-price million yuan. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A16: ALTERNATE SPECIFICATIONS

	Exports (1)	Primary (2)	Secondary (3)	Tertiary (4)	GDP (5)	Per capita (6)
Panel A: Main specification controlling for non-primary employment						
Post x NTR gap	.209 (.085)**	.006 (.020)	.026 (.015)*	.023 (.014)	.032 (.012)***	.010 (.015)
Obs.	5158	14722	15688	15375	29782	26347
Panel B: Main specification controlling for high gap employment						
Post x NTR gap	.212 (.081)***	.010 (.020)	.032 (.015)**	.024 (.014)*	.041 (.012)***	.020 (.015)
Obs.	5158	14722	15688	15375	29782	26347
Panel C: Baseline specification without controls						
Post x NTR gap	.114 (.051)**	-.049 (.025)**	.029 (.014)**	.017 (.011)	.053 (.012)***	.031 (.015)***
Obs.	5187	15261	16248	15934	30401	26606
Panel D: Population-weighted standard errors						
Post x NTR gap	.181 (.082)**	-.002 (.018)	.036 (.015)**	.027 (.015)*	.042 (.013)***	.036 (.016)**
Obs.	5155	14716	15682	15369	29767	26332
Panel E: NTR Gap Winsorized at 1/99 percentile						
Post x NTR gap	.179 (.080)**	.021 (.024)	.028 (.015)*	.022 (.015)	.038 (.013)***	.036 (.015)**
Obs.	5158	14722	15688	15375	29782	26347

Notes: The base specification and dependent variables are identical to those described in Table A7. In Panel A, the specification includes interactions between dummies for quartiles of initial secondary and tertiary employment and year fixed effects. In Panel B, the specification includes interactions between dummies for quartiles of employment in five high NTR gap industries and year fixed effects. In Panel C, the specification includes only county and province year fixed effects. In Panel D, the regressions are weighted with respect to the 1990 county population. In Panel E, the NTR gap is winsorized at the 1st and 99th percentiles. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A17: ALTERNATE SPECIFICATIONS

	Exports (1)	Primary (2)	Secondary (3)	Tertiary (4)	GDP (5)	Per capita (6)
Panel A: Baseline GDP quartile - year fixed effects						
Post x NTR gap	.180 (.082)**	.004 (.018)	.034 (.015)**	.023 (.014)	.043 (.012)***	.039 (.017)**
Obs.	5158	14722	15688	15375	29782	26347
Panel B: Baseline education quartile - year fixed effects						
Post x NTR gap	.217 (.081)***	.0009 (.018)	.031 (.015)**	.029 (.014)**	.045 (.012)***	.035 (.016)**
Obs.	5158	14722	15688	15375	29782	26347
Panel C: Baseline Herfindahl - year fixed effects						
Post x NTR gap	.201 (.081)**	.006 (.020)	.029 (.015)*	.023 (.014)*	.038 (.012)***	.022 (.016)
Obs.	5158	14722	15688	15375	29782	26347
Panel D: Heterogeneity with respect to import competition						
Post x NTR gap	.163 (.086)*	.016 (.020)	.029 (.015)*	.010 (.013)	.033 (.013)***	.042 (.017)**
Import comp. int.	.031 (.089)	.020 (.013)	-.020 (.017)	-.038 (.012)***	-.014 (.015)	.028 (.018)
Obs.	5158	14722	15688	15375	29782	26358

Notes: The base specification and the dependent variables are identical to those described in Tables A7 through A9. In Panel A, a full set of interactions between year fixed effects and dummy variables for each quartile of initial GDP are added. In Panel B, a full set of interactions between year fixed effects and dummy variables for each quartiles of initial post-primary education are added. In Panel C, a full set of interactions between year fixed effects and dummy variables for each quartile of the initial Herfindahl index are added. In Panel D, the post-NTR interaction is interacted with a dummy equal to one for districts who are above the median of soybeans and cotton as a fraction of total sown area, and we also include interactions between quartiles of this fraction and year fixed effects.

TABLE A18: EXCHANGE RATE SHOCKS

	Exports (1)	Primary (2)	Secondary (3)	Tertiary (4)	GDP (5)	Per capita (6)
Panel A: Heterogeneous effects of exchange rate shocks post-accession						
High U.S. exports x Rmb/\$	7.230 (6.980)	.504 (.369)	1.279 (.730)*	.613 (.611)	.593 (.484)	.857 (.560)
High U.S. exports x Rmb/\$ x Post	-7.215 (6.998)	-.502 (.369)	-1.273 (.732)*	-.596 (.613)	-.602 (.485)	-.874 (.561)
Obs.	5158	14722	15688	15375	29782	26365
Panel B: Effects of exchange rate shocks						
High U.S. exports x Rmb/\$	-.016 (.100)	.004 (.011)	.002 (.018)	.022 (.013)*	-.009 (.008)	-.024 (.009)***
Obs.	5158	14722	15688	15375	29782	26365

Notes: The base specification and the dependent variables are identical to those described in Tables A7 through A9. The primary independent variable is the interaction of a dummy variable equal to one for counties above the median of baseline U.S. export share of total exports and the annual average exchange rate in remminbi per dollar. In Panel A, this double interaction is additionally interacted with a dummy variable for the post-2001 period. Asterisks indicate significance at the ten, five, and one percent level.

TABLE A19: EVALUATING MISREPORTING IN COUNTY-LEVEL GDP

		GDP gap	
	(1)	(2)	(3)
NTR gap	.137 (.525)		
Post x NTR gap		.445 (.300)	-.589 (1.075)
Control variables	None	None	Full
Fixed effects		Province + year	Province + year
Obs.	260	260	260

Notes: The independent variables are the NTR gap at the province-year level standardized to have mean zero and standard deviation one, and the NTR gap interacted with a dummy variable equal to one for the post-2001 period. The dependent variable is the GDP gap at the province-year level, estimated as the percentage gap between the sum of county-level GDP (calculated using a balanced panel of counties, and adjusted for the percentage of counties that are missing from the balanced panel), and province-level GDP as reported by the National Bureau of Statistics. Fixed effects and control variables are as reported in the table. Full controls include the province-level mean of the following control variables: an interaction of the post-reform indicator variable and a time-invariant dummy capturing whether the county is characterized by high contract intensity industries, the industry-weighted MFA quota fill rate for county-produced goods, the industry-weighted national tariff rate for imports of county-produced good, the industry-weighted percentage of firms licensed to export, and the industry-weighted time-varying NTR rate. Standard errors are clustered at the province level. Asterisks indicate significance at the ten, five, and one percent level.