Appendix

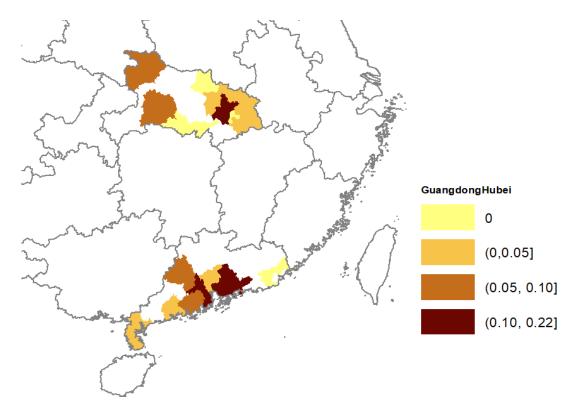## Some Details of the China Employer-Employee Survey

Appendix Table A1 shows "Summary Statistics of CEES Data in 2015. Appendix Figure A2 provides a map showing variation in firms' use of robots across the sampled prefectures in 2015. Appendix Figure A2 graphs the share of robots in manufacturing by industry, comparing the IFR data on robots vs. our CEES data, and thus illustrating the very high correlation between them mentioned in the main text of the paper.

Appendix Table 1: Summary Statics of CEES Data in 2015

variable	N	mean	sd	p25	p50	p75
a. Robot usage						
Use Robots (1/0)	1115	0.086	0.281			
ln Robot Value	1038	0.426	1.676			
b. Basic firm characteristics						
Workers	1109			55	160	520
Capital to Labor (10K RMB)	1106			14.592	36.191	83.008
c. Measuring Industry Policy						
Get Subsidy for Buying Robots	1115	0.013	0.111			
Firm: SOE/Collective	1115	0.124	0.329			
CEO: Party Member	1115	0.350	0.477			
CEO: Male	1115	0.913	0.282			
CEO: College	1115	0.399	0.490			
CEO: Age	1049	48.600	8.827			
d. Measuring Labor Cost						
Worker: Union	1115	0.592	0.492			
Wage Cost (10K RMB)	1046			150	512	1865
Worker: # left voluntarily	1095			4	21	96
Worker: # left involuntarily	1086			0	0	7
Turnover: voluntary	1090	0.310	0.994	0.040	0.149	0.340
Turnover: involuntary	1080	0.129	1.679	0	0	0.025
e. Measuring Quality and Growth						
Quality Strategy	1115	0.745	0.435			
Defect Rate	1047	2.258	9.489			
Exporter	1115	0.422	0.494			
Change in ln Sales from 2014	1072	0.020	0.931	-0.182	0.01	0.169
f. Measuring Tasks (principal component)						
Manual	1115	0.517	0.577	0.215	0.510	0.803
Routine	1115	0.489	0.567	0.224	0.504	0.814
Abstract	1115	-0.464	0.558	-0.801	-0.479	-0.142

Notes: This table present summary statistics for key firm characteristics the CEES survey 2016 (for data in 2015).
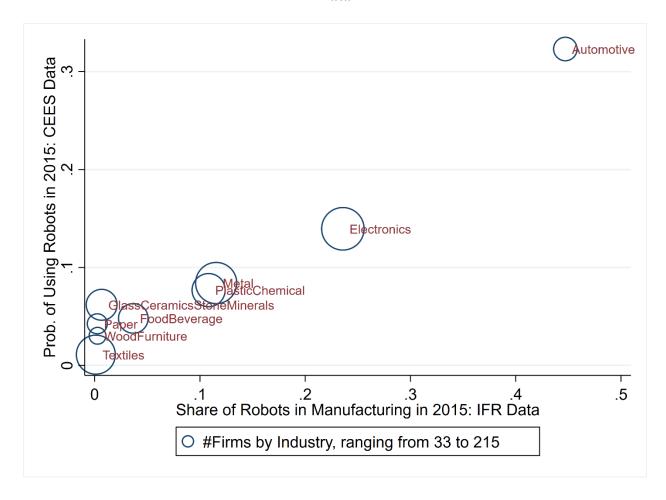
Appendix Figure A1: Sampled Prefectures and Robot Use in 2015

Notes: This maps plots the probability of using robots in 2015 in our CEES data. A large part of the regional variation can be explained by industrial composition.

Appendix Figure A2: Robot Penetration across Industries in the CEES Data versus IFR Data

Notes: This figure plots the share of robot units across industries in the IFR data versus the probability of using robots by industries in our CEES data. The high correlation provide a validity check for our survey data.