Online Appendix

A More Details on Measuring TFP

- **Output:** We choose to use gross shipments to avoid a possible measurement issue. Although it is possible to adjust output for the change in inventories, inventories for some plants are imputed (Baily, Bartelsman, and Haltiwanger (2001)).
- **Hours:** Note that hours for nonproduction workers are not collected. Thus, we estimate the value for total hours following the method in Baily, Hulten, and Campbell (1992), which multiplies the total hours of production workers by the ratio of the total payroll for all workers to the payroll for production workers.
- **Factor Elasticities:** For factor elasticies, we use the average of revenue shares between adjacent time periods (i.e., the Tornqvist index). In calculating labor's share, we follow Bils and Chang (2000) and use information from the National Income and Product Accounts. We adjust each industry's wage and salary payments to reflect other labor payments, such as fringe payments and employer FICA payments.

See Lee and Mukoyama (2008) and Castro, Clementi, and Lee(2015) for details on constructing real capital stock and TFP.

B Summary Statistics of Factor Elasticities

Table A1 presents summary statistics of estimated factor elasticities θ_k, θ_n, and θ_m. It reports the summary statistics for the averages of estimated factor elasticities across four-digit industries between 1972 and 1997. We set the elasticities equal to the averages of four-digit industry level revenue shares between adjacent time periods (i.e., the Tornqvist index).

	Sample Size	Mean	Std. Dev.
θ_k	11307	0.204	0.090
θ_n	11307	0.254	0.100
θ_m	11307	0.505	0.127

Table A1: Summary statistics of factor elasticities

C Additional Tables for Estimation Results

This section presents additional results on the estimations we performed in Section 3. Tables A2 and A3 supplement Table 3 (the third column of each table corresponds to Table 3 results).

They present the system GMM estimation of productivity and employment processes with AR(1) specification, using different instruments. As noted in footnote 9, both $m1$ and $m2$ tests are rejected in all of the specifications in Tables A2 and A3. This indicates the possible existence of misspecification.

Productivity, AR(1)				
ρ	0.601	0.746	0.843	0.884
	(0.010)	(0.019)	(0.028)	(0.019)
σ	0.307	0.298	0.301	0.304
$m1$	-39.09	-25.54	-25.01	-31.43
$m2$	2.08	2.33	2.75	2.56
Instruments	s_{t-2}	s_{t-3}	s_{t-4}	s_{t-5}
	s_{t-3}	s_{t-4}	s_{t-5}	s_{t-6}

Table A2: System GMM estimation of productivity process, AR(1)

Employment, AR(1)				
ρ	0.881	0.992	0.993	0.998
	(0.007)	(0.009)	(0.008)	(0.007)
σ	0.397	0.380	0.380	0.380
$m1$	-49.55	-38.82	-41.40	-41.95
$m2$	3.40	3.00	3.01	2.99
Instruments	n_{t-2}	n_{t-3}	n_{t-4}	n_{t-5}
	n_{t-3}	n_{t-4}	n_{t-5}	n_{t-6}

Table A3: System GMM estimation of employment process, AR(1)

Similarly, Tables A4 and A5 supplement Table 4. In both tables, the third column corresponds to the results in Table 4. In each table, the $m1$ and $m2$ tests are rejected in both the first and the second column. In the third column, the $m2$ test is not rejected.

Productivity, AR(2)			
ρ_1	1.086	0.996	0.956
	(0.059)	(0.077)	(0.093)
ρ_2	-0.167	-0.049	0.014
	(0.036)	(0.061)	(0.080)
$\tilde{\sigma}$	0.290	0.283	0.282
$m1$	-14.53	-8.90	-6.97
$m2$	6.28	2.11	0.91
Instruments	s_{t-3}	s_{t-4}	s_{t-5}
	s_{t-4}	s_{t-5}	s_{t-6}

Table A4: System GMM estimation of productivity process, AR(2)

Employment, AR(2)			
ρ_1	1.087	1.247	0.901
	(0.050)	(0.087)	(0.063)
ρ_2	-0.104	-0.266	0.080
	(0.049)	(0.086)	(0.063)
$\tilde{\sigma}$	0.365	0.380	0.358
$m1$	-12.48	-8.51	-7.72
$m2$	2.73	3.23	-0.63
Instruments	n_{t-3}	n_{t-4}	n_{t-5}
	n_{t-4}	n_{t-5}	n_{t-6}

Table A5: System GMM estimation of employment process, AR(2)

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