

Online Appendix for

**Is Automation Labor-Displacing?
Productivity Growth, Employment, and the Labor Share**

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Appendix Table A1. EUKLEMS data coverage by country

<i>ISO code</i>	<i>Country</i>	<i>Years</i>
AUS	Australia	1970-2007
AUT	Austria	1970-2007
BEL	Belgium	1970-2006
CAN	Canada	1970-2004
DNK	Denmark	1970-2007
ESP	Spain	1970-2007
FIN	Finland	1970-2007
FRA	France	1970-2007
GER	Germany	1970-2007
IRL	Ireland	1988-2007
ITA	Italy	1970-2007
JPN	Japan	1973-2006
KOR	South Korea	1970-2007
LUX	Luxembourg	1986-2007
NLD	Netherlands	1970-2007
PRT	Portugal	1970-2006
SWE	Sweden	1981-2007
UK	United Kingdom	1970-2007
USA	United States	1970-2005

Notes: Data coverage for EUKLEMS database, 2008 release supplemented with information from 2009 and 2007 releases. Greece excluded for lack of TFP data.

Table A2. EUKLEMS industry list

<i>ISIC code</i>	<i>Description</i>	<i>Sector grouping</i>
C	Mining and quarrying	Mining, utilities, and construction
15t16	Food, beverages, and tobacco	Manufacturing
17t19	Textiles, textile , leather, and footwear	Manufacturing
20	Wood and wood products	Manufacturing
21t22	Pulp, paper, paper, printing, and publishing	Manufacturing
23	Coke, refined petroleum and nuclear fuel	Manufacturing
24	Chemicals and chemical products	Manufacturing
25	Rubber and plastics	Manufacturing
26	Other non-metallic mineral	Manufacturing
27t28	Basic metals and fabricated metal	Manufacturing
29	Machinery, not elsewhere classified	Manufacturing
30t33	Electrical and optical equipment	Manufacturing
34t35	Transport equipment	Manufacturing
36t37	Manufacturing not elsewhere classified; recycling	Manufacturing
E	Electricity, gas, and water supply	Mining, utilities, and construction
F	Construction	Mining, utilities, and construction
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of fuel	Low-tech services
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	Low-tech services
52	Retail trade, except of motor vehicles and motorcycles; repair of household goods	Low-tech services
H	Hotels and restaurants	Low-tech services
60t63	Transport and storage	Low-tech services
64	Post and telecommunications	High-tech services
J	Financial intermediation	High-tech services
70	Real estate activities	Low-tech services
71t74	Renting of machinery & equipment and other business activities	High-tech services
M	Education	Health and education
N	Health and social work	Health and education
O	Other community, social and personal service activities	Low-tech services

Notes: ISIC revision 3 codes. We exclude agriculture (industry AtB), public administration (industry L), private households (P) and extra-territorial organizations (Q) from our analyses.

Appendix Table A3. Shift-Share Analysis of Labor Share Changes in Levels by Decade

Annualized decadal percentage point change in laborshare by country						
Decade	Weighted by country size			Unweighted		
	Mean	Between industry	Within industry	Mean	Between industry	Within industry
1970s	0.268	-0.084 -31%	0.352 131%	0.123	-0.050 -40%	0.172 140%
1980s	-0.256	-0.024 9%	-0.232 91%	-0.164	0.003 -2%	-0.167 102%
1990s	-0.126	-0.010 2%	-0.116 98%	-0.268	-0.088 33%	-0.180 67%
2000s	-0.405	-0.130 33%	-0.274 67%	-0.116	0.019 -16%	-0.136 117%

Appendix Table A4. Contribution of Each Industry to Between- and Within-Industry Components of Change in Aggregate Mean Log Labor Share by Decade

ISIC code	Description	Contribution to between effect				Contribution to within effect			
		1970s	1980s	1990s	2000s	1970s	1980s	1990s	2000s
C	Mining and quarrying	-0.18	0.23	0.04	-0.10	-0.11	0.03	-0.03	-0.05
15t16	Food, beverages, and tobacco	0.02	0.02	0.02	0.03	0.05	-0.04	-0.01	0.02
17t19	Textiles, textile , leather, and footwear	0.03	0.01	0.01	0.02	0.02	-0.01	0.00	0.00
20	Wood and wood products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
21t22	Pulp, paper, paper, printing, and publishing	0.00	0.00	0.01	0.04	0.02	-0.02	-0.01	-0.01
23	Coke, refined petroleum and nuclear fuel	0.02	0.03	-0.01	-0.04	-0.01	0.00	-0.01	-0.03
24	Chemicals and chemical products	0.02	0.00	0.01	0.02	0.03	-0.03	-0.01	-0.02
25	Rubber and plastics	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
26	Other non-metallic mineral	0.01	0.01	0.01	0.01	0.02	-0.01	0.00	0.00
27t28	Basic metals and fabricated metal	0.07	0.04	0.02	0.01	0.04	-0.01	0.00	-0.04
29	Machinery, not elsewhere classified	0.00	0.02	0.01	0.01	0.02	-0.01	0.02	-0.02
30t33	Electrical and optical equipment	0.01	-0.01	0.00	0.05	0.04	-0.03	-0.01	0.00
34t35	Transport equipment	-0.01	0.01	0.01	0.00	0.01	-0.01	-0.01	0.00
36t37	Manufacturing not elsewhere classified; recycling	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
E	Electricity, gas, and water supply	-0.06	0.01	0.03	0.01	0.02	-0.04	-0.02	-0.02
F	Construction	0.02	0.01	0.03	-0.02	0.08	-0.04	0.05	-0.08
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of fuel	0.00	0.00	0.00	0.00	0.01	0.00	-0.02	-0.01
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	-0.01	0.01	-0.01	0.00	0.03	0.01	-0.04	-0.09
52	Retail trade, except of motor vehicles and motorcycles; repair of household goods	0.01	0.00	0.00	0.01	0.05	-0.04	-0.03	-0.01
H	Hotels and restaurants	0.00	0.00	0.00	0.00	0.03	-0.01	-0.02	-0.03
60t63	Transport and storage	0.02	0.02	0.01	0.01	0.06	-0.02	-0.02	-0.03
64	Post and telecommunications	-0.01	0.00	-0.02	0.01	0.00	-0.04	-0.01	-0.06
J	Financial intermediation	-0.02	-0.05	-0.05	0.00	0.06	-0.02	-0.09	-0.05
70	Real estate activities	-0.04	-0.40	-0.10	-0.45	0.17	0.05	0.04	0.08
71t74	Renting of machinery & equipment and other business activities	-0.04	-0.11	-0.09	-0.02	0.05	0.03	0.06	-0.01
M	Education	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.01	0.06
N	Health and social work	-0.02	-0.01	-0.02	-0.04	0.02	0.01	-0.02	-0.03
O	Other community, social and personal service activities	-0.02	-0.02	-0.01	0.00	0.02	-0.02	0.02	0.01
	Total	-0.187	-0.183	-0.075	-0.425	0.699	-0.276	-0.188	-0.436

Appendix Table A5. Predictive Industry-Level Relationship Between Other-Country TFP Growth and Own-Country TFP Growth

dependent variable: annual change in own-country log TFP by industry

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta \ln \text{TFP (ict) in other countries}$	0.567** (0.079)	0.567** (0.079)	0.549** (0.082)	0.554** (0.083)	0.572** (0.084)	0.517** (0.065)	0.322** (0.064)	0.496** (0.064)
<i>Fixed effects:</i>								
Country	NO	YES	YES	YES	YES	YES	YES	YES
Year	NO	NO	YES	YES	YES	YES	YES	YES
Country \times Timetrend	NO	NO	NO	YES	NO	NO	NO	YES
Country \times Business cycle	NO	NO	NO	YES	NO	NO	NO	YES
Country \times Year	NO	NO	NO	NO	YES	YES	YES	NO
Sectorgroup	NO	NO	NO	NO	NO	YES	NO	YES
Industry	NO	NO	NO	NO	NO	NO	YES	NO
R2	0.060	0.064	0.073	0.085	0.117	0.127	0.156	0.095
N	15,007	15,007	15,007	15,007	15,007	15,007	15,007	15,007

Notes: All models weighted by industry value added shares within countries, multiplied by time-varying country shares in total value added. The number of observations is equal to the number of country-industry cells multiplied by the number of years. Standard errors are clustered by country-industry and reported in parentheses, ~ p<0.10, * p<0.05, ** p<0.01.

Appendix Table A6. Summary Statistics for Standardized TFP Measures and Patents

	A. Total Factor Productivity			
	Weighted by country size		Not weighted by country size	
	<i>Mean</i>	<i>Sd</i>	<i>Mean</i>	<i>Sd</i>
$\Delta \ln$ Own-Industry TFP (i, c, t)	0.622	2.585	0.636	2.484
$\Delta \ln$ Supplier-Industry TFP (j \neq i, c, t)	0.196	0.359	0.167	0.315
$\Delta \ln$ Customer-Industry TFP (j \neq i, c, t)	0.108	0.318	0.098	0.252

	B. Patents and patent citations			
	Weighted by country size		Not weighted by country size	
	<i>Mean</i>	<i>Sd</i>	<i>Mean</i>	<i>Sd</i>
$\Delta \ln$ Own-Industry patents (i, c, t)	4.334	2.591	4.641	2.475
$\Delta \ln$ Own-Industry patent citations (i, c, t)	3.224	2.809	3.692	2.698

Notes: All variables weighted by industry shares in value added.

Appendix Table A7. Trends in Patent Grants and Patent Citations by Industry for US and non-US Inventors, 1970 – 2007

<i>ISIC code</i>	<i>Description</i>	Mean log nr of patents		Mean log nr of patent citations	
		<i>by US inventors</i>	<i>by non-US inventors</i>	<i>by US inventors</i>	<i>by non-US inventors</i>
C	Mining and quarrying	6.23	4.50	5.10	3.14
15t16	Food , beverages, and tobacco	5.27	3.47	3.87	1.62
17t19	Textiles, textile , leather, and footwear	5.18	4.07	4.22	2.78
20	Wood and wood products	4.02	3.14	2.95	1.84
21t22	Pulp, paper, paper, printing, and publishing	6.56	4.50	5.73	3.26
23	Coke, refined petroleum and nuclear fuel	7.38	6.02	6.05	4.32
24	Chemicals and chemical products	8.31	7.23	7.22	5.88
25	Rubber and plastics	5.98	4.49	4.91	3.03
26	Other non-metallic mineral	5.83	3.42	4.79	1.96
27t28	Basic metals and fabricated metal	6.54	5.09	5.29	3.53
29	Machinery, not elsewhere classified	7.43	6.32	6.35	5.00
30t33	Electrical and optical equipment	8.54	8.15	7.65	6.88
34t35	Transport equipment	7.36	6.70	6.25	5.37
36t37	Manufacturing not elsewhere classified; recycling	5.75	4.11	4.83	2.87
E	Electricity, gas, and water supply	3.01	3.15	1.75	1.49
F	Construction	4.57	3.05	3.80	1.75
50	Sale, maintenance and repair of motor vehicles; retail sale of fuel	3.09	2.20	1.87	0.53
51	Wholesale trade and commission trade, except of motor vehicles	3.40	2.76	2.09	1.01
52	Retail trade, except of motor vehicles; repair of household goods	5.04	3.52	4.19	2.18
H	Hotels and restaurants	3.55	2.23	2.53	0.86
60t63	Transport and storage	4.10	2.77	3.05	1.44
64	Post and telecommunications	6.72	4.83	5.82	3.67
J	Financial intermediation	4.83	3.86	4.10	2.29
70	Real estate activities	1.68	1.58	0.48	0.17
71t74	Renting of machinery & equipment and other business activities	7.40	6.59	6.42	5.37
M	Education	-0.95	-2.04	-1.45	-3.12
N	Health and social work	2.79	1.59	2.03	0.79
O	Other community, social and personal service activities	5.30	3.91	4.09	2.15

Notes: Average across 1970-2007.

Appendix Table A8. Trends in Patent Grants and Patent Citations by Industry for US and non-US Inventors: Overall and by Decade and Sector
dependent variable: 100 x log outcome by country-industry-year

	Nr of patents		Nr of patent citations	
	<i>by US inventors</i>	<i>by non-US inventors</i>	<i>by US inventors</i>	<i>by non-US inventors</i>
	(1)	(2)	(3)	(4)
Mean	4.578** (0.097)	3.513** (0.093)	3.583** (0.108)	2.191** (0.101)
Mean for:				
1970s	3.761** (0.194)	2.605** (0.159)	2.531** (0.213)	1.221** (0.159)
1980s	4.489** (0.177)	3.363** (0.172)	4.016** (0.174)	2.469** (0.178)
1990s	4.973** (0.183)	4.013** (0.179)	4.951** (0.172)	3.320** (0.188)
2000s	5.385** (0.196)	4.308** (0.220)	2.604** (0.262)	1.464** (0.276)
Mean for:				
Mining & utilities & construction	4.471** (0.207)	3.284** (0.135)	3.543** (0.262)	1.913** (0.216)
Manufacturing	6.675** (0.078)	5.360** (0.102)	5.583** (0.098)	3.926** (0.120)
Education & health	1.091** (0.282)	-0.186 (0.290)	0.448 (0.322)	-1.143** (0.344)
Low-tech services	3.471** (0.117)	2.581** (0.084)	2.342** (0.153)	1.098** (0.111)
High-tech services	6.318** (0.167)	5.276** (0.200)	5.447** (0.193)	3.924** (0.235)
N	1,059	1,042	1,057	1,026

Notes: 1970-2007. All models weighted by time-averaged industry value added shares, averaged across countries. The number of observations is equal to the number of industry cells multiplied by the number of years. Robust standard errors are reported in parentheses, ~ p<0.10, * p<0.05, ** p<0.01.

Appendix Table A9. Aggregate Elasticity Estimates: Country-Level Growth and Industry-Level Employment, Hours, Wagebill, and Output

dependent variable: annual change in log outcome by country

	<u>Employment</u>	<u>Hours</u>	<u>Wagebill</u>	<u>Nominal VA</u>	<u>Real VA</u>	<u>Laborshare</u>
	(1)	(2)	(3)	(4)	(5)	(6)
$\Sigma \Delta \ln$ aggregate real VA (c, t-k)	0.414** (0.041)	0.301** (0.051)	-	-	0.436** (0.134)	-
$\Sigma \Delta \ln$ aggregate nominal VA (c, t-k)	-	-	0.929** (0.025)	0.858** (0.027)	-	0.054** (0.021)
R2	0.301	0.173	0.685	0.656	0.056	0.051
N	552	552	552	552	552	552
Model weighted by:	Employment	Hours	Hours	VA	VA	VA

Notes: Estimates are the sum of coefficients for 5 annual distributed lags (k=1, ..., 5). The number of observations is equal to the number of countries multiplied by the number of years. Standard errors are reported in parentheses, ~ p<0.10, * p<0.05, ** p<0.01.

Appendix Table A10. Estimates of the Relationship Between Productivity Growth and Industry-Level Outcomes, 1970 – 2007 Excluding Contemporaneous TFP Measure from Distributed Lag Model: Direct Effects, Supplier and Customer Effects, and Aggregate Effects

dependent variable: annual change in log outcome by country-industry

	A. Industry effects					
	<u>Employment</u>	<u>Hours</u>	<u>Wagebill</u>	<u>Nominal VA</u>	<u>Real VA</u>	<u>Laborshare</u>
	(1)	(2)	(3)	(4)	(5)	(6)
$\Sigma \Delta \ln$ Own-Industry TFP (i, c, t-k)	-0.895** (0.137)	-0.871** (0.151)	-1.061** (0.204)	-0.688** (0.172)	0.941** (0.357)	-0.452** (0.156)
$\Sigma \Delta \ln$ Supplier-Industry TFP (j≠i, c, t-k)	0.797** (0.214)	0.678** (0.229)	0.021 (0.317)	0.130 (0.322)	-0.091 (0.421)	0.048 (0.271)
$\Sigma \Delta \ln$ Customer-Industry TFP (j≠i, c, t-k)	0.105 (0.125)	0.165 (0.151)	-0.098 (0.189)	-0.241 (0.201)	0.310 (0.225)	-0.208 (0.188)
<i>Fixed effects:</i>						
Country	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
Sectorgroup	YES	YES	YES	YES	YES	YES
Country × Timetrend	YES	YES	YES	YES	YES	YES
Country × Business cycle	YES	YES	YES	YES	YES	YES
R2	0.275	0.244	0.427	0.314	0.135	0.067
N	15,520	15,520	15,520	15,520	15,520	15,520
Model weighted by:	Employment	Hours	Hours	VA	VA	VA
	B. Aggregate elasticities					
	<u>Employment</u>	<u>Hours</u>	<u>Wagebill</u>	<u>Nominal VA</u>	<u>Real VA</u>	<u>Laborshare</u>
	(1)	(2)	(3)	(4)	(5)	(6)
$\Sigma \Delta \ln$ aggregate real VA (j≠i, c, t-k)	0.450** (0.066)	0.344** (0.077)	-	-	0.434** (0.095)	-
$\Sigma \Delta \ln$ aggregate nominal VA (j≠i, c, t-k)	-	-	0.984** (0.024)	0.917** (0.024)	-	0.082** (0.024)
<i>Fixed effects:</i>						
Sectorgroup	YES	YES	YES	YES	YES	YES
R2	0.183	0.132	0.371	0.252	0.046	0.005
N	15,520	15,520	15,520	15,520	15,520	15,520
Model weighted by:	Employment	Hours	Hours	VA	VA	VA

Notes: All TFP terms refer to other-country TFP, and are rescaled to have a unit standard deviation. Estimates are the sum of coefficients for 5 annual distributed lags (k=1, ..., 5). The number of observations is equal to the number of country-industry cells multiplied by the number of years. Standard errors are clustered by country-industry and reported in parentheses, ~ p<0.10, * p<0.05, ** p<0.01.

Appendix Table A11. Industry Contributions to Predicted Employment Effects
by Source of TFP Growth, 1970 – 2007

<i>ISIC code</i>	<i>Description</i>	<u>Direct</u>	<u>Supplier</u>	<u>Customer</u>	<u>Final dem.</u>	<u>Net</u>
C	Mining and quarrying	0.000	0.003	0.000	0.002	0.005
15t16	Food, beverages, and tobacco	-0.007	0.013	0.004	0.013	0.022
17t19	Textiles, textile , leather, and footwear	-0.025	0.008	0.003	0.015	0.002
20	Wood and wood products	-0.006	0.013	0.000	0.006	0.013
21t22	Pulp, paper, paper, printing, and publishing	-0.009	0.031	0.001	0.014	0.037
23	Coke, refined petroleum and nuclear fuel	0.000	-0.002	0.000	-0.002	-0.004
24	Chemicals and chemical products	-0.014	0.060	0.004	0.035	0.085
25	Rubber and plastics	-0.010	0.032	0.001	0.013	0.037
26	Other non-metallic mineral	-0.006	0.020	0.000	0.008	0.022
27t28	Basic metals and fabricated metal	-0.021	0.056	0.001	0.027	0.063
29	Machinery, not elsewhere classified	-0.017	0.016	0.006	0.024	0.029
30t33	Electrical and optical equipment	-0.051	0.063	0.012	0.070	0.094
34t35	Transport equipment	-0.019	0.015	0.012	0.037	0.044
36t37	Manufacturing not elsewhere classified; recycling	-0.006	0.005	0.002	0.006	0.007
E	Electricity, gas, and water supply	-0.004	0.043	0.001	0.017	0.057
F	Construction	-0.005	0.003	0.002	0.007	0.007
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of fuel	-0.001	0.003	0.000	0.001	0.003
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	-0.024	0.077	0.003	0.035	0.091
52	Retail trade, except of motor vehicles and motorcycles; repair of household goods	-0.049	0.047	0.004	0.032	0.034
H	Hotels and restaurants	0.019	-0.015	-0.004	-0.014	-0.013
60t63	Transport and storage	-0.021	0.069	0.002	0.030	0.080
64	Post and telecommunications	-0.017	0.121	0.003	0.042	0.149
J	Financial intermediation	-0.014	0.089	0.002	0.034	0.111
70	Real estate activities	0.003	-0.065	-0.003	-0.033	-0.099
71t74	Renting of machinery & equipment and other business activities	0.049	-0.313	-0.003	-0.088	-0.355
M	Education	0.004	-0.001	0.000	-0.003	0.000
N	Health and social work	0.006	-0.001	-0.001	-0.006	-0.001
O	Other community, social and personal service activities	0.023	-0.035	-0.003	-0.020	-0.035
	Total	-0.222	0.353	0.051	0.301	0.482

Notes: Predictions based on Table 9.

Appendix Table A12. Industry Contributions to Predicted Employment Effects
by Destination of Employment Growth, 1970 – 2007

<i>ISIC code</i>	<i>Description</i>	<u>Direct</u>	<u>Supplier</u>	<u>Customer</u>	<u>Final dem.</u>	<u>Net</u>
C	Mining and quarrying	0.000	0.002	0.001	0.002	0.004
15t16	Food, beverages, and tobacco	-0.007	0.014	0.000	0.008	0.014
17t19	Textiles, textile , leather, and footwear	-0.025	0.022	0.001	0.010	0.008
20	Wood and wood products	-0.006	0.005	0.001	0.002	0.002
21t22	Pulp, paper, paper, printing, and publishing	-0.009	0.009	0.002	0.006	0.007
23	Coke, refined petroleum and nuclear fuel	0.000	0.001	0.000	0.000	0.001
24	Chemicals and chemical products	-0.014	0.004	0.001	0.004	-0.005
25	Rubber and plastics	-0.010	0.010	0.002	0.003	0.005
26	Other non-metallic mineral	-0.006	0.006	0.001	0.003	0.004
27t28	Basic metals and fabricated metal	-0.021	0.016	0.005	0.010	0.010
29	Machinery, not elsewhere classified	-0.017	0.023	0.001	0.007	0.015
30t33	Electrical and optical equipment	-0.051	0.014	0.001	0.009	-0.026
34t35	Transport equipment	-0.019	0.021	0.000	0.006	0.008
36t37	Manufacturing not elsewhere classified; recycling	-0.006	0.013	0.000	0.004	0.011
E	Electricity, gas, and water supply	-0.004	0.002	0.001	0.002	0.001
F	Construction	-0.005	0.064	0.001	0.026	0.086
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of fuel	-0.001	0.010	0.001	0.006	0.015
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	-0.024	0.009	0.006	0.018	0.010
52	Retail trade, except of motor vehicles and motorcycles; repair of household goods	-0.049	0.010	0.006	0.034	0.000
H	Hotels and restaurants	0.019	0.029	0.002	0.019	0.069
60t63	Transport and storage	-0.021	0.007	0.004	0.014	0.004
64	Post and telecommunications	-0.017	-0.001	0.001	0.005	-0.012
J	Financial intermediation	-0.014	-0.009	0.002	0.012	-0.010
70	Real estate activities	0.003	0.002	0.000	0.004	0.009
71t74	Renting of machinery & equipment and other business activities	0.049	0.034	0.009	0.024	0.116
M	Education	0.004	0.005	0.001	0.021	0.031
N	Health and social work	0.006	0.020	0.000	0.023	0.050
O	Other community, social and personal service activities	0.023	0.012	0.002	0.018	0.056
	Total	-0.222	0.353	0.051	0.301	0.482

Notes: Predictions based on Table 9.

Appendix Table A13. Direct Effects by Decade
dependent variable: annual change in log outcome by country-industry

	<u>Employment</u>	<u>Hours</u>	<u>Wagebill</u>	<u>Nominal VA</u>	<u>Real VA</u>	<u>Laborshare</u>
	(1)	(2)	(3)	(4)	(5)	(6)
<u>$\Delta \ln$ Own-Industry TFP (ci) in previous 5-year period</u>						
1970s	-0.256 (0.171)	-0.206 (0.187)	-0.446~ (0.233)	-0.457 (0.300)	0.465 (0.400)	-0.215 (0.299)
N	419	419	419	419	419	419
1980s	-0.533** (0.187)	-0.421* (0.210)	-0.619** (0.232)	-0.266 (0.270)	0.435 (0.340)	-0.368* (0.161)
N	894	894	894	894	894	894
1990s	-1.088** (0.149)	-1.061** (0.161)	-0.645** (0.189)	-0.413* (0.187)	0.835* (0.348)	-0.455** (0.156)
N	1,005	1,005	1,005	1,005	1,005	1,005
2000s	-0.605** (0.162)	-0.662** (0.176)	-0.741** (0.210)	-0.472* (0.219)	1.046** (0.222)	-0.397* (0.167)
N	502	502	502	502	502	502
<i>Fixed effects for all models</i>						
Country	YES	YES	YES	YES	YES	YES
Sectorgroup	YES	YES	YES	YES	YES	YES
Models weighted by:	Employment	Hours	Hours	VA	VA	VA

Notes: TFP is other-country-same-industry TFP, and are rescaled to have a unit standard deviation (across the entire period). Models estimated separately by decade. The number of observations is equal to the number of country-industry cells multiplied by the number of years. Standard errors are clustered by country-industry and reported in parentheses, ~ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.