Automation trends and labor markets

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Table 1: UNIDO industry data

	Observations		Labor share			
	Total	Years	All years	1992–2004	2005–2015	Change
	(1)	(2)	(3)	(4)	(5)	(6)
Argentina	200	10	0.35	0.35	.	.
Brazil	472	24	0.23	0.22	0.24	0.020
Chile	301	20	0.21	0.22	0.20	-0.018
Colombia	459	24	0.13	0.15	0.10	-0.059
Ecuador	470	24	0.15	0.14	0.16	0.021
Mexico	292	15	0.16	0.15	0.16	0.009
Peru	418	24	0.20	0.20	0.20	-0.002
All countries	2612	141	0.18	0.18	0.18	-0.005

Notes: Own calculations from UNIDO. Columns (1) and (2) show the number of observations. Columns (3) to (6) show the average labor share, defined as industry wagebill over industry value added, for different time periods. The last line computes the average across all countries in the table except Argentina.

Table 2: SEDLAC individual and district level data

	Households	District-Year	Years	Unemp. rate	Labor income	Poverty rate	Ratio p75/p25
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Argentina	2255677	90	24	11.0	799.1	20.7	3.38
Brazil	7709716	81	21	7.6	680.8	34.1	3.73
Chile	2227951	146	11	8.0	822.1	26.7	3.00
Colombia	7178032	48	13	11.1	630.8	41.9	3.47
Ecuador	1091602	47	13	5.3	597.0	37.3	3.17
Mexico	941101	96	13	3.5	627.1	40.4	3.03
Peru	1488704	75	19	3.9	447.0	41.8	3.16
All countries	22892783	583	16.3	7.4	657.6	33.9	3.31

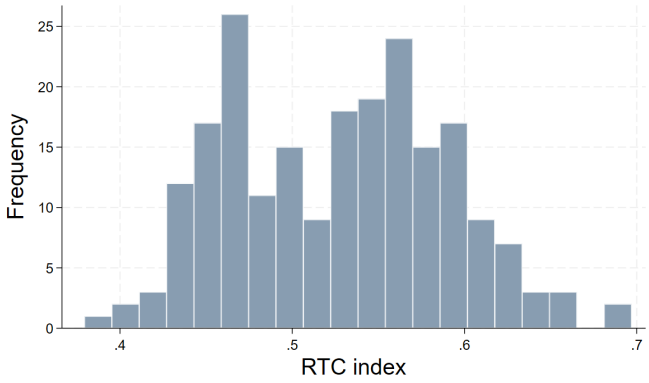
Notes: Own calculations from SEDLAC database. Columns (1) to (3) show the number of observations at the individual level, at the district level, and the number of years of data per country. Columns (4) to (7) report average statistics during 1992–2015. Labor market statistics are restricted to adults aged 18–65. Unemployment is the share of adults in the labor force that have been actively looking for a job in the last month. Labor income is the monthly value expressed in constant USD PPP 2011. Poverty rate is the percentage of population with income below the official moderate poverty line. The ratio p75/p25 is the inter-quartile range of labor income.

Table 3: Industries and occupations with high and low levels of routinization

	RTC1 (1)	RTC2 (2)	RTC3 (3)	RTC4 (4)	RTC5 (5)	RTC6 (6)
Industries						
Textiles	0.71	0.46	0.88	0.84	0.38	0.61
Wood	0.59	0.31	0.86	0.80	0.38	0.63
Apparel	0.57	0.34	0.85	0.78	0.33	0.61
Printing	0.25	0.12	0.76	0.71	0.08	0.48
Other transport equip.	0.06	0.06	0.58	0.61	-0.58	0.55
Coke and petroleum	0.02	0.02	0.33	0.38	-0.93	0.46
Occupations						
Laborers: Agriculture, forestry, fishing	0.77	0.64	0.93	0.91	0.52	0.69
Cleaners and helpers	0.76	0.64	0.92	0.90	0.47	0.62
Workers: Subsistence primary sector	0.75	0.58	0.93	0.88	0.49	0.74
Professionals: ICT	0.11	0.05	0.53	0.50	-0.40	0.19
Managers: Production	0.11	0.04	0.46	0.43	-0.69	0.23
Managers: Administrative	0.05	0.02	0.41	0.37	-0.90	0.19

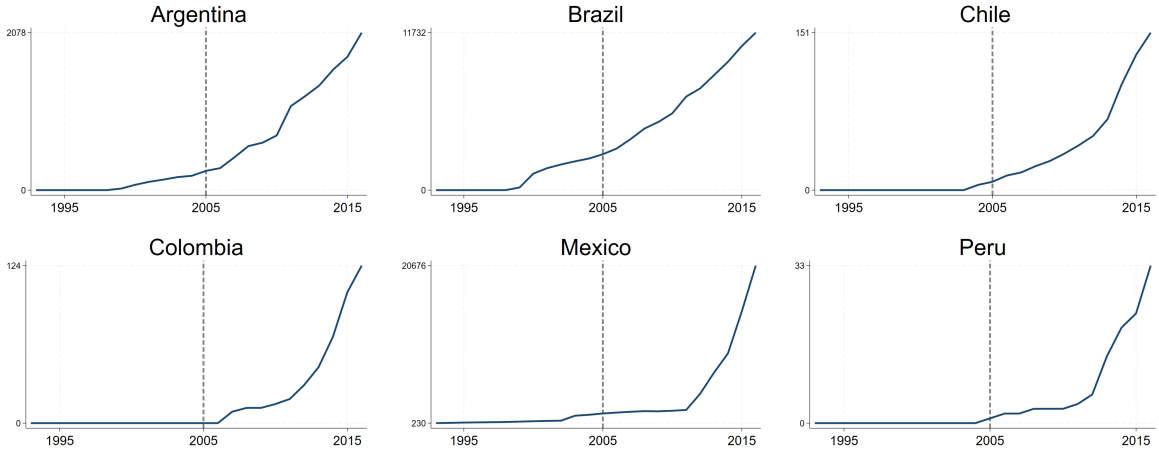
Notes: Own calculations from PIAAC surveys. The first panel shows the three industries with highest and lowest levels of routinization, computed as in equation (**??**). The second panel shows the three occupations with highest and lowest levels of routinization, computed as in the first average in equation (**??**). RTC_6 is computed from DOT data.

Fig. 1: Dispersion of RTC index across districts



Notes: Histogram shows the frequency distribution of the RTC index across districts based on the occupation composition of the initial year of data. Source: SEDLAC and PIAAC.

Fig. 2: Trends in adoption of automation technology



Notes: total number of industrial robots. Source: International Federation of Robotics (IFR).

Table 4: Industry level regressions

	Log employment		Log wage		Labor share	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)	(5)	(6)
RTC1						
	0.24	-0.70	-0.39	0.18	-0.15	0.03
	(0.30)	(0.24***)	(0.21*)	(0.20)	(0.05***)	(0.05)
RTC2						
	-0.15	-0.92	-0.31	0.22	-0.10	0.05
	(0.47)	(0.38**)	(0.33)	(0.31)	(0.07)	(0.07)
RTC3						
	0.36	-0.97	-0.47	0.43	-0.17	0.04
	(0.42)	(0.30***)	(0.31)	(0.30)	(0.07**)	(0.05)
RTC4						
	0.11	-1.22	-0.48	0.52	-0.15	0.05
	(0.55)	(0.38***)	(0.42)	(0.41)	(0.09*)	(0.07)
RTC5						
	-0.03	-0.39	-0.11	0.08	-0.04	0.02
	(0.13)	(0.09***)	(0.10)	(0.13)	(0.02*)	(0.02)
RTC6						
	2.20	-0.56	-1.56	1.15	-0.61	0.21
	(0.70***)	(0.64)	(0.67**)	(0.47**)	(0.26**)	(0.18)
Obs.	118	102	118	102	118	102

Notes: Dependent variables are: columns (1) and (2) log industry employment, columns (3) and (4) log industry average wage, columns (5) and (6) industry share of labor. Table shows coefficients α_1 and α_2 from regression equations (**??**) and (**??**). Columns (1), (3), (5) refer to changes in outcome defined as $t_2 - t_1$. Columns (2), (4), (6) refer to changes in outcome defined as $t_3 - t_2$. Regressions control for initial labor share, initial log value added per worker, and change in log value added per worker. Results are robust to different combinations of the control variables. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: UNIDO and PIAAC.

Table 5: Industry level regressions.
Parameterization of technology adoption

	Log employment $(y_t - y_0)$	Log wage $(y_t - y_0)$	Labor share $(y_t - y_0)$
	(1)	(2)	(3)
RTC1			
$RTC \times Tech$	-0.76	0.20	0.00
	(0.18***)	(0.09**)	(0.03)
RTC2			
$RTC \times Tech$	-1.02	0.25	-0.02
	(0.34***)	(0.14*)	(0.05)
RTC3			
$RTC \times Tech$	-0.40	0.08	-0.01
	(0.11***)	(0.05)	(0.02)
RTC4			
$RTC \times Tech$	-0.41	0.08	-0.01
	(0.12***)	(0.06)	(0.02)
RTC5			
$RTC \times Tech$	-0.88	-0.08	-0.01
	(0.15***)	(0.10)	(0.02)
RTC6			
$RTC \times Tech$	-0.58	0.13	0.00
	(0.15***)	(0.07*)	(0.02)
Obs.	729	711	711

Notes: Dependent variables are: log industry employment, log industry average wage, industry labor share of value added. Table shows coefficients α_4 from regression equation (**??**). Regressions control for initial labor share, initial log value added per worker, and change in log value added per worker. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: UNIDO, PIAAC and IFR.

Table 6: Industry level regressions.
Share of industry in total employment

	Share in employment		Share in employment	
	2005	2013	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)
RTC1				
	0.214	0.131	0.012	-0.027
	(0.06***)	(0.04***)	(0.01)	(0.01***)
RTC2				
	0.135	0.059	-0.004	-0.047
	(0.06**)	(0.05)	(0.02)	(0.02***)
RTC3				
	0.254	0.166	0.021	-0.028
	(0.07***)	(0.05***)	(0.02)	(0.01**)
RTC4				
	0.256	0.163	0.012	-0.042
	(0.08***)	(0.05***)	(0.02)	(0.02**)
RTC5				
	0.052	0.031	0.005	-0.008
	(0.02**)	(0.02*)	(0.00)	(0.00**)
RTC6				
	0.338	0.252	0.071	-0.002
	(0.08***)	(0.07***)	(0.03**)	(0.02)
Obs.	69	93	118	102

Notes: In columns (1) and (2) the dependent variable is industry share in total employment for the years 2005 and 2013. Independent variable: routine task content index. Regressions control for country effects. Columns (3) and (4) are analogous to Table 4 with dependent variable industry share in total employment. Regressions control for initial labor share, initial log value added per worker, and change in log value added per worker. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: UNIDO and PIAAC.

Table 7: District level regressions. Employment and wages

	Employment rate		Unemployment Rate		Log Wage	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)	(5)	(6)
RTC1						
	-0.04	-0.17	-0.01	0.15	-0.57	0.85
	(0.03)	(0.04***)	(0.03)	(0.03***)	(0.32*)	(0.40**)
RTC2						
	-0.03	-0.19	0.01	0.14	-0.30	0.86
	(0.04)	(0.04***)	(0.03)	(0.03***)	(0.23)	(0.32***)
RTC3						
	-0.07	-0.25	-0.02	0.23	-1.00	1.25
	(0.05)	(0.07***)	(0.04)	(0.05***)	(0.66)	(0.74*)
RTC4						
	-0.06	-0.27	-0.01	0.23	-0.73	1.23
	(0.05)	(0.06***)	(0.04)	(0.05***)	(0.48)	(0.64*)
RTC5						
	-0.02	-0.09	-0.01	0.08	-0.29	0.42
	(0.02)	(0.02***)	(0.01)	(0.02***)	(0.19)	(0.24*)
RTC6						
	-0.11	-0.25	-0.04	0.25	-0.58	0.71
	(0.05**)	(0.07***)	(0.04)	(0.05***)	(0.46)	(0.50)
Obs.	161	207	161	207	161	207

Notes: Dependent variables are: columns (1) and (2) district employment rate, columns (3) and (4) district unemployment rate, columns (5) and (6) log district average wage. Table shows coefficients ϕ_1 and ϕ_2 from regression equations (**??**) and (**??**). Columns (1), (3), (5) refer to changes in outcome defined as $t_2 - t_1$. Columns (2), (4), (6) refer to changes in outcome defined as $t_3 - t_2$. Regressions control for initial average wage and employment rate. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: SEDLAC and PIAAC.

Table 8: District level regressions.
Parameterization of technology adoption

	Employment rate $(y_t - y_0)$	Unemployment rate $(y_t - y_0)$	Log Wage $(y_t - y_0)$
	(1)	(2)	(3)
RTC1			
$RTC \times Tech$	-0.148	0.023	0.585
	(0.056***)	(0.018)	(0.272**)
RTC2			
$RTC \times Tech$	-0.250	0.038	0.689
	(0.083***)	(0.028)	(0.422)
RTC3			
$RTC \times Tech$	-0.077	0.013	0.486
	(0.038**)	(0.012)	(0.188***)
RTC4			
$RTC \times Tech$	-0.087	0.014	0.507
	(0.041**)	(0.013)	(0.200**)
RTC5			
$RTC \times Tech$	-0.261	0.049	0.180
	(0.075***)	(0.026*)	(0.426)
RTC6			
$RTC \times Tech$	-0.124	0.018	0.669
	(0.054**)	(0.018)	(0.271**)
Obs.	548	548	548

Notes: Dependent variables are: Employment rate, unemployment rate, log district average wage. Regressions control for initial average wage and employment rate. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: SEDLAC, PIAAC and IFR.

Table 9: District level regressions.
Unemployment by skill groups

	Unskilled		Semi-skilled		Highly skilled	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)	(5)	(6)
RTC1						
	-0.03	0.17	-0.06	0.13	-0.01	0.11
	(0.03)	(0.04***)	(0.07)	(0.04***)	(0.03)	(0.03***)
RTC2						
	-0.01	0.16	-0.06	0.14	0.00	0.12
	(0.03)	(0.03***)	(0.09)	(0.03***)	(0.03)	(0.03***)
RTC3						
	-0.06	0.27	-0.09	0.20	-0.03	0.17
	(0.05)	(0.06***)	(0.11)	(0.06***)	(0.04)	(0.05***)
RTC4						
	-0.04	0.27	-0.09	0.22	-0.02	0.18
	(0.05)	(0.05***)	(0.11)	(0.05***)	(0.04)	(0.05***)
RTC5						
	-0.02	0.10	-0.03	0.08	-0.01	0.06
	(0.02)	(0.02***)	(0.04)	(0.02***)	(0.01)	(0.02***)
RTC6						
	-0.06	0.29	-0.10	0.24	-0.04	0.16
	(0.04)	(0.06***)	(0.10)	(0.06***)	(0.04)	(0.05***)
Obs.	161	207	161	207	161	207

Notes: Dependent variable: unemployment rate computed for three skill groups. Unskilled workers: no high school degree. Semi-skilled workers: high school degree and no further education. Highly skilled workers: tertiary education or university degree. Table shows coefficients ϕ_1 and ϕ_2 from regression equations (**??**) and (**??**). Columns (1), (3), (5) refer to changes in outcome defined as $t_2 - t_1$. Columns (2), (4), (6) refer to changes in outcome defined as $t_3 - t_2$. Regressions control for initial average wage and employment rate. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: SEDLAC and PIAAC.

Table 10: District level regressions.
Labor informality by skill groups

	Unskilled		Semi-skilled		Highly skilled	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)	(5)	(6)
RTC1						
	0.08	-0.09	-0.02	0.24	-0.04	-0.03
	(0.06)	(0.07)	(0.06)	(0.11**)	(0.07)	(0.05)
RTC2						
	0.08	0.01	-0.03	0.38	-0.07	-0.07
	(0.06)	(0.07)	(0.07)	(0.10***)	(0.07)	(0.05)
RTC3						
	0.14	-0.16	-0.01	0.32	-0.05	-0.03
	(0.10)	(0.11)	(0.09)	(0.18*)	(0.10)	(0.08)
RTC4						
	0.13	-0.10	-0.03	0.41	-0.07	-0.06
	(0.09)	(0.10)	(0.09)	(0.17**)	(0.10)	(0.08)
RTC5						
	0.05	-0.04	-0.01	0.13	-0.02	-0.02
	(0.03)	(0.04)	(0.03)	(0.06**)	(0.03)	(0.03)
RTC6						
	0.04	-0.08	-0.07	0.33	-0.11	-0.06
	(0.07)	(0.10)	(0.10)	(0.17**)	(0.09)	(0.07)
Obs.	161	207	161	207	161	207

Notes: Dependent variable: labor informality rate is the share of salaried workers with no contributions to the pension system. It is computed for three skill groups. Unskilled workers: no high school degree. Semi-skilled workers: high school degree and no further education. Highly skilled workers: tertiary education or university degree. Table shows coefficients ϕ_1 and ϕ_2 from regression equations (**??**) and (**??**). Columns (1), (3), (5) refer to changes in outcome defined as $t_2 - t_1$. Columns (2), (4), (6) refer to changes in outcome defined as $t_3 - t_2$. Regressions control for initial average wage and employment rate. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: SEDLAC and PIAAC.

Table 11: District level regressions. Poverty and inequality

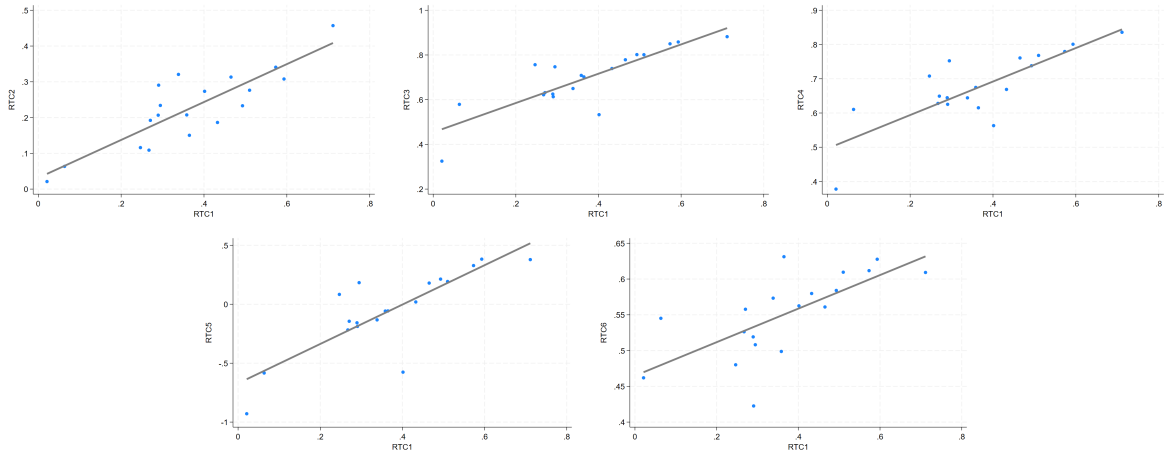
	Poverty rate		Inequality p75–p25	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)
RTC1				
	-0.01	0.37	-0.76	0.98
	(0.17)	(0.19**)	(0.53)	(0.49**)
RTC2				
	0.01	0.02	-0.48	0.83
	(0.14)	(0.21)	(0.60)	(0.51)
RTC3				
	0.00	0.65	-1.25	1.56
	(0.31)	(0.26**)	(0.76*)	(0.72**)
RTC4				
	-0.08	0.49	-1.23	1.50
	(0.25)	(0.26*)	(0.76)	(0.72**)
RTC5				
	-0.03	0.18	-0.46	0.54
	(0.09)	(0.09**)	(0.26*)	(0.25**)
RTC6				
	-0.21	0.27	-0.75	0.65
	(0.19)	(0.28)	(0.76)	(0.68)
Obs.	161	207	161	207

Notes: Analogous to Table 7 with outcome variables: columns (1) and (2): Poverty rate computed using per capita family income; columns (3) and (4): inter-quartile range (ratio p75/p25) of labor income. Regressions control for initial poverty rate and inter-quartile ratio of income. Robust standard errors in parenthesis. Significance at the 1, 5 and 10 percent levels denoted with ***, ** and *. Source: SEDLAC and PIAAC.

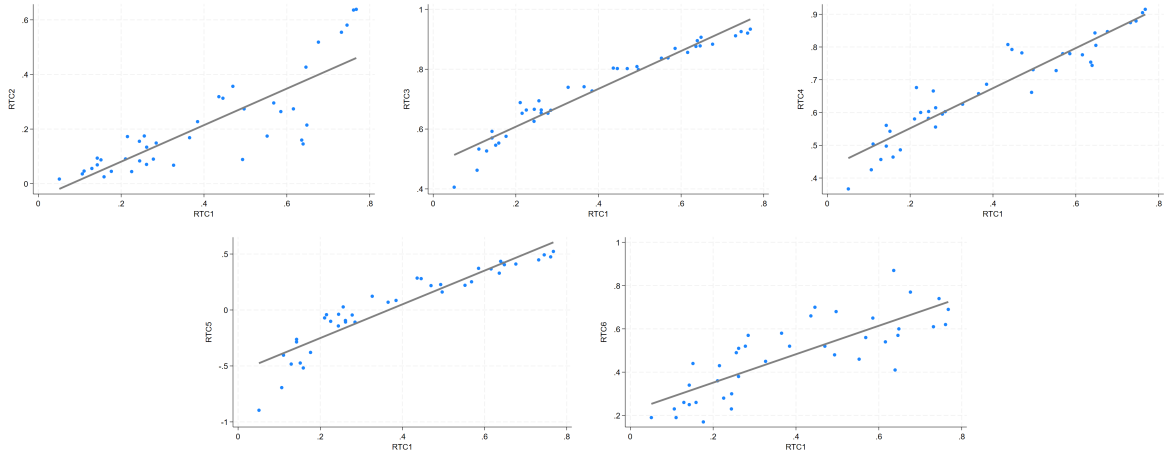
Appendix: Data and Additional Results

Fig. A1: Correlation of definitions of RTC indexes

(a) Industry indexes

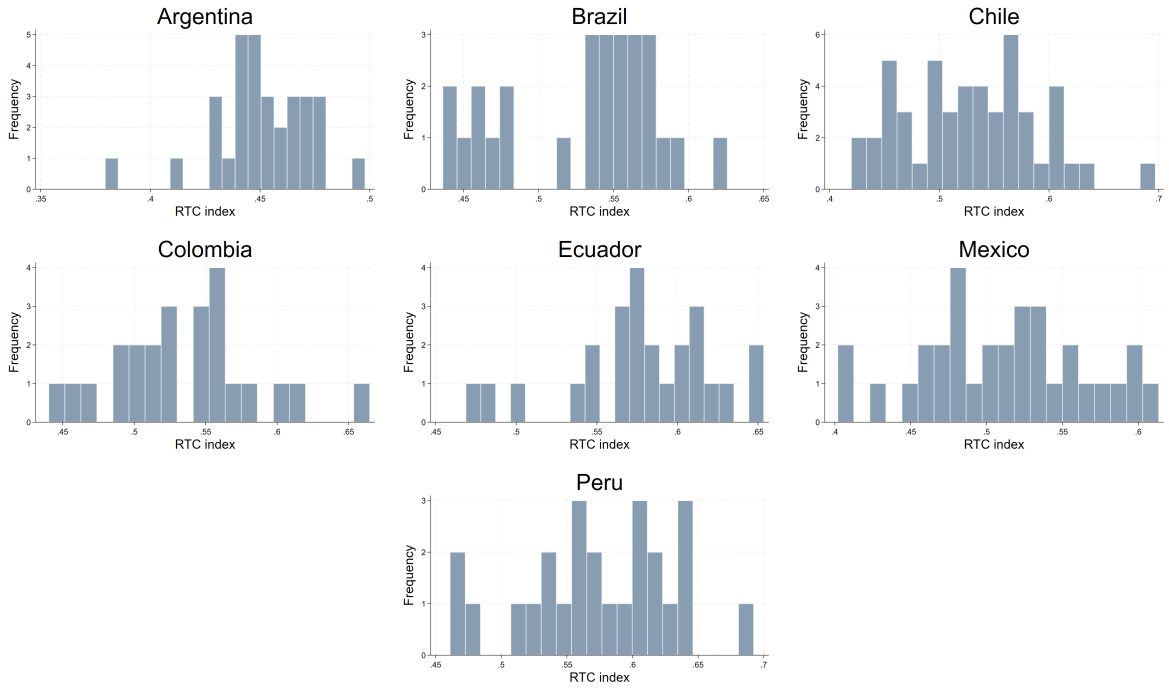


(b) Occupation indexes



Notes: Figure plots the correlation between industry-level indexes RTC_1 and RTC_2 to RTC_6 (top panel), and the correlation between occupation-level indexes RTC_1 and RTC_2 to RTC_6 (bottom panel). Indexes RTC_1 to RTC_5 are computed from the pooled PIAAC surveys, whereas RTC_6 is computed from the index of Autor and Dorn (2013).

Fig. A2: Dispersion of RTC index across districts



Notes: Histograms show the frequency distribution of the RTC_1 index across districts.

Table A1: PIAAC surveys

	All Surveys	Chile	Ecuador	Mexico	Peru
	(1)	(2)	(3)	(4)	(5)
Supervising	0.11	0.14	0.09	0.12	0.08
Planning	0.25	0.31	0.28	0.25	0.20
Solving problems	0.31	0.39	0.25	0.32	0.24
Written output	0.30	0.35	0.30	0.31	0.22
Presentations	0.43	0.49	0.54	0.42	0.39
Budgets	0.50	0.45	0.51	0.51	0.51
F1	0.57	0.64	0.56	0.58	0.46
F2	0.80	0.83	0.81	0.80	0.77
F3	0.24	0.30	0.23	0.25	0.18
F4	0.32	0.35	0.33	0.32	0.27
F5	-0.16	-0.01	-0.17	-0.16	-0.24
Observations	11688	2539	2332	2949	3868

Notes: Table shows the percentage of individuals that respond "yes" to performing six flexible tasks often (Supervising, Planning, Solving problems, Producing written output, Giving presentations or sales pitches, Calculating budgets), the average of the four flexibility indexes across individuals (F_1, F_2, F_3, F_4, F_5), and the number of observations. Calculations are based on employed individuals that can be matched to an ISCO 08 occupation.

Table A2: Correlation of RTC indexes computed from different samples

	All Latin American surveys				
	RTC1	RTC2	RTC3	RTC4	RTC5
	(1)	(2)	(3)	(4)	(5)
Panel A: Occupation-level index					
Chile	0.95	0.90	0.98	0.97	0.96
Ecuador	0.85	0.91	0.82	0.85	0.75
Mexico	0.98	1.00	0.95	0.98	0.92
Peru	0.90	0.97	0.89	0.92	0.86
Panel B: Industry-level index					
Chile	0.78	0.77	0.79	0.76	0.78
Ecuador	0.86	0.91	0.90	0.85	0.90
Mexico	0.99	0.99	0.98	0.98	0.98
Peru	0.78	0.91	0.82	0.82	0.80

Notes: RTC indexes are computed from different samples at the occupation level (Panel A) and at the industry level (Panel B). Column 1 displays the correlation of RTC_1 computed from surveys of the four Latin American countries pooled together, with the RTC index computed separately from the survey of each of the four Latin American countries. Columns 2, 3, 4 and 5 compute analogous correlations for RTC_2, RTC_3, RTC_4 and RTC_5. To compute the correlations we keep occupations and industries with at least 25 observations for each of the four Latin American countries.

Table A3: Industry level RTC indexes

Industry	RTC1 (1)	RTC2 (2)	RTC3 (3)	RTC4 (4)	RTC5 (5)	RTC6 (6)	Obs. (7)
Food and beverages	0.49	0.23	0.80	0.74	0.21	0.58	448
Textiles	0.71	0.46	0.88	0.84	0.38	0.61	59
Apparel	0.57	0.34	0.85	0.78	0.33	0.61	303
Leather	0.51	0.28	0.80	0.77	0.19	0.61	51
Wood	0.59	0.31	0.86	0.80	0.38	0.63	50
Paper	0.27	0.19	0.63	0.65	-0.14	0.56	31
Printing	0.25	0.12	0.76	0.71	0.08	0.48	47
Coke and petroleum	0.02	0.02	0.33	0.38	-0.93	0.46	12
Chemicals	0.36	0.21	0.71	0.67	-0.06	0.50	87
Rubber and plastics	0.34	0.32	0.65	0.64	-0.13	0.57	55
Other minerals prod.	0.47	0.31	0.78	0.76	0.18	0.56	70
Basic metals	0.40	0.27	0.53	0.56	-0.58	0.56	22
Metal products	0.43	0.19	0.74	0.67	0.02	0.58	154
Machinery and equipment nec	0.27	0.11	0.62	0.63	-0.22	0.53	40
Computers, electronics	0.29	0.29	0.61	0.63	-0.19	0.42	22
Electrical machinery	0.29	0.23	0.75	0.75	0.18	0.51	37
Motor vehicles	0.29	0.21	0.63	0.64	-0.16	0.52	94
Other transport equip.	0.06	0.06	0.58	0.61	-0.58	0.55	15
Furniture	0.36	0.15	0.70	0.62	-0.06	0.63	122

Notes: RTC indexes RTC_1 to RTC_5 are computed from pooled PIAAC surveys as weighted averages of the individual level flexibility indexes F_1 to F_5. RTC_6 is computed as a weighted average of the occupation level index of Autor and Dorn (2013), using the occupation shares in industry employment as weights. Column (7) displays the number of surveyed individuals that report employment in each industry in the PIAAC surveys. Columns (1) to (5) are computed based on the number of observations in the PIAAC surveys in column (7).

Table A4: Occupation level RTC indexes

Occupation	RTC1 (1)	RTC2 (2)	RTC3 (3)	RTC4 (4)	RTC5 (5)	RTC6 (6)	Obs. (7)
Public administration officials	0.18	0.05	0.58	0.49	-0.38	0.17	62
Managers: Administrative	0.05	0.02	0.41	0.37	-0.90	0.19	97
Managers: Production	0.11	0.04	0.46	0.43	-0.69	0.23	235
Managers: Services	0.16	0.03	0.55	0.46	-0.52	0.26	154
Professionals: Science and engineering	0.13	0.06	0.53	0.46	-0.48	0.26	166
Professionals: Health	0.24	0.08	0.67	0.60	-0.04	0.30	190
Professionals: Teaching	0.23	0.04	0.66	0.60	-0.10	0.28	553
Professionals: Business	0.14	0.07	0.57	0.50	-0.26	0.25	260
Professionals: ICT	0.11	0.05	0.53	0.50	-0.40	0.19	50
Professionals: Legal, social, cultural	0.24	0.16	0.63	0.58	-0.14	0.23	206
Associate Prof: Science and engineering	0.15	0.09	0.55	0.54	-0.47	0.44	309
Associate Prof: Health	0.26	0.17	0.69	0.67	0.03	0.49	194
Associate Prof: Business	0.26	0.07	0.65	0.56	-0.09	0.38	459
Associate Prof: Legal, social, cultural	0.21	0.09	0.69	0.58	-0.07	0.36	107
Technicians: ICT	0.14	0.09	0.59	0.56	-0.29	0.34	81
Clerks: General	0.26	0.13	0.66	0.61	-0.11	0.51	147
Clerks: Customer service	0.33	0.07	0.74	0.63	0.12	0.45	212
Clerks: Data	0.28	0.15	0.66	0.60	-0.11	0.57	345
Clerks: Other	0.38	0.23	0.73	0.69	0.09	0.52	119
Workers: Personal service	0.55	0.17	0.84	0.73	0.22	0.46	722
Workers: Sales	0.49	0.09	0.81	0.66	0.23	0.48	1911
Workers: Personal care	0.47	0.36	0.80	0.78	0.22	0.52	210
Workers: Protective service	0.22	0.17	0.65	0.68	-0.04	0.43	316
Workers: Agriculture	0.73	0.55	0.91	0.87	0.45	0.61	673
Workers: Forestry, Fishery, Hunting	0.65	0.21	0.91	0.81	0.40	0.60	58
Workers: Subsistence primary sector	0.75	0.58	0.93	0.88	0.49	0.74	148
Workers: Building and related trades	0.50	0.27	0.80	0.73	0.16	0.68	597
Workers: Metal and machinery	0.37	0.17	0.74	0.66	0.07	0.58	377
Workers: Handicraft and printing	0.57	0.30	0.84	0.78	0.25	0.56	126
Workers: Electrical and electronic trades	0.28	0.09	0.65	0.60	-0.04	0.52	151
Workers: Crafts	0.59	0.26	0.87	0.78	0.37	0.65	574
Plant and machine operators	0.45	0.31	0.80	0.79	0.28	0.70	262
Assemblers	0.44	0.32	0.80	0.81	0.29	0.66	42
Drivers and mobile plant operators	0.62	0.27	0.86	0.78	0.37	0.54	846
Cleaners and helpers	0.76	0.64	0.92	0.90	0.47	0.62	787
Laborers: Agriculture, forestry, fishing	0.77	0.64	0.93	0.91	0.52	0.69	388
Laborers: Mining, const., manuf., transp.	0.68	0.52	0.88	0.85	0.41	0.77	486
Food preparation assistants	0.64	0.16	0.88	0.75	0.33	0.87	258
Street sales and service workers	0.64	0.15	0.90	0.74	0.43	0.41	112
Elementary workers	0.65	0.43	0.88	0.84	0.42	0.57	178

Notes: RTC indexes RTC_1 to RTC_5 are computed from pooled PIAAC surveys as weighted averages of the individual level flexibility indexes F_1 to F_5. RTC_6 is the occupation level index of Autor and Dorn (2013). Column (7) displays the number of surveyed individuals that report employment in each occupation in the PIAAC surveys. Columns (1) to (5) are computed based on the number of observations in the PIAAC surveys in column (7).

Table A5: Average RTC by country

	RTC1 (1)	RTC2 (2)	RTC3 (3)	RTC4 (4)	RTC5 (5)	RTC6 (6)
Countries						
Argentina	0.47	0.25	0.80	0.73	0.16	0.54
Brazil	0.53	0.32	0.81	0.75	0.30	0.56
Chile	0.51	0.30	0.82	0.75	0.26	0.56
Colombia	0.52	0.27	0.81	0.74	0.27	0.52
Ecuador	0.56	0.32	0.85	0.78	0.33	0.56
Mexico	0.50	0.29	0.78	0.72	0.25	0.53
Peru	0.54	0.31	0.82	0.75	0.33	0.55

Notes: Table shows the weighted average of district-level RTC indexes for each country.

Table A6: Industry level regressions

	Log employment		Log wage		Labor share	
	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$	$(y_{t2} - y_{t1})$	$(y_{t3} - y_{t2})$
	(1)	(2)	(3)	(4)	(5)	(6)
RTC1						
	0.14	-0.67	-0.37	0.20	-0.14	0.03
	(0.30)	(0.24***)	(0.21*)	(0.20)	(0.04***)	(0.05)
RTC2						
	-0.54	-0.78	-0.22	0.33	-0.06	0.07
	(0.50)	(0.41*)	(0.38)	(0.33)	(0.06)	(0.08)
RTC3						
	0.21	-0.92	-0.43	0.46	-0.15	0.05
	(0.44)	(0.29***)	(0.33)	(0.30)	(0.07**)	(0.05)
RTC4						
	-0.21	-1.10	-0.42	0.61	-0.12	0.07
	(0.60)	(0.37***)	(0.47)	(0.39)	(0.09)	(0.07)
RTC5						
	-0.04	-0.39	-0.10	0.08	-0.04	0.02
	(0.13)	(0.09***)	(0.11)	(0.13)	(0.02*)	(0.02)
RTC6						
	2.23	-0.59	-1.57	1.13	-0.61	0.20
	(0.74***)	(0.62)	(0.68**)	(0.49**)	(0.25**)	(0.18)
Obs.	118	102	118	102	118	102

Notes: Analogous to Table 4 adding a control for offshoring.

Table A7: Industry level regressions

	Log employment	Log wage	Labor share
	(1)	(2)	(3)
RTC1			
$RTC \times Tech$	-0.89	0.28	0.05
	(0.28***)	(0.09***)	(0.03*)
RTC2			
$RTC \times Tech$	-1.36	0.36	0.06
	(0.45***)	(0.17**)	(0.05)
RTC3			
$RTC \times Tech$	-0.52	0.12	0.01
	(0.19***)	(0.06*)	(0.02)
RTC4			
$RTC \times Tech$	-0.54	0.11	0.01
	(0.20***)	(0.07)	(0.02)
RTC5			
$RTC \times Tech$	-0.87	-0.10	-0.00
	(0.17***)	(0.10)	(0.02)
RTC6			
$RTC \times Tech$	-0.73	0.14	0.04
	(0.25***)	(0.09)	(0.02**)
Obs.	729	711	711

Notes: Analogous to Table 5 adding a control for offshoring.