Online Appendix

Slowing Down, Heating Up: Economic Deceleration and Social Discontent in Latin America

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This Online Appendix complements the results presented in the paper. Section A presents the changes in income along the distribution for South America. Section B presents the growth incidence curves for each country. Section C reports the models of satisfaction at the country level with alternative corrections for the standard errors. Section D shows the robustness of the models at the income group level to alternative definitions of income groups and reference groups.

A. Income changes in South America

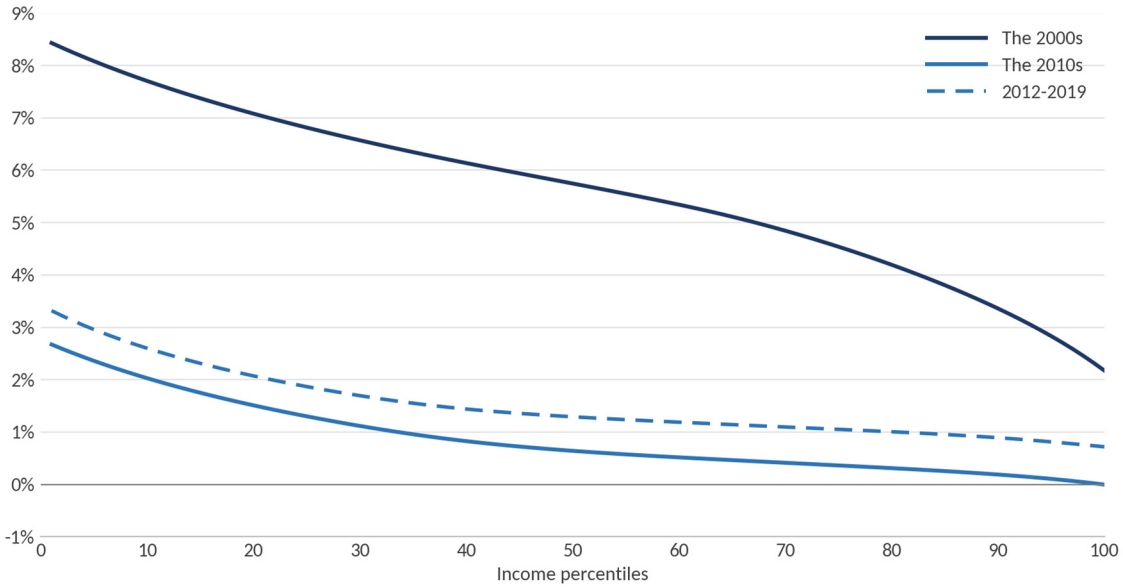
Table A1 replicates Table 5 of the paper for South America (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Uruguay), and Figure A1 shows the corresponding growth incidence curves.

Table A1: Annual growth rate in real household per capita income, South America

	The 2000s	2010s = 2012–2022			2010s = 2012–2019		
		The 2010s	Difference relative to		The 2010s	Difference relative to	
			Previous decade	Mean		Previous decade	Mean
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)
1	8.1	2.4	−5.7	1.6	3.0	−5.1	1.6
2	7.2	1.5	−5.6	0.7	2.0	−5.2	0.5
3	6.6	1.1	−5.5	0.3	1.7	−4.9	0.2
4	6.2	0.9	−5.4	0.0	1.5	−4.8	0.0
5	5.9	0.6	−5.3	−0.2	1.3	−4.6	−0.2
6	5.6	0.5	−5.1	−0.3	1.2	−4.4	−0.3
7	5.2	0.4	−4.7	−0.4	1.1	−4.0	−0.3
8	4.7	0.4	−4.3	−0.4	1.1	−3.6	−0.3
9	4.1	0.3	−3.8	−0.5	1.0	−3.1	−0.5
10	2.6	0.1	−2.6	−0.8	0.8	−1.8	−0.7
Mean	5.6	0.8	−4.8	0.0	1.5	−4.2	0.0
Income groups							
Deciles 1 to 5	6.8	1.3	−5.5	0.5	1.9	−4.9	0.4
Deciles 6 to 9	4.9	0.4	−4.5	−0.4	1.1	−3.8	−0.4
Decile 10	2.6	0.1	−2.6	−0.8	0.8	−1.8	−0.7

Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: this table shows the unweighted mean across South American countries of the annual growth rate of household per capita income in USD PPP, by income decile.

Figure A1: Growth incidence curve of household per capita income, South America

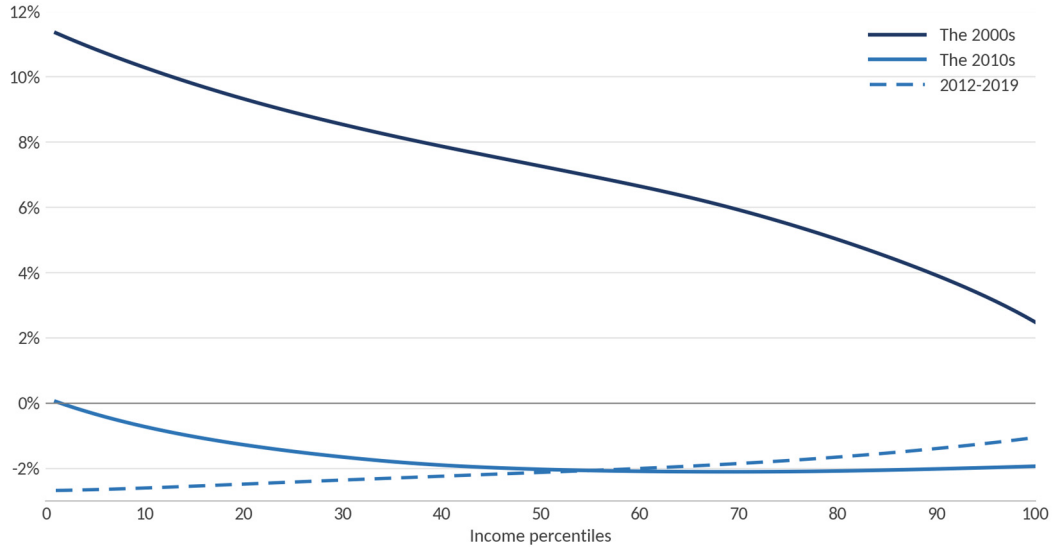


Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: each curve shows the unweighted mean across South American countries of the annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS.

B. Country-specific evidence

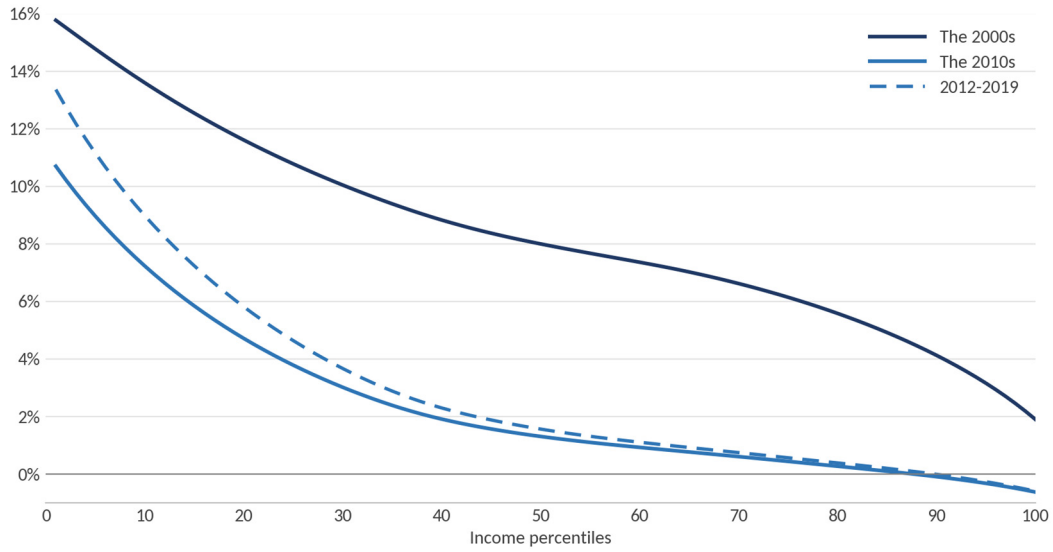
Figures A2 to A15 present the growth incidence curves of household per capita income for each country. The years of the household surveys used for each country are listed in Table 4 of the paper.

Figure A2: Growth incidence curve of household per capita income, Argentina



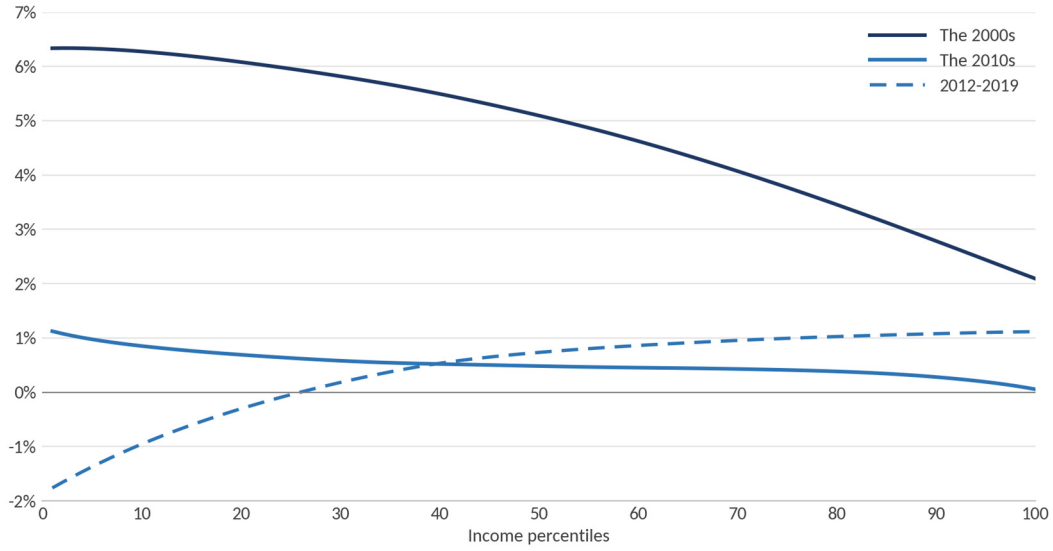
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A3: Growth incidence curve of household per capita income, Bolivia



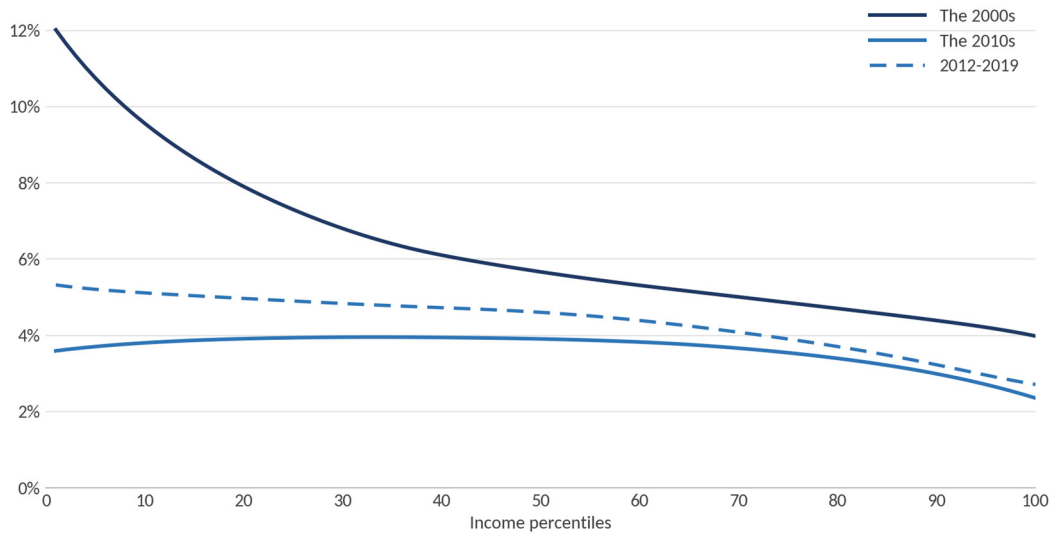
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A4: Growth incidence curve of household per capita income, Brazil



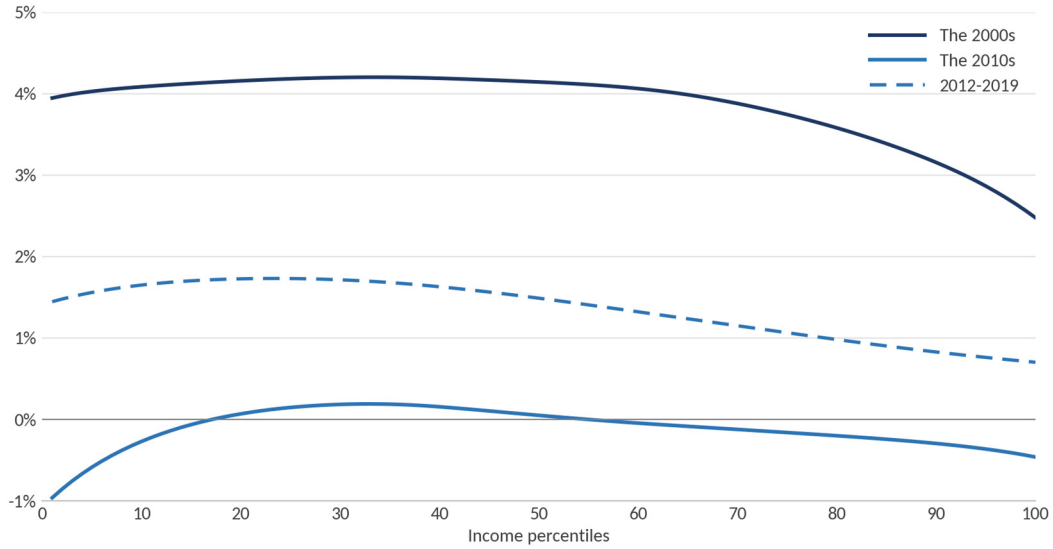
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A5: Growth incidence curve of household per capita income, Chile



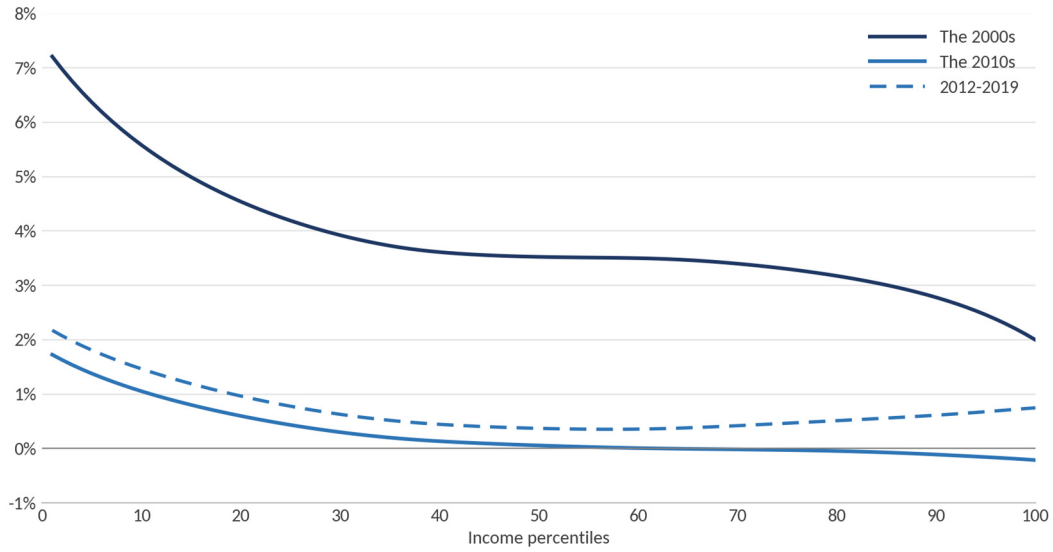
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A6: Growth incidence curve of household per capita income, Colombia



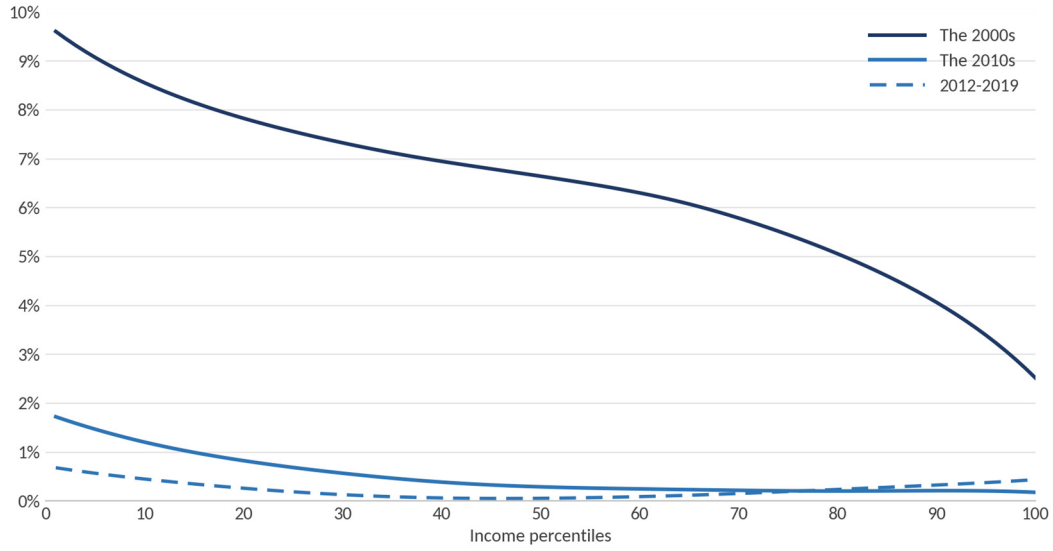
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A7: Growth incidence curve of household per capita income, Costa Rica



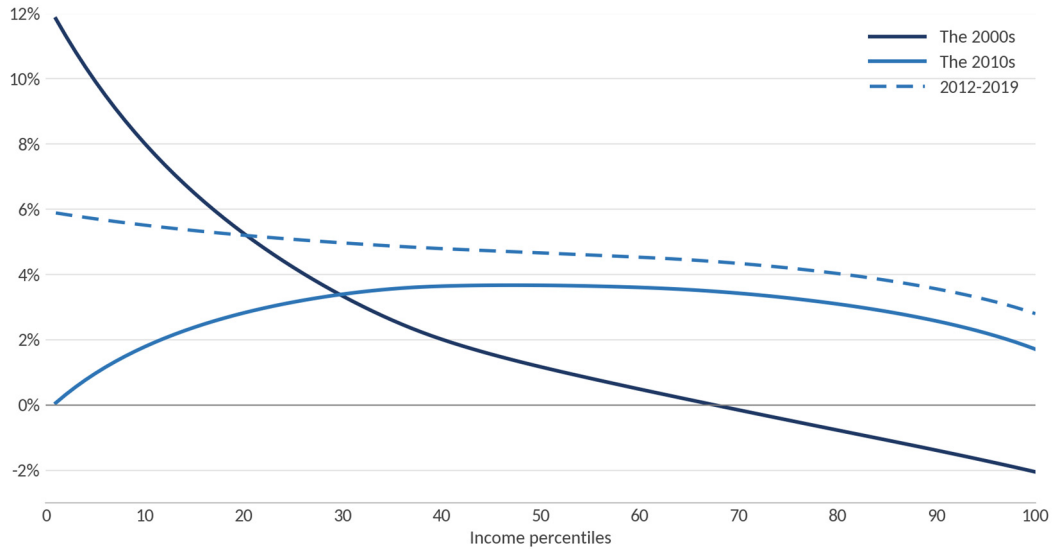
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A8: Growth incidence curve of household per capita income, Ecuador



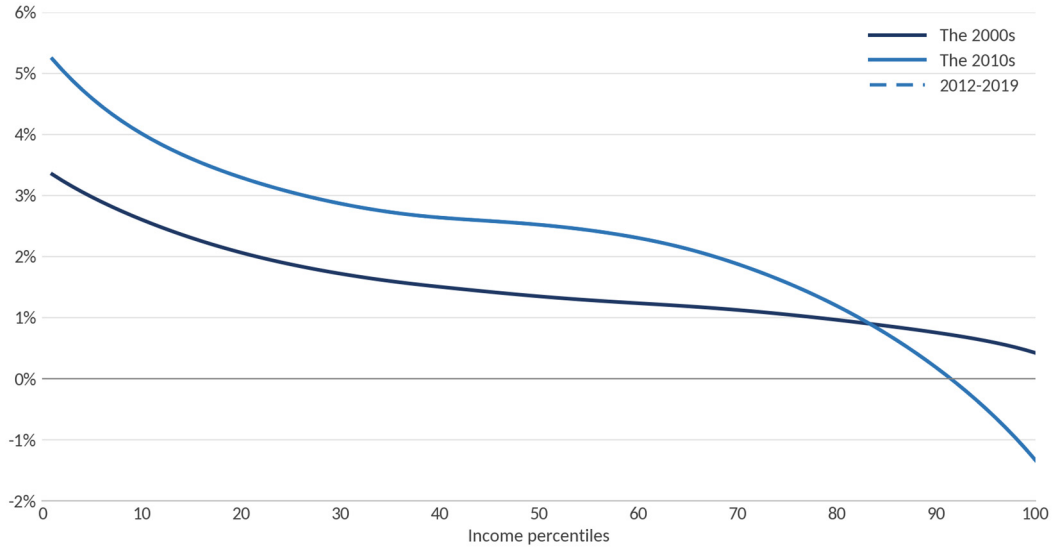
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A9: Growth incidence curve of household per capita income, El Salvador



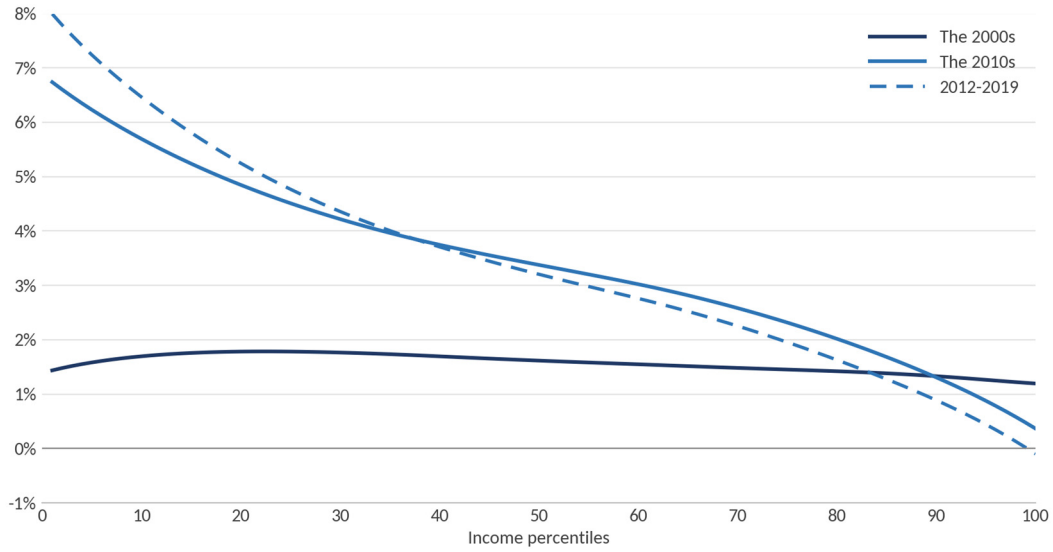
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A10: Growth incidence curve of household per capita income, Honduras



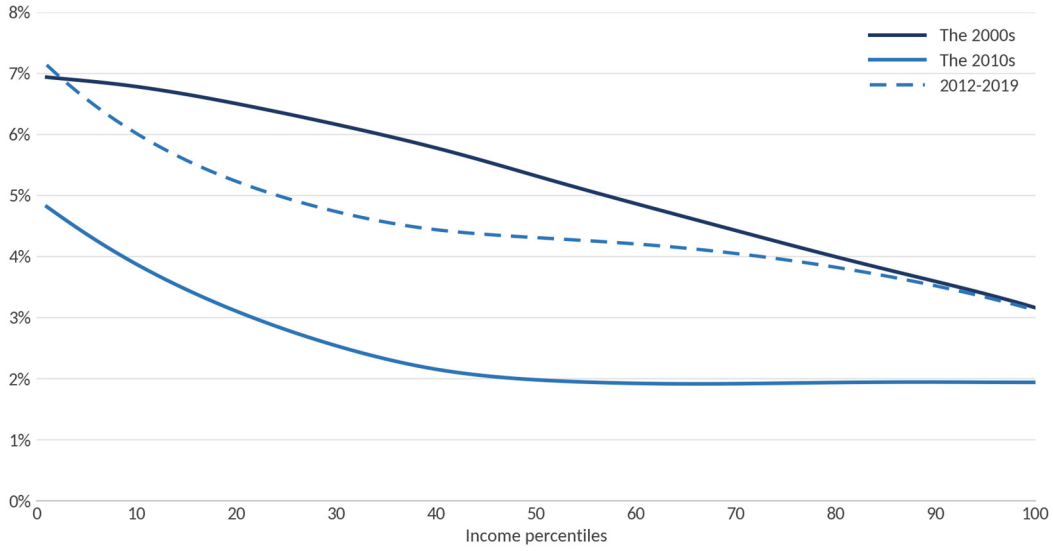
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A11: Growth incidence curve of household per capita income, Mexico



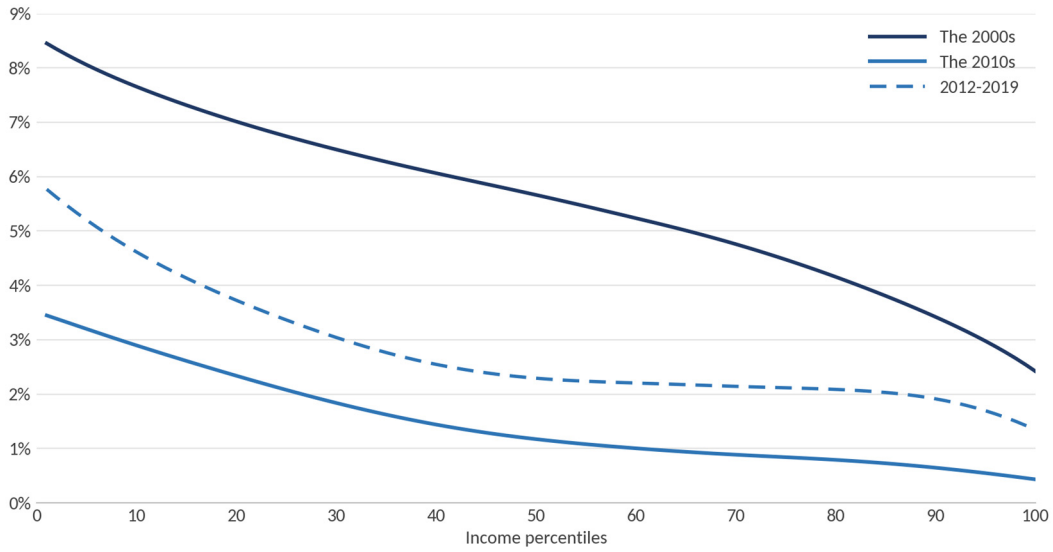
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A12: Growth incidence curve of household per capita income, Panama



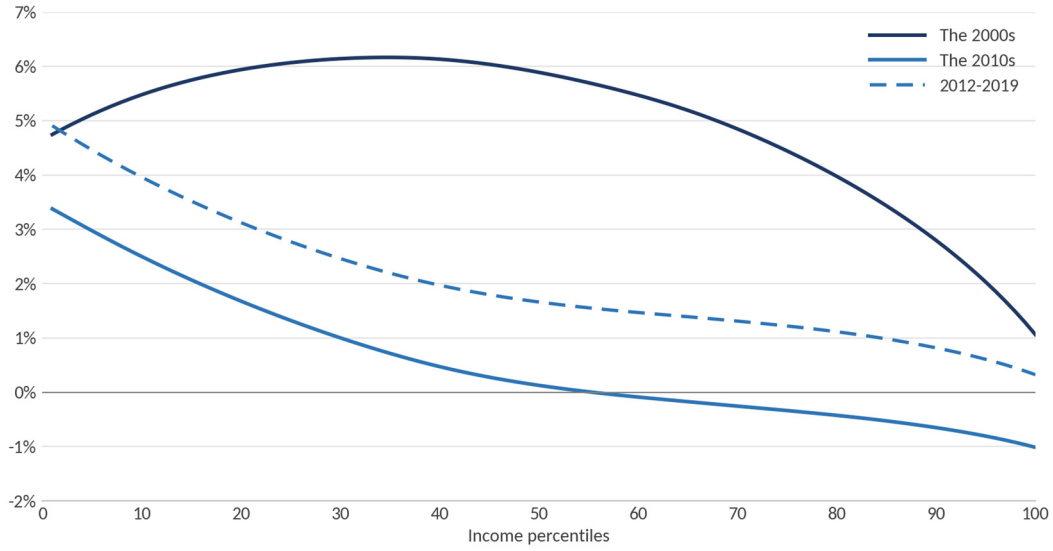
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A13: Growth incidence curve of household per capita income, Paraguay



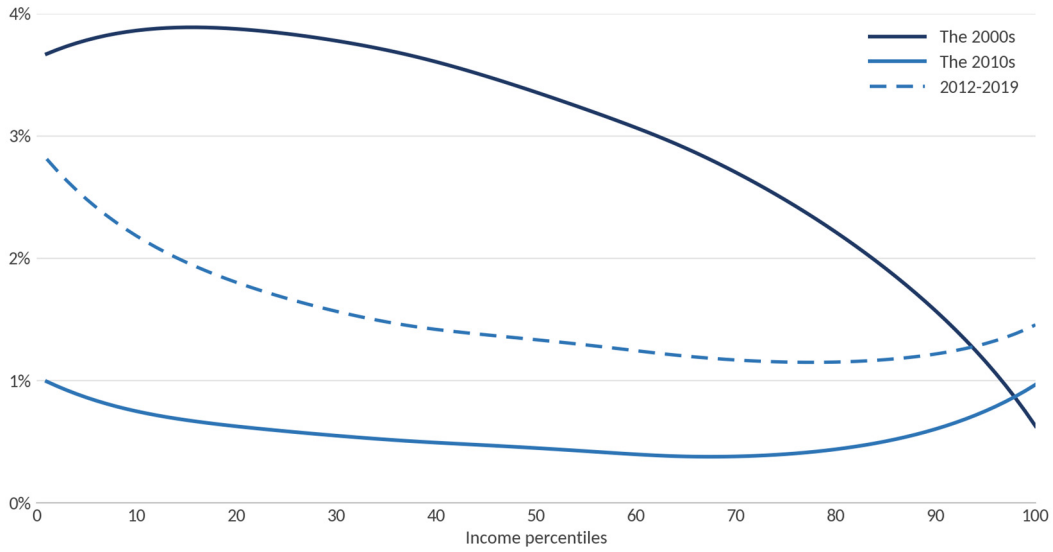
Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A14: Growth incidence curve of household per capita income, Peru



Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

Figure A15: Growth incidence curve of household per capita income, Uruguay



Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: annual growth rate of household per capita income in USD PPP, by income percentile. Curves are smoothed with LOWESS. Survey years are listed in Table 4 of the paper.

C. Alternative standard errors

Given the small number of observations, Table 6 of the paper reports cluster-robust standard errors computed using wild cluster bootstrap. Tables A2 and A3 replicate Table 6 using heteroskedasticity-robust standard errors and the conventional cluster correction at the country level, respectively. Point estimates are identical to those in the paper; only the standard errors and the significance levels change.

Table A2: Models of satisfaction at the country level, heteroskedasticity-robust standard errors

	Yearly data				5-year data			
	Economic situation	Approval government	Confidence government	Satisfaction democracy	Economic situation	Approval government	Confidence government	Satisfaction democracy
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log GDP pc	26.97***	7.484	0.610	8.709**	23.21***	6.852	−0.700	5.602
	(2.644)	(7.223)	(4.803)	(3.756)	(4.320)	(7.915)	(5.854)	(5.798)
growth rate	0.792***	1.334***	1.037***	0.825***	2.211***	5.816***	4.365***	2.553***
	(0.0977)	(0.380)	(0.215)	(0.151)	(0.493)	(0.915)	(0.658)	(0.579)
Constant	−259.6***	−29.45	28.29	−49.16	−222.8***	−25.15	38.56	−18.93
	(26.79)	(73.87)	(48.93)	(38.22)	(43.76)	(83.02)	(59.50)	(58.76)
Observations	352	319	320	352	68	68	68	68
R-squared	0.482	0.182	0.310	0.529	0.714	0.572	0.640	0.769
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: replicates Table 6 of the paper. Heteroskedasticity-robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table A3: Models of satisfaction at the country level, conventional cluster-robust standard errors

	Yearly data				5-year data			
	Economic situation	Approval government	Confidence government	Satisfaction democracy	Economic situation	Approval government	Confidence government	Satisfaction democracy
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
log GDP pc	26.97***	7.484	0.610	8.709	23.21***	6.852	−0.700	5.602
	(5.097)	(10.45)	(7.330)	(7.156)	(5.686)	(11.83)	(8.119)	(8.086)
growth rate	0.792***	1.334***	1.037***	0.825***	2.211***	5.816***	4.365***	2.553***
	(0.127)	(0.448)	(0.250)	(0.146)	(0.403)	(1.039)	(0.622)	(0.447)
Constant	−259.6***	−29.45	28.29	−49.16	−222.8***	−25.15	38.56	−18.93
	(51.73)	(106.1)	(74.57)	(72.62)	(57.78)	(120.0)	(82.33)	(81.94)
Observations	352	319	320	352	68	68	68	68
R-squared	0.482	0.182	0.310	0.529	0.714	0.572	0.640	0.769
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: replicates Table 6 of the paper. Standard errors clustered at the country level in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

D. Robustness of the models at the income group level

Tables A4 and A5 show that the income growth rate coefficients of Table 7 are robust to alternative definitions of income groups in Latinobarómetro and to alternative reference groups. The first row of each panel reproduces Table 7. The next two rows define income groups using different methods of aggregating the household well-being proxies: an equal-weighted index of the six proxies used in the paper (each standardized), and the first principal component of household assets and services only (computer, car, sewerage, and hot water). The fourth row uses respondents' self-perceived position on a ten-step income ladder. The last two rows return to the baseline income groups but change the reference group in the relative component: the mean growth rate of the whole population, and the growth rate of each of the other two groups included separately. The growth rate coefficients are positive and similar in size across specifications. The only exception is the rich group defined by self-perceived position,

which is small and noisy, since few respondents place themselves in the top step of the ladder; for this group the coefficients are not significant.

Table A4: Income growth rate coefficients in the models of satisfaction at the income group level, alternative specifications, yearly data

	Economic situation	Approval government	Confidence government	Satisfaction democracy
Poor				
Baseline (Table 7)	0.22**	0.55*	0.45**	0.42**
Equal-weighted index	0.23**	0.56*	0.46**	0.43**
PCA of assets and services	0.25**	0.59**	0.48**	0.43**
Self-perceived income ladder	0.38***	0.62*	0.46**	0.53***
Reference: whole population	0.23**	0.56*	0.45**	0.43**
Reference: each group separately	0.23**	0.56*	0.47**	0.43**
Middle class				
Baseline (Table 7)	0.39***	0.70**	0.64**	0.47**
Equal-weighted index	0.39***	0.73**	0.65***	0.49**
PCA of assets and services	0.39***	0.68**	0.61**	0.48**
Self-perceived income ladder	0.68***	0.78*	0.81**	0.70***
Reference: whole population	0.39***	0.69**	0.62**	0.47**
Reference: each group separately	0.36***	0.68**	0.60**	0.45**
Rich				
Baseline (Table 7)	0.48***	0.75***	0.66**	0.42*
Equal-weighted index	0.48**	0.73**	0.67***	0.42*
PCA of assets and services	0.43**	0.78**	0.69**	0.42*
Self-perceived income ladder	0.60	0.55	0.31	0.76
Reference: whole population	0.52***	0.76**	0.67***	0.43*
Reference: each group separately	0.48***	0.76**	0.67**	0.41*

Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: each cell reports the coefficient of the income growth rate in equation (2), estimated separately for each income group with country fixed effects. Significance levels are based on wild cluster bootstrap (999 replications) with clusters at the country level. The specification based on self-perceived position includes 191 observations per group, since the question is not available in all survey rounds.
*** p<0.01, ** p<0.05, * p<0.1

Table A5: Income growth rate coefficients in the models of satisfaction at the income group level, alternative specifications, 5-year data

	Economic situation	Approval government	Confidence government	Satisfaction democracy
Poor				
Baseline (Table 7)	0.64**	1.39	1.12*	0.74
Equal-weighted index	0.65**	1.37	1.11	0.74
PCA of assets and services	0.65**	1.43	1.15*	0.74
Self-perceived income ladder	0.86***	1.10	0.98	0.75
Reference: whole population	0.68**	1.49	1.18*	0.79
Reference: each group separately	0.65**	1.32	1.18	0.76
Middle class				
Baseline (Table 7)	1.16***	1.55	1.54**	0.81**
Equal-weighted index	1.14***	1.57	1.56***	0.83**
PCA of assets and services	1.15***	1.53	1.50***	0.79*
Self-perceived income ladder	1.43***	1.27	1.49*	1.00**
Reference: whole population	1.16***	1.63	1.54**	0.87**
Reference: each group separately	0.93**	1.38	1.36*	0.84*
Rich				
Baseline (Table 7)	1.38***	1.66	1.51**	0.80*
Equal-weighted index	1.36***	1.67	1.50**	0.72*
PCA of assets and services	1.26***	1.57	1.45*	0.75
Self-perceived income ladder	1.74	−0.54	−1.02	1.85
Reference: whole population	1.44***	1.68	1.54**	0.83*
Reference: each group separately	1.37***	1.44	1.48*	0.80*

Source: own calculations based on microdata from harmonized national household surveys - SEDLAC (CEDLAS and The World Bank). Note: each cell reports the coefficient of the income growth rate in equation (2), estimated separately for each income group with country fixed effects. Significance levels are based on wild cluster bootstrap (999 replications) with clusters at the country level.
*** p<0.01, ** p<0.05, * p<0.1