

## Annex A1

Table A1.1  
**Brazil: urban male workers by independent variables category and formal or informal sector, 1980–2010**  
*(Percentages)*

Independent variables	1980		1991		2000		2010	
	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal
<b>Age-education indicators</b>								
Aged 15–24, less than complete primary	34.13	16.62	26.74	12.49	16.56	6.73	8.62	3.29
Aged 15–24, complete primary	4.93	6.64	4.62	5.90	7.30	6.20	7.72	5.26
Aged 15–24, complete secondary	1.62	3.84	1.92	4.07	3.93	6.76	5.84	8.62
Aged 15–24, complete university	0.15	0.24	0.15	0.35	0.20	0.38	0.28	0.62
Aged 25–34, less than complete primary	18.61	20.01	20.63	14.99	17.21	11.73	11.12	6.64
Aged 25–34, complete primary	1.63	4.66	3.90	6.50	4.83	6.54	5.38	5.77
Aged 25–34, complete secondary	1.24	5.37	2.81	8.26	4.45	10.00	7.63	14.37
Aged 25–34, complete university	0.46	2.47	0.53	2.94	0.78	2.88	1.51	4.22
Aged 35–49, less than complete primary	21.33	20.92	21.97	18.79	20.84	15.26	19.08	11.57
Aged 35–49, complete primary	0.98	2.87	1.91	4.25	4.59	6.32	5.98	6.33
Aged 35–49, complete secondary	0.74	2.89	1.46	5.54	4.30	9.78	6.56	12.03
Aged 35–49, complete university	0.36	2.20	0.52	4.12	1.06	5.24	1.50	5.07
Aged 50–64, less than complete primary	13.00	8.75	11.72	8.67	10.86	7.16	12.01	6.94
Aged 50–64, complete primary	0.37	0.90	0.47	0.94	1.20	1.34	2.67	2.48
Aged 50–64, complete secondary	0.25	0.83	0.39	1.09	1.18	1.80	2.95	3.99
Aged 50–64, complete university	0.19	0.79	0.27	1.10	0.71	1.88	1.13	2.80
<b>Race or colour</b>								
Non-white	52.19	34.35	55.56	38.92	49.37	37.56	55.83	45.97
White	47.81	65.65	44.44	61.08	50.63	62.44	44.17	54.03
<b>Marital status</b>								
Unmarried	57.51	39.59	40.08	30.34	58.97	46.28	64.30	53.48
Married	42.49	60.41	59.92	69.66	41.03	53.72	35.70	46.52
<b>Religion</b>								
Non-Protestant	94.77	93.97	92.63	91.89	86.48	86.46	80.32	79.49
Protestant	5.23	6.03	7.37	8.11	13.52	13.54	19.68	20.51
<b>Region</b>								
North	5.30	2.50	7.84	3.24	8.22	4.34	9.65	5.31
North-East	29.38	13.87	31.09	14.88	27.30	15.42	27.75	15.95
South	11.36	17.09	12.59	17.32	13.26	18.11	12.89	17.73
South-East	44.27	61.20	38.02	58.51	42.01	54.91	40.41	52.80
Centre-West	9.69	5.33	10.45	6.04	9.21	7.22	9.29	8.21
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>
<b>Formal/informal sector</b>								
Population percentage	22.65	77.35	30.79	69.21	40.91	59.09	33.45	66.55
Sample size	975 900	3 333 210	854 733	1 921 091	1 352 379	1 953 426	1 240 454	2 468 030
<b>Total sample size</b>	<b>4 309 110</b>		<b>2 775 824</b>		<b>3 305 805</b>		<b>3 708 484</b>	

Source: Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

Table A1.2  
**Brazil: average monthly real incomes of urban male workers by independent variables  
category and formal or informal sector, 1980–2010**

*(Constant reais at 2010 prices)*

Independent variables	1980		1991		2000		2010	
	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal
<b>Age-education indicators</b>								
Aged 15–24, less than complete primary	416.80	639.49	355.16	493.23	420.72	579.71	467.15	694.84
Aged 15–24, complete primary	573.38	813.47	565.46	671.01	527.71	679.18	528.55	725.51
Aged 15–24, complete secondary	955.42	1 307.42	798.16	999.18	842.36	1 024.30	748.15	939.00
Aged 15–24, complete university	1 523.25	2 636.32	1 222.29	1 757.34	1 545.82	2 325.39	1 569.66	1 829.81
Aged 25–34, less than complete primary	717.37	1 048.75	570.31	755.21	705.90	857.04	681.08	878.81
Aged 25–34, complete primary	1 346.28	1 636.21	975.39	1 117.13	1 108.13	1 225.89	912.40	1 044.38
Aged 25–34, complete secondary	1 960.23	2 425.66	1 430.37	1 705.39	1 563.82	1 855.62	1 234.28	1 411.19
Aged 25–34, complete university	3 229.54	4 771.23	2 660.41	3 316.43	2 936.76	4 169.23	2 846.49	3 315.17
Aged 35–49, less than complete primary	815.55	1 319.97	664.84	1 018.63	840.87	1 176.60	819.64	1 066.03
Aged 35–49, complete primary	2 132.00	2 525.90	1 258.76	1 660.46	1 367.20	1 809.59	1 198.81	1 411.59
Aged 35–49, complete secondary	3 233.28	3 792.14	1 975.94	2 535.42	2 148.13	3 032.83	1 720.32	2 096.14
Aged 35–49, complete university	5 631.51	6 693.26	4 300.66	5 066.40	4 461.99	6 478.57	4 217.73	5 161.21
Aged 50–64, less than complete primary	745.45	1 326.77	612.53	1 003.57	843.11	1 373.27	839.15	1 205.08
Aged 50–64, complete primary	2 332.67	2 930.67	1 573.44	2 096.54	1 593.31	2 484.86	1 325.19	1 736.50
Aged 50–64, complete secondary	3 972.71	4 328.56	2 527.99	3 271.40	2 473.39	4 017.80	1 987.10	2 759.65
Aged 50–64, complete university	6 017.05	7 061.40	4 919.62	6 003.43	5 679.71	8 311.60	4 796.99	6 675.99
<b>Race or colour</b>								
Non-white	574.27	1 014.89	519.55	896.46	700.38	1 192.20	798.49	1 260.80
White	940.12	1 891.40	862.05	1 707.01	1 232.43	2 383.37	1 352.00	2 196.53
<b>Marital status</b>								
Unmarried	545.43	1 036.82	465.30	887.06	735.76	1 340.03	847.97	1 349.11
Married	1 024.99	1 953.09	809.90	1 611.23	1 306.00	2 449.32	1 390.94	2 242.22
<b>Religion</b>								
Non-Protestant	745.50	1 596.51	669.12	1 406.29	967.72	1 988.86	1 044.25	1 841.85
Protestant	815.91	1 493.61	705.09	1 224.54	982.83	1 598.30	1 033.95	1 467.11
<b>Region</b>								
North	899.15	1 428.38	760.42	1 343.60	873.32	1 651.34	924.92	1 603.83
North-East	511.63	1 268.53	450.02	1 015.66	642.31	1 436.47	702.38	1 402.27
South	832.87	1 452.88	721.12	1 283.73	1 052.49	1 889.65	1 182.19	1 776.59
South-East	842.61	1 700.88	791.73	1 511.10	1 150.33	2 095.81	1 224.66	1 858.04
Centre-West	862.49	1 674.90	769.01	1 494.39	1 083.97	2 074.89	1 271.70	2 004.30
<b>Total</b>	<b>749.18</b>	<b>1 590.31</b>	<b>671.77</b>	<b>1 391.55</b>	<b>969.76</b>	<b>1 935.99</b>	<b>1 042.24</b>	<b>1 765.12</b>

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Incomes are adjusted by the IBGE national consumer price index (INPC) to correct for currency movements and inflation(<https://www.ibge.gov.br/en/statistics/economic/prices-and-costs/17136-national-consumer-price-index.html?=&t=o-que-e>)

Table A1.3

**Brazil: coefficients and standard errors estimated by ordinary least squares regression from equation (4) for the logarithm of urban male workers' individual earnings as the dependent variable, 1980–2010**

Independent variables	1980	1991	2000	2010
<b>Formal or informal sector</b>				
Informal	Reference category	Reference category	Reference category	Reference category
Formal	0.371*** (0.001)	0.258*** (0.001)	0.281*** (0.001)	0.283*** (0.001)
<b>Age-education indicators</b>				
Aged 15–24, less than complete primary	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary	-0.039*** (0.007)	-0.572*** (0.013)	-0.394*** (0.011)	0.114*** (0.015)
Aged 15–24, complete secondary	0.358*** (0.008)	-0.085*** (0.012)	-0.241*** (0.008)	-0.293*** (0.009)
Aged 15–24, complete university	1.036*** (0.027)	0.378*** (0.033)	0.570*** (0.025)	0.483*** (0.020)
Aged 25–34, less than complete primary	-0.336*** (0.007)	0.405*** (0.009)	0.485*** (0.006)	0.235*** (0.006)
Aged 25–34, complete primary	0.273*** (0.008)	0.075*** (0.012)	-0.025** (0.011)	-0.417*** (0.015)
Aged 25–34, complete secondary	0.564*** (0.008)	0.283*** (0.010)	0.112*** (0.008)	-0.142*** (0.008)
Aged 25–34, complete university	1.202*** (0.009)	0.905*** (0.013)	0.959*** (0.010)	0.653*** (0.009)
Aged 35–49, less than complete primary	0.661*** (0.007)	0.714*** (0.009)	0.820*** (0.007)	0.500*** (0.007)
Aged 35–49, complete primary	0.751*** (0.009)	0.453*** (0.012)	0.424*** (0.010)	0.012 (0.011)
Aged 35–49, complete secondary	0.918*** (0.010)	0.781*** (0.011)	0.676*** (0.009)	0.280*** (0.008)
Aged 35–49, complete university	1.400*** (0.009)	1.262*** (0.011)	1.331*** (0.009)	0.917*** (0.009)
Aged 50–64, less than complete primary	0.571*** (0.007)	0.698*** (0.011)	0.738*** (0.009)	0.446*** (0.008)
Aged 50–64, complete primary	0.861*** (0.013)	0.683*** (0.018)	0.534*** (0.015)	0.309*** (0.012)
Aged 50–64, complete secondary	1.080*** (0.015)	0.992*** (0.018)	0.960*** (0.014)	0.645*** (0.010)
Aged 50–64, complete university	1.469*** (0.014)	1.418*** (0.018)	1.518*** (0.013)	1.209*** (0.012)

Independent variables	1980	1991	2000	2010
<b>Proportions in age-education groups</b>				
Aged 15–24, less than complete primary	-1.143*** (0.015)	-1.588*** (0.021)	-1.737*** (0.020)	-3.337*** (0.047)
Aged 15–24, complete primary	-0.592*** (0.071)	6.669*** (0.160)	2.163*** (0.106)	-3.733*** (0.153)
Aged 15–24, complete secondary	-0.423*** (0.156)	8.369*** (0.267)	6.498*** (0.112)	3.520*** (0.098)
Aged 15–24, complete university	- 35.999*** (8.128)	71.660*** (7.974)	71.411*** (6.089)	6.067* (3.472)
Aged 25–34, less than complete primary	2.101*** (0.032)	-3.507*** (0.050)	-3.639*** (0.040)	-3.593*** (0.044)
Aged 25–34, complete primary	4.493*** (0.197)	3.229*** (0.203)	6.655*** (0.201)	9.864*** (0.284)
Aged 25–34, complete secondary	5.748*** (0.166)	5.645*** (0.148)	7.814*** (0.111)	4.135*** (0.064)
Aged 25–34, complete university	11.514*** (0.360)	14.690*** (0.477)	19.936*** (0.459)	11.365*** (0.285)
Aged 35–49, less than complete primary	-2.951*** (0.032)	-4.047*** (0.044)	-4.424*** (0.035)	-3.663*** (0.034)
Aged 35–49, complete primary	-0.683** (0.295)	0.868*** (0.326)	1.241*** (0.178)	4.148*** (0.186)
Aged 35–49, complete secondary	9.508*** (0.353)	2.997*** (0.237)	3.908*** (0.119)	2.910*** (0.080)
Aged 35–49, complete university	16.960*** (0.371)	10.220*** (0.282)	10.901*** (0.229)	11.971*** (0.245)
Aged 50–64, less than complete primary	-4.984*** (0.056)	-7.294*** (0.079)	-6.570*** (0.070)	-4.459*** (0.059)
Aged 50–64, complete primary	-7.437*** (0.876)	-9.369*** (1.249)	2.754*** (0.845)	-0.211 (0.383)
Aged 50–64, complete secondary	10.734*** (1.275)	1.145 (1.121)	4.239*** (0.632)	0.793*** (0.236)
Aged 50–64, complete university	26.037*** (1.363)	18.686*** (1.252)	18.659*** (0.687)	12.714*** (0.462)

<b>Independent variables</b>	<b>1980</b>	<b>1991</b>	<b>2000</b>	<b>2010</b>
<b>Race or colour</b>				
Non-white	Reference category	Reference category	Reference category	Reference category
White	0.190*** (0.001)	0.238*** (0.001)	0.204*** (0.001)	0.159*** (0.001)
<b>Marital status</b>				
Unmarried	Reference category	Reference category	Reference category	Reference category
Married	0.291*** (0.001)	0.326*** (0.001)	0.257*** (0.001)	0.200*** (0.001)
<b>Religion</b>				
Non-Protestant	Reference category	Reference category	Reference category	Reference category
Protestant	-0.031*** (0.001)	-0.021*** (0.002)	-0.035*** (0.001)	-0.046*** (0.001)
<b>Region</b>				
North	-0.025*** (0.002)	0.006** (0.003)	-0.104*** (0.002)	-0.067*** (0.002)
North-East	-0.309*** (0.001)	-0.406*** (0.002)	-0.347*** (0.001)	-0.271*** (0.001)
South	-0.163*** (0.001)	-0.168*** (0.001)	-0.101*** (0.001)	0.001 (0.001)
South-East	Reference category	Reference category	Reference category	Reference category
Centre-West	-0.070*** (0.001)	-0.024*** (0.002)	0.011*** (0.002)	0.098*** (0.002)
Constant	8.491*** (0.003)	10.720*** (0.005)	5.455*** (0.003)	6.351*** (0.005)
R <sup>2</sup>	0.478	0.433	0.470	0.423
Sample size	4 309 104	2 775 824	3 305 805	3 708 484

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Robust standard errors are shown in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A1.4

**Brazil: coefficients and standard errors estimated by ordinary least squares regression from equation (5) for the logarithm of urban male workers' individual earnings as the dependent variable, 1980–2010**

Independent variables	1980	1991	2000	2010
<b>Formal or informal sector</b>				
Informal	Reference category	Reference category	Reference category	Reference category
Formal	0.377*** (0.001)	0.207*** (0.002)	0.321*** (0.002)	0.441*** (0.003)
<b>Age-education indicators</b>				
Aged 15–24, less than complete primary	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary	-0.074*** (0.008)	-0.619*** (0.013)	-0.375*** (0.012)	0.112*** (0.016)
Aged 15–24, complete secondary	0.318*** (0.010)	-0.165*** (0.014)	-0.198*** (0.009)	-0.170*** (0.010)
Aged 15–24, complete university	0.716*** (0.036)	0.134*** (0.042)	0.478*** (0.029)	0.626*** (0.025)
Aged 25–34, less than complete primary	-0.281*** (0.007)	0.411*** (0.010)	0.607*** (0.007)	0.375*** (0.007)
Aged 25–34, complete primary	0.422*** (0.010)	0.060*** (0.013)	0.044*** (0.011)	-0.261*** (0.015)
Aged 25–34, complete secondary	0.679*** (0.011)	0.250*** (0.012)	0.188*** (0.009)	0.039*** (0.009)
Aged 25–34, complete university	1.096*** (0.016)	0.812*** (0.020)	0.928*** (0.013)	0.819*** (0.012)
Aged 35–49, less than complete primary	0.658*** (0.008)	0.566*** (0.010)	0.842*** (0.007)	0.648*** (0.008)
Aged 35–49, complete primary	0.931*** (0.012)	0.363*** (0.014)	0.457*** (0.010)	0.162*** (0.012)
Aged 35–49, complete secondary	1.127*** (0.014)	0.661*** (0.014)	0.661*** (0.009)	0.447*** (0.009)
Aged 35–49, complete university	1.563*** (0.016)	1.193*** (0.020)	1.252*** (0.012)	1.032*** (0.013)
Aged 50–64, less than complete primary	0.469*** (0.009)	0.523*** (0.012)	0.688*** (0.009)	0.521*** (0.009)
Aged 50–64, complete primary	0.898*** (0.020)	0.547*** (0.024)	0.510*** (0.016)	0.433*** (0.013)
Aged 50–64, complete secondary	1.148*** (0.025)	0.817*** (0.026)	0.874*** (0.016)	0.730*** (0.012)
Aged 50–64, complete university	1.538*** (0.026)	1.267*** (0.030)	1.412*** (0.017)	1.206*** (0.016)

Independent variables	1980	1991	2000	2010
<b>Interactions of age-education indicators and formal or informal sector</b>				
Aged 15–24, less than complete primary x formal sector	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary x formal sector	0.062*** (0.004)	-0.020*** (0.005)	-0.011*** (0.004)	-0.040*** (0.004)
Aged 15–24, complete secondary x formal sector,	0.051*** (0.007)	0.068*** (0.008)	-0.072*** (0.004)	-0.148*** (0.004)
Aged 15–24, complete university x formal sector,	0.350*** (0.025)	0.280*** (0.033)	0.124*** (0.020)	-0.178*** (0.019)
Aged 25–34, less than complete primary x formal sector	-0.049*** (0.002)	-0.004 (0.003)	-0.135*** (0.003)	-0.172*** (0.004)
Aged 25–34, complete primary x formal sector	-0.183*** (0.006)	-0.065*** (0.006)	-0.188*** (0.004)	-0.252*** (0.005)
Aged 25–34, complete secondary x formal sector	-0.122*** (0.008)	0.006 (0.007)	-0.121*** (0.005)	-0.247*** (0.004)
Aged 25–34, complete university x formal sector	0.116*** (0.013)	0.078*** (0.017)	0.033*** (0.010)	-0.205*** (0.009)
Aged 35–49, less than complete primary x formal sector	0.001 (0.002)	0.116*** (0.003)	-0.034*** (0.003)	-0.179*** (0.004)
Aged 35–49, complete primary x formal sector	-0.199*** (0.009)	0.081*** (0.009)	-0.060*** (0.005)	-0.264*** (0.005)
Aged 35–49, complete secondary x formal sector	-0.215*** (0.010)	0.112*** (0.010)	0.023*** (0.005)	-0.221*** (0.005)
Aged 35–49, complete university x formal sector	-0.164*** (0.013)	0.051*** (0.018)	0.086*** (0.009)	-0.144*** (0.010)
Aged 50–64, less than complete primary x formal sector	0.081*** (0.003)	0.160*** (0.004)	0.073*** (0.004)	-0.076*** (0.004)
Aged 50–64, complete primary x formal sector	-0.039** (0.017)	0.138*** (0.020)	0.059*** (0.010)	-0.153*** (0.007)
Aged 50–64, complete secondary x formal sector	-0.070*** (0.021)	0.177*** (0.022)	0.127*** (0.010)	-0.097*** (0.007)
Aged 50–64, complete university x formal sector	-0.070*** (0.023)	0.144*** (0.027)	0.125*** (0.012)	-0.002 (0.012)

Independent variables	1980	1991	2000	2010
<b>Proportions in age-education groups</b>				
Aged 15–24, less than complete primary	-1.119*** (0.015)	-1.776*** (0.022)	-1.669*** (0.020)	-2.761*** (0.049)
Aged 15–24, complete primary	-0.719*** (0.071)	7.144*** (0.163)	2.076*** (0.106)	-3.127*** (0.152)
Aged 15–24, complete secondary	-0.451*** (0.156)	8.347*** (0.269)	6.623*** (0.113)	3.490*** (0.099)
Aged 15–24, complete university	-27.537*** (8.125)	67.314*** (7.956)	70.429*** (6.079)	6.441* (3.491)
Aged 25–34, less than complete primary	2.036*** (0.032)	-3.765*** (0.050)	-4.000*** (0.040)	-3.655*** (0.045)
Aged 25–34, complete primary	5.050*** (0.197)	4.036*** (0.206)	7.840*** (0.203)	10.629** (0.286)
Aged 25–34, complete secondary	5.804*** (0.166)	5.735*** (0.149)	8.030*** (0.112)	4.317*** (0.065)
Aged 25–34, complete university	11.506*** (0.360)	14.727*** (0.477)	19.749*** (0.460)	11.429** (0.285)
Aged 35–49, less than complete primary	-2.918*** (0.033)	-3.850*** (0.045)	-4.416*** (0.035)	-3.726*** (0.034)
Aged 35–49, complete primary	-0.502* (0.294)	0.784** (0.329)	1.384*** (0.180)	5.115*** (0.189)
Aged 35–49, complete secondary	9.252*** (0.353)	2.905*** (0.238)	3.795*** (0.119)	3.040*** (0.080)
Aged 35–49, complete university	16.797*** (0.371)	10.267*** (0.283)	10.753*** (0.229)	11.967** (0.245)
Aged 50–64, less than complete primary	-4.555*** (0.058)	-6.982*** (0.080)	-6.389*** (0.070)	-4.404*** (0.059)
Aged 50–64, complete primary	-7.350*** (0.876)	-9.715*** (1.251)	2.053** (0.848)	-0.247 (0.387)
Aged 50–64, complete secondary	10.827*** (1.274)	1.030 (1.121)	4.060*** (0.631)	0.688*** (0.236)
Aged 50–64, complete university	26.025*** (1.363)	18.642*** (1.252)	18.657*** (0.685)	12.621** (0.461)



<b>Independent variables</b>	<b>1980</b>	<b>1991</b>	<b>2000</b>	<b>2010</b>
<b>Race or colour</b>				
Non-white	Reference category	Reference category	Reference category	Reference category
White	0.190*** (0.001)	0.237*** (0.001)	0.203*** (0.001)	0.159*** (0.001)
<b>Marital status</b>				
Unmarried	Reference category	Reference category	Reference category	Reference category
Married	0.292*** (0.001)	0.326*** (0.001)	0.257*** (0.001)	0.201*** (0.001)
<b>Religion</b>				
Non-Protestant	Reference category	Reference category	Reference category	Reference category
Protestant	-0.031*** (0.001)	-0.021*** (0.002)	-0.034*** (0.001)	-0.047*** (0.001)
<b>Region</b>				
North	-0.027*** (0.002)	0.010*** (0.003)	-0.105*** (0.002)	-0.068*** (0.002)
North-East	-0.309*** (0.001)	-0.401*** (0.002)	-0.346*** (0.001)	-0.270*** (0.001)
South	-0.163*** (0.001)	-0.168*** (0.001)	-0.101*** (0.001)	0.001 (0.001)
South-East	Reference category	Reference category	Reference category	Reference category
Centre-West	-0.070*** (0.001)	-0.022*** (0.002)	0.012*** (0.002)	0.097*** (0.002)
Constant	8.482*** (0.004)	10.786*** (0.005)	5.428*** (0.004)	6.224*** (0.006)
R <sup>2</sup>	0.479	0.434	0.471	0.424
Sample size	4 309 104	2 775 824	3 305 805	3 708 484

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Robust standard errors are shown in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A1.5

**Brazil: coefficients and standard errors estimated by ordinary least squares regression from equation (6) for the logarithm of urban male workers' individual earnings as the dependent variable, 1980–2010**

Independent variables	1980	1991	2000	2010
<b>Formal or informal sector</b>				
Proportion of male workers in the formal sector	1.381*** (0.004)	1.921*** (0.006)	1.610*** (0.008)	1.442*** (0.006)
<b>Age-education indicators</b>				
Aged 15–24, less than complete primary	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary	0.483*** (0.008)	0.286*** (0.013)	0.045*** (0.012)	0.107*** (0.016)
Aged 15–24, complete secondary	0.887*** (0.008)	0.667*** (0.012)	0.189*** (0.009)	0.252*** (0.010)
Aged 15–24, complete university	1.464*** (0.028)	0.912*** (0.034)	0.862*** (0.026)	0.778*** (0.020)
Aged 25–34, less than complete primary	-0.079*** (0.007)	0.259*** (0.009)	0.402*** (0.006)	0.231*** (0.006)
Aged 25–34, complete primary	0.880*** (0.009)	0.869*** (0.012)	0.443*** (0.011)	0.071*** (0.015)
Aged 25–34, complete secondary	1.202*** (0.008)	1.106*** (0.011)	0.579*** (0.008)	0.413*** (0.008)
Aged 25–34, complete university	1.736*** (0.009)	1.529*** (0.013)	1.290*** (0.010)	0.982*** (0.010)
Aged 35–49, less than complete primary	0.374*** (0.007)	0.453*** (0.009)	0.687*** (0.007)	0.395*** (0.007)
Aged 35–49, complete primary	1.183*** (0.009)	1.099*** (0.013)	0.793*** (0.010)	0.438*** (0.012)
Aged 35–49, complete secondary	1.434*** (0.010)	1.479*** (0.011)	1.107*** (0.009)	0.718*** (0.009)
Aged 35–49, complete university	1.854*** (0.009)	1.866*** (0.011)	1.676*** (0.009)	1.236*** (0.010)
Aged 50–64, less than complete primary	0.462*** (0.008)	0.595*** (0.011)	0.659*** (0.009)	0.382*** (0.008)
Aged 50–64, complete primary	1.188*** (0.013)	1.157*** (0.018)	0.798*** (0.016)	0.541*** (0.012)
Aged 50–64, complete secondary	1.449*** (0.015)	1.490*** (0.018)	1.263*** (0.014)	0.906*** (0.010)
Aged 50–64, complete university	1.822*** (0.014)	1.900*** (0.018)	1.806*** (0.013)	1.468*** (0.012)

Independent variables	1980	1991	2000	2010
<b>Proportions in age-education groups</b>				
Aged 15–24, less than complete primary	-0.014 (0.016)	0.218*** (0.022)	-0.773*** (0.021)	-1.771*** (0.050)
Aged 15–24, complete primary	-3.226*** (0.073)	0.210 (0.161)	-0.443*** (0.109)	-1.942*** (0.158)
Aged 15–24, complete secondary	-5.117*** (0.159)	-0.024 (0.269)	3.112*** (0.115)	-0.610*** (0.103)
Aged 15–24, complete university	-82.941*** (8.471)	32.559*** (8.085)	47.786*** (6.234)	-10.955*** (3.487)
Aged 25–34, less than complete primary	2.323*** (0.032)	0.070 (0.050)	-1.611*** (0.041)	-1.562*** (0.046)
Aged 25–34, complete primary	-3.597*** (0.198)	-4.502*** (0.205)	1.125*** (0.203)	3.806*** (0.286)
Aged 25–34, complete secondary	-1.731*** (0.167)	-1.165*** (0.149)	3.985*** (0.113)	0.768*** (0.067)
Aged 25–34, complete university	0.750** (0.368)	5.057*** (0.481)	14.396*** (0.468)	7.188*** (0.288)
Aged 35–49, less than complete primary	0.101*** (0.034)	-0.367*** (0.045)	-2.541*** (0.037)	-1.736*** (0.035)
Aged 35–49, complete primary	-6.104*** (0.292)	-6.586*** (0.324)	-2.417*** (0.181)	-0.524*** (0.189)
Aged 35–49, complete secondary	0.590* (0.351)	-4.061*** (0.236)	0.503*** (0.121)	0.087 (0.082)
Aged 35–49, complete university	8.797*** (0.374)	3.875*** (0.284)	7.332*** (0.233)	8.610*** (0.247)
Aged 50–64, less than complete primary	-1.654*** (0.059)	-2.866*** (0.081)	-4.261*** (0.072)	-2.466*** (0.061)
Aged 50–64, complete primary	-10.896*** (0.882)	-16.308*** (1.249)	-2.753*** (0.859)	-2.848*** (0.389)
Aged 50–64, complete secondary	2.460* (1.275)	-6.512*** (1.117)	-1.453** (0.641)	-1.393*** (0.239)
Aged 50–64, complete university	18.403*** (1.358)	11.084*** (1.247)	13.741*** (0.697)	9.941*** (0.468)

Independent variables	1980	1991	2000	2010
<b>Race or colour</b>				
Non-white	Reference category	Reference category	Reference category	Reference category
White	0.187*** (0.001)	0.214*** (0.001)	0.190*** (0.001)	0.147*** (0.001)
<b>Marital status</b>				
Unmarried	Reference category	Reference category	Reference category	Reference category
Married	0.334*** (0.001)	0.344*** (0.001)	0.280*** (0.001)	0.221*** (0.001)
<b>Religion</b>				
Non-Protestant	Reference category	Reference category	Reference category	Reference category
Protestant	-0.035*** (0.001)	-0.022*** (0.002)	-0.041*** (0.001)	-0.051*** (0.001)
<b>Region</b>				
North	0.166*** (0.002)	0.382*** (0.003)	0.093*** (0.002)	0.122*** (0.002)
North-East	-0.118*** (0.001)	-0.079*** (0.002)	-0.154*** (0.002)	-0.088*** (0.002)
South	-0.182*** (0.001)	-0.171*** (0.001)	-0.152*** (0.001)	-0.056*** (0.001)
South-East	Reference category	Reference category	Reference category	Reference category
Centre-West	0.041*** (0.002)	0.195*** (0.002)	0.065*** (0.002)	0.125*** (0.002)
Constant	7.550*** (0.005)	9.328*** (0.007)	4.704*** (0.006)	5.591*** (0.006)
R <sup>2</sup>	0.470	0.443	0.460	0.412
Sample size	4 309 104	2 775 824	3 305 805	3 708 484

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Robust standard errors are shown in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A1.6

**Brazil: coefficients and standard errors estimated by ordinary least squares regression from equation (7) for the logarithm of formal urban male workers' individual earnings as the dependent variable, 1980–2010**

Independent variables	1980	1991	2000	2010
<b>Age-education indicators</b>				
Aged 15–24, less than complete primary	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary	-0.004 (0.008)	-0.701*** (0.016)	-0.375*** (0.014)	0.046*** (0.015)
Aged 15–24, complete secondary	0.367*** (0.009)	-0.110*** (0.014)	-0.253*** (0.010)	-0.137*** (0.010)
Aged 15–24, complete university	1.043*** (0.028)	0.409*** (0.036)	0.621*** (0.028)	0.575*** (0.021)
Aged 25–34, less than complete primary	-0.413*** (0.007)	0.275*** (0.011)	0.485*** (0.007)	0.240*** (0.006)
Aged 25–34, complete primary	0.278*** (0.009)	-0.006 (0.014)	-0.090*** (0.013)	-0.261*** (0.016)
Aged 25–34, complete secondary	0.570*** (0.009)	0.245*** (0.012)	0.128*** (0.009)	-0.017** (0.009)
Aged 25–34, complete university	1.215*** (0.009)	0.865*** (0.014)	0.992*** (0.011)	0.730*** (0.010)
Aged 35–49, less than complete primary	0.560*** (0.008)	0.481*** (0.012)	0.781*** (0.009)	0.468*** (0.007)
Aged 35–49, complete primary	0.782*** (0.009)	0.448*** (0.015)	0.446*** (0.012)	0.072*** (0.013)
Aged 35–49, complete secondary	0.942*** (0.010)	0.762*** (0.013)	0.738*** (0.010)	0.372*** (0.009)
Aged 35–49, complete university	1.406*** (0.009)	1.221*** (0.012)	1.377*** (0.009)	0.998*** (0.010)
Aged 50–64, less than complete primary	0.512*** (0.009)	0.621*** (0.014)	0.749*** (0.012)	0.501*** (0.010)
Aged 50–64, complete primary	0.872*** (0.013)	0.683*** (0.020)	0.660*** (0.020)	0.455*** (0.015)
Aged 50–64, complete secondary	1.095*** (0.015)	0.975*** (0.020)	1.080*** (0.017)	0.772*** (0.012)
Aged 50–64, complete university	1.481*** (0.015)	1.393*** (0.020)	1.583*** (0.014)	1.324*** (0.012)

Independent variables	1980	1991	2000	2010
<b>Proportions in age-education groups</b>				
Aged 15–24, less than complete primary	-1.042*** (0.018)	-1.933*** (0.032)	-1.301*** (0.027)	-1.087*** (0.054)
Aged 15–24, complete primary	-0.631*** (0.074)	7.518*** (0.194)	2.541*** (0.131)	-1.305*** (0.151)
Aged 15–24, complete secondary	-0.121 (0.162)	7.804*** (0.297)	7.230*** (0.127)	3.050*** (0.103)
Aged 15–24, complete university	-16.674** (8.379)	58.555*** (8.526)	80.043*** (6.779)	10.181*** (3.731)
Aged 25–34, less than complete primary	2.616*** (0.034)	-3.048*** (0.063)	-3.617*** (0.050)	-2.341*** (0.050)
Aged 25–34, complete primary	4.443*** (0.207)	3.506*** (0.235)	8.004*** (0.242)	8.542*** (0.304)
Aged 25–34, complete secondary	5.846*** (0.170)	5.420*** (0.160)	8.026*** (0.124)	3.876*** (0.069)
Aged 25–34, complete university	11.937*** (0.365)	14.320*** (0.491)	21.245*** (0.487)	12.526*** (0.301)
Aged 35–49, less than complete primary	-2.294*** (0.039)	-2.864*** (0.055)	-3.850*** (0.046)	-2.623*** (0.040)
Aged 35–49, complete primary	-1.859*** (0.309)	-0.133 (0.360)	1.720*** (0.217)	4.669*** (0.217)
Aged 35–49, complete secondary	8.611*** (0.367)	2.533*** (0.251)	3.953*** (0.135)	3.060*** (0.088)
Aged 35–49, complete university	17.136*** (0.382)	10.043*** (0.288)	11.506*** (0.241)	13.166*** (0.251)
Aged 50–64, less than complete primary	-4.084*** (0.074)	-6.666*** (0.103)	-5.670*** (0.097)	-3.518*** (0.072)
Aged 50–64, complete primary	-7.279*** (0.919)	- (1.365)	0.512 (1.058)	-1.036** (0.472)
Aged 50–64, complete secondary	10.324*** (1.303)	11.766*** (1.182)	3.304*** (0.745)	0.926*** (0.267)
Aged 50–64, complete university	25.776*** (1.389)	17.609*** (1.296)	19.756*** (0.744)	13.878*** (0.492)

Independent variables	1980	1991	2000	2010
<b>Race or colour</b>				
Non-white	Reference category	Reference category	Reference category	Reference category
White	0.207*** (0.001)	0.255*** (0.001)	0.209*** (0.001)	0.163*** (0.001)
<b>Marital status</b>				
Unmarried	Reference category	Reference category	Reference category	Reference category
Married	0.289*** (0.001)	0.315*** (0.002)	0.242*** (0.001)	0.191*** (0.001)
<b>Religion</b>				
Non-Protestant	Reference category	Reference category	Reference category	Reference category
Protestant	-0.038*** (0.001)	-0.034*** (0.002)	-0.054*** (0.001)	-0.065*** (0.001)
<b>Region</b>				
North	-0.129*** (0.003)	-0.044*** (0.004)	-0.097*** (0.003)	-0.040*** (0.002)
North-East	-0.288*** (0.001)	-0.408*** (0.002)	-0.301*** (0.002)	-0.197*** (0.001)
South	-0.175*** (0.001)	-0.173*** (0.002)	-0.090*** (0.001)	0.001 (0.001)
South-East	Reference category	Reference category	Reference category	Reference category
Centre-West	-0.113*** (0.002)	-0.061*** (0.003)	0.002 (0.002)	0.074*** (0.002)
Constant	8.838*** (0.004)	11.026** (0.006)*	5.686*** (0.004)	6.513*** (0.005)
R <sup>2</sup>	0.441	0.407	0.465	0.408
Sample size	3 333 208	1 921 091	1 953 426	2 468 030

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Robust standard errors are shown in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

Table A1.7

**Brazil: coefficients and standard errors estimated by ordinary least squares regression from equation (8) for the logarithm of informal urban male workers' individual earnings as the dependent variable, 1980–2010**

Independent variables	1980	1991	2000	2010
<b>Age-education indicators</b>				
Aged 15–24, less than complete primary	Reference category	Reference category	Reference category	Reference category
Aged 15–24, complete primary	-0.127*** (0.017)	-0.601*** (0.022)	-0.323*** (0.017)	0.178*** (0.026)
Aged 15–24, complete secondary	0.359*** (0.025)	-0.259*** (0.026)	-0.146*** (0.015)	-0.282*** (0.020)
Aged 15–24, complete university	0.987*** (0.095)	0.003 (0.083)	0.557*** (0.054)	0.592*** (0.049)
Aged 25–34, less than complete primary	0.117*** (0.015)	0.592*** (0.015)	0.617*** (0.009)	0.406*** (0.010)
Aged 25–34, complete primary	0.131*** (0.023)	-0.043* (0.022)	0.036** (0.018)	-0.468*** (0.030)
Aged 25–34, complete secondary	0.500*** (0.031)	0.101*** (0.025)	0.170*** (0.016)	-0.089*** (0.017)
Aged 25–34, complete university	1.218*** (0.043)	0.817*** (0.046)	1.007*** (0.026)	0.808*** (0.025)
Aged 35–49, less than complete primary	0.946*** (0.014)	0.888*** (0.016)	0.909*** (0.010)	0.727*** (0.011)
Aged 35–49, complete primary	0.602*** (0.026)	0.228*** (0.027)	0.453*** (0.016)	0.109*** (0.020)
Aged 35–49, complete secondary	0.923*** (0.035)	0.529*** (0.031)	0.666*** (0.017)	0.404*** (0.017)
Aged 35–49, complete university	1.557*** (0.036)	1.148*** (0.045)	1.314*** (0.024)	1.066*** (0.029)
Aged 50–64, less than complete primary	0.500*** (0.014)	0.552*** (0.018)	0.727*** (0.012)	0.586*** (0.014)
Aged 50–64, complete primary	0.877*** (0.038)	0.433*** (0.041)	0.448*** (0.024)	0.370*** (0.020)
Aged 50–64, complete secondary	1.106*** (0.059)	0.769*** (0.051)	0.816*** (0.025)	0.701*** (0.020)
Aged 50–64, complete university	1.510*** (0.063)	1.160*** (0.064)	1.434*** (0.031)	1.198*** (0.030)



Independent variables	1980	1991	2000	2010
<b>Proportions in age-education groups</b>				
Aged 15–24, less than complete primary	-1.317*** (0.025)	-1.863*** (0.031)	-1.664*** (0.026)	-2.909*** (0.069)
Aged 15–24, complete primary	-0.601*** (0.179)	6.740*** (0.293)	1.487*** (0.164)	-4.096*** (0.252)
Aged 15–24, complete secondary	-2.065*** (0.512)	10.638*** (0.626)	5.693*** (0.222)	4.535*** (0.226)
Aged 15–24, complete university	-115.179*** (27.449)	104.151** (21.340) *	47.942*** (13.222)	5.659 (9.362)
Aged 25–34, less than complete primary	-0.536*** (0.080)	-5.110*** (0.084)	-4.133*** (0.060)	-4.185*** (0.074)
Aged 25–34, complete primary	11.868*** (0.596)	5.657*** (0.419)	7.721*** (0.347)	14.155*** (0.585)
Aged 25–34, complete secondary	9.032*** (0.677)	8.035*** (0.397)	8.150*** (0.241)	5.255*** (0.158)
Aged 25–34, complete university	4.389** (1.871)	14.389*** (1.951)	14.784*** (1.315)	10.213*** (0.846)
Aged 35–49, less than complete primary	-4.614*** (0.060)	-5.745*** (0.075)	-4.896*** (0.054)	-4.488*** (0.056)
Aged 35–49, complete primary	11.026*** (0.926)	4.343*** (0.809)	1.079*** (0.314)	5.309*** (0.349)
Aged 35–49, complete secondary	15.643*** (1.244)	5.767*** (0.742)	3.447*** (0.249)	3.042*** (0.182)
Aged 35–49, complete university	15.313*** (1.541)	11.513*** (1.431)	8.120*** (0.713)	9.257*** (0.881)
Aged 50–64, less than complete primary	-5.220*** (0.094)	-7.498*** (0.126)	-6.888*** (0.099)	-5.379*** (0.097)
Aged 50–64, complete primary	-8.963*** (2.810)	-1.216 (3.107)	4.611*** (1.410)	0.210 (0.665)
Aged 50–64, complete secondary	11.831** (5.262)	3.736 (3.400)	5.959*** (1.179)	0.191 (0.490)
Aged 50–64, complete university	26.353*** (6.200)	27.094*** (4.703)	16.060*** (1.699)	10.474*** (1.279)

Independent variables	1980	1991	2000	2010
<b>Race or colour</b>				
Non-white	Reference category	Reference category	Reference category	Reference category
White	0.134*** (0.002)	0.192*** (0.002)	0.195*** (0.002)	0.153*** (0.002)
<b>Marital status</b>				
Unmarried	Reference category	Reference category	Reference category	Reference category
Married	0.302*** (0.002)	0.350*** (0.002)	0.282*** (0.002)	0.228*** (0.002)
<b>Religion</b>				
Non-Protestant	Reference category	Reference category	Reference category	Reference category
Protestant	-0.007** (0.003)	0.014*** (0.004)	-0.006*** (0.002)	-0.010*** (0.002)
<b>Region</b>				
North	0.153*** (0.004)	0.081*** (0.004)	-0.126*** (0.003)	-0.133*** (0.003)
North-East	-0.327*** (0.002)	-0.369*** (0.003)	-0.398*** (0.002)	-0.390*** (0.002)
South	-0.113*** (0.003)	-0.155*** (0.003)	-0.126*** (0.002)	-0.000 (0.002)
South-East	Reference category	Reference category	Reference category	Reference category
Centre-West	0.029*** (0.003)	0.052*** (0.003)	0.013*** (0.003)	0.121*** (0.003)
Constant	8.536*** (0.006)	10.793** (0.007)*	5.448*** (0.005)	6.280*** (0.007)
R <sup>2</sup>	0.303	0.286	0.327	0.307
Sample size	975 896	854 733	1 352 379	1 240 454

**Source:** Brazilian Institute of Geography and Statistics (IBGE), Brazilian Demographic Censuses of 1980, 1991, 2000 and 2010.

**Note:** Robust standard errors are shown in parentheses. \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.