Supplemental Appendix to "Perceptions of Race in the Labor Market"

– CadÚnico Results –

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A Summary Statistics **1**

B Mismatched Racial Identities **3**

C Race Function **4**

D Racial Wage Disparities **6**

A Summary Statistics

Table A.1: Summary Statistics of CadÚnico Sample and Full RAIS Sample

	(1) In CadUnico Mean	(2) Not in CadUnico Mean	(3) Difference (1) - (2)
Worker Characteristics			
Non-White (Employer-Ascribed)	0.46	0.32	0.15***
Male	0.59	0.64	-0.06***
Age (years)	33.40	33.80	-0.40***
Log Hourly Wage (2018 BRL)	1.94	2.36	-0.42***
Highest Degree Attained			
Less than Elementary	0.06	0.03	0.03***
Elementary School	0.19	0.12	0.08***
Middle School	0.28	0.20	0.07***
High School	0.45	0.51	-0.06***
Undergraduate or More	0.02	0.14	-0.13***
Establishment Characteristics			
Firm Size	547.45	599.37	-51.92***
Average Log Hourly Wage	2.03	2.31	-0.28***
Sector			
Agriculture	0.03	0.01	0.01***
Extractive Industry	0.00	0.01	-0.00***
Manufacturing	0.24	0.25	-0.01***
Construction	0.09	0.06	0.03***
Retail	0.26	0.25	0.02***
Transport & Communication	0.13	0.13	0.00***
Finance & Real Estate	0.16	0.17	-0.02***
Education & Health	0.06	0.08	-0.03***
Other Services	0.03	0.03	-0.00***
Region			
North	0.06	0.04	0.02***
Northeast	0.21	0.13	0.08***
Southeast	0.51	0.58	-0.07***
South	0.15	0.19	-0.05***
Center-West	0.08	0.07	0.01***
No. of worker-year obs.	116,511,084	195,051,536	311,562,620
No. of workers	26,781,358	34,621,078	
No. of establishments	4,334,569	4,815,830	

Notes: The table shows mean characteristics of workers who have appeared in CadÚnico between 2012 and 2024 (column (1)) and all other workers in RAIS (our extended estimation sample, column (2)). Column (3) shows the difference in means between both samples. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.2: Racial Gaps in CadÚnico Sample and Full RAIS Sample

	(1)	(2)	(3)	(4)	(5)	(6)
	In CadUnico			Not in CadUnico		
	White Mean	Non-White Mean	Racial gap (1)-(2)	White Mean	Non-White Mean	Racial gap (4)-(5)
Worker Characteristics						
Male	0.57	0.61	-0.04***	0.62	0.70	-0.08***
Age (years)	33.64	33.13	0.51***	33.99	33.37	0.62***
Log Hourly Wage (2018 BRL)	1.97	1.89	0.08***	2.43	2.20	0.23***
Highest degree attained						
Less than Elementary	0.05	0.08	-0.03***	0.02	0.04	-0.02***
Elementary School	0.19	0.19	0.00***	0.11	0.14	-0.03***
Middle School	0.29	0.26	0.03***	0.20	0.22	-0.02***
High School	0.45	0.46	-0.01***	0.50	0.52	-0.02***
Undergraduate or More	0.02	0.01	0.01***	0.17	0.08	0.09***
Establishment Characteristics						
Firm Size	410.56	704.13	-293.57***	544.24	711.14	-166.90***
Average Log Hourly Wage	2.06	2.00	0.06***	2.37	2.19	0.18***
Sector						
Agriculture	0.02	0.03	-0.01***	0.01	0.02	-0.01***
Extractive Industry	0.00	0.01	-0.00***	0.01	0.01	-0.00***
Manufacturing	0.26	0.22	0.05***	0.27	0.21	0.06***
Construction	0.07	0.11	-0.04***	0.04	0.09	-0.05***
Retail	0.27	0.25	0.02***	0.25	0.24	0.01***
Transport & Communication	0.13	0.13	0.01***	0.13	0.13	-0.01***
Finance & Real Estate	0.14	0.17	-0.03***	0.17	0.18	-0.01***
Education & Health	0.06	0.06	0.00***	0.09	0.08	0.01***
Other Services	0.03	0.03	0.00***	0.03	0.03	0.00***
Region						
North	0.02	0.09	-0.07***	0.01	0.08	-0.07***
Northeast	0.11	0.33	-0.22***	0.06	0.27	-0.21***
Southeast	0.57	0.44	0.12***	0.61	0.51	0.10***
South	0.24	0.04	0.19***	0.26	0.05	0.22***
Center-West	0.07	0.09	-0.02***	0.05	0.09	-0.04***
N	62,064,196	53,201,086	115,265,282	131,885,034	61,031,635	192,916,669

Notes: The table shows racial gaps (by employer-ascribed race) in mean characteristics of workers have appeared in CadÚnico between 2012 and 2024 (our extended estimation sample, columns (1)-(3)) and all other workers in RAIS (columns (4)-(6)). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

B Mismatched Racial Identities

Table B.1: Self-Declared Race in CadÚnico versus Employer-Ascribed Race

Employer-ascribed Self-declared	White White	Non-White Non-White	White Non-White	Non-White White	*N*
Baseline sample	29.76%	37.30%	24.10%	8.84%	113,319,243
Firms with variation in ascribed race	28.00%	38.81%	23.91%	9.28%	102,574,530
Firms with HR employees	28.26%	39.49%	22.73%	9.52%	66,455,265
Self-declared race in same period	29.65%	38.75%	21.21%	10.39%	1,176,664
Employer-ascribed Self-declared	Male Male	Female Female	Male Female	Female Male	*N*
Baseline sample	57.17%	40.71%	1.32%	0.80%	113,319,243

Notes: The table shows mismatch rates between self-declared race in CadÚnico and employer-ascribed race in RAIS. In addition to results for the full sample, we also restrict the sample to firms that do not ascribe the same racial category to all their workers, firms that have at least one employee in an HR occupation, and worker-years for which we see both racial classification measures. The table also reports mismatch rates across reported gender instead of race.

C Race Function

Table C.1: Determinants of Employer-Ascribed Race: CadÚnico Name Cues

	(1)	(2)	(3)	(4)	(5)	(6)
Non-White Index Given Name	0.517***	0.506***	0.115***	0.109***	0.103***	0.056***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Non-White Index Surname	0.752***	0.744***	0.385***	0.375***	0.362***	0.258***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Demographics						
Male		0.013***	0.015***	0.007***	0.005***	0.008***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age		-0.015***	-0.013***	-0.016***	-0.015***	-0.015***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age^2		-0.004***	-0.000***	-0.000***	-0.001***	-0.002***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Some) High School		-0.001***	-0.031***	-0.023***	-0.011***	-0.010***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Some) University		-0.069***	-0.099***	-0.099***	-0.056***	-0.036***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Region						
Northeast			-0.055***	-0.056***	-0.057***	
			(0.000)	(0.000)	(0.000)	
Southeast			-0.356***	-0.357***	-0.356***	
			(0.000)	(0.000)	(0.000)	
South			-0.574***	-0.570***	-0.571***	
			(0.000)	(0.000)	(0.000)	
Center-West			-0.227***	-0.227***	-0.227***	
			(0.000)	(0.000)	(0.000)	
N	109,369,045	109,369,045	109,369,045	109,341,931	109,341,923	105,744,037
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	Yes	No	No
Industry × Occupation FE	No	No	No	No	Yes	No
Firm × Occupation FE	No	No	No	No	No	Yes
R-squared	0.067	0.069	0.171	0.175	0.181	0.535
Adjusted R-squared	0.067	0.069	0.171	0.175	0.181	0.496

Notes: The table reports OLS estimates of the relationship between employer-ascribed race (an indicator equal to one for non-White) and various covariates in the CadÚnico sample, including non-White indices of given names and surnames. The first column displays the relationship with the name indices, when only controlling for year fixed effects. The subsequent columns progressively add demographic covariates as well as region, one-digit industry, three-digit occupation, and firm fixed effects. Standard errors clustered at the individual level are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table C.2: Determinants of Employer-Ascribed Race: CadÚnico Self-Declared Race

	(1)	(2)	(3)	(4)	(5)	(6)
Non-White Self-Declared	0.377***	0.374***	0.262***	0.259***	0.255***	0.197***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Demographics						
Male		0.024***	0.012***	0.005***	0.004***	0.006***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age		-0.012***	-0.012***	-0.014***	-0.013***	-0.013***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age^2		-0.003***	0.000***	0.001***	-0.000*	-0.001***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Some) High School		0.002***	-0.023***	-0.016***	-0.007***	-0.007***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
(Some) University		-0.055***	-0.077***	-0.076***	-0.042***	-0.029***
		(0.001)	(0.000)	(0.000)	(0.001)	(0.001)
Region						
Northeast			-0.038***	-0.038***	-0.040***	
			(0.000)	(0.000)	(0.000)	
Southeast			-0.297***	-0.297***	-0.297***	
			(0.000)	(0.000)	(0.000)	
South			-0.475***	-0.472***	-0.473***	
			(0.000)	(0.000)	(0.000)	
Center-West			-0.198***	-0.198***	-0.198***	
			(0.000)	(0.000)	(0.000)	
N	113,319,243	113,319,243	113,319,243	113,291,324	113,291,315	109,641,239
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	Yes	No	No
Industry × Occupation FE	No	No	No	No	Yes	No
Firm × Occupation FE	No	No	No	No	No	Yes
R-squared	0.142	0.143	0.217	0.220	0.225	0.553
Adjusted R-squared	0.142	0.143	0.217	0.220	0.225	0.517

Notes: The table reports OLS estimates of the relationship between employer-ascribed race (an indicator equal to one for non-White) and various covariates in the CadÚnico sample, including self-declared race from CadÚnico. The first column displays the relationship with self-declared race, when only controlling for year fixed effects. The subsequent columns progressively add demographic covariates as well as region, one-digit industry, three-digit occupation, and firm fixed effects. Standard errors clustered at the individual level are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

D Racial Wage Disparities

Table D.1: Wage Disparities by Employer-Ascribed Race: CadÚnico Name Cues

	(1)	(2)	(3)	(4)	(5)	(6)
[A] OLS: Conventional Disparity						
Non-White Employer-Ascribed	-0.099***	-0.098***	-0.032***	-0.034***	-0.023***	-0.014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
[B] Reduced Form: Colorism Disparity						
Non-White Index Given Name	0.032***	-0.215***	-0.014***	-0.019***	0.010***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
Non-White Index Surname	-0.278***	-0.216***	-0.086***	-0.086***	-0.041***	-0.024***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
[C] First Stage: Racialization						
Non-White Index Given Name	0.517***	0.506***	0.115***	0.109***	0.103***	0.056***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Non-White Index Surname	0.752***	0.744***	0.385***	0.375***	0.362***	0.258***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
[D] 2SLS: Perception-Normalized Disparity						
Non-White Employer-Ascribed	-0.249***	-0.326***	-0.215***	-0.227***	-0.100***	-0.084***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)
KP F-stat	1,227,965.1	1,166,682.7	212,228.3	201,484.7	187,861.9	87,760.0
N	109,369,045	109,369,045	109,369,045	109,341,931	109,341,923	105,744,037
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes	Yes	Yes
Region FE	No	No	Yes	Yes	Yes	No
Industry FE	No	No	No	Yes	No	No
Industry × Occupation FE	No	No	No	No	Yes	No
Firm × Occupation FE	No	No	No	No	No	Yes

Notes: The table reports racial wage gaps based on employer-ascribed race in the CadÚnico sample when using non-White indices of given names and surnames as racial cues. All columns include year fixed-effects. The first column always shows the unconditional relationship (apart from year fixed-effects), and the remaining columns progressively add controls. Panel A shows coefficient estimates of OLS regressions of log hourly wage on employer-ascribed race. Panel B shows reduced form regressions of log hourly wage on the non-White name indices. Panel C presents the first-stage coefficient from regressing employer-ascribed race on the non-White name indices. Finally, Panel D shows 2SLS estimates of regressing log hourly wage on employer-ascribed race, instrumented by the non-White name indices. Standard errors clustered at the individual level are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.2: Wage Disparities by Employer-Ascribed Race: CadÚnico Self-Declared Race as Racial Cue

	(1)	(2)	(3)	(4)	(5)	(6)
[A] OLS: Conventional Disparity						
Non-White Employer-Ascribed	-0.098***	-0.098***	-0.031***	-0.033***	-0.023***	-0.014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
[B] Reduced Form: Colorism Disparity						
Non-White Self-Declared	-0.099***	-0.100***	-0.044***	-0.046***	-0.030***	-0.008***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
[C] First Stage: Racialization						
Non-White Self-Declared	0.377***	0.374***	0.262***	0.259***	0.255***	0.197***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
[D] 2SLS: Perception-Normalized Disparity						
Non-White Employer-Ascribed	-0.262***	-0.267***	-0.169***	-0.177***	-0.116***	-0.041***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)
KP F-stat	4,261,082.6	4,131,886.6	1,743,145.3	1,696,425.1	1,645,040.1	988,652.7
N	113,319,243	113,319,243	113,319,243	113,291,324	113,291,315	109,641,239
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographics	No	Yes	Yes	Yes	Yes	Yes
Region FE	No	No	Yes	Yes	Yes	No
Industry FE	No	No	No	Yes	No	No
Industry × Occupation FE	No	No	No	No	Yes	No
Firm × Occupation FE	No	No	No	No	No	Yes

Notes: The table reports racial wage gaps based on employer-ascribed race when using CadÚnico self-declared race as racial cue. All columns include year fixed-effects. The first column always shows the unconditional relationship (apart from year fixed-effects), and the remaining columns progressively add controls. Panel A shows coefficient estimates of OLS regressions of log hourly wage on employer-ascribed race. Panel B shows reduced form regressions of log hourly wage on self-declared race. Panel C presents the first-stage coefficient from regressing employer-ascribed race on self-declared race. Finally, Panel D shows 2SLS estimates of regressing log hourly wage on employer-ascribed race, instrumented by self-declared race. Standard errors clustered at the individual level are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.