Online Appendix for the Author's Websites Only

Multinationals, Monopsony, and Local Development:
Evidence from the United Fruit Company

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Diana Van Patten
Princeton University

Esteban Méndez-Chacón
Central Bank of Costa Rica

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K Additional Robustness Checks

Our additional robustness checks presented in this section include: running our regressions at different distances from the boundary, changing the specifications of the latitude-longitude polynomial, and varying the control variables.

K.1 The River vs. the Boundary

In this subsection we present our average and yearly results restricting our observations to units on the "wrong side" of the river that closely follows our boundary. Our results hold even within these narrower neighborhoods.

Table K.1: Average UFCo Effect–River Test: Restricted 1 km

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.100	-0.014	-0.085	-0.084	-0.149	-0.284
	(0.034)***	(0.030)	(0.030)***	(0.024)***	(0.046)***	(0.074)***
	[0.022]***	[0.010]	[0.018]***	[0.019]***	[0.024]***	[0.027]***
Adjusted R^2	0.144	0.224	0.274	0.031	0.157	0.269
Observations	1,937	1,937	1,937	1,937	1,937	1,937
Clusters	44	44	44	44	44	44
Mean	0.176	0.060	0.235	0.200	0.481	0.670

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to census block located within 1 km of the UFCo boundary. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude.

Table K.2: Dynamics of the UFCo-Effect Across Years-River Test (Restricted 1 km)

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.140	-0.271	-0.090	-0.117	-0.202	-0.619
	$(0.041)^{***}$	$(0.061)^{***}$	$(0.049)^{*}$	$(0.047)^{**}$	$(0.072)^{***}$	$(0.126)^{***}$
	$[0.031]^{***}$	$[0.065]^{***}$	[0.064]	$[0.046]^{**}$	$[0.093]^{**}$	$[0.148]^{***}$
$UFCo_{1984}$	0.017	0.034	-0.126	-0.130	-0.123	-0.273
	(0.065)	(0.027)	$(0.047)^{***}$	$(0.043)^{***}$	$(0.050)^{**}$	$(0.132)^{**}$
	[0.060]	[0.018]	$[0.048]^{***}$	$[0.045]^{***}$	[0.044]	$[0.133]^{**}$
$UFCo_{2000}$	-0.083	0.010	-0.084	0.001	-0.104	-0.156
	$(0.039)^{**}$	(0.027)	$(0.021)^{***}$	(0.029)	$(0.056)^{*}$	$(0.088)^{*}$
	$[0.044]^{*}$	[0.028]	$[0.018]^{***}$	[0.039]	[0.069]	[0.112]
$UFCo_{2011}$	-0.073	-0.015	-0.104	-0.093	-0.181	-0.285
	$(0.037)^{*}$	(0.022)	$(0.041)^{**}$	$(0.043)^{**}$	$(0.047)^{***}$	$(0.093)^{***}$
	$[0.026]^{***}$	[0.015]	$[0.050]^{**}$	$[0.039]^{**}$	$[0.110]^{***}$	$[0.061]^{***}$
Adjusted R^2	0.146	0.239	0.273	0.025	0.156	0.267
Observations	1,937	1,937	1,937	1,937	1,937	1,937
Clusters	44	44	44	44	44	44
$Mean_{1973}$	0.491	0.396	0.455	0.252	0.829	1.595
$Mean_{1984}$	0.265	0.053	0.357	0.186	0.563	0.861
$Mean_{2000}$	0.150	0.037	0.255	0.208	0.497	0.650
$Mean_{2011}$	0.134	0.018	0.164	0.197	0.405	0.513

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to census block located within 1 km of the UFCo boundary. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

K.2 Eliminating Observations Close to the Boundary

We present our main results after eliminating the top 5% and 10% of households that are closest to the border on each side.

Table K.3: Average UFCo Effect– Eliminating Observations Close to the Boundary

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
			Omitting the Top 5%			
UFCo	-0.105	-0.025	-0.049	-0.067	-0.131	-0.247
	(0.030)***	(0.020)	(0.026)**	(0.029)**	(0.034)***	(0.063)***
	[0.039]***	[0.018]	[0.017]***	[0.027]**	[0.028]***	[0.064]***
Adjusted R^2	0.105	0.181	0.240	0.015	0.117	0.205
Observations	8,654	8,654	8,654	8,654	8,654	8,654
Clusters	191	191	191	191	191	191
Mean	0.172	0.059	0.231	0.198	0.475	0.659
			Omitting the Top 10%			
UFCo	-0.101	-0.012	-0.052	-0.060	-0.122	-0.225
	(0.033)***	(0.022)	(0.029)*	(0.029)**	(0.036)***	(0.067)***
	[0.039]***	[0.024]	[0.0218]***	[0.021]***	[0.053]***	[0.050]***
Adjusted R^2	0.136	0.186	0.235	0.015	0.111	0.200
Observations	8,147	8,147	8,147	8,147	8,147	8,147
Clusters	181	181	181	181	181	181
Mean	0.170	0.059	0.231	0.199	0.476	0.660

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample omits the top 5% and 10% observations closest to the study boundary on each side, respectively. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

K.3 Varying Specifications for the Latitude-Longitude Polynomial

In our original results, we used a linear polynomial in latitude and longitude. In this section, we test the robustness of our results to different specifications for the RD polynomial. In particular, we use a quadratic polynomial and a linear polynomial in latitude, longitude, and distance to the boundary.

K.3.1 Quadratic Latitude-Longitude Polynomial

Table K.4: Average UFCo Effect-Quadratic Latitude-Longitude Polynomial

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.107	-0.022	-0.058	-0.070	-0.138	-0.257
	(0.027)***	(0.018)	(0.022)***	(0.026)***	(0.030)***	(0.057)***
	[0.034]***	[0.015]	[0.009]***	[0.025]***	[0.025]***	[0.055]***
Adjusted R^2	0.102	0.169	0.239	0.015	0.116	0.200
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.670

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a quadratic polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K.5: Dynamics Across Years-Quadratic Latitude-Longitude Polynomial

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.230	-0.292	-0.057	-0.139	-0.258	-0.718
	(0.065)***	(0.077)***	(0.042)***	(0.046)***	(0.068)***	(0.154)***
	[0.070]***	[0.076]***	[0.030]*	[0.049]***	[0.055]***	[0.148]***
$UFCo_{1984}$	-0.073	0.009	-0.088	-0.081	-0.101	-0.233
	(0.049)	(0.028)	(0.027)***	(0.035)**	(0.048)**	(0.093)**
	[0.035]**	[0.012]	[0.019]***	[0.029]***	[0.032]***	[0.061]***
$UFCo_{2000}$	-0.097	0.017	-0.062	-0.152	-0.136	-0.239
	(0.032)***	(0.018)	(0.022)***	(0.028)***	(0.038)***	(0.061)***
	[0.033]***	[0.016]	[0.009]***	[0.025]***	[0.032]***	[0.054]***
$UFCo_{2011}$	-0.093	0.015	-0.040	-0.024	-0.108	-0.142
	(0.031)***	(0.017)	(0.029)	(0.035)	(0.038)***	(0.062)**
	[0.034]***	[0.018]	[0.025]	[0.051]	[0.049]**	[0.087]
Adjusted R^2	0.104	0.199	0.239	0.017	0.117	0.207
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a quadratic polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

K.3.2 Linear Polynomial in Latitude, Longitude and Distance to the Boundary

Table K.6: Contemporary Household Outcomes: Average UFCo Effect-Linear Polynomial in Latitude, Longitude and Distance to the Boundary

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.101	-0.022	-0.053	-0.065	-0.132	-0.242
	(0.026)***	(0.017)	(0.022)**	(0.024)***	(0.030)***	(0.055)***
	[0.031]***	[0.015]	[0.016]***	[0.025]***	[0.026]***	[0.053]***
Adjusted R^2	0.102	0.169	0.238	0.015	0.115	0.199
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.658

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude, longitude, and distance to the UFCo boundary.We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K.7: Contemporary Household Outcomes: Dynamics Across Years-Linear Polynomial in Latitude, Longitude and Distance to the Boundary

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.220	-0.279	-0.064	-0.134	-0.250	-0.670
	(0.065)***	(0.078)***	(0.045)***	(0.048)***	(0.068)***	(0.159)***
	[0.066]***	[0.077]***	[0.034]	[0.047]***	[0.054]***	[0.147]***
$UFCo_{1984}$	-0.066	0.009	-0.084	-0.075	-0.093	-0.214
	(0.047)	(0.028)	(0.028)***	(0.035)**	(0.047)**	(0.091)**
	[0.031]**	[0.014]	[0.022]***	[0.031]**	[0.032]***	[0.064]***
$UFCo_{2000}$	-0.090	0.017	-0.057	-0.090	-0.144	-0.219
	(0.031)**	(0.017)	(0.058)***	(0.027)***	(0.036)***	(0.058)***
	[0.031]***	[0.015]	[0.014]***	[0.025]***	[0.032]***	[0.055]***
$UFCo_{2011}$	-0.088	0.019	-0.038	-0.018	-0.102	-0.125
	(0.031)***	(0.016)	(0.030)	(0.035)	(0.038)***	(0.063)**
	[0.031]***	[0.019]	[0.029]	[0.052]	[0.050]**	[0.091]
Adjusted R^2	0.104	0.198	0.238	0.017	0.117	0.206
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude, longitude, and distance to the UFCo boundary.
We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

K.4 Varying the Controls

K.4.1 No Demographic Controls

Table K.8: Average UFCo Effect-No Demographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.108	-0.020	-0.082	-0.068	-0.150	-0.278
	(0.027)***	(0.017)	(0.025)***	(0.025)***	(0.033)***	(0.063)***
	[0.033]***	[0.014]	[0.010]***	[0.023]***	[0.025]***	[0.056]***
Adjusted R^2	0.071	0.162	0.044	0.003	0.058	0.111
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.658

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K.9: Contemporary Household Outcomes: Dynamics Across Years-No Demographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.229	-0.286	-0.082	-0.136	-0.270	-0.732
	(0.064)***	(0.079)***	(0.058)	(0.049)**	(0.069)***	(0.166)***
	[0.066]***	[0.077]***	[0.049]*	[0.050]***	[0.056]***	[0.154]***
$UFCo_{1984}$	-0.067	0.010	-0.086	-0.075	-0.095	-0.219
	(0.050)	(0.027)	(0.035)**	(0.036)**	(0.055)	(0.107)**
	[0.040]*	[0.015]	[0.025]***	[0.031]**	[0.037]***	[0.077]***
$UFCo_{2000}$	-0.098	0.020	-0.091	-0.092	-0.166	-0.262
	(0.030)***	(0.017)	(0.027)***	(0.027)***	(0.039)***	(0.062)***
	[0.033]***	[0.015]	[0.015]***	[0.024]***	[0.034]***	[0.058]***
$UFCo_{2011}$	-0.095	0.021	-0.072	-0.022	-0.124	-0.168
	(0.031)***	(0.016)	(0.029)**	(0.034)	(0.038)***	(0.063)***
	[0.032]***	[0.018]	[0.019]***	[0.050]	[0.044]***	[0.078]**
Adjusted R^2	0.073	0.192	0.044	0.005	0.059	0.118
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

K.4.2 No Geographic Controls

Table K.10: Average UFCo Effect-No Geographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.105	-0.021	-0.054	-0.067	-0.137	-0.247
	(0.026)***	(0.017)	(0.022)**	(0.024)***	(0.030)***	(0.057)***
	[0.031]***	[0.016]	[0.018]***	[0.023]***	[0.025]***	[0.052]***
Adjusted R^2	0.101	0.169	0.238	0.015	0.115	0.199
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.658

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K.11: Contemporary Household Outcomes: Dynamics Across Years-No Geographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.227	-0.289	-0.055	-0.136	-0.255	-0.708
	$(0.062)^{***}$	$(0.079)^{***}$	(0.045)	$(0.046)^{***}$	$(0.067)^{***}$	$(0.158)^{***}$
	$[0.064]^{***}$	$[0.078]^{***}$	[0.035]	$[0.048]^{***}$	$[0.053]^{***}$	$[0.146]^{***}$
$UFCo_{1984}$	-0.072	0.009	-0.084	-0.077	-0.098	-0.225
	(0.047)	(0.028)	$(0.027)^{***}$	$(0.035)^{**}$	$(0.046)^{**}$	$(0.092)^{**}$
	$[0.036]^{**}$	[0.016]	$[0.023]^{***}$	$[0.031]^{**}$	$[0.034]^{***}$	$[0.069]^{***}$
$UFCo_{2000}$	-0.094	0.017	-0.057	-0.089	-0.147	-0.224
	$(0.031)^{***}$	(0.017)	$(0.023)^{**}$	$(0.026)^{***}$	$(0.037)^{***}$	$(0.059)^{***}$
	$[0.029]^{***}$	[0.017]	$[0.018]^{***}$	$[0.024]^{***}$	$[0.030]^{***}$	$[0.050]^{***}$
$UFCo_{2011}$	-0.092	0.017	-0.037	-0.020	-0.110	-0.137
	$(0.030)^{***}$	(0.017)	(0.029)	(0.035)	$(0.037)^{***}$	$(0.062)^{**}$
	$[0.029]^{***}$	[0.019]	[0.030]	[0.046]	$[0.047]^{**}$	[0.085]
Adjusted R^2	0.103	0.199	0.238	0.017	0.117	0.206
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

K.4.3 No Demographic or Geographic Controls

Table K.12: Average UFCo Effect-No Demographic or Geographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.111	-0.019	-0.083	-0.069	-0.154	-0.281
	(0.027)***	(0.017)	(0.025)***	(0.025)***	(0.034)***	(0.064)***
	[0.034]***	[0.016]	[0.011]***	[0.022]***	[0.025]***	[0.057]***
Adjusted R^2	0.071	0.162	0.044	0.003	0.058	0.111
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.658

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table K.13: Dynamics Across Years-No Demographic or Geographic Controls

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.232	-0.293	-0.055	-0.134	-0.251	-0.709
	$(0.064)^{***}$	$(0.077)^{***}$	(0.045)	$(0.046)^{***}$	$(0.067)^{***}$	$(0.155)^{***}$
	$[0.066]^{***}$	$[0.076]^{***}$	[0.034]	$[0.049]^{***}$	$[0.054]^{***}$	$[0.145]^{***}$
$UFCo_{1984}$	-0.071	0.009	-0.084	-0.076	-0.094	-0.218
	(0.050)	(0.027)	$(0.028)^{***}$	$(0.035)^{**}$	(0.047)	$(0.092)^{**}$
	[0.033]	[0.013]	$[0.024]^{***}$	$[0.031]^{**}$	$[0.035]^{***}$	$[0.066]^{***}$
$UFCo_{2000}$	-0.102	0.017	-0.055	-0.090	-0.143	-0.217
	$(0.030)^{***}$	(0.017)	$(0.022)^{**}$	$(0.027)^{***}$	$(0.037)^{***}$	$(0.059)^{***}$
	$[0.031]^{***}$	[0.016]	$[0.014]^{***}$	$[0.026]^{***}$	$[0.032]^{***}$	$[0.054]^{***}$
$UFCo_{2011}$	-0.099	0.017	-0.038	-0.019	-0.102	-0.128
	$(0.030)^{***}$	(0.017)	(0.029)	(0.035)	$(0.038)^{***}$	$(0.064)^{***}$
	$[0.030]^{***}$	[0.019]	[0.029]	[0.053]	$[0.051]^{***}$	[0.093]
Adjusted R^2	0.073	0.199	0.238	0.017	0.058	0.206
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

L Méndez & Trejos Index

In this section, we re-estimate equations (1) and (2) using the Unsatisfied Basic Needs (UBN) originally proposed by Méndez and Trejos (2004) for the 2000 and 2011 censuses. We find that our main message is unchanged.

Table L.14: Average UFCo Effect-Méndez & Trejos Index

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.086	-0.023	-0.054	-0.020	-0.103	-0.184
	(0.030)***	(0.050)	(0.026)**	(0.018)	(0.043)**	(0.077)**
	[0.034]**	[0.031]	[0.025]**	[0.014]	[0.035]***	[0.069]***
Adjusted R^2	0.018	0.025	0.147	0.025	0.075	0.091
Observations	7,016	7,016	7,016	7,016	7,016	7,016
Clusters	166	166	166	166	166	166
Mean	0.129	0.023	0.188	0.197	0.420	0.536

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table L.15: Dynamics Across Years-Méndez & Trejos Index

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{2000}$	-0.085	-0.012	-0.062	-0.038	-0.104	-0.196
	(0.036)**	(0.066)	(0.023)***	(0.019)***	(0.052)**	(0.102)*
	[0.037]**	[0.051]	[0.025]***	[0.016]**	[0.042]**	[0.083]**
$UFCo_{2011}$	-0.087	-0.032	-0.048	-0.006	-0.103	-0.104
	(0.033)***	(0.049)	(0.031)	(0.020)	(0.045)**	(0.075)**
	[0.037]**	[0.030]	[0.032]	[0.019]	[0.041]**	[0.077]**
Adjusted R^2	0.018	0.025	0.147	0.025	0.075	0.091
Observations	7,016	7,016	7,016	7,016	7,016	7,016
Clusters	166	166	166	166	166	166
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

M Distance to a Railroad

In this section, we include as a control variable the nearest distance of each census block centroid to a railroad. Our results suggest that the UFCo effect is not exclusively a product of the provision of railroads.

Table M.16: Average UFCo Effect-Distance to a Railroad

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.103	-0.023	-0.053	-0.065	-0.132	-0.244
	(0.026)***	(0.017)	(0.022)**	(0.025)***	(0.030)***	(0.057)***
	[0.031]***	[0.017]	[0.016]***	[0.025]***	[0.027]***	[0.055]***
Adjusted R^2	0.101	0.169	0.238	0.015	0.115	0.199
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
Mean	0.171	0.058	0.232	0.199	0.475	0.658

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include a control for distance to a railroad; geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table M.17: Dynamics Across Years-Distance to a Railroad

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.228	-0.297	-0.055	-0.134	-0.252	-0.709
	(0.062)***	(0.077)***	(0.045)	(0.046)***	(0.067)***	(0.155)***
	[0.066]***	[0.076]***	[0.034]**	[0.049]***	[0.054]***	[0.145]***
$UFCo_{1984}$	-0.068	0.009	-0.084	-0.076	-0.094	-0.218
	(0.048)	(0.027)	(0.028)***	(0.035)**	(0.047)**	(0.092)**
	[0.033]**	[0.013]	[0.024]***	[0.031]**	[0.035]***	[0.066]***
$UFCo_{2000}$	-0.089	0.017	-0.055	-0.090	-0.143	-0.217
	(0.031)***	(0.017)	(0.022)**	(0.027)***	(0.037)***	(0.059)***
	[0.031]***	[0.016]	[0.014]***	[0.026]***	[0.032]***	[0.054]***
$UFCo_{2011}$	-0.090	0.018	-0.038	-0.019	-0.102	-0.128
	(0.031)***	(0.017)	(0.029)	(0.035)	(0.038)***	(0.064)**
	[0.030]***	[0.019]	[0.029]	[0.053]	[0.051]**	[0.093]
Adjusted R^2	0.104	0.199	0.238	0.017	0.117	0.206
Observations	9,179	9,179	9,179	9,179	9,179	9,179
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.462	0.353	0.393	0.208	0.777	1.416
$Mean_{1984}$	0.209	0.060	0.362	0.201	0.579	0.832
$Mean_{2000}$	0.145	0.031	0.230	0.178	0.452	0.584
$Mean_{2011}$	0.118	0.016	0.156	0.211	0.396	0.501

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include a control for distance to a railroad; geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

N Assessing the Impact of Migration

In this section we run our regressions on subsamples of households where (i) nobody migrated, and (ii) the head of household did not migrate; both within 5 years of each census. Our results persist, indicating that migration is not driving our estimations. It is also worth noting that migration rates between UFCo and non-UFCo census-blocks are balanced; in particular, Table N.18 compares migration rates in UFCo and non-UFCo locations.

Table N.18: Difference in Migration Rates in UFCo and Non-UFCo Census-Blocks

	(1)
UFCo	-0.006
	(0.014)
Adjusted R^2	0.072
Observations	206
Clusters	206
Mean	0.092

Notes: Robust standard errors, adjusted for clustering by census block, are in parentheses. The regression includes census fixed effects. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

N.0.1 No member migrated within 5 years of the census.

Table N.19: Average UFCo Effect-Any Migrant

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.114	-0.018	-0.066	-0.074	-0.151	-0.272
	(0.027)***	(0.017)	(0.024)***	(0.026)***	(0.030)***	(0.061)***
	[0.034]***	[0.017]	[0.015]***	[0.020]***	[0.021]***	[0.044]***
Adjusted R^2	0.091	0.171	0.232	0.012	0.109	0.188
Observations	6,855	6,855	6,855	6,855	6,855	6,855
Clusters	206	206	206	206	206	206
Mean	0.160	0.054	0.221	0.206	0.467	0.641

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to households whose members are all non-migrants. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table N.20: Dynamics of the UFCo-Effect Across Years-Any Migrant

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.273	-0.271	-0.096	-0.189	-0.292	-0.829
	$(0.055)^{***}$	$(0.077)^{***}$	$(0.049)^{*}$	$(0.040)^{***}$	$(0.073)^{***}$	$(0.169)^{***}$
	$[0.062]^{***}$	$[0.078]^{***}$	$[0.030]^{***}$	$[0.041]^{***}$	$[0.065]^{***}$	$[0.156]^{***}$
$UFCo_{1984}$	-0.087	-0.000	-0.107	-0.093	-0.139	-0.288
	$(0.046)^{*}$	(0.028)	$(0.033)^{***}$	$(0.042)^{**}$	$(0.049)^{***}$	$(0.092)^{***}$
	$[0.043]^{**}$	[0.016]	$[0.024]^{***}$	$[0.038]^{**}$	$[0.032]^{***}$	$[0.067]^{***}$
$UFCo_{2000}$	-0.090	0.011	-0.051	-0.105	-0.150	-0.235
	$(0.030)^{***}$	(0.017)	$(0.026)^{**}$	$(0.031)^{***}$	$(0.036)^{***}$	$(0.059)^{***}$
	$[0.029]^{***}$	[0.018]	$[0.020]^{***}$	$[0.029]^{***}$	$[0.027]^{***}$	$[0.046]^{***}$
$UFCo_{2011}$	-0.103	0.018	-0.055	0.013	-0.119	-0.153
	$(0.031)^{***}$	(0.016)	(0.033)	(0.035)	$(0.036)^{***}$	$(0.061)^{**}$
	$[0.032]^{***}$	[0.018]	[0.029]	[0.044]	$[0.041]^{**}$	$[0.072]^{**}$
Adjusted R^2	0.094	0.193	0.232	0.016	0.110	0.197
Observations	6,855	6,855	6,855	6,855	6,855	6,855
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.457	0.376	0.371	0.227	0.777	1.431
$Mean_{1984}$	0.212	0.061	0.369	0.232	0.604	0.875
$Mean_{2000}$	0.135	0.033	0.224	0.179	0.446	0.571
$Mean_{2011}$	0.116	0.017	0.154	0.213	0.395	0.500

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to households whose members are all non-migrants. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

N.0.2 Head-of-household did not migrate within 5 years of the census

Table N.21: Average UFCo Effect-Head Migrant

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
UFCo	-0.115	-0.018	-0.070	-0.080	-0.157	-0.282
	(0.026)***	(0.015)	(0.025)***	(0.025)***	(0.029)***	(0.056)***
	[0.031]***	[0.015]	[0.018]***	[0.023]***	[0.023]***	[0.045]***
Adjusted R^2	0.096	0.174	0.230	0.013	0.112	0.188
Observations	7,555	7,555	7,555	7,555	7,555	7,555
Clusters	206	206	206	206	206	206
Mean	0.165	0.054	0.229	0.201	0.473	0.649

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to households whose head of household is non-migrant. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table N.22: Dynamics of the UFCo-Effect Across Years-Head Migrant

	Probability of UBN in				Probability	Total number
	Housing	Health	Education	Consumption	of being poor	of UBN
	(1)	(2)	(3)	(4)	(5)	(6)
$UFCo_{1973}$	-0.253	-0.277	-0.101	-0.178	-0.307	-0.809
	(0.061)***	(0.078)***	(0.047)**	(0.036)***	(0.069)***	(0.158)***
	[0.067]***	[0.081]***	[0.031]***	[0.040]***	[0.060]***	[0.149]***
$UFCo_{1984}$	-0.091	-0.000	-0.106	-0.105	-0.143	-0.302
	(0.047)*	(0.026)	(0.033)***	(0.040)***	(0.045)***	(0.089)***
	[0.037]**	[0.014]	[0.021]***	[0.039]***	[0.033]***	[0.065]***
$UFCo_{2000}$	-0.094	0.014	-0.058	-0.113	-0.157	-0.251
	(0.030)***	(0.017)	(0.024)**	(0.029)***	(0.035)***	(0.056)***
	[0.028]***	[0.019]	[0.020]**	[0.027]***	[0.028]***	[0.052]***
$UFCo_{2011}$	-0.104	0.019	-0.056	-0.019	-0.123	-0.159
	(0.031)***	(0.015)	(0.032)*	(0.033)	(0.036)***	(0.061)***
	[0.029]***	[0.018]	[0.032]	[0.048]	[0.046]***	[0.081]*
Adjusted R^2	0.099	0.199	0.230	0.016	0.114	0.198
Observations	7,555	7,555	7,555	7,555	7,555	7,555
Clusters	206	206	206	206	206	206
$Mean_{1973}$	0.464	0.367	0.377	0.210	0.787	1.418
$Mean_{1984}$	0.213	0.057	0.379	0.219	0.603	0.868
$Mean_{2000}$	0.141	0.031	0.231	0.176	0.451	0.579
$Mean_{2011}$	0.118	0.017	0.159	0.212	0.398	0.505

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. The sample is restricted to households whose head of household is non-migrant. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

O Verifying that Results are not Driven by Persistence of Better Agricultural Abilities

A concern might be that the higher productivity and better infrastructure in the UFCo attracted people who were ex-ante better at growing crops; and that what we are capturing is the persistence of these abilities across generations. Therefore, in this section, we compare the UFCo effect in households that worked in agricultural activities with the effect on households devoted to other non-agricultural enterprises, and find no significant difference in the UFCo effect.

Table O.23 compares our results for households where a member is employed in agricultural activities against all other households. Table O.24 shows how households whose head works in agricultural activities deliver equivalent estimates to households where the head is employed in other activities.

Table O.23: Average UFCo Effect-Comparison of households where any member is engaged in the agriculture sector versus other economic sectors

		Probability of UBN in				Probability	Total number
		Housing	Health	Education	Consumption	of being poor	of UBN
		(1)	(2)	(3)	(4)	(5)	(6)
Agricultural Sector	UFCo	-0.102	-0.030	-0.046	-0.063	-0.134	-0.242
		(0.027)***	(0.178)*	(0.024)*	(0.026)**	(0.032)***	(0.057)***
		[0.027]***	[0.014]	[0.0203]**	[0.023]***	[0.020]***	[0.045]***
	Adjusted R^2	0.123	0.187	0.246	0.044	0.152	0.245
	Observations	6,449	6,449	6,449	6,449	6,449	6,449
	Clusters	206	206	206	206	206	206
	Mean	0.180	0.067	0.263	0.187	0.489	0.697
Non-Agricultural Sector	UFCo	-0.093	0.002	-0.077	-0.061	-0.118	-0.230
		(0.039)**	(0.024)	(0.032)**	(0.049)	(0.051)**	(0.094)**
		[0.047]**	[0.025]	[0.025]***	[0.025]**	[0.039]***	[0.080]***
	Adjusted R^2	0.048	0.089	0.169	0.018	0.045	0.068
	Observations	2,730	2,730	2,730	2,730	2,730	2,730
	Clusters	199	199	199	199	199	199
	Mean	0.148	0.035	0.157	0.226	0.442	0.567
P-value for difference		0.798	0.170	0.376	0.971	0.774	0.899

Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. The p-values in the last row are for the test of the hypothesis that the UFCo coefficient is the same between the two groups, and are clustered at the census-block level. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

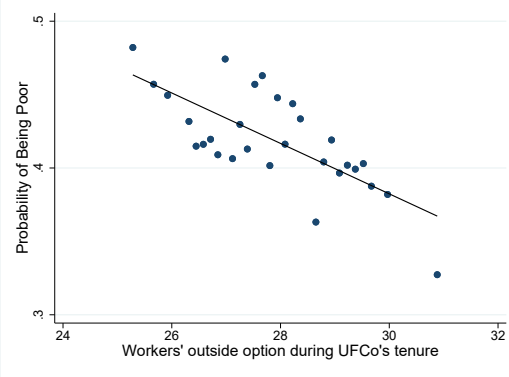
Table O.24: Average UFCo Effect-Comparison of households where head of household is engaged in the agriculture sector versus other economic sectors

		Probability of UBN in				Probability	Total number
		Housing	Health	Education	Consumption	of being poor	of UBN
		(1)	(2)	(3)	(4)	(5)	(6)
Agricultural Sector	UFCo	-0.092	-0.033	-0.038	-0.048	-0.115	-0.212
		(0.029)***	(0.020)	(0.026)	(0.028)*	(0.035)***	(0.063)***
		[0.025]***	[0.014]**	[0.026]	[0.022]**	[0.026]***	[0.057]***
	Adjusted R^2	0.128	0.195	0.252	0.044	0.155	0.253
	Observations	5,574	5,574	5,574	5,574	5,574	5,574
	Clusters	206	206	206	206	206	206
	Mean	0.177	0.071	0.254	0.194	0.484	0.695
Non-Agricultural Sector	UFCo	-0.118	0.002	-0.085	-0.090	-0.160	-0.296
		(0.033)***	(0.017)	(0.030)***	(0.039)**	(0.039)***	(0.066)***
		[0.045]***	[0.021]	[0.020]***	[0.027]***	[0.025]***	[0.062]***
	Adjusted R^2	0.064	0.089	0.209	0.012	0.067	0.103
	Observations	3,605	3,605	3,605	3,605	5,574	3,605
	Clusters	203	203	203	203	203	203
	Mean	0.166	0.039	0.200	0.208	0.467	0.612
P-value for difference		0.473	0.098	0.188	0.366	0.334	0.248

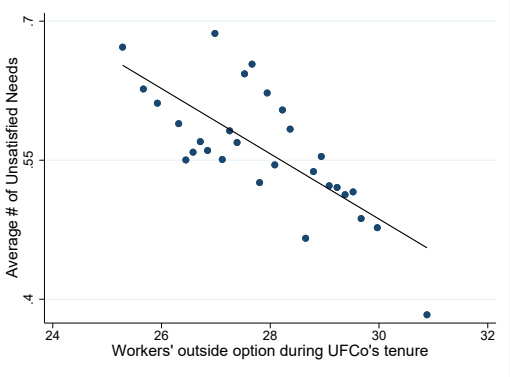
Notes: UBN= Unsatisfied Basic Need. The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls (slope, elevation, temperature); demographic controls for the number of adults, children, and infants in the household; census fixed effects, and a linear polynomial in latitude and longitude. The p-values in the last row are for the test of the hypothesis that the UFCo coefficient is the same between the two groups, and are clustered at the census-block level. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

P Outside Options in 1973 and Current Outcomes

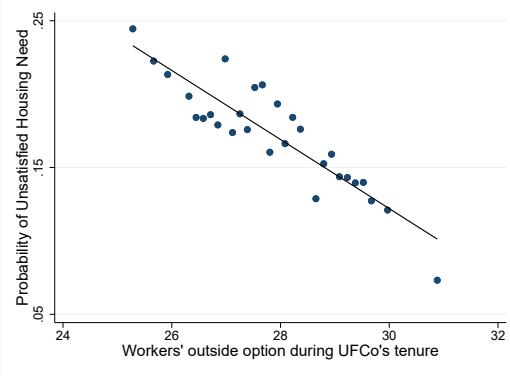
Figure P.1: Outside Options during UFCo's Tenure and Current Outcomes



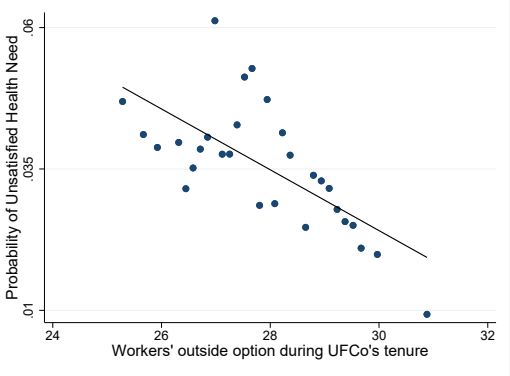
(a) Probability of Being Poor



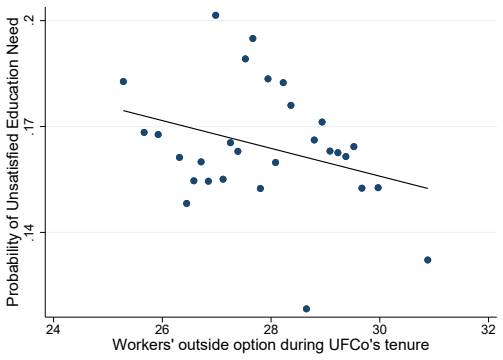
(b) Total Number of Unsatisfied Needs



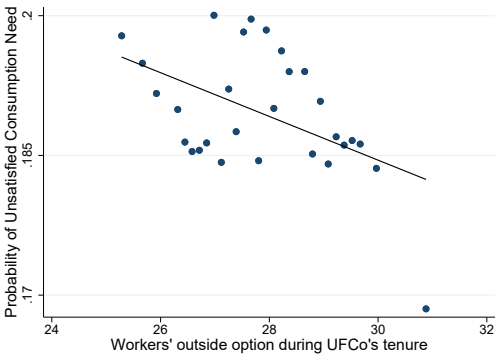
(c) Housing Dimension



(d) Health Dimension



(e) Education Dimension



(f) Consumption Dimension

Notes: Figure P.1 shows results from Table 4 graphically. In every case, higher outside options in 1973 within the UFCo are associated with better current outcomes.

Q Historical Details to Support the Assumptions in the General Equilibrium Model

Monopsony in the UFCo Region: Between 1912 and 1976, the UFCo employed, on average, 7% of the Costa Rican total agricultural labor force. The UFCo was also the only employer within its landholdings. To measure the degree of monopsony of the UFCo, we analyze how changes in the company's employment correlate with changes in world banana prices during the period 1912 to 1976. Namely, we consider the following regression

$$\ln(\textit{UFCo employment}_t) = \alpha + \beta \ln(P_{Bt}^W) + \varepsilon_t, \tag{8}$$

where P_{Bt}^W stands for the world banana price at year t. The coefficient β measures the degree of monopsony. Assuming decreasing returns to scale, under perfect competition $\beta > 1$, while under monopsony $\beta < 1$.[67]

We estimate $\beta = 0.397$ with a robust standard error of 0.089 (thus, the coefficient is significant at the 1% level). The result implies that the company indeed faced an upward-sloping labor supply, i.e., the firm could influence the price of labor. Therefore, it provides support to the assumption that the UFCo was a monopolist, the sole employer within its concession.

Perfect Competition in the Rest of the Country: Aside from bananas, most of the agricultural production during the 20th century in Costa Rica consisted of coffee. Coffee was produced predominantly in small farms, owned by many producers. According to the 1935 Coffee Census, there were 25,477 farms producing coffee and 21,731 producers, on average, 1.17 farms per owner. The coffee plantations were mostly small: 93.81% had an extension below five hectares. We use the Herfindahl-Hirschman Index (HHI) to measure coffee production concentration. The HHI is 39.03, suggesting a competitive industry (HHI below 100). Moreover, the 1935 Coffee Census reported 25,472 persons permanently employed in coffee production (on average, one worker per farm), approximately 23% of the Costa Rican total agricultural labor force. This historical evidence supports our assumption of perfect competition in the rest of the country.

Local Government Budget Constraints: The Costa Rican government during the first half of the 20th century had very limited access to capital markets. In the 1870s, the government entered into $15 million of external debt with an 18% interest rate (sovereign bonds sold in England and France). At the time, the service of this external debt represented between 20% and 50% of the value of exports (Marichal, 1988). This burden proved to be too large, and in 1874 the first default on payments

[67] For the intuition behind this result, consider the case of an increase in the price of the final product. The increase in the price of the final product increases the value of the marginal product of labor. Therefore, the optimal response for the firm is to adjust by increasing employment. Under perfect competition, the firm cannot influence wages, and because of the decreasing returns to scale, the change in employment must be more than proportional to the change in the price of the final product. Under monopsony, the firm influences wages, then the increase in labor demand will increase wages, which offsets the initial increase in prices. Therefore, the change in labor is less than proportional to the change in price. The result holds regardless if the firm has market power in the final product market or does not.

occurred. At this time, debt was restructured with a longer maturity and a higher interest rate. A similar story repeated itself in 1901 and 1933. By this time, the debt had increased to $21 million of external debt, as new debt emitted to cover delayed interest payments. The country then entered a moratorium that lasted more than a decade (1935-1946), with payments being defaulted throughout the period. Therefore, the very high loan in the late 1800s and the local inability to serve the interest of this debt, incurred a penalty on the interest rates and borrowing ability.

According to data from Reinhart and Rogoff (2009), between 1899 and 1984 (UFCo tenure), Costa Rica had four episodes of external and domestic debt default or restructuring.[68] The country was in a state of default or restructuring during 37 of the 86 years that cover the period. In particular, for the period that we calibrate our model (1950 to 1973), the country went through two episodes of default, being in a state of default during four of the 24 years. Therefore, we assume that the government has to finance local amenities using collected taxes and is intertemporally constrained.

R Small Area Estimation Methodology

In this section, we use the small area estimation methodology of Elbers et al. (2003) as an alternative to compute household income and poverty status. The methodology imputes income or consumption for each household in the population census, using a prediction model obtained from a household survey. A series of studies employ the method to generate measures of consumption, income, or poverty when is not directly surveyed at a more disaggregated level (e.g., Baird et al. 2013; Enamorado et al. 2016; Asher and Novosad 2020).

To apply the small area estimation methodology we use the 2011 Census and the 2011 National Household Survey (*Encuesta Nacional de Hogares (ENAHO)*). The ENAHO is a nationally representative survey that aside from sharing some questions with the population census, contains information on household per capita income. We cannot apply the small area estimation methodology for all the census waves used through the paper because the household survey program began in 1976, and before 2000, questions that might be relevant to predict income were not asked in the surveys, such as dwelling characteristics or asset ownership.

As a first step to implement the methodology, we identified the set of explanatory variables in the ENAHO that are also found in, and strictly comparable to, the population census. Through a lasso regression, we selected the variables that improved the accuracy of the model. We then use the obtained coefficients to predict household-level per capita net income in the census microdata. We iterate the model 100 times and take the median value for income for each household. A household is considered poor if its median imputed income falls below the poverty line defined by the National Institute of Statistics and Census (*Instituto Nacional de Estadística y Censos*).[69]

[68] The year when each episode began is 1901, 1932, 1962, and 1981.

[69] The National Institute of Statistics and Census constructs the poverty line as the cost of a basic food basket and expands it to non-food components using the Orshansky coefficient. For 2011, the

Then, using as dependent variables the values for income and poverty generated by the small area estimation method, we estimate equation (1). Although we use imputed variables, their use as a dependent variable does not require additional regression adjustments (Elbers et al., 2005). For the case of income, we use its logarithm. All regressions include geographic and demographic controls, and a linear polynomial in latitude and longitude.

Table R.25 reports the results for all border segments where the characteristics balance, while Table R.26 presents the results for the census blocks in the land that was randomly assigned to the company. Overall, the results obtained through the small area estimation methodology reinforce our main message: In the households located within the former UFCo plantations the per capita net income is higher, and the probability of being poor measured using the poverty line is lower.

Table R.25: Average UFCo Effect-Small Area Estimation Methodology Along All Border Segments where Characteristics Balance

	ln Household per Capita Net Income	Probability of being poor
	(1)	(2)
UFCo	0.065	-0.105
	$(0.037)^{*}$	$(0.025)^{***}$
	[0.045]	$[0.022]^{***}$
Adjusted R^2	0.195	0.107
Observations	5,763	5,763
Clusters	185	185
Mean	11.675	0.231

Notes: The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls, demographic controls, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

poverty line for urban and rural areas per person per month was 92 122 CRC (approx. 182 USD) and 70 970 CRC (approx. 140 USD) respectively.

Table R.26: Average UFCo Effect-Small Area Estimation Methodology

	ln Household per Capita Net Income	Probability of being poor
	(1)	(2)
UFCo	0.083	-0.105
	(0.050)	(0.041)**
	[0.054]	[0.032]***
Adjusted R^2	0.221	0.105
Observations	4,021	4,021
Clusters	109	109
Mean	11.675	0.223

Notes: The unit of observation is the household. Robust standard errors, adjusted for clustering by census block, are in parentheses. Conley standard errors are in brackets. All regressions include geographic controls, demographic controls, and a linear polynomial in latitude and longitude. We denote: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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