

## ELECTRONIC SUPPLEMENTARY MATERIAL

### Employment loss in informal settlements during the Covid-19 pandemic: evidence from Chile

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**Table A1:** Techo survey households by region of residence, and relative to the national census of informal settlements

REGION	MINVU 2019	Percentage	TECHO	Percentage
Tarapacá	4,084	9	864	15
Antofagasta	7,641	16	937	17
Atacama	4,648	10	556	10
Coquimbo	1,019	2	343	6
Valparaíso	11,228	24	710	13
OHiggins	1,271	3	0	0
Maule	152	0	0	0
Biobío y Ñuble	6,747	14	543	10
La Araucanía	351	1	0	0
Los Lagos	2,090	4	155	3
Aysén	252	1	0	0
Magallanes	53	0	0	0
Metropolitana	5,991	13	1,378	25
Los Ríos	1,197	3	121	2
Arica y Parinacota	326	1	0	0
Total	47,050	100	5,607	100

Notes: The table describes the region of residence of the TECHO and MINVU survey. In 2019, the Chilean Ministry of Housing and Urbanism surveyed all informal settlements in the country and reported 47,050 households.

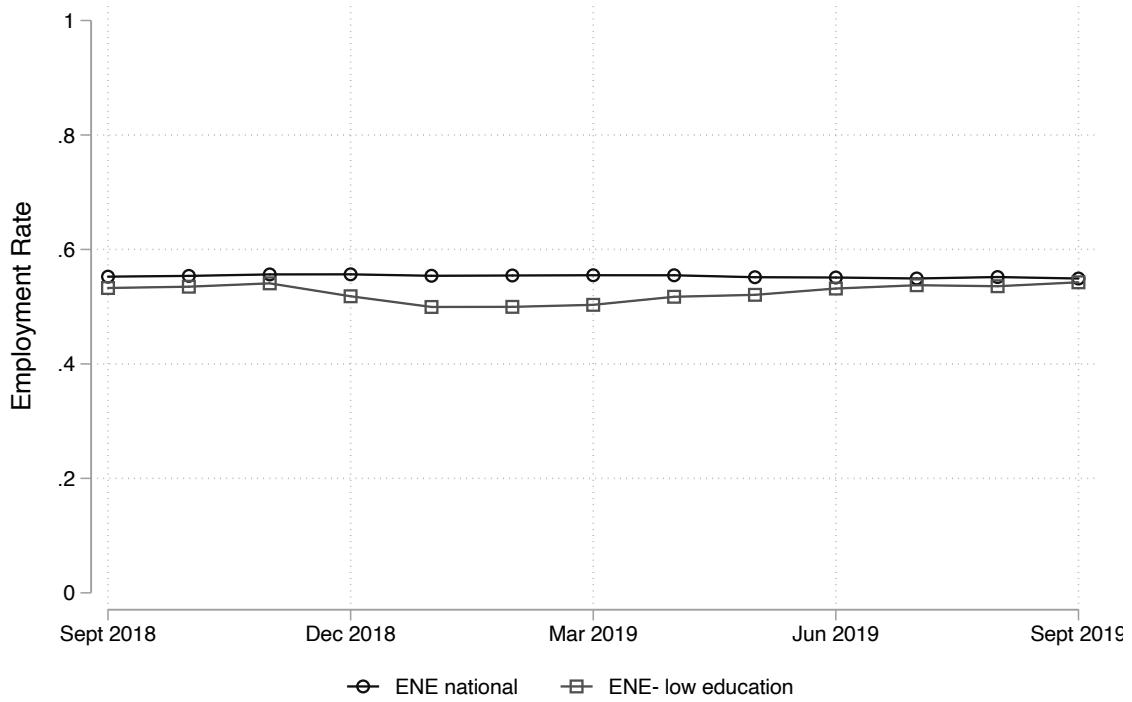
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**Table A2:** Balance across survey waves.

	All 2019 respondents	2019 respondents in wave 1	p-value <sup>†</sup>	2019 respondents in waves 1 and 2	p-value <sup>†</sup>
Employment	0.7315 (0.4432)	0.7315 (0.4434)	0.9985	0.7467 (0.4352)	0.3901
Migrant	0.3851 (0.4867)	0.3983 (0.4898)	0.435	0.3957 (0.4893)	0.5913
Persons in household	3.4024 (3.4108)	3.3292 (1.6916)	0.3024	3.3232 (1.6922)	0.3158
Children in household	1.2000 (1.2257)	1.1624 (1.1602)	0.3552	1.1806 (1.174)	0.6844
Persons >65 years in household	0.0982 (0.3931)	0.0915 (0.3497)	0.5867	0.1026 (0.376)	0.7726
Persons in household with chronic diseases	0.3531 (0.6071)	0.3998 (0.6363)	0.0334	0.4263 (0.6514)	0.0051
Adults who did not finish school in household	0.6072 (0.4884)	0.5992 (0.4903)	0.6373	0.5910 (0.492)	0.4136
Arrived to informal settlement because of economic reasons	0.6440 (0.4789)	0.6449 (0.4788)	0.957	0.6443 (0.4791)	0.9853
Previously lived in an informal settlement	0.1023 (0.3031)	0.0904 (0.287)	0.2383	0.0954 (0.2939)	0.5603
Arrived to informal settlement more than three years ago	0.4598 (0.4984)	0.4844 (0.500)	0.158	0.4985 (0.5004)	0.056
Poor quality walls	0.4298 (0.4951)	0.4361 (0.4962)	0.7164	0.4311 (0.4956)	0.9472
Poor quality ceiling	0.3998 (0.4899)	0.3933 (0.4887)	0.7046	0.3968 (0.4896)	0.8793
Poor quality floor	0.4501 (0.4975)	0.4329 (0.4957)	0.3264	0.4169 (0.4934)	0.1003
Have access to drinking water	0.7923 (0.4057)	0.8022 (0.3986)	0.4872	0.8066 (0.3952)	0.379
Have trust in neighbors	0.5465 (0.4979)	0.5537 (0.4974)	0.6781	0.5664 (0.4959)	0.3212
Observations	5,494	955		682	

Notes: <sup>†</sup>*p-values* show whether there are statistically significant differences between all 2019 respondents and 2019 respondents in wave 1 or waves 1 and 2. The Table shows the average values for the observed variables and the corresponding sample. Standard deviations are shown in parentheses. The original 2019 survey was conducted in person in September 2019. The first and second waves correspond to a random sample of the original respondents re-surveyed in May 2020 and September 2020.



**Fig. S1 Employment rate evolution during 2018-2019.** Evolution of the employment rate during 2018-2019 following similar months described in figures 1 and 2 by immigration respondent status before and after the COVID-19 pandemic period for different survey series. The figure shows the employment rate as the proportion of people employed divided by the population older than fifteen years old on each survey. From ENE monthly surveys, we plotted a subsample of respondents who reported less than complete secondary education and resided in municipalities with at least one informal settlement.

**Table A3:** Variable definition

Variable	Description	Questionnaire question
Employment status	Proportion of people that worked in the last week	Did you work for pay the last week?
<b>Collaboration with neighbors</b>		
Listens to problems	Proportion of people that offer help to their neighbors by listening to their problems	If your neighbors need help, do you generally listen to their problems (emotional support)?
Domestic work	Proportion of people that offer help to their neighbors by helping with domestic work	If your neighbors need help, do you generally help with housework, shopping, paperwork, other help.?
Money	Proportion of people that offer help to their neighbors by lending money	If your neighbors need help, do you lend them money?
Clothes and food	Proportion of people that offer in-kind help to their neighbors by cloth and food	If your neighbors need in-kind help, do you offer things they need (food, cloth, medicine, other things)?
Child care	Proportion of people that offer help to their neighbors by taking care of their children	If your neighbors need help, do you help to care for their children?
Participate	Proportion of people that participate in community activities	Do you get involved in any way in community activities (such as assemblies, bingos, other activities)?
<b>Government assistance</b>		
Unemployment insurance	Proportion of people that lost their jobs and receive unemployment insurance (anybody in the household)	Since the pandemic began, have you or any member of your household received unemployment insurance to support your income?
Cash transfer	Proportion of people that receive a government cash transfer in the pandemic, conditional on social vulnerability index (anybody in the household)	Did you or any member of your household receive cash transfers during the last months since the pandemic began to support your income?

**Table A4.** Descriptive statistics of TECHO panel survey

	2019	Wave 1	P-value <sup>†</sup>	Wave 2	P-value <sup>†</sup>
Employment	0.746 (0.436)	0.478 (0.5)	0.000	0.357 (0.479)	0.000
Women	0.575 (0.495)	0.575 (0.495)	1.000	0.575 (0.495)	1.000
Immigrant	0.443 (0.497)	0.443 (0.497)	1.000	0.431 (0.496)	1.000
Collaboration with neighbors: Listens to problems	0.643 (0.479)	0.665 (0.472)	0.130	0.687 (0.464)	0.515
Collaboration with neighbors: Domestic work	0.403 (0.491)	0.65 (0.477)	0.000	0.592 (0.492)	0.016
Collaboration with neighbors: Money	0.349 (0.477)	0.365 (0.482)	0.289	0.301 (0.459)	0.003
Collaboration with neighbors: Clothes and food	0.662 (0.473)	0.775 (0.418)	0.000	0.739 (0.44)	0.129
Collaboration with neighbors: Child care	0.325 (0.469)	0.486 (0.5)	0.000	0.385 (0.487)	0.000
Unemployment insurance	. (.)	0.058 (0.233)	.	0.172 (0.378)	0.000
Money transfer	. (.)	0.326 (0.469)	.	0.373 (0.484)	0.033
Observations	934	934		699	

**Notes:** <sup>†</sup>*p-values* show whether there are statistically significant differences between all 2019 respondents and respondents in wave 1 or waves 1 and 2. The Table A shows the average values for each variable and sample in the corresponding wave survey. Standard deviations are in parentheses. We calculate the *p-value* of the difference across sample surveys for a different combination of samples identified in each column. The original 2019 survey was conducted in person in September 2019. The first and second waves correspond to a random sample of the original respondents re-surveyed in May 2020 and September 2020.

**Table A5:** Employment change over time: Logit model

VARIABLES	(1) Employment	(2) Employment	(3) Employment
Post-1	-0.279*** (0.0285)	-0.292*** (0.0293)	-0.259*** (0.0200)
Post-2	-0.408*** (0.0250)	-0.417*** (0.0255)	-0.390*** (0.0187)
Women		-0.139*** (0.0228)	
Age		-0.00161* (0.000958)	
Inmigrant		0.0130 (0.0239)	
Schooling (years)		0.00347 (0.00360)	
Observations	1,887	1,724	6,839
Slum FE	NO	NO	YES
Clustered standard errors	NO	NO	NO
Reg	Logit	Logit	Logit
Weight	YES	YES	NO

**Notes:** The table reports marginal effects from logit regressions estimated under different model specifications. All columns show results from pooled cross-section regressions using TECHO-panel survey 2019-2020a-2020b. Coefficients Post-1 and Post-2 show the change in employment status in May-2020 and in September-2020, relative to the pre-pandemic period measured in September 2019. Regression details are explained at the bottom. Columns (1) and (2) show robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

**Table A6:** Comparison between ENE Survey and TECHO Panel Survey

	ENE May 2020			
	All	Low-Education	Head of HH	Informal Dwellers (Techo)
Women	0.511 (0.500)	0.537 (0.499)	0.494 (0.500)	0.575 (0.495)
Age	43.884 (18.067)	50.487 (21.235)	51.71 (15.097)	40.865 (12.58)
Immigrant	0.08 (0.271)	0.056 (0.229)	0.077 (0.267)	0.443 (0.497)
Schooling (Years)	12.687 (3.369)	9.589 (2.571)	12.367 (3.505)	11.286 (3.256)
Observations	57,752	5,708	33,215	934

**Notes.** The table compares the average values of three relevant populations in ENE-May 2020 Series survey and Techo Panel Survey. Standard deviations are in parentheses. Schooling is measured in years of formal education and was created based on the level of education variable on each survey. All ENE-subgroups are restricted to individuals older than 15 years old. The “Low Education” group is a subsample of ENE respondents who reported less than complete secondary education and resided in municipalities with at least one informal settlement. “Head of HH” is a subsample of ENE respondents who were the head or the spouse of the head of the household respondents. Information on informal dwellers was obtained from Techo Panel Wave surveyed in May 2020.

**Table A7: Changes in employment status over time (ENE)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post- 1	-0.0978*** (0.0028)	-0.0983*** (0.0044)	-0.105*** (0.0040)	-0.0976*** (0.0044)	-0.121*** (0.0020)	-0.118*** (0.0033)	-0.118*** (0.0032)	-0.117*** (0.0033)
Post- 2	-0.0629*** (0.0027)	-0.0416*** (0.0042)	-0.0473*** (0.0037)	-0.0413*** (0.0041)	-0.0853*** (0.0021)	-0.0638*** (0.0033)	-0.0643*** (0.0031)	-0.0629*** (0.0032)
Women			-0.259*** (0.0015)				-0.206*** (0.0012)	
Age			-0.0103*** (0.0000)				-0.00043*** (0.0000)	
Immigrant			-0.00960** (0.0048)				0.148*** (0.0035)	
Schooling (years)			0.0152*** (0.00022)				0.0201*** (0.00018)	
Constant	0.511*** (0.0005)	0.549*** (0.0009)	1.029*** (0.0046)	0.553*** (0.0049)	0.463*** (0.0004)	0.489*** (0.0007)	0.351*** (0.0033)	0.489*** (0.0036)
Observations	1,017,779	1,017,779	1,007,910	1,017,779	1,724,412	1,724,412	1,706,581	1,724,412
R-squared	0.002	0.002	0.212	0.015	0.003	0.003	0.076	0.011
Weight	NO	YES	YES	YES	NO	YES	YES	YES
HH Head Sample	YES	YES	YES	YES	NO	NO	NO	NO
Municipality FE	NO	NO	NO	YES	NO	NO	NO	YES

Notes: The Table A shows coefficients for the change in employment over time under different model specifications indicated at the bottom. All regressions are estimated using a pooled cross-section dataset of monthly nationally representative surveys available in ENE from January 2019 to December 2020. All regressions include a series of dummy indicator variables for each month series considering September 2019 as the reference month. We report the coefficients for May 2020 and September 2020 corresponding to Post-1 and Post-2 as characterized in the Techo Panel Survey. Details about how each variable definition is available in Appendix Table A1. All coefficients are estimated ENE survey weights. Robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.



**Table A8:** Heterogenous change in employment status

	(1)	(2)	(3)	(4)	(5)	(6)
Post-1	-0.211*** (0.0383)	-0.221*** (0.0377)	-0.286*** (0.0346)	-0.272*** (0.0430)	-0.272*** (0.0433)	-0.310*** (0.0407)
Post-2	-0.410*** (0.0331)	-0.407*** (0.0325)	-0.407*** (0.0291)	-0.377*** (0.0393)	-0.372*** (0.0391)	-0.377*** (0.0356)
Immigrant	0.0530 (0.0334)	0.0149 (0.0415)				
Post-1x Immigrant	-0.165*** (0.0581)	-0.167*** (0.0581)	-0.148*** (0.0523)			
Post-2x Immigrant	-0.0129 (0.0516)	-0.0121 (0.0508)	-0.0215 (0.0448)			
Female				-0.111*** (0.0324)	-0.0878** (0.0342)	
Post-1x Female				-0.0179 (0.0569)	-0.0331 (0.0570)	-0.0661 (0.0526)
Post-2 x Female				-0.0533 (0.0504)	-0.0574 (0.0499)	-0.0554 (0.0450)
Constant	0.748*** (0.0219)	0.765*** (0.0242)	0.789*** (0.0128)	0.828*** (0.0236)	0.815*** (0.0247)	0.782*** (0.0127)
Observations	1,807	1,785	1,807	1,887	1,865	1,887
R-squared	0.137	0.225	0.269	0.146	0.226	0.254
Individual FE	NO	NO	YES	NO	NO	YES
Slum FE	NO	YES	NO	NO	YES	NO

**Notes:** Coefficients were estimated under different model specifications, as shown in the bottom panel. Columns (1) and (4) show results from a pooled cross-section regression, and coefficients Post-1 and Post-2 show the change in employment status for each period, relative to the pre-pandemic period measured in September 2019. Columns (2) and (5) reproduce the same specification as columns (1) and (4) but including slum fixed effects. Columns (3) and (6) show results, including individual fixed effects as specified in equation (1). All coefficients are estimated using survey weights. Robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

**Table A9:** Heterogenous change in program participation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Unemp. Insurance	Unemp. Insurance	Covid transfer	Covid transfer	Unemp. Insurance	Unemp. Insurance	Covid transfer	Covid transfer
Post-2	0.0873*** (0.0208)	0.0895*** (0.0192)	0.0309 (0.0341)	0.0332 (0.0239)	0.109*** (0.0279)	0.114*** (0.0262)	0.0874** (0.0362)	0.0805*** (0.0277)
Immigrant	-0.000560 (0.0283)		-0.192*** (0.0453)					
Post-2 x Immigrant	0.0525 (0.0373)	0.0570* (0.0339)	0.0151 (0.0492)	0.00564 (0.0323)				
Female					0.0133 (0.0220)		0.157*** (0.0352)	
Post-2 x Female					0.00124 (0.0357)	0.00100 (0.0332)	-0.0780 (0.0486)	-0.0696** (0.0340)
Constant	0.0606*** (0.0151)	0.0588*** (0.00821)	0.413*** (0.0274)	0.330*** (0.00831)	0.0534*** (0.0164)	0.0594*** (0.00817)	0.239*** (0.0253)	0.329*** (0.00822)
Observations	1,310	1,328	1,313	1,331	1,363	1,381	1,369	1,387
R-squared	0.119	0.079	0.229	0.008	0.117	0.074	0.225	0.016
Individual FE	NO	YES	NO	YES	NO	YES	NO	YES
Slum FE	YES	NO	YES	NO	YES	NO	YES	NO

**Notes:** Coefficients are estimated under different model specifications following equation (1), and different combinations of fixed effects are identified at the bottom of each column. Post-2 represents the change in the outcome in September 2020, relative to the observed level in May 2020. All coefficients are estimated using survey weights. Robust standard errors in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.