Web Appendix

In this appendix we provide additional analysis and data in support of our arguments. In Section A1 we provide additional tables that support the main analyses performed in the paper. In Section A2 we provide the tables that support the analysis exploring different mechanisms. Section A3 provides further details on the development of the 'store size' measure. In Section A4, we provide the results of the 'Cairo subsample analysis, which acts as a robustness check of our main analysis. In Section A5 we provide further evidence of how 'real' and 'consequential expropriation is and in Section A6 we discuss theoretical considerations around the micro-entrepreneur's objective function and constraints.

Section A1. Additional Tables for Main Analysis

Table A1.1. Results from Expert Assessments of Good Management Practices (in contexts similar to Ezbet Khairallah)

Item	Considered a good practice
Would you consider it a good practice if a business:	
a) Is allowing bulk breaking?	100%
b) Is selling seasonal products?	100%
c) Is allowing bargaining?	0%
d) Is staying open late?	86%
e) Is price tagging?	71%
f) Is reducing the price of products close to their expiry date?	100%
g) Is offering discounts based on customers' income?	100%
h) Is bundling products?	100%
i) Is using self-created promotional material?	100%
j) Is using promotional materials provided by the manufacturer?	100%

Table A1.2. Impact of Informal Property Rights on Overall Marketing Practice Innovation (2SLS): First-Stage 2SLS Estimates

First Stage 2SLS estimates	
Dependent variable	Lease
Parents not born in land reform area	0.35***
	(0.09)
Individual-level factors measuring incentive to improve their business	yes
Individual-level factors potentially affected by the Patents' birthplace	yes
General individual specific factors	yes
Business-specific factors	yes
F-stat	14.37
F-stat p-value	<0.001***
R-squared	0.25

Note. The first stage estimation is identical across all regressions.

Table A1.3. Impact of Informal Property Rights on Overall Marketing Practice Innovation (2SLS): Second-Stage 2SLS Estimates

Second Stage 2SLS estimates					
Dependent Variable	(1) Overall Marketing Practice Innovation	(2) Product	(3) Price	(4) Promotion	(5) Place
Lease	4.66***	2.57***	2.30***	1.45***	-637.18***
	(1.44)	(0.83)	(0.72)	(0.46)	(225.31)
% exhibiting future focus	0.43	-0.05	0.09	-0.02	142.12**
	(0.41)	(0.23)	(0.2)	(0.13)	(62.98)
% reporting motivation to scale up their business	-0.21	0.06	-0.13	0.27	-175.41
	(0.61)	(0.35)	(0.31)	(0.2)	(95.60)
Exhaustion index	-0.37***	-0.15**	-0.18***	-0.07**	13.83
	(0.10)	(0.06)	(0.05)	(0.03)	(16.22)
Impulsiveness	0.31	0.24	0.24	-0.13	14.81
	(0.56)	(0.32)	(0.28)	(0.18)	(86.45)

Note. The first stage estimation is identical across all regressions.
Figures in parentheses are standard errors; ***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A1.3. Impact of Informal Property Rights on Overall Marketing Practice Innovation (contd.)

Dependent Variable	(1) Overall Marketing Practice Innovation	(2) Product	(3) Price	(4) Promotion	(5) Place
Optimism	0.19	0.10	0.06	0.36**	-149.87**
	(0.46)	(0.27)	(0.23)	(0.15)	(72.36)
Achievement Orientation	0.01	0.03	0.01	-0.07	20.39
	(0.18)	(0.1)	(0.09)	(0.06)	(28.18)
% not finished primary school	-0.11	-0.05	-0.02	-0.02	-5.24
	(0.15)	(0.09)	(0.08)	(0.05)	(23.56)
% of entrepreneurs whose parents owned a business	-0.57	-0.44	-0.45**	0.04	72.62
	(0.45)	(0.26)	(0.23)	(0.14)	(70.41)
% born in Cairo	0.01	-0.11	0.21	-0.04	-42.42
	(0.34)	(0.20)	(0.17)	(0.11)	(53.41)
% who have children	0.77	0.89**	0.49	-0.07	-143.43
	(0.79)	(0.45)	(0.39)	(0.25)	(122.19)
Number of financial dependents	-0.11	-0.14**	-0.05	-0.04	42.93**
	(0.12)	(0.07)	(0.06)	(0.04)	(18.93)
% females	0.01	0.14	0.20	0.010	-116.33
	(0.41)	(0.24)	(0.21)	(0.13)	(64.27)
Age of entrepreneur	0.02	0.01	0.01	0.0024	- 0.98
	(0.02)	(0.01)	(0.01)	(0.0074)	(3.64)
Ability (Frederick's cognitive reflection test)	-0.43	-0.16	-0.32**	-0.24**	114.19**
	(0.31)	(0.18)	(0.16)	(0.1)	(48.85)
% worked in private sector before	0.33	-0.12	-0.25	0.05	205.54
	(0.69)	(0.4)	(0.35)	(0.22)	(107.84)
% worked in public sector before	-0.09	0.18	0.08	-0.26	6.65
	(0.82)	(0.47)	(0.41)	(0.26)	(127.02)
% who traveled for Haj Pilgrimage	0.58	0.63**	0.35	0.17	-192.06**
	(0.56)	(0.32)	(0.28)	(0.18)	(87.58)
Age of the business	0.00032	0.00016	0.00017	0.0004	- 0.24
	(0.00019)	(0.00011)	(0.000096)	(0.0006)	(0.3)

Note. Figures in parentheses are standard errors.

***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A1.3. Impact of Informal Property Rights on Overall Marketing Practice Innovation (contd.)

Dependent Variable	(1) Overall Marketing Practice Innovation	(2) Product	(3) Price	(4) Promotion	(5) Place
% reporting business as only source of income	0.97**	0.34	0.29	0.16	58.07
	(0.46)	(0.26)	(0.23)	(0.147)	(71.93)
Number of paid employees	0.11	0.19	0.45	-0.18	-87.43
	(0.47)	(0.27)	(0.23)	(0.15)	(73.38)
Number of SKUs	0.01	0.00016	-0.00017	0.00047	1.61
	(0.01)	(0.00058)	(0.01)	(0.00032)	(1.57)
Perceived number of competitors	-0.17	-0.1	-0.03	-0.03	-1.01
	(0.09)	(0.05)	(0.05)	(0.03)	(14.59)
Average number of suppliers	-0.82**	0.11	-0.43**	-0.12	-121.19
	(0.41)	(0.23)	(0.2)	(0.13)	(63.46)
Hausman test p-value	<0.001***	<0.001***	<0.001***	<0.001***	0.01***
Observations	249	249	249	249	249

Note. Figures in parentheses are standard errors; ***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A1.4. Impact of Informal Property Rights on Product Practices

Panel A: OLS results				
	(1) Product	(2) Product	(3) Product	(4) Product
Lease	0.36***	0.36***	0.29**	0.33**
	(0.1)	(0.12)	(0.12)	(0.15)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-square	0.04	0.05	0.07	0.18
Observations	425	340	340	249
Panel B: 2SLS: 1st stage results				
	(1) Lease	(2) Lease	(3) Lease	(4) Lease
Parents not born in land reform area	0.27***	0.38***	0.35***	0.35***
	(0.05)	(0.08)	(0.08)	(0.09)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-squared	0.08	0.20	0.26	0.25
Panel C: 2SLS: 2nd stage results				
	(1) Product	(2) Product	(3) Product	(4) Product
Lease	1.85***	1.67***	1.77***	2.57***
	(0.51)	(0.52)	(0.58)	(0.83)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A1.5 Impact of Informal Property Rights on Pricing Practices

Panel A: OLS results				
	(1) Pricing	(2) Pricing	(3) Pricing	(4) Pricing
Lease	0.46***	0.46***	0.43***	0.49***
	(0.1)	(0.12)	(0.12)	(0.14)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-square	0.08	0.10	0.11	0.21
Observations	425	340	340	249
Panel B: 2SLS: 1st stage results				
	(1) Lease	(2) Lease	(3) Lease	(4) Lease
Parents not born in land reform area	0.27***	0.38***	0.35***	0.35***
	(0.05)	(0.08)	(0.08)	(0.09)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-squared	0.08	0.20	0.26	0.25
Panel C: 2SLS: 2nd stage results				
	(1) Pricing	(2) Pricing	(3) Pricing	(4) Pricing
Lease	2.36***	1.98***	2.10***	2.30***
	(0.56)	(0.53)	(0.59)	(0.72)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A1.6. Impact of Informal Property Rights on Promotion Practices

Panel A: OLS results				
	(1) Promotion	(2) Promotion	(3) Promotion	(4) Promotion
Lease	0.48***	0.46***	0.44***	0.37***
	(0.07)	(0.08)	(0.08)	(0.10)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-square	0.13	0.16	0.18	0.28
Observations	425	340	340	249
Panel B: 2SLS: 1st stage results				
	(1) Lease	(2) Lease	(3) Lease	(4) Lease
Parents not born in land reform area	0.27***	0.38***	0.35***	0.35***
	(0.05)	(0.08)	(0.08)	(0.09)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-squared	0.08	0.2	0.26	0.25
Panel C: 2SLS: 2nd stage results				
	(1) Promotion	(2) Promotion	(3) Promotion	(4) Promotion
Lease	1.29***	1.44***	1.49***	1.45***
	(0.32)	(0.36)	(0.40)	(0.46)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A1.7. Impact of Informal Property Rights on Place Practices

Panel A: OLS results				
	(1) Place	(2) Place	(3) Place	(4) Place
Lease	-121.07***	-136.08***	-147.71***	-152.60***
	(32.42)	(39.53)	(40.76)	(48.51)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-square	0.09	0.10	0.14	0.22
Observations	425	340	340	249
Panel B: 2SLS: 1st stage results				
	(1) Lease	(2) Lease	(3) Lease	(4) Lease
Parents not born in land reform area	0.27***	0.38***	0.35***	0.35***
	(0.05)	(0.08)	(0.08)	(0.09)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes
R-squared	0.08	0.20	0.26	0.25
Panel C: 2SLS: 2nd stage results				
	(1) Place	(2) Place	(3) Place	(4) Place
Lease	-593.33***	-446.70***	-518.62***	-637.18***
	(161.74)	(160.6)	(177.28)	(225.31)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	no	yes	yes	yes
General individual-specific factors	no	no	yes	yes
Business-specific factors	no	no	no	yes

*Note.*Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Section A2: Exploring mechanisms at work

Table A2.1. Perceptions about Opening a Grocery Store Compared to other Businesses in the Slum (N=95)

Item	Percentage Agree (Full sample)	Percentage Agree (Possess)	Percentage Agree (Lease)	p-value
Easier to start?	93.68%	93.10%	94.59%	0.771
More profitable?	58.95%	53.45%	53.45%	0.173
Less expensive to run?	62.11%	67.24%	54.05%	0.196
Easier to run?	78.95%	79.31%	78.38%	0.913
Less risk of loss?	74.74%	75.97%	72.97%	0.752
More convenient to run?	73.68%	75.86%	70.27%	0.546

Notes. Given the fact that we are comparing the two groups on 6 dimensions, we make use of the Bonferroni correction, which is used when several dependent or independent statistical tests are being performed simultaneously. The Bonferroni correction sets the overall confidence interval for the entire set of N comparisons equal to α by taking the α for each individual comparison equal to αN. The p-value is for a two-sample t-test of the difference in means between those who lease and those who possess. After the Bonferroni correction our critical value is 0.0083.

Table A2.2. Checking for "As If" Random Assignment – Parental Human Capital (N=460)

Variable	Parent born in areas affected by Land Reform Law	Parent born in areas *not* affected by Land Reform Law	p-value
% of entrepreneurs whose parents did *not* own a business	82.09%	80.80%	0.75
% of entrepreneurs whose parents did *not* finish primary school	86.88%	80.67%	0.03
Average age of entrepreneurs' parents	74.86 years	60.76 years	<0.01***
Average number of years the micro-entrepreneurs' parents have been living in Cairo	47.04 years	50.27 years	0.26
% of entrepreneurs saying they inherited this business	9.63 %	14.17%	0.43

Notes. The p-value is for a two-sample t-test of the difference in means between those whose parents were born in areas affected by Land Reform Law and those whose parents were not. Given the fact that we are comparing the two groups on twenty-three dimensions, we make use of the Bonferroni correction, which is used when several dependent or independent statistical tests are being performed simultaneously. The Bonferroni correction sets the overall confidence interval for the entire set of N comparisons equal to α by taking the α for each individual comparison equal to $\frac{\alpha}{N}$. After the Bonferroni correction our critical value (95%) is 0.01 which is noted as ***.

Table A2.3. Comparison of Lease versus Possession on Different Dimensions of Parental Human Capital (N=95)

Item	Full Sample	Possess	Lease	p-Value
Main source of knowledge on how to run a business				
Yourself	45.26%	45.16%	45.45%	0.37
Parents	23.16%	27.42%	15.15%	0.37
A relative/ a family member	9.47%	6.45%	15.15%	0.37
Friends	5.26%	3.23%	9.09%	0.37
Previous employer	0%	0%	0%	0.37
I have learned from businesses around me	13.68%	14.52%	12.12%	0.37
Occupation of micro-entrepreneur's father				
Daily Wage worker	43.16%	43.55%	42.42%	0.92
Repair person	5.26%	4.84%	6.06%	0.80
Factory worker	9.47%	8.06%	12.12%	0.52
Office job	10.53%	9.68%	12.12%	0.71
Grocery store owner	24.21%	25.81%	21.21%	0.62
Store owner (non-grocery)	0%	0%	0%	N/A
Salesperson in a shop	0%	0%	0%	N/A
Worker in a restaurant/food stall	1.05%	1.61%	0.00%	0.46
Unemployed	1.05%	0.00%	3.03%	0.17
Occupation of micro-entrepreneur's mother				
Daily Wage worker	2.11%	3.23%	0.00%	0.30
Repair person	0%	0%	0%	N/A
Factory worker	0%	0%	0%	N/A
Office job	0%	0%	0%	N/A
Grocery store owner	11.58%	12.90%	9.09%	0.58
Store owner (non-grocery)	1.05%	0.00%	3.03%	0.17
Salesperson in a shop	0%	0%	0%	N/A
Worker in a restaurant/food stall	0%	0%	0%	N/A
Housewife	83.16%	82.26%	84.85%	0.75

Notes. The p-value is for a two-sample t-test of the difference in means between those whose lease and those who possess. Given the fact that we are comparing the two groups on twenty-three dimensions, we make use of the Bonferroni correction, which is used when several dependent or independent statistical tests are being performed simultaneously. The Bonferroni correction sets the overall confidence interval for the entire set of N comparisons equal to α by taking the α for each individual comparison equal to $\frac{\alpha}{N}$. After the Bonferroni correction our critical value (95%) is 0.002.

Table A2.4. Explaining Marketing Practice Innovation: Effect of Including Interaction of Lease & Parent Owned a Business (OLS)

Dependent Variable	Overall Marketing Practice Innovation
Lease	0.73 ***
	(0.28)
Parent *did* own a business	-0.22
	(0.83)
Lease * Parent did own a business	1.80
	(1.02)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-square	0.3
Observations	249

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A2.5. Explaining Marketing Practice Innovation: Effect of Including Interaction of Lease & Parental Education (OLS)

Dependent Variable	Overall Marketing Practice Innovation
Lease	0.80***
	(0.29)
Parents went to primary level	0.41
	(1.04)
Parents went to preparatory level	-1.12
	(0.95)
Parents went to secondary level	-1.4
	(1.4)
Parents have a Diploma/vocational training	0.21
	(2.02)
Lease * Parents went to primary level	-0.31
	(1.19)
Lease * Parents went to preparatory level	0.51
	(1.41)
Lease * Parents went to secondary level	0.96
	(1.20)
Lease * Parents have a Diploma/vocational training	omitted
Psychological factors	yes
Demographic factors (potentially affected by parents' birth place)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-square	0.30
Observations	249

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A2.6. Explaining Marketing Practice Innovation: Effect of Including Interaction of Lease & Parental Age (OLS)

Dependent Variable	Overall Marketing Practice Innovation
Lease	4.12***
	(1.73)
Parental age	0.00
	(0.17)
Lease * Parental age	-0.05
	(0.02)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-square	0.29
Observations	249

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A2.7. Explaining Marketing Practice Innovation: Effect of Including Interaction of Lease & Nr. of Years Parents Resident in Cairo (OLS)

Dependent Variable	Overall Marketing Practice Innovation
Lease	4.47
	(2.41)
Nr. of years parents resident in Cairo	0.04
	(0.06)
Lease * Nr. of years parents resident in Cairo	-0.07
	(0.04)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-square	0.51
Observations	65

Note. Figures in parentheses are standard errors.

Table A2.8. Explaining Marketing Practice Innovation: Effect of Including Interaction of Lease & Parental Human Capital Index (OLS)

Dependent Variable	Overall Marketing Practice Innovation
Lease	0.84***
	(0.27)
Parental Human Capital Index	0.13
	(0.12)
Lease * Parental Human Capital Index	-0.18
	(0.13)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-square	0.29
Observations	249

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A2.9. Mechanism Check: Impact of Informal Property Rights on Financial Management (2SLS)

First Stage 2SLS estimates: Dependent variable: Lease	
Parents not born in land reform area	0.23***
	(0.07)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
F-stat	11.89
F-stat p-value	0.00
R-squared	0.19
Second Stage 2SLS estimates: Dependent Variable: Financial Management	
Lease	1.2**
	(0.61)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
Hausman test p-value	0.12
Observations	266

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A2.10. Mechanism check: Distance from Demolition Areas (OLS)

Dependent variable:	Overall Marketing Practice Innovation
Far from demolition area and possessing[+]	-0.88**
	(0.4)
Close to demolition area and leasing[+]	-0.86
	(0.48)
Close to demolition area and possessing[+]	-1.34***
	(0.48)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
Distance from Demolition area	yes
R-Squared	0.30
Observations	233

[+] Compared to baseline: Far from demolition area and leasing.
Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level; **Significant at the 5 percent level.

Table A2.11. Mechanism Check: Amount of Rent Paid (OLS)

Dependent variable	Overall Marketing Practice Innovation
Amount of rent paid	-0.00
	(0.00)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
R-Squared	0.33
Observations	96

Note. Figures in parentheses are standard errors.

Table A2.12. Robustness Check: 2SLS: Controlling for Nearest Market to the Store

First Stage 2SLS estimates: Dependent variable: Lease	
Parents not born in land reform area	0.3***
	(0.10)
Distance to nearest market	- 0.00
	(0.00)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
F-stat	9.84
F-stat p-value	0.002
R-squared	0.25
Second Stage 2SLS estimates: Overall Marketing Practice Innovation	
Lease	5.57***
	(1.92)
Distance to nearest market	0.01
	(0.02)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
Hausman test p-value	<0.001
Observations	233

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Table A2.13. Robustness Check: Controlling for Store Size

First Stage 2SLS estimates: Dependent variable: Lease	
Parents not born in land reform area	0.35***
	(0.11)
Store size	0.11
	(0.05)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
F-stat	9.33
F-stat p-value	<0.001***
R-squared	0.31
Second Stage 2SLS estimates: Dependent variable: Overall Marketing PracticeInnovation	
Lease	5.02***
	(1.80)
Store size	-0.39
	(0.32)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Businessspecific factors	yes
Hausman test p-value	<0.001***
Observations	161

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Section A3. Measuring Store Size

Going to store owners and asking them for information on the size of their store was not feasible for two reasons. First, many store owners are themselves unaware of the exact size of their stores. Second, we noted some sensitivity among store owners around the act of taking precise measurements of their stores. We learned that taking measurements of stores, homes, and buildings is closely associated with expropriation, since government authorities take measurements when planning the next big project that requires the expropriation of homes and businesses. We therefore decided to avoid collecting such precise measures of the size of the store; instead, we hired two independent coders who coded, over two rounds, pictures of the stores based on the structure of the store, e.g., a wooden structure attached to a building or a physical store as part of a building. If it was a physical store, we had the coder code the width of the door, the depth of the store and whether there is an extension attached to the store. In order to be able to determine the width and depth of the store, we collected data on the size of stands which often occupy the front of the store. We also collected data on the different sizes of fridges and chips boxes placed along the walls of the store and used these measures to estimate the dimensions of the store. Our research assistants have experience in conducting research in the field context that we study and are quite familiar with the context. This gives us faith in their judgements. The interrater reliability in the initial round of coding was 62%, after which the authors discussed with the coders the pictures on which they had differing assessments. These discussions allowed us to further refine the rating scheme. We then asked the coders to independently redo the pictures on which they disagreed, which led to 84% interrater reliability after the second round.

Section A4: Cairo Subsample Analysis

Table A4.1. Checking for Random Assignment (Cairo-Born Micro-entrepreneurs Subsample)

Variable	Parent born in areas affected by Land Reform Law	Parent born in areas *not* affected by Land Reform Law	p-value
Micro-entrepreneur specific			
Psychological factors:			
% exhibiting future focus	75.32%	74.79%	0.93
% reporting motivation to scale up their business	90.91%	92.44%	0.70
Exhaustion index	28.33	28.47	0.58
Impulsiveness	2.97	2.94	0.38
Optimism	1.14	1.11	0.60
Achievement Orientation	1.99	1.78	0.14
Demographic factors (potentially affected by parents' birthplace)			
% not finished primary school	48.65%	34.78%	0.03
% of entrepreneurs whose parents owned a business	25.93%	19.20%	0.25
% who have children	95.71%	90.48%	0.19
Number of individuals financially dependent on them	3.38	3.05	0.16
General individual-specific factors			
% females	63.64%	60.50%	0.66
Age of the entrepreneur	40.76%	40.76%	0.99
Ability (Frederick's cognitive reflection test)	0.43	0.46	0.70
% worked in private sector before	7.50%	6.50%	0.78
% worked in public sector before	5.00%	3.25%	0.53
% who travelled for pilgrimage	12.50%	8.13%	0.31
Business-specific factors			
Age of the business	6.86 years	5.89 years	0.40
% reporting business as only source of income	80.25%	77.6%	0.65
Number of paid employees	1.11	1.29	0.15
Number of SKUs	49.16	52.12	0.23
Perceived number of competitors	3.65	3.06	0.06
Average number of suppliers	1.32	1.44	0.09

Notes. The p-value is for a two-sample t-test of the difference in means between those whose parents were born in areas affected by Land Reform Law and those whose parents were not. Given the fact that we are comparing the two groups on twenty-three dimensions, we make use of the Bonferroni correction, which is used when several dependent or independent statistical tests are being performed simultaneously. The Bonferroni correction sets the overall confidence interval for the entire set of N comparisons equal to α by taking the α for each individual comparison equal to $\frac{\alpha}{N}$." After the Bonferroni correction our critical value (95%) is 0.002.

Table A4.2. Impact of Informal Property Rights on Marketing Practice Innovation (Cairo-born Micro-entrepreneurs Subsample): First-Stage 2SLS Estimates

First Stage 2SLS estimates	
Dependent Variable	Lease
Parents not born in Land Reform area	0.35***
	(0.1)
Psychological factors	yes
Demographic factors (potentially affected by parents' birthplace)	yes
General individual-specific factors	yes
Business-specific factors	yes
F-stat	12.73
F-stat p-value	<0.001***
R-squared	0.39

Note. The first stage estimation is identical across all regressions.

Table A4.3. Impact of Informal Property Rights on Marketing Practice Innovation (Cairo-born Micro-entrepreneurs Subsample): Second-Stage 2SLS Estimates

Second Stage 2SLS estimates					
Dependent Variable	(1) Overall Marketing Practice Innovation	(2) Product	(3) Price	(4) Promotion	(5) Place
Lease	3.95***	2.45***	2.15***	1.71***	-751.62***
	(1.31)	(0.8)	(0.69)	(0.50)	(217.10)
Psychological factors	yes	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	yes	yes	yes	yes	yes
General individual-specific factors	yes	yes	yes	yes	yes
Business-specific factors	yes	yes	yes	yes	yes
Hausman test p-value	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
Observations	107	107	107	107	107

Note. Figures in parentheses are standard errors;
***Significant at the 1 percent level.

Section A5. How Real and Consequential is the Threat of Expropriation?

Since the threat of expropriation is a central pillar of our theoretical framework, it is important to establish two specific aspects of how the threat is viewed. First, that it is viewed as consequential, i.e., the expected losses from the event are such as to cause a major upheaval in the micro-entrepreneur's life. And second, that it is viewed as 'real', i.e., there is a reasonable probability of it happening in a short time frame. We gathered three pieces of evidence – two archival and one direct survey – relating to the consequentiality and reality of the threat. The evidence seems to lead clearly to the conclusion that expropriation is not a run of the mill threat: it is a traumatic and potentially existential threat to the micro-entrepreneur's business.

Consequences. To get a sense of the consequences of expropriation, we conducted further analyses of existing reports on the institutional context. Part of our evidence comes from a 2011 Amnesty International report titled "We are not dirt: forced evictions in Egypt's informal settlements". The following quote from Amnesty International (2011, p. 35) describes the effects of expropriation (though the focus in the paragraphs below is on evictions from homes, the process and outcomes are similar for evictions from businesses):

> The day of their forced eviction is one of destruction and uncertainty. The men, women and children suddenly find their homes and lives at the mercy of the authorities and demolition crews. Often, they feel intimidated by the presence of security forces such as the riot or local police, and fear with good reason strong action if they resist. As they watch workers destroy their homes, they wonder whether that night they will be sleeping in a new home at an as yet unknown location, or on the street. Some who wanted to remain in their homes told Amnesty International that they felt it was better to die under the rubble in dignity than submit to the eviction. For these people, the dreaded day invariably ends with force and violence as they are dragged away by security forces.
>
> For those who receive a rehousing letter after queuing for long periods, the day ends at a new home that may or may not suit their needs. For those who are not given alternative housing, the day ends in despair and signals the beginning of an unknown period of homelessness. They try to find some kind of shelter for that night, some way to protect the vulnerable members of their family, some means to guard their possessions. They may lodge a grievance with the local authorities, which can lead them to living on the streets for months in the hope that they will be rehoused. They may stage protests and sit-ins outside local government offices. Whatever the outcome, their lives are never the same again.
>
> For the neighbours, the demolitions serve as a warning of what awaits them. In the meantime, they are often left living amidst rubble, invariably littered with exposed electricity wires and leaking water pipes. In some, gangs of youths and drug addicts pick through the debris, gathering material to sell. As a result, the neighbourhoods

become largely deserted at night, and women said that this made them more dangerous and put them at additional risk of sexual violence.

Further evidence for the potential consequences of expropriation comes from information on the kinds of areas into which some of those expropriated are resettled (note that the ones who do get resettled are the "lucky" ones compared to those who receive no such help). Picture D shows an image of Cairo that highlights formal settlements in yellow and informal settlements in pink. Areas marked in red are considered "unsafe" by the government and residents therefore face a high risk of expropriation. The map also shows the three main areas into which the people have been resettled, namely, 6th of October City, Al-Nahda City, and 15th of May City. These areas are 27.4 miles, 21.6 miles, and 19.5 miles, respectively, from Cairo's city centre (Tahrir Square). Ezbet Khairallah (the site of our research), by contrast, is 5.96 miles away from the city centre. This distance matters a great deal given the paucity of public transport connections to the centre. Any expropriation and resettlement decision therefore has a potentially devastating impact on those affected: to them, expropriation can mean loss of livelihood, loss of access to employment opportunities, higher costs of commuting to the city, and loss of any investments made into the property.

Probability of Occurrence. Because there exist no registries of deaths of the informal businesses we study, it is not possible to provide hard numbers for how many micro-entrepreneurs typically have to shut down their business every year because of sudden unactionable reasons such as expropriation.

In order, therefore, to get a sense of the frequency of these events, we constructed a database of major expropriation incidents reported in Egypt's main national newspapers since 1990. The database recorded 80 articles that reported on an expropriation event. Over a roughly 25-year period (1990 to 2017), this amounts to approximately 3 such events reported yearly on average, or slightly less than one such event every quarter. While this is a reasonably high probability, there are very good reasons to believe that the number of events we suggest above is a serious undercount. For instance, looking at these reports in greater detail, we noticed that some of the expropriation events we knew about from our primary research had not been reported in the national newspapers (e.g., a major expropriation event in 2010 in Ezbet Khairallah, in which hundreds of houses were demolished and people were evicted). The lack of reporting is a reflection of the institutional reality of (the lack of) press freedom in Egypt. National newspapers in Cairo tend to avoid reports that would cause the government to appear in a negative light (Walsh 2017). Forced expropriations, which are generally conducted by entities associated with the government, are especially sensitive

topics, given the possibility of civil unrest that often accompanies them (COHRE 2006, Sims 2010). Indeed, it was striking to see the contrast between press coverage and reports from Amnesty International in 2009 and 2011. The latter feature i) a greater number of instances of expropriation, and ii) a far more critical examination of the impact of expropriation on the lives of those affected.

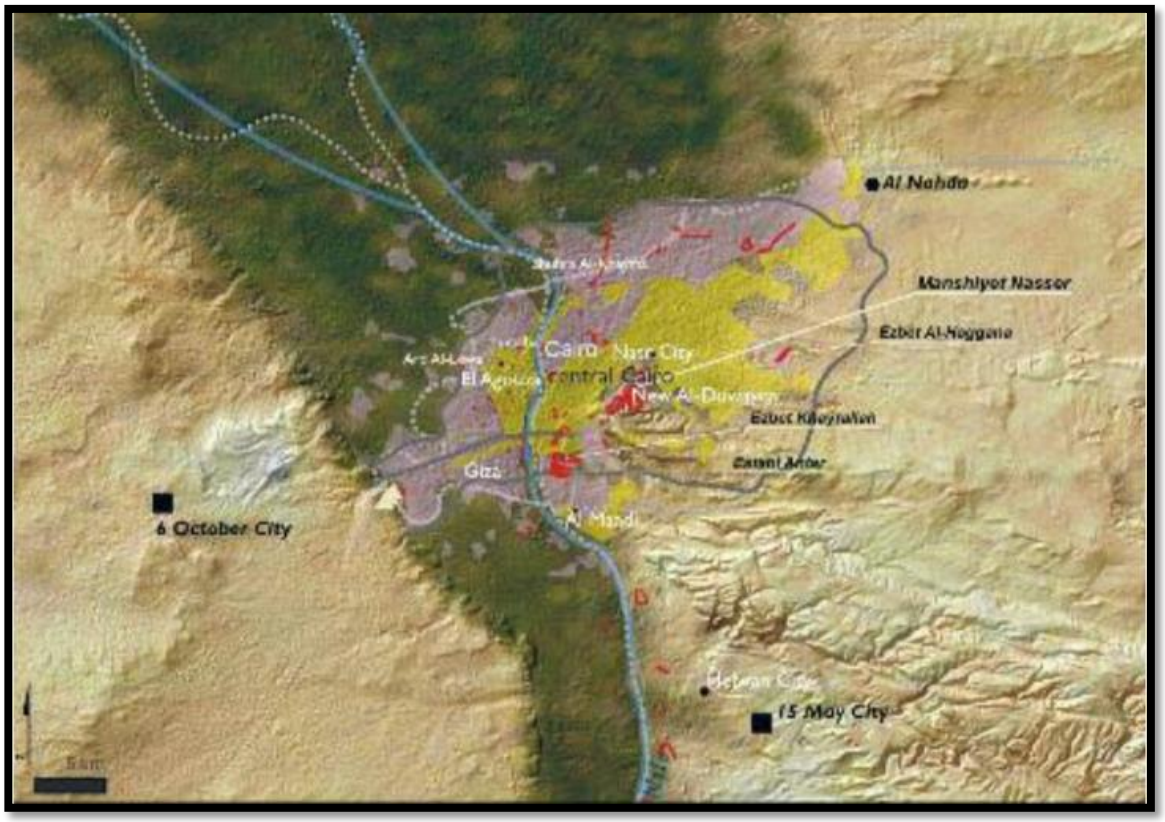
Survey Evidence. To get a direct sense of the prevalence of expropriation events and micro-entrepreneurs' perception of the threat, we conducted a survey in Ezbet Khairallah with a set of 147 micro-entrepreneurs (grocery store owners) who were not part of our original sample. As a first cut at examining the reality of the threat, we asked respondents if they knew anyone who had been expropriated. Almost 60% of respondents answered in the affirmative. Digging deeper, this subset of respondents reported an average of 35 as the number of people of their acquaintance who had been expropriated. Even this number is likely to be an understatement: close to 65% of respondents reported the number as being too large for them to recall accurately. We then asked respondents about the last event of expropriation they had heard of. Aggregating this data across responses reveals at least one event of expropriation annually in the slum since 2010.

The responses above emphasize the point that micro-entrepreneurs in our study context often learn about the threat of expropriation (as well as its potentially devastating consequences) through vicarious means. The micro-entrepreneurs themselves (or indeed others in the same slum) need not have experienced the expropriation event to incorporate such an event into their decision making: even the experiences of distant others can become relevant to their perceptions of the probability of expropriation, as long as they have information linkages with those others. Consistent with a long literature on vicarious learning about negative events (Baum and Ingram 1998, Kim and Miner 2007), these micro-entrepreneurs appear to calibrate their expectations (and thus their behavior) in part through reports of the experiences of others who were affected by expropriation events.

Finally, as an overall measure for examining perceptions of the expropriation threat, we asked people whether they were worried about getting expropriated. Roughly 50% responded in the affirmative. At first blush, this suggests that fully half the sample is not worried. This turns out, however, to be an inaccurate conclusion: the 50% who responded in the negative felt it was pointless to "worry about something that we cannot change anyway". In other words, it is not that they are not worried; rather, to use our terminology, they believe the threat is non-actionable.

Each piece of evidence presented above is consistent with the suggestion that the threat of expropriation is prevalent in the minds of people living and running businesses in Ezbet Khairallah. People know of events and know of people who have been affected. The risk of expropriation is perceived as real and consequential; even those who profess not to worry about expropriation do not deny that its effects can be devastating.

Picture D1. Map of Cairo Showing Formal and Informal Settlements



Source. Amnesty Intl. 2011

Informal Settlements Formal Settlements Unsafe Areas Areas of resettlement

Section A6: Further Theoretical Considerations

We clarify several points relevant to our theory and conceptualization in this appendix. These relate to the objective functions of the micro-entrepreneurs in our context, the constraints they face.

First, we assume that the objective function for leasers and possessors is the same, i.e., *maximizing profits subject to constraints.* In making this assumption, we follow a large prior literature that empirically estimates returns to a variety of interventions for micro-entrepreneurs, such as loans or business training (De Mel et al. 2008, Karlan and Valdivia 2011, Karlan and Zinman 2010,).

The difference between our micro-entrepreneurs and the type of firm typically studied in marketing, however, is that the former are necessity entrepreneurs operating in the informal economy in an emerging market. Well-known features of those living in the informal economy are that they are unbanked; they tend to earn and spend on a daily basis; and they tend to be financially myopic (they have a high discount factor in terms of the future relative to the present) (Collins, et al. 2009, Karlan et al. 2019, Jachimowicz et al. 2017). As a result, they tend not to save much or regularly. This finding is similar in many ways to the well-known observation that people in the informal economy in many parts of the developing world do not take out life insurance or other forms of insurance against catastrophic risks (Visser et al. 2019). This is partly because they are financially myopic and partly because they lack formal financial instruments such as bank accounts. The upshot is that they face very serious constraints on what they can do to optimize their performance, both in terms of their current business (e.g., invest in marketing practice innovation) as well as in terms of other options outside their business (e.g., saving, getting insurance, finding a better job, investing in education, etc.).

Second, while both possessors and leasers suffer the same constraints objectively (they live in the same environment), we argue that possessors face greater *perceived* constraints than leasers. This stems from the particular circumstances of possessing a fixed asset (a semi-legal home) that can be demolished at any time through processes completely beyond the possessor's control and even beyond their ability to predict.

Third, for possessors, the objective constraints and their perception of these constraints are linked and reinforce each other. Thus, the real lack of alternatives such as insurance or savings solutions (the micro-entrepreneurs are in the informal economy and face

market failures in financial services) combined with the fact of the looming bulldozers mean that possessors are more likely than leasers not to be able to choose some other course of action to mitigate against the effects of being expropriated. They could of course choose to lease. But as our surveys show, they would not do so unless they had no other option, so as to avoid the burden of having to pay rent on the leased property.

To summarize, we assume that both leasers and possessors share the same objective function, namely, the maximization of profits. Further, neither micro-entrepreneurs who possess nor those who lease are likely to engage in long-term plans such as saving or insurance as those in the formal economy can and do. The two parties, however, face slightly different sets of constraints. Possessors face the risk of expropriation; leasers do not. On the other hand, leasers have to make regular payments; possessors do not. Our theory of actionable and unactionable risk is about what micro-entrepreneurs can do to mitigate the risk. Leasers mitigate the risk they face through marketing actions in their stores that are a) regular, b) concrete, and c) feasible. The marketing innovations we detail satisfy all the above and potentially enhance profitability. In that sense, leasers face an 'actionable' risk. By contrast, while possessors can largely undertake the same marketing innovations, none of these actions would help deal with the unactionable risk they face, namely expropriation. As a result, they are less likely to adopt/introduce these innovations.

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