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Article

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Abstract

Micro-entrepreneurs represent the most common type of business in the world, and marketing is a primary means by which they earn their livelihoods. They are especially numerous in emerging markets, and many live precarious lives characterized by poverty and potentially devastating exogenous shocks. This paper examines the marketing practices of micro-entrepreneurs by studying grocery retailers in a large slum in Cairo, Egypt. Employing detailed data on the marketing practices of these retailers, the paper examines why some micro-entrepreneurs engage in innovation in their marketing practices (and perform better), while others fail to do so. We highlight the causal effect of an important but rarely studied factor – informal property rights – on innovation in marketing practices among micro-entrepreneurs. Because few micro-entrepreneurs in the context we study have access to formal property rights, the threat of expropriation looms large in their lives. We show that those micro-entrepreneurs who possess their stores (without actually owning them) are substantially less likely to innovate in their marketing practices than those who lease their stores. We make use of an exogenous shock to property rights laws to assess the causal impact of informal property rights on innovation in marketing practices.

Keywords: Micro-entrepreneurs, lease, possession, informal property rights, innovation in marketing practice, performance.

1. Introduction

More than 70% of those who earn a living in sub-Saharan Africa and South Asia do so as self-employed entrepreneurs (Fields 2019). The vast majority of these individuals run tiny businesses: they are micro-entrepreneurs, employing five or fewer individuals (Anderson et al. 2018). By some estimates, over half the world's poor make their living selling goods and services as micro-entrepreneurs (De Mel et al. 2009, De Mel et al. 2010, Spears 2009). Their businesses are informal and precarious, often condemning them to lives of penury (Banerjee and Duflo 2007). Indeed, it was the self-immolation of a poor Tunisian fruit and vegetable seller, Tarek Mohamed Bouazizi, that triggered mass protests against the then-ruling Tunisian regime in December 2010, and which by many accounts led to tumult across the region, the tremors of which are felt to this day. More generally, understanding these marketing practitioners is of profound importance: how they lead their marketing lives and how well they do are questions that have wide economic, social and political repercussions.

The importance and prevalence of micro-entrepreneurs in the world is, however, not reflected in the degree of academic attention to their lives, at least in the field of marketing, where almost all our knowledge is in the context of large corporations, generally in developed economies (for exceptions, see Anderson et al. 2018, Bao et al. 2018, Narasimhan et al. 2015, Viswanathan et al. 2010). Research in other fields – notably in development economics – has studied the financial, educational and information constraints that micro-entrepreneurs face (Bruhn et al. 2010, De Mel et al. 2009, De Mel et al. 2008, Jensen 2007); almost none of this literature has focused on the marketing practices of micro-entrepreneurs. Yet marketing activities are a primary means by which micro-entrepreneurs earn their livelihoods (De Mel et al. 2009b, McKenzie and Woodruff 2017). At the same time, the nature of their marketing practices and the circumstances in which they engage in them both differ considerably from the practices and circumstances characteristic of Western contexts: "Weak legal institutions [in developing countries] can lead to the persistence of market protocols which, from a developed country perspective, may seem primitive or otherwise "second-best"" (Narasimhan et al. 2015, p. 474).

This paper offers a quantitative assessment of marketing practices among micro-entrepreneurs. In doing so, we highlight three relatively unexplored aspects of the marketing lives of micro-entrepreneurs. First, the marketing practices of micro-entrepreneurs in emerging markets are influenced by the prospect of severe and potentially devastating exogenous shocks (Collins et al. 2009). For instance, the risk of bulldozers arriving with little notice to flatten her store is fairly low on the list of concerns of a marketer in a developed country. By contrast, such risks are not at all inconceivable for many emerging market micro-entrepreneurs, who hold few

formal rights to the property they work from (Birch et al. 2016, Galiani and Schargrodsky 2010, Kim et al. 2016, Sudhir et al. 2015, Sudhir and Talukdar 2015). For such micro-entrepreneurs, a slight change in political climate can mean an exogenous swing from possible "regularization" of land rights to complete dispossession (Birch et al. 2016, Galiani and Schargrodsky 2010). These kinds of situations throw into sharp relief the nature of exogenous risk and coping mechanisms, when much of what matters is beyond one's control. It is hard to imagine similar situations in the developed world, where most risk is foreseeable and manageable (the COVID-19 pandemic being an exception that reinforces this point). Partly because the target of much of the literature in marketing has been large Western firms, which generally face fairly stable external environments, the literature has largely focused on risks associated with endogenous actions taken by firms (Hanssens et al. 2009, McAlister et al. 2007). We suggest that by ignoring the exogenous risks faced by micro-entrepreneurs in emerging markets, the literature ignores many of the forces that shape the daily reality of marketing.

Second, although micro-entrepreneurs in emerging markets arguably represent the most common marketers in the world, their marketing practices have received very little formal study (see Viswanathan et al. 2010). While a bulldozer looming large might seem like a recipe for paralysis, it is nevertheless true that some micro-entrepreneurs do take actions that serve to differentiate them from competitors and enhance their profits. These actions could be as simple as bulk breaking packets of goods, i.e., splitting up a packet or a carton into individual items (an example would be a packet of 20 cigarettes "broken" up for sale as individual sticks). One normally thinks of innovations as being big and frequently expensive to bring about (cf. Hauser et al. 2006). Studying micro-entrepreneurs in developing markets reorients our focus on the power of seemingly minor actions that are innovative *in the context* in which they exist and can have large effects on profitability. This line of inquiry parallels the concerns of a recent strand of literature on how the implementation of seemingly minor operations management practices can have dramatic effects on sales and profitability (Bloom et al. 2013, Bloom and Van Reenen 2007).

Third, history hangs heavily over the lives of micro-entrepreneurs. The roots of the challenges that micro-entrepreneurs face – and of their marketing responses to these challenges – often extend deep into the past. As we note later in this paper, events that a micro-entrepreneur's parent or grandparent – or even a neighbor or acquaintance – experienced decades ago can drive the thinking and the marketing actions of the micro-entrepreneur today. The historical origins of micro-entrepreneurs' challenges and responses are similar in spirit to those in the recent literature in economics on how historical events can cast a long shadow over decisions by ordinary actors

decades later. Celebrated examples include the impact of slave raids (Acemoglu and Johnson 2005, Kirmayer et al. 2014, Nunn 2008, Nunn and Wantchekon 2011), infrastructure building (Donaldson and Hornbeck 2016), and historical boundaries (Dell et al. 2018) on the thinking and actions of contemporary consumers and business persons. Marketing scholars, with only a few exceptions (e.g., Bronnenberg et al. 2012, Chen and Zhong 2019) have rarely examined in a quantitative manner the impact of specific historical events on current thinking and actions among marketing practitioners (also see Chandy et al. 2004).

This paper represents an initial attempt to address these gaps and opportunities in the literature. We examine the impact of informal property rights on marketing practice innovation among micro-entrepreneurs. We argue and show that specific historical events can have a strong impact on micro-entrepreneurs' rights of ownership, which in turn frame how these marketers are affected by exogenous risks. Moreover, we show that the effects of informal property rights persist even after controlling for a host of other factors typically highlighted in the existing literature. Our study of institutional factors such as property rights reflects the heightened interest in the mainstream marketing literature on institutional and regulatory issues throughout the world (Ault and Spicer 2014, Grewal and Dharwadkar 2002, Narayan et al. 2015, Prabhu et al. 2017, Qian 2014, Sudhir et al. 2015, Sudhir and Talukdar 2015). We collect detailed information about practices on key dimensions of marketing (product, price, promotion, and place), and about the backgrounds and property rights circumstances of grocery store owners in an urban slum in Cairo, Egypt, and use this data to empirically validate our predictions and explanations.

Furthermore, we address a major empirical challenge, namely establishing causation, by finding an appropriate instrument, i.e., a measure that is correlated with a micro-entrepreneur's current informal property right status, but not with any omitted unobserved variable. We make use of a change in property rights laws in Egypt, via a Land Reform Law, as an exogenous shock that affects the microentrepreneurs' current property right but does not, for instance, affect entrepreneurial ability. Specifically, we use the region ("governorate") in which the micro-entrepreneurs' parents were born as an instrument for micro-entrepreneurs' current informal property rights.

The rest of the paper is structured as follows. Section 2 discusses the theory underlying our thesis. Section 3 introduces our empirical context and data. Section 4 reports on the empirical tests of our thesis. Section 5 presents robustness checks and addresses various alternative explanations for our results. We conclude with implications for theory and practice in section 6.

2. Theory: Informal Property Rights and Marketing Practices in Urban Slums

Our thesis is that informal property rights affect the extent to which micro-entrepreneurs innovate in their marketing practices. Our theoretical framework has two strands. First, we recognize that informal property rights result in high levels of risk and uncertainty. Risk can be perceived as being either i) actionable, or ii) non-actionable. However, the perception of risk associated with different forms of informal property rights can differ significantly (Kasperson et al. 1988, Slovic 1987, Slovic et al. 2004). Second, we argue that the extent of micro-entrepreneurs' marketing practice innovation differs according to their perception of the risk they face. We elaborate on these arguments below.

2.1. Informal Property Rights

We consider the two most prevalent modes of access to physical location in an informal property rights environment, namely: i) 'possession', which is holding on to, using and earning an income from a productive asset, without having the legal right to it, nor paying for the use of the asset (usually, the productive asset is 'owned' by a third party, such as the government); and ii) 'leasing', which is using and earning an income from a productive asset for a period of time against a regular lease payment (generally to a powerful landlord within the entrepreneur's local context, who may in turn possess or in some cases have actual ownership over the asset).

Consider possession first. This is a common mode of access to physical locations in developing countries, where the lack of soft infrastructure such as formal property rights is widespread. Most urban slums, be they in Kinshasa or Kolkata, Cairo or Cape Town, are made up of dwellers with little formal rights to the land on which they live and run their businesses (Field 2007, Johnson et al. 2002, Lanjouw and Levy 2002, Marx et al. 2013). The productive asset is often owned by a third party, usually the government, that can at any point lawfully enforce its right to use and earn an income from the productive asset by expropriating it. Existence for micro-entrepreneurs is, thus, precarious in the most elementary sense of the term – their land can be expropriated and their shops can be bulldozed without notice[1].

Leasing provides both an up-side and a down-side compared to possession. The upside is that the micro-entrepreneur has not personally built any of the physical edifice that could be expropriated or destroyed. The downside is that the micro-entrepreneur has to pay a fixed amount at regular intervals (i.e., rent) to a landlord in order to retain access to the physical asset. While this rent is predictable, both in timing and magnitude, the consequences of not paying this fixed

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[1] Details of how real and consequential the threat of expropriation is, can be found in Section A5 of the Web Appendix.

amount are tangible and large. As we note later, failure to meet these payments subjects micro-entrepreneurs to possible loss of reputation or the use of force against them by agents of the landlords. Once evicted from one leased location, there is a cost (both economic and psychological) to getting another location to lease and from which to do business. All this serves to keep the risk of losing the productive asset alive. Avoiding these negative outcomes is therefore likely to be a priority for micro-entrepreneurs who lease their physical location.[2]

In sum, both possession and leasing put the micro-entrepreneur at the risk of losing access to their productive asset. However, in the latter case the micro-entrepreneur can reduce the probability of such a risk by making timely lease payments. In the case of possession, the micro-entrepreneur can do very little, if anything, to avoid possible expropriation.[3]

2.2. Linking Informal Property Rights to Risk Perceptions and Innovation in Marketing

Informal property rights can cause micro-entrepreneurs to face the risk of losing their productive assets (Lanjouw and Levy 2002). As mentioned earlier, previous literature has shown that perceptions of risk (and therefore behaviour in response to risk) can differ based on specific situational factors. We argue that two situational factors – the predictability and preventability of risk – differ in the case of leasing versus possession. This, in turn, results in differences in micro-entrepreneurs' perceptions of the risk of losing their productive assets and hence their response in terms of innovation in marketing practices and performance. The sections below provide an overview of the theoretical logic we use to justify our predictions; a more extensive discussion of the decision-making context facing micro-entrepreneurs is offered in Web Appendix A6.

2.2.1 *Possession is perceived as a non-actionable risk.* Possession increases the risk of expropriation because the productive asset is often owned by a third party that can at any point lawfully enforce its right to use and earn an income from the asset. Expropriation events are often part of large city-, province-, or national-level projects; decisions are made at levels that are far beyond the influence – or awareness – of slum-based micro-entrepreneurs, who tend to be at the fringes of society (Birch et al. 2016, Galiani and Schargrodsky 2010). The risk of expropriation

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[2] A sceptical reader may ask why leasers, who typically lease from those who possess, do not also face the fear of expropriation. The reason why the fear of expropriation affects leasers less is that they have the option of relocating if their leased facility is bulldozed. While still painful, it is an option that possessors do not have; the latter face the loss of a large specific investment as they lose the physical asset into which they have invested considerable time, money, and effort.

[3] At this point, one might be tempted to view the difference between leasing and possessing, especially with respect to the impact on business outcomes, as one of costs, i.e., there is an extra cost that a leaser has to pay that a possessor does not. One could argue that it is the need to make this payment that drives leasers to act differently from possessors. A simple thought experiment suggests a test for this conjecture. If indeed extra costs drive innovation behavior, we should see differences even *between* leasers on how much they innovate, with those paying more in rent innovating more. We provide formal evidence later that this is not the case (see section 5.6).

is not easily *predictable*, since the micro-entrepreneur can never really know when the expropriation might happen. Nor is it *preventable*, since there is very little the micro-entrepreneur can do to avoid expropriation. As a result, possession is accompanied by risk that is perceived as being non-actionable. Specialized investments such as innovation in marketing practices are not likely to alleviate the risk of expropriation.[4] Other things being equal – and, as we argue below, in contrast to those who lease – micro-entrepreneurs who possess are therefore less likely to innovate their marketing practices.

2.2.2 *Leasing on the other hand is perceived as actionable risk.* Those who lease face the risk of negative consequences if lease payments for the use of the productive asset are unmet. Lease payments in many urban slums are enforced by "specialists in violence" (Joireman 2011 p.103, Marx et al. 2019). The risk due to unmet lease payments is *predictable* in that the micro-entrepreneur knows when the lease payment is due, and that dire consequences are likely if these payments are not made as expected. Moreover, the risk is *preventable* in that the micro-entrepreneur knows that making lease payments regularly generally ensures that the business operates without hindrance. The predictable and preventable nature of the risk associated with leasing causes it to be perceived as actionable. In particular, actions such as marketing practice innovations (and specialized investments in such practices) are likely to generate additional income to help meet regular lease payments and thus help alleviate the risk of eviction. Hence, micro-entrepreneurs who lease are more likely to innovate in their marketing practices.

2.3 Micro-Entrepreneur Marketing Practice Innovation and Performance

What options are available to micro-entrepreneurs who lease to make the extra money needed to stave off eviction due to unmet lease payments? Prior literature suggests two broad strategies to achieve superior profitability: a cost focus or an innovation focus (Porter 1985). A low-cost strategy can be achieved through means such as a superior manufacturing process or a better inventory management system. Another common route is through sourcing inputs more cheaply than the competition, perhaps through favored access to suppliers or through superior bargaining power in negotiations with suppliers. Unfortunately, none of these is easy to implement in the contexts in which most micro-entrepreneurs operate. The businesses they run are often service offerings (retail) that are low on technology, with little possibility of technologically driven process innovation that involves a substantial upfront cost. These

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[4] More generally, micro-entrepreneurs face very serious constraints on what they can do to optimize their performance, both in terms of their current business (e.g., invest in improving or changing their 4 Ps; what we call 'innovation' in this paper) and in terms of other options outside their business (e.g., saving, getting insurance, finding a better job, investing in education, etc.). Thus, the real lack of alternatives such as insurance or savings solutions, combined with the fact of the looming bulldozers, means 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.

businesses are price-takers in the true sense of the term: they are frequently beholden to just one large supplier who enjoys most of the bargaining power in the relationship (the average micro-entrepreneur in our sample accounts for less than 1% of their supplier's total revenues). Further, the strong social networks at play make it difficult for the entrepreneur to look for alternative suppliers, let alone play one off against the other.

This suggests that the only generic strategy open to the typical micro-entrepreneur is one with a focus on innovation in marketing practices. We define a marketing practice innovation as the application by a firm of a marketing tactic that is novel to the firm and its marketplace context and *intended to enhance marketplace outcomes for the firm*.[5] A rich literature has suggested a number of such tactics. While almost all the literature concerns itself with formal firms in developed economies, there is nevertheless a subset of actions that are open to micro-entrepreneurs in developing countries operating in the informal sector.

Following the broad marketing literature, we focus on the four main ways in which micro-entrepreneurs can innovate their marketing practices: product (services), price, promotion, and place (Kotler 2019). Needless to say, the implementation costs and benefits of each of these practices differs in our context from the case of large firms in developed economies. We discuss each of these strategies below.

2.3.1 *Product (Services)*. Micro-entrepreneurs do not typically have the option of influencing product design or of offering their own "private labels". Instead, there is a relatively simple way in which they can innovate, which is to provide services that are of value to the customer. For instance, micro-entrepreneurs can engage in bulk breaking of products such as cigarettes in order to sell them per piece, or offer complimentary bags for customers to carry purchases home in.

2.3.2 *Price*. In contrast to product, price is generally viewed as one of the easiest marketing practice innovations to implement (Hoch et al. 1994, Thompson and Teng 1984). Nevertheless, micro-entrepreneurs do not have much leeway in setting prices for packaged goods, for the following reasons. First, packaged goods often come with a suggested retail price set by the wholesaler; while not a legal requirement, most retailers adhere to the wholesalers' recommendation. Additionally, since the goods sold by micro-entrepreneurs are common, consumers are aware of the recommended retail price, which makes it difficult for micro-entrepreneurs to set higher prices. Second, emerging markets are known for their long supply chains; this leads to small profit margins for micro-entrepreneurs, which in turn makes it difficult

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[5] It is important to note here that *both* parts of the definition, novelty as well as enhanced outcomes, need to be present for a marketing practice to be called an innovation.

to reduce prices. That said, micro-entrepreneurs can engage in creative pricing practices, such as reducing the prices of products that are close to their expiry date, bundling products, and offering different qualities at different prices.

2.3.3 *Promotion*. The marketing literature broadly identifies two types of promotion practices: advertising and sales (Kotler 2019). Regular TV or social media advertising is not really a viable option for most micro-entrepreneurs. Micro-entrepreneurs can, however, use promotional materials, especially those that might be provided by manufacturers. These are broadly like in-store displays and features in the developed country retail context. Further, these sales promotion practices are not very costly, and it is easy for micro-entrepreneurs to change and adapt them according to their needs.

2.3.4 *Place*. The broader notion of the channels of distribution that "place" entails has little relevance in the micro-enterprise context. As stated earlier, micro-entrepreneurs typically have no control over the supply chain. A dimension of "place" that micro-entrepreneurs do have control over is the physical location of their store. Those who lease can weigh the costs of higher lease payments against the benefits associated with better locations. Since lease contracts are often for a limited period of time and can be terminated if the choice of location is not optimal, micro-entrepreneurs who lease can change their choice in a way that makes meeting recurring lease payments possible.[6] Using Hotelling-like logic, the micro-entrepreneur can situate herself very close to where the demand is (i.e., towards the "middle" of the Hotelling line); this would be the most favorable location (albeit with the caveat that such locations might attract greater competition).

2.3.5 *Performance.* As mentioned earlier the goal of the micro-entrepreneur is to improve her performance and generate the income needed to meet recurring lease payments. We have highlighted above how marketing practice innovation can help the micro-entrepreneur achieve that objective. The positive impact of such innovation on performance has been well established (Banerjee and Duflo 2007, Fagerberg et al. 2010, Hauser et al. 2006, Von Tunzelmann and Acha 2005). Since we have argued above that leasers are more likely to engage in marketing practice innovation, a natural corollary is that those who lease are likely to have higher performance than those who possess.

In summary, our thesis is that micro-entrepreneurs who lease perceive the risk of losing

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[6] The location decision is one of the concrete decisions the leaser can make to enhance the likelihood of maximizing profit, and it is unique to the leaser – the other innovations are available to possessors also. In order to make the comparison between equivalent choice sets, we redid our entire analysis after dropping the location decision. We find that all our findings remain intact. Given the centrality of location to retail markets, we have opted to retain location choice as one of the decisions the leaser can make.

their productive asset as actionable, and therefore innovate their marketing practices (product, price, promotion, and place) in order to generate the revenues needed to meet their recurring lease payments. In contrast, micro-entrepreneurs who possess perceive the risk of losing their productive asset as non-actionable; this leads them to being less likely to innovate their marketing practices along the dimensions of product, price, promotion and place.

A suitable empirical context to test our theory would be a location in a developing country with a high percentage of micro-entrepreneurs. More specifically, the context should involve a community that is representative of the informal property rights context, where possession and leasing are prevalent, and in which micro-entrepreneurs who possess their productive asset face the threat of expropriation.

Even with an ideal context, however, there is the familiar challenge of causally proving the impact of informal property rights on marketing innovation practice. Among the biggest issues is that of selection – those who are more entrepreneurial on average could be choosing to lease a grocery store (especially if it is a "high risk, high reward" activity). If we then find leasers engaging in more marketing innovation, the finding is arguably an artefact of the fact that those with greater entrepreneurial ability selected into leasing, and has nothing to do with leasing per se. To overcome this challenge, we use an instrumental variable approach. Briefly, we make use of a change in property rights laws in our empirical context as an exogenous shock that affects the decision to lease or possess. A detailed discussion of our instrument, along with formal checks on its validity and strength, is in the empirical section of the paper.

3. Methodology

3.1 Empirical Context

3.1.1 *Historical context.* Our choice of empirical context is a large slum in Egypt's capital, Cairo. Egypt is a lower-middle income country (World Bank 2013); almost 39% of the population were self-employed in 2013. Like many large cities in the developing world, Cairo is home to about 170 slums and informal communities, dispersed all over its urban landscape (Sims 2010). Our study focuses on Ezbet Khairallah, one of the most disadvantaged slums in Cairo. The slum is over 40 years old and is built on about two square kilometers of land. It is home to 650,000 inhabitants who are mainly migrants from Upper Egypt (70%) and the Delta region (30%) (Tadamun 2014). Like most urban slums around the world, Ezbet Khairallah lacks many basic services (Birch et al. 2016). It only has one primary school and no hospital. Its four medical clinics all run on donations from local mosques and it has just a handful of privately-owned pharmacies. The slum has a northern and a southern side and is divided by Cairo's ring road, which was built in the early 1990s. Each side has a market which is home to several businesses.

The slum was built in the early 1970s on desert land that is legally owned by the government. Private ownership is therefore limited, and possession and leasing are highly prevalent. In our sample of micro-entrepreneurs only about 6% have formal ownership of their physical location (i.e., the store); roughly 48% of micro-entrepreneurs possess their stores and 46% lease them. As of April 2020, most inhabitants were still fighting for the right to own their land and therefore still faced the risk of expropriation.

3.1.2 *Threat of expropriation.* The risk of expropriation is ever-present in Ezbet Khairallah. Since it was established in the 1970s, the slum has seen a major incident of expropriation at least once every decade. In the 1980s, President Anwar Sadat issued a decree allocating the land on which Ezbet Khairallah was built to the Maadi Company for Development and Reconstruction. In 1982, security forces arrived in Ezbet Khairallah to implement the demolition order, but the area's inhabitants formed a human cordon and succeeded in protecting their homes. In the 1990s a major ring road was built around Cairo. It went straight through the heart of Ezbet Khairallah, leading to houses being demolished and the land on which hundreds of families lived being expropriated. In 2010, Ezbet Khairallah witnessed another major incident of this kind: an area marked as unsafe was demolished, again leaving hundreds of families homeless and the land on which they lived expropriated. We conducted a survey with 147 micro-entrepreneurs which reveals that there have been relatively smaller but nevertheless significant expropriation events every year following the major expropriation event in 2010; our interviews and surveys suggest that each of these events has registered in the minds of the residents of the slum.

More generally, the threat of expropriation is not just restricted to Ezbet Khairallah but is common in other parts of Cairo and Egypt as well. Millions of people are affected by it and are in fear of losing their livelihoods. Amnesty International (2011) estimated that about 156 informal settlements, home to 6.1 million people in the greater Cairo area, are potentially subject to forced eviction and demolition. This means that about 30% of the population of Egypt's capital is threatened by forced eviction at any given moment.

3.1.3 *Informal property rights regime.* As previously mentioned, Ezbet Khairallah was originally land owned by the government, but kept unused till the 1970s. At that time, a few families from the Delta and Upper Egypt region migrated there and claimed the land as their own (in local parlance, these migrants "put their hand on the land"). These migrants were willing to use force to defend their claim to the property and proceeded to profit from their position by selling parcels of land to other migrants. This was the genesis of what we have termed

"possession" in our sample. As for leasing, all that is required is money to make the lease payments – no "connections" are required to become a leaser.

Interviews and informal conversations that we had with residents and entrepreneurs suggest that the drive to possess stems from being able to avoid making monthly lease payments and enabling the investment of savings in an asset that can benefit the family in the future. When we asked possessors about the threat of expropriation, the most common response was "there is nothing I can do to prevent it, so I just want to live my life today as well as I can". When we asked whether expropriation could be avoided by connections to powerful individuals or by paying bribes, the response was negative, as the main reason for expropriation is often a big government project that "has priority over our lives". There seems to be no parallel compelling motivations for leasers – almost no one said they were a leaser by choice. All leasers we spoke to said that they would prefer to be possessors but lacked the requisite capital to obtain the "informal" right.[7]

3.2 Data collection

We first conducted a census of the economic activities in Ezbet Khairallah. This census revealed that retail is the most common form of business in the slum (47%), while grocery businesses are the most common among these retail businesses (51%). This is in line with several prior studies of urban slums around the world (Banerjee and Duflo 2011, De Mel et al. 2010, Jerath 2016). In order to ensure comparability when measuring innovation in marketing practices among micro-entrepreneurs, we focus on the grocery retail sector.

To acquire data for this study, we worked with a community-based non-governmental organization (NGO) that provided 15 fieldworkers who were from the community and were therefore able to gain the trust of respondents. These fieldworkers also had experience with survey research through their prior work with an international development agency. We contracted with a local market research firm to supervise the data collection process, quality control and data entry.

We collected four types of data. First, we conducted interviews to gain a better understanding of the empirical context and formulate the questionnaires we used to collect quantitative data. Second, we collected archival data to understand how regions (governorates, in

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[7] For example, one of the entrepreneurs we spoke to, when asked "If you open another shop, will it be rented or owned?", said "I will buy it, because I do not want to leave the place after I have my own customers". Another micro-entrepreneur, when asked "If you could save some money, would you like to own a shop or do you prefer to rent?", answered "I prefer to own a shop, but if I want to buy a shop, I will need 100K or more. If you own, you will save the rent. The owner will not chase you for his rent."

the Egyptian context) were affected differentially by the land reform law. Third, we collected quantitative survey data on micro-entrepreneurs' innovation practices (along with data on several other relevant control variables). Multiple waves of surveys were conducted over a period of 17 months, from September to December 2012, and from May to September 2013. (The interruptions in data collection were related to the Islamic fasting month of Ramadan and the following month, as both result in non-representative seasonal variations in profits and sales in the grocery business.) Fourth, we collected data on the location of micro-entrepreneurs' stores and slum facilities, such as schools, hospitals, NGOs, local markets, mosques, and churches, using Geographic Positioning Systems (GPS) data.

3.3 Measures

Our outcome variables are measures of marketing practice innovation (product, price, promotion, place), and performance.

3.3.1 *Outcome Variables: Marketing Practice Innovation.* We followed a common approach to arrive at the practice constructs. We first compiled an exhaustive list, through interviews and observation, of marketing practices used by grocery stores in the Ezbet Khairallah area. Recall that we defined a marketing practice innovation as the application by a firm of a marketing tactic that is novel to the firm and its marketplace context and intended to enhance marketplace outcomes for the firm. Our list encompassed all practices intended to enhance marketplace outcomes.

We interviewed seven experts who have extensive experience working in Ezbet Khairallah and similar markets. Six of these market experts are from the salesforce of several MNCs (e.g., Cadbury, PepsiCo, Indomie) and local manufacturers in Egypt that directly sell to grocery stores like ours. The seventh is an expert from a market research firm. The group has an average experience of 10 years in markets similar to ours. We asked them to give their opinion on whether they felt certain management practices were likely to lead to improved retailer performance in Ezbet Khairallah. We found that there is agreement among our experts that the business practices included in our measures are considered good management practices (see Table A1.1. of the Web Appendix for detailed results). [8]

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[8] The only exception to that is "allowing customers to bargain" (details below). Although our experts all said that allowing customers to bargain was not a good management practice, most of them also said that they often do see a need for grocery owners to engage in that practice, due to the economic circumstances their customers live in. For robustness, we did all our analysis both with and without the bargaining item and found the results largely unchanged (in what follows we include the bargaining item).

In order to be faithful to the rest of the definition, that of novelty to the marketplace context, we eliminated all practices that were used by greater than 50% of the population of stores. This left us with roughly two to four items for each specific marketing practice (see Table 1 and Table 2). In essence our measure of marketing practice innovation is a count of the number of marketing practices used by the micro-entrepreneur (along each dimension). As Table 1 shows, the practices outlined are – though simple – not widely prevalent in the population of micro-entrepreneurs in our context.

3.3.1.1 <u>Product (Service) Practices</u>. Corresponding to our earlier discussion, we measure product practices along the service dimension, wherein we count the number of customer service practices that each retailer in our sample provides. Practices include i) bulk breaking of products such as cigarettes to sell them per piece, ii) selling seasonal products, iii) allowing bargaining, and iv) opening longer hours. Our measure is:

$$\text{Product (Service) Practices} = \sum product_i \qquad (1)$$

where $product_i$ refers to the sum of service practices performed by micro-entrepreneur i.

3.3.1.2 <u>Pricing Practices</u>. We count the number of pricing practices that each micro-entrepreneur in our sample provides. Practices include i) price tagging, ii) reducing the prices of products that are close to their expiry date, iii) offering discounts based on customers' income, and iv) bundling products. Our measure is:

$$\text{Price Practices} = \sum price_i \qquad (2)$$

where $price_i$ refers to the sum of pricing practices performed by micro-entrepreneur i

3.3.1.3 <u>Promotion Practices</u>. We count the number of promotion practices that each micro-entrepreneur in our sample engaged in. The promotion practices we measure are i) the use of promotional materials provided by the manufacturers and ii) paper advertisements the micro-entrepreneurs create themselves. Our final measure is:

$$\text{Promotion Practices} = \sum promotion_i \qquad (3)$$

where $promotion_i$ refers to the total number of practices performed by micro-entrepreneur i.

3.3.1.4 <u>Place Practices</u>. In the retail literature, closeness to the consumer has often been cited as an important determinant of optimal store location (Thomadsen 2007). We start by identifying key locations in the slum that attract the most footfall and are closest to most consumers: These are the slum center, and the main paved street running through the slum. We then calculate the Euclidean distance of a micro-entrepreneur's store from each of these locations. Place Practices are captured by adding up both these distances. Our final measure is:

$$\text{Place Practices} = \sum distance_{ix} \qquad (4)$$

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where $distance_{ix}$ is the distance of micro-entrepreneur i to key location x in the slum. Note that for this measure, in contrast to other measures of marketing practice innovation, lower values correspond to better practices, i.e., lower distances from key locations imply better place practices.

3.3.1.5 <u>Marketing Practice Innovation</u>. We standardize each of the four practice measures, i.e., rescale to have a mean of zero and a standard deviation of one, and then sum them to create the final measure.

Marketing Practice Innovation = $\sum marketing_{ji}$ (5)

where *marketing_{ji}* refers to standardized practice innovation *j* for micro-entrepreneur *i*.

3.3.1.6 <u>Performance</u>. We developed four measures of performance. First, we collected self-reported data on revenues and expenses. From this data we constructed two more traditional measures of performance (De Mel et al. 2009). The first measure was self-reported revenues, and the second measure was self-reported profits (which was constructed by deducting reported expenses from reported revenues). There are two drawbacks, however, to these self-reported measures. First, such questions typically suffer from low response rates. Since micro-enterprises are informal and don't pay taxes, they are often reluctant to answer questions related to their revenues and profits. Second, high seasonality and poor (often non-existent) bookkeeping methods lead to recall errors, i.e., inaccurate responses about revenues and profits (De Mel et al. 2009). To overcome these challenges, we developed more objective observational measures of performance specific to the grocery context. The next paragraph briefly describes these observational measures.

In-depth interviews with storeowners in Ezbet Khairallah showed that footfall, defined as the total number of individuals walking into a store over a given time, is a particularly important measure of performance for them. In the marketing literature, footfall is traditionally measured using secondary data collected electronically, for example, through loyalty card schemes. We devised an equivalent measure in our context, namely counts of the number of individuals walking into a store at peak customer traffic hours in the slum (as observed by a set of our research assistants). The second observational measure was a recording of the revenues observed by our research assistants (concurrent with a recording of footfalls).

To sum, our four measures of performance are: i) self-reported revenues; ii) self-reported profits (constructed measure); iii) footfall in store, observed by researcher; iv) revenues observed by researcher.

3.3.2. *Predictor: Informal Property Rights.* As previously mentioned, micro-entrepreneurs either lease or possess their stores. Accordingly, we measure informal property rights as a binary variable with leasing = 1 and possessing = 0.

While we have focused on the role of informal property rights in affecting the propensity to innovate and firm performance, there are clearly other factors that might have an impact. The most obvious are characteristics of the micro-entrepreneur (e.g., level of education, gender) and characteristics of the business (e.g., size, age). We deploy controls for both these categories, detailed below. At a broader level, prior literature (Tellis et al., 2009) has pointed to the importance of labor, capital, government, and culture in influencing innovation. In our context, we do control for aspects of labor and capital within the categories mentioned earlier; government and culture are more macro variables that, while differing across countries, are not likely to vary within the narrow (geographic, socio-economic, industry) context that we study.

3.3.3 *Micro-entrepreneur Specific Controls.* We include a number of micro-entrepreneur specific variables that prior research suggests could influence micro-enterprise performance (Ardagna and Lusardi 2010, De Mel et al. 2008, Djankov et al. 2008, Field et al. 2010). These can be grouped usefully into three categories: i) psychological factors (e.g., their intention to scale up their business and the extent to which they think about the future); ii) demographic factors (e.g., education attained by micro-entrepreneurs, parents being self-employed, and the micro-entrepreneur being born in Cairo); iii) general individual-level factors (e.g., gender, age of the entrepreneur) (see Table 3). Note that these categories are mainly for expositional convenience – nothing in the empirical analysis that follows relies on this specific categorization.

3.3.4. *Business-Specific Controls.* Consistent with prior research (De Mel et al. 2008, Karlan and Valdivia 2011, McKenzie and Woodruff 2012) we control for business-specific variables, such as the age of the business, the size of the business (number of employees), the business being the only source of income, perceived competition, number of main suppliers, and number of SKUs offered (see Table 3).

4. Empirical Analysis

We first report the summary statistics for our key variables. We then show the results of bivariate correlations between leasing versus possession and each of the types of marketing practices and each performance measure described above. We then report formal 2SLS regressions using an IV estimator.

4.1. Summary Statistics

Table 3 gives relevant descriptive statistics. The sample size for this study is 460 grocery stores. 52.83% of our micro-entrepreneurs lease while 47.17% possess their stores. The average

daily revenue of a grocery store owner in Ezbet Khairallah is 19 USD a day.[9] Profit margins are about 5-10%. As such, the micro-entrepreneurs make approximately $1.50 a day, which is below the World Bank's poverty line of $2 a day. The average age of the businesses in our sample is approximately six years and they each hire, on average, 1 paid employee. About 75% of micro-entrepreneurs studied report the business as the only source of income for their families. In terms of store facilities, only a few businesses in our sample had a separate warehouse (3.57%), a freezer for ice-cream (30.13%), or access to water (17.19%). However, the majority of the businesses had access to electricity (80.36%), a fridge (84.30%), and a scale (78.12%).

As for the micro-entrepreneurs themselves, about 60% of our sample are women, 52% never attended school, the average age is 45, and the average experience in the grocery business is approximately 7 years. In only 16.63% of cases did one of the micro-entrepreneur's parents own a business.

4.2. Model-free Results

Tests of differences in mean values show that micro-entrepreneurs who lease are significantly more likely to innovate their marketing practices than those who possess (see Table 4). Results indicate that those who lease are higher on product (service) practice (1.04 versus 0.72, $p<0.01$), price practice (1.53 versus 1.06, $p<0.01$), and promotion practice (0.73 versus 0.3, $p<0.01$). As for place practice, those who lease are closer to key locations in the slum than those who possess (287.43 versus 401.81, $p<0.01$), consistent with the argument that those who lease pick "better" locations. Those who lease do better on overall marketing practice innovation (0.59 versus -0.35, $p<0.01$) and perform better on different dimensions of. Additionally, Figures 1–4 help complete the argument by showing that overall innovation has a positive impact on different performance measures.

4.3. Identifying Causal Relationships

The model-free evidence so far suggests possible support for our thesis on the positive relationship between leasing and marketing practice innovation. However, as mentioned earlier, it might well be that an unobserved variable, such as micro-entrepreneurs' ability, drives the differences we observe in marketing practice innovation. A common solution to problems of this kind is to find an appropriate instrument, i.e., a measure that is correlated with whether a micro-entrepreneur leases or possesses, but not with any omitted unobserved variable. We now turn to our choice of instrument and the logic behind it.

4.3.1. *Instrument Definition*. We make use of a change in property rights laws in Egypt, via a Land Reform Law, as an exogenous shock that affects the decision to lease or possess but

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[9] Based on the exchange rate at the time the data was collected (0.164 USD = 1 EGP).

does not, for instance, affect entrepreneurial ability. Specifically, we use the region ("governorate") in which the micro-entrepreneurs' parents were born as an instrument for micro-entrepreneurs' current informal property rights. Formally, our instrument is a binary variable that indicates whether the micro-entrepreneur's parents were born in governorates *not affected* by the land reform law (Parent Place of Birth=1) or *affected* by the land reform law (Parent Place of Birth=0). Parents born in areas not affected by the land reform law are 27% of the sample; those born in areas affected by the land reform law are the remainder 73% (see Table 6 for details).

As with any instrument, we check for two characteristics: validity (the exclusion restriction is satisfied) and strength (the instrument should be strongly correlated with the explanatory variable) (Murray 2006). In the sections below, we do the following. First, we provide an intuitive argument for the validity of our instrument by presenting the logic behind the instrument (in particular, we show that the instrument affects the dependent variable "only through" the mechanism we posit, and not directly, i.e., that the exclusion restriction holds). Second, we formally test the validity of the instrument following approaches suggested in prior literature by Acemoglu et al. (2001), Alesina et al. (2013), Altonji et al. (2005), and Oster (2019). Third, we check that the instrument achieves an "as if random" assignment. And finally, we check for the strength of the instrument using a test suggested by Stock and Yogo (2005).

4.3.2. *Intuitive Argument.* Figure 5 presents a schematic representation of the logic behind our instrument. Briefly, a change in property rights laws in Egypt affected land ownership patterns: the heterogeneity of these laws across governorates resulted in heterogeneity in land ownership patterns across governorates. This in turn meant that where one lived mattered to whether one owned land there. This in turn meant that when one moved to the slum in Cairo, one either had access to land in one's place of origin that could be sold to acquire land in Cairo (be a possessor), or one did not (and hence was forced to lease). We detail each of these links below.

4.3.2.1 <u>Change in Property Rights Law.</u> In response to perceived inequality in the distribution of economic power and wealth in Egypt, President Gamal Abdel Nasser passed Law Number 178 on September 1, 1952 (also called the Land Reform Law). The law capped the maximum amount of land any individual could own and allowed the government to buy anything above that cap to offer it to "peasants" for ownership, in exchange for payments over a 30-year period (later amended to a 40-year period).

4.3.2.2 <u>Link between Land Reform Law and Ownership Patterns in Governorates (Link 1, Figure 5).</u> The land reform law affected Egyptian governorates differently. It had the most impact in governorates such as the Canal Zone, the Delta and Upper Egypt, and less of an impact in governorates such as Cairo and Alexandria. A study conducted in 2008 by USAID (2008)

showed that the mode of access to housing in 'Cairo proper' (i.e., the old center of Cairo excluding Giza or peri-urban Cairo) and Alexandria is predominantly through leasing (41% and 44.9% respectively), while in other Egyptian governorates, access to housing is predominantly through ownership (between 57% and 69%). Between the 1950s and the 1970s, these regional differences were even starker (Sims 2010).

4.3.2.3 <u>Link Between Ownership Patterns in Governorates, Parents' Birthplace, and Mode of Access of Micro-entrepreneur (Links 2 and 3, Figure 5).</u> Why do land reforms in areas far removed from Ezbet Khairallah matter? To understand this, note that Ezbet Khairallah is a fairly new slum (set up in the 1970s); the vast majority of micro-entrepreneurs in it are born to parents who spent the bulk of their lives in a different location (even though the micro-entrepreneurs themselves may have been born in Cairo). Where the parents were born therefore largely determines whether the parents owned land prior to their move to Cairo. When parents who owned land moved to Cairo, they could sell the land they had and use the capital to possess land in Ezbet Khairallah. They could then build their homes and/or stores on this plot of land. In contrast, those micro-entrepreneurs whose parents did not benefit from the land reform law could not follow this path: those parents, and hence those micro-entrepreneurs themselves, had to lease their homes and/or stores when they moved to Ezbet Khairallah.

There are two pieces of evidence one would need to substantiate this link. First, one would need to show differential rates of leasing versus possession among micro-entrepreneurs in Ezbet Khairallah, based on parents' birthplace. Second, one would need to show that the disposal of land by parents who possessed was (predominantly) what enabled micro-entrepreneurs today to be possessors rather than leasers (i.e., it provided the capital necessary to make possession possible).

Our data provide both pieces of evidence (see Figure 6). We find that micro-entrepreneurs whose parents were born in areas affected by the land reform law are significantly more likely to possess than lease (60.3% versus 39.7%, $p<0.01$). We also find that the opposite pattern holds: micro-entrepreneurs whose parents were *not* born in areas affected by the land reform law are significantly more likely to lease than possess (67.2% versus 32.8%, $p<0.01$). As for the disposal of land enabling the purchase of land in Ezbet Khairallah, we find that the single most common source of capital for micro-entrepreneurs who possess is from the sale of land in their home village or from land they inherited in their home village (46.01% vs. 11.74% for the next most common source, which was savings).

So far, we have given an intuitive logic for why our instrument might satisfy the exclusion restriction. We now proceed to more formal tests.

4.3.3. *Exclusion Restriction ("Only Through" Condition)*. The exclusion restriction implied by our IV regression is that, conditional on the controls included in the regression, parents' birthplace has no effect on the extent of a micro-entrepreneur's innovation in marketing practices, except through whether they lease or possess their store. One argument that could threaten the validity of our instrument is that the parents' access to land changed the children's formative experiences in some fashion. More tangibly, perhaps it affected such things as the amount of education they could get; less tangibly, perhaps it affected other aspects of entrepreneur psychology. While it is hard to say which way these effects would go, their very existence would threaten our exclusion restriction. Following past literature (Acemoglu et al. 2001, Alesina et al. 2013, Altonji et al. 2005, Oster 2019) we use three approaches to demonstrate that our results are not driven by omitted factors: i) including a complete set of control variables, ii) formally evaluating the impact of omitted variables, and iii) performing an overidentification test.

4.3.3.1. <u>Comprehensive List of Control Variables</u>. We consider a comprehensive list of variables (described in Table 3) that might be correlated with both parental birthplace and micro-entrepreneur performance. We use these factors as controls in regressions examining the role of property rights on marketing practice innovation and performance (Acemoglu et al. 2001, Alesina et al. 2013). Ideally, one wants the estimates of property rights on innovation to remain relatively stable across specifications with and without control variables. Table 6 displays the results. The baseline model in column (1) of Table 7 shows the results controlling for psychological factors only. We then add demographic factors that might be affected by parents' birthplace, general individual-level factors, and business-specific factors in columns (2), (3) and (4) respectively. We find that the estimates of property rights on innovation in marketing practices do not change substantially between our baseline estimate in column (1) (1.06) and the full model estimate in column (4) (0.82). We report similar results for each of our innovation measures in Tables A1.3.–A1.6. of the Web Appendix.

4.3.3.2. <u>Evaluating the Robustness of Results to Omitted Variable Bias</u>. While the list of control variables above is quite comprehensive, one can never definitively state that there are no important factors that might have been omitted. A formal test, first suggested by Altonji et al. (2005) and operationalized by Oster (2019) helps assess the extent to which omitted unobservable factors could possibly be driving our results. Briefly, the test looks at the change in R-squared values in going from a regression with no controls, to one with all observed controls, to one with both observed and unobserved controls (this third regression is hypothetical). The R-squared of the third model, denoted R_{max}, is used to compute a value δ, which represents how

important unobserved control variables would have to be, relative to the observed controls, for the coefficient of interest to be zero (i.e., non-significant). For example, a δ of 5 would mean that the unobservables would have to be five times as important as the included controls, in order for omitted variable bias to be large enough to make the coefficient of interest non-significant.

Table 7, column (1) shows the estimated treatment effects for the baseline model (no control variables). Column (2) presents the point estimates for the model with all the control variables discussed in Table 3. Column (3) reports values of δ for an R_{max} value of 1.3 $R^\sim$, where $R^\sim$ is the R-squared value from the regression with all observed controls included.[10] Three aspects of the results are worth highlighting. First, as observed earlier, the coefficient estimates are relatively stable across specifications, suggesting that the main effect we are finding is robust. Second, the R-squared value goes up significantly in column (2) relative to column (1) for every regression, suggesting that the included controls do have significant explanatory power. Third, the observed δ values suggest that any omitted control variables would have to be almost 3 to 10 times as important as the included control variables, for the observed significant result on our focal variable to disappear. Given that we have included most control variables that theory and prior literature have suggested, it is hard to imagine that there are omitted variables with this high an explanatory power.

4.3.3.3. <u>Overidentification test</u>. A common approach in prior literature to establish instrument validity is to conduct an overidentification test (this approach is based on Acemoglu et al. (2001) and follows Sargan (1980)). To do this, one needs additional instruments, over and above the focal instrument whose validity is being tested.

Before proceeding, it is useful to lay out our conceptual logic in the form of a figure.

Parents' birthplace -> Informal Property Rights (possess or lease) -> Risk Perceptions (actionable vs. non-actionable risk) -> Marketing Practice Innovation and Performance.

What we need for the test is a plausible instrument for Informal Property Rights other than our focal instrument (i.e., Parents' Birthplace). The overidentification test presumes that the additional instrument we propose is truly exogenous and uses this to test for the exogeneity of our focal instrument. Because the null is that the focal instrument is indeed exogenous, this is, in some ways, a direct test of our exclusion restriction. The null will be rejected if a) the additional instrument we propose for Informal Property Rights has a direct effect on innovation in marketing practices, or b) if our focal instrument has an impact on marketing practice innovation that works through a channel other than the one we propose above (i.e., other than through

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[10] This R_{max} value is the one suggested by Oster (2019), based on theory and empirical tests. We also conducted the test for other values of R_{max}, with similar conclusions.

Informal Property Rights). Briefly, the test consists of running the 2SLS specification with just the additional instrument and comparing it to a 2SLS specification with the focal instrument and the additional instrument. The null is that the coefficients estimated via these two different specifications are not significantly different. A failure to reject the null suggests that the focal instrument is appropriate.

We implement the test with one additional instrument. Our instrument is a dummy variable = 1 if the micro-entrepreneur was born after 1978. The logic behind the instrument is that post-1978, the chances of a micro-entrepreneur gaining access to land to possess declined, making it more likely that they would lease. This is because of a series of new laws issued in 1978 which made it increasingly difficult and illegal to build informal housing. The impetus for these laws was the drastic rise in informal land possession and housing in Cairo during the period 1950–1970 (Sims 2010, Sims et al. 2003). This rise in informal land possession and housing, in turn, was due to a large wave of internal migration in the 1950s, 1960s, and 1970s, prompted by macro-economic reforms that led to an increase in employment opportunities in Cairo but deteriorating economic conditions in rural parts of the country (Tsourapas 2017). Internal migration (especially to Cairo) was at its peak prior to 1978 (Herrera and Badr 2012). In sum, the earlier wave of internal migration, and the passing of laws in 1978, meant that land available for possession decreased greatly after 1978 (Sims 2010, Sims et al. 2003).

The results are reported in Table 9. Panel A reports 2SLS coefficients estimated with the additional instrument defined above, while panel B reports the corresponding first stage results. Panel C, wherein we report the p-value from the χ^2 test for overidentification, is an explicit comparison of the two specifications (i.e., 2SLS with additional instrument vs. 2SLS with additional instruments and the focal instrument). Note that the hypothesis that the coefficients are equal is never rejected at the 5-percent significance level and we can therefore rule out a) a direct effect of the focal instrument on innovation in marketing practices, and b) that the focal instrument has an impact other than through the route of Informal Property Rights. Finally, panel D provides a version of the overidentification test that directly examines the issue of whether our focal instrument has an impact on innovation in marketing practices through channels other than property rights. The test consists of adding our focal instrument, Parents' Birthplace, as an exogenous regressor, while using the additional instrument to instrument for property rights. If Parents' Birthplace had a direct effect on innovation in marketing practices, we would expect it to have a positive and significant coefficient. We find the effect to be statistically non-significant.

This suggests that the impact of Parental Birthplace on innovation very likely works through the Informal Property Rights regime.[11]

4.3.4. *As-If Random Assignment*. In a perfect research design, one would randomly assign one-half of the sample of micro-entrepreneurs in Ezbet Khairallah to the "leasing" condition and one-half to the "possessing" condition. A good exogenous shock should take us as close to this ideal as possible. In our case, micro-entrepreneurs whose parents were born in areas affected by the land reform law should be "similar" in observable characteristics to their counterparts whose parents were born in areas not affected by the land reform law. As Table 10 shows, we find no significant differences between the two groups on 20 of the 23 variables.[12]

Additionally, we went through historical archives to gather data on potential differences in observable factors at the governorate level (i.e., parents' birthplace), especially from 1950 to 1970 (i.e., around the time when the land reform law was implemented, and people started migrating to Cairo). Table 10 reports the findings. Note that governorates affected by the land reform law are not significantly different from governorates not affected by the land reform law in terms of access to education, healthcare, housing, electricity, information (through cinema), jobs, or average wages paid.

4.3.5 *Strength of the Instrument.* We follow Murray (2006) and test for the strength of our instrument by i) reporting the R^2 value for the first stage regression and ii) calculating the partial F-statistic of the excluded instrument and performing a relatively conservative test suggested by Stock and Yogo (2005). First, the R-square of the first-stage regression is 0.25, which is reasonable. Second, the intuition behind the Stock and Yogo test is that instruments are defined as strong if the F-statistic is large enough that the relative bias in an IV regression is at most 10%. The key to the test, therefore, is the definition based on relative bias, which in turn implies different critical values for the F-statistic (see table 1 in Stock and Yogo 2005). If the actual value exceeds this threshold, then the instruments are strong, else not. Based on Table 1 in Stock and Yogo (2005), the threshold in our case is 9.08 at a 10% level of bias. Our test statistic (F-stat > 14.37, $p < 0.05$) exceeds this threshold, suggesting that our instrument is not weak.

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[11] In addition to the preceding analysis, we conducted a 'placebo test' as suggested by a reviewer, i.e., we created one hundred data sets with a random assignment of birthplaces of entrepreneurs' parents and examined the resulting distribution of the t-statistic for the coefficient on the lease variable. We find that the distribution is centred at zero, adding to the weight of evidence in favour of the instrument.

[12] Motivated by the thought that differences in the micro-entrepreneur specific characteristics we observe might be driven by the micro-entrepreneurs' birthplace rather than their parents' birthplace, we repeated our analysis on a subsample of 206 Cairo-born micro-entrepreneurs. This subsample shows no significant differences between leasers and possessors along any relevant dimension (see Table A4.1.). Table A4.2. reports the findings of our 2SLS regression for this subsample; note that the results are consistent with results from the full sample.

4.3.6. *2SLS Regression.* Table 11 shows that leasing has a significant positive impact on all outcome measures - product practice, price practice, promotion practice, place practice,[13] and overall marketing practice.[14] The specification of our empirical model is as follows:

First Stage

$\widehat{lease_i} = a_0 + \beta_1 \text{parent\_affected}_i + \Gamma_1 \text{controlpsychology}_i + \Gamma_2 \text{controldemographics}_i + \Gamma_3 \text{controlindividual}_i + \Gamma_4 \text{controlbusiness}_i + e$ (6)

where parent_affected$_i$ is the instrumental variable (parent was born in area affected by the land reform law), and controlpsychology$_i$, controldemographics$_i$, controlindividual$_i$ and controlbusiness$_i$ are vectors for the different sets of controls detailed in Table 3 of the paper.

Second Stage

$y = a_0 + \beta_1 \widehat{lease_i} + \Gamma_1 \text{controlpsychology}_i + \Gamma_2 \text{controldemographics}_i + \Gamma_3 \text{controlindividual}_i + \Gamma_4 \text{controlbusiness}_i + e$ (7)

where $\widehat{lease_i}$ is the fitted value for *lease* derived from equation (1) and the controls are as defined earlier.

Additionally, Table 12 shows that leasing has a positive impact on our different performance measures.

4.3.7. *Link between Marketing Practices and Performance.* Throughout the paper we have assumed that increased innovation in marketing practices improves micro-enterprise performance. While intuitive, it remains an untested assertion in our context. As a formal test, we regress our overall marketing practice innovation measure on the four measures of performance described above: footfall, observed revenue, self-reported revenues, and self-reported profits.

$Performance_i = \beta_1 Marketing\ Practice\ Innovation_i + \sum \beta_j\ controls_i + \varepsilon_i$ (8)

The estimates reported in Table 13 suggest a strong positive link (albeit, not causal) between marketing practice innovation and our measures of performance.

5. Exploring the Mechanisms at Work and Alternative Explanations

We show that micro-entrepreneurs who lease innovate more than their counterparts who possess. While we attribute this to the perception of actionable risk faced by those who lease, it is useful to look more deeply into what distinguishes these two groups of micro-entrepreneurs, both in terms of their attitudes and their actions. We turn to such an examination below (for reasons of space, the relevant tables are displayed in the Web Appendix, not in the main paper itself; please see Section A2.).

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[13] To clarify, the Place Practice variable has a negative coefficient in the regression, consistent with those who lease being closer to high-demand locations.

[14] In addition, Table A1.2. provides the complete set of coefficient estimates. Tables A1.3. to A1.6. display estimates from separate regressions for each marketing practice variable.

5.1 Could those with Higher Entrepreneurial Ability be Self-selecting into Leasing Grocery Stores?

While the IV method we adopt addresses causality and issues with self-selection, there could still be concerns around the latter. For instance, one could argue that the grocery business may be higher risk (and higher reward) than a host of alternatives. Only those with higher entrepreneurial ability will choose to take this risk. Even if this set, those who possess might be the ones who passively went into the business because they already had access to a store. By contrast, those who lease had to actively take a further risk. If true, this argument would suggest that we would see leasers innovating more than possessors, not because of differences in property rights but because of differences in inherent entrepreneurial ability.

For the argument above to be valid, a couple of assumptions need to hold. First, that leasers and possessors have several career options to choose from. Second, that leasers made a choice *to go* into grocery (high risk, high return), but possessors made a choice *to stay* in grocery (low risk, low return). To see if these assumptions are valid, we collected additional data – as it turns out, neither of these assumptions are valid in our sample.

To check the first assumption, we asked the micro-entrepreneurs in our sample three questions[15]. 1) "At the time you opened this business did you have any other option to earn an income?" Almost everyone (98.95%) said no. (2) "At the time you opened this business, did you have other options for paid employment?" Again, almost everyone (98.95%) said no. (3) "At the time you opened this business, did you have an option that would have earned you a higher income than what you are earning now?". This time, everyone (100%) said no. Collectively this is fairly convincing evidence to suggest that most micro-entrepreneurs often have no choice but to become self-employed and open a grocery store.

On the second assumption, we asked micro-entrepreneurs about their perceptions regarding opening a grocery store compared to other businesses/stores in the area. We found that 93% of the respondents said that a grocery business is easier to start, and 58.95% said that it is more profitable than other businesses. Further, 78.95% said it is *easier* to run a grocery store, and 74.74% said that the grocery business is *less* risky to run. We also compared leasers and possessors to check if there are any significant differences in perception but found none (please see Table A2.1 for details).

Given the evidence presented above, it is hard to make the case that a group of micro-entrepreneurs with high entrepreneurial ability is self-selecting into leasing in the grocery business.

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[15] We acknowledge that the types of questions asked in the survey could yield noisy responses.

5.2. Does Actionability Mediate the Effect of Lease on Overall Marketing Innovation?

We argue that when micro-entrepreneurs lease their productive asset, the risk of losing their productive asset is perceived as being actionable. To measure perceptions of actionability, we used an item from our survey that asks the store owner: On a scale of 1 (not strong), 2 (moderately strong), and 3 (very strong), how strong is your ability to control your life? Ranking higher on this scale means that the micro-entrepreneur perceives herself as being more able to control her life and therefore means more actionability. We then run a formal mediation analysis (PROCESS Model 4, Hayes 2017) to see if the perception of actionability mediates the effect of lease on overall marketing innovation. Formally:

$$y = a_0 + bx_i + cm_i + e$$

where, bx_i refers to lease (the predictor variable) and cm_i refers to perception of actionability (the mediator).

If perception of actionability mediates the effect of lease on overall marketing innovation (indirect effect) we would expect a bootstrapped confidence interval that does not include zero. This is what we find; the indirect effect estimate is 0.09 (bootstrapped $SE = 0.06$) with a 95% confidence interval ranging from 0.0008 to 0.21 (i.e., does not include 0). To restate, perception of actionability mediates the effect of lease on overall marketing practice.

5.3. Is Inter-generational Persistence (i.e., Parental Human Capital) an Alternative Mechanism Explaining the Impact of Lease on Overall Marketing Innovation?

A potential alternative mechanism at play could be inter-generational persistence via parental human capital. One could argue that parents affected by the land reform migrated to Cairo earlier, are older, more likely to have owned a business, and possibly less educated. In order to explore this, we looked into data that we collected on micro-entrepreneurs' parents and compared those Affected to those Not Affected by the land reform law. The raw data Table A2.2), suggests that parental human capital is not significantly different on most dimensions (except parental age).

Furthermore, we find that 81.7% of micro-entrepreneurs reported that their parents did not own a business, only 10.7% reported that they have taken over the business from their parents, just 0.67% reported having their parents as partners in the business, and 2.2% reported having their parents employed in their business. This tells us that a small percentage of our sample had taken over their parents' business or were running the business with them.

To gain further insight into the source of the management practices implemented by our sample of micro-entrepreneurs, we collected additional data. We were able to locate 95 businesses (20.7% of original sample) and managed to interview the same key respondent in

67.4% of these cases. Table A2.3 summarizes some of the key findings. We can see that 45.3% of respondents said that their main source of knowledge on how to run the business has been "themselves". Only 23.2% said that their parents have been their main source of knowledge.

We also asked them about the kind of employment their parents had. 45% of respondents said that their father was a daily wage worker (24.2% were grocery stores owners), and 83.2% said that their mother was a housewife (11.6% were grocery store owners). We compared those who lease with those who possess on key dimensions of parental human capital and could not find any significant differences between the two groups. These results further suggest that there is insufficient evidence to construct a mechanism story around parental human capital.

A more formal analysis of interaction effects also suggests that the effects of informal property rights are not mediated by parental human capital or family business experience. We conduct the formal analysis in two ways. First, we run a series of regressions with the interaction effects of informal property rights with "parent owned a business", "parental education", "parental age" and "number of years parents' resident in Cairo" on "Overall Marketing Practice Innovation". Tables A2.4. – A2.7. present the results – observe that none of these interaction effects is significantly different from zero. Second, we consolidate these regressions by developing an index of Parental Human Capital and use that in interaction with informal property rights. Briefly, the index is developed by standardizing (i.e., rescaling to have a mean of zero and a standard deviation of one) the four human capital measures: "parent owned a business", "parental education", "parental age" and "number of years parents resident in Cairo", and summing:

$$\text{Parental Human Capital Index} = \sum parentalhumancapital_{ji} \qquad (9)$$

where $parentalhumancapital_{ji}$ refers to standardized parental human capital variables j for micro-entrepreneur i.

Table A2.8. presents the results of this analysis – observe that the interaction effect is not significantly different from zero.

5.4. Do Micro-entrepreneurs who Lease Engage in Better Financial Management Practices?

Micro-entrepreneurs who lease their productive assets need to make regular lease payments. It is of the utmost importance for individuals in this position to avoid cash flow and liquidity problems that could imperil their ability to make regular and timely lease payments. Given this, one would expect micro-entrepreneurs who lease to follow superior financial and mental accounting practices.

In general, micro-entrepreneurs face three major challenges in the financial management of their businesses. First, allowing sale on credit causes liquidity problems and reduces revenues, making it harder to meet lease payments. Second, when there is no separation between household and business income, and family members help themselves to products from the store without paying, micro-entrepreneurs are often left without enough revenue and profit to reinvest in new stock and meet lease payments. Third, when micro-entrepreneurs do not properly record income and expenses, they often do not know how much profit they are making, and which items need to be better managed.

In our raw data, we find that micro-entrepreneurs who lease their productive assets are less likely to offer sale on credit than those who possess (32.87% versus 44.49%, p<.01) and more likely to record their revenues and expenses (67.91% versus 51.06%, p<.01). Those who lease are also more likely to separate their household and business incomes than those who possess (62.62% versus 45.45%, p<.01). More formally, we run a 2SLS specification (see Table A2.9.) with financial management practice indicators as the dependent variable. We find that leasing has a significant positive impact on financial management activities (1.2, p<0.05). This collective evidence suggests that micro-entrepreneurs who lease their productive assets manage their finances more efficiently than those who possess.

5.5. Do Businesses that are Farther Away from the Demolition Areas Innovate their Marketing Practices More?

The reasoning here is that the fear of expropriation would be most salient for those nearest to the location of a major expropriation incident. Following this logic, we should observe that micro-entrepreneurs who possess and are located closest to the location of a major demolition area innovate the least, while those who lease and are located the farthest from the demolition area innovate the most. We create categorical variables that capture the lease*distance-to-demolition site interaction and regress these on overall innovation in marketing practices. Table A2.10 reports the results. Note that those who possess and are the closest to the demolition area innovate the least (-1.34; p<0.01).

5.6. Do Higher Costs (Due to Lease Payments) Explain the Impact of Leasing on Marketing Practice Innovation?

If micro-entrepreneurs who lease innovate more because they simply face higher costs, then overall innovation in marketing practices should be positively correlated with the amount of the lease payment. To test this, we ran an OLS regression with a subsample of those entrepreneurs who make lease payments (n=182), where our independent variable was the lease amount paid and the dependent variable was marketing practice innovation (see Table A2.11).

The results show that the lease amount does not predict marketing practice innovation (-0.00; p>0.1).

5.7. Do Businesses that are Closer to the Local Markets Innovate their Marketing Practices More?

As mentioned in Section 3.1.1, the slum has two markets, one on each of side of the main highway, mainly offering fruits and vegetables. The dynamics and structures of the two markets in the slum could cause competition to increase for those grocery stores that are located closer to them; this could result in these stores innovating in their marketing practices. To test for this, we repeat our main 2SLS analysis with our overall innovation variable and add a variable that measures the distance of each store to their nearest market. Table A2.12 shows the results of this analysis. Note that the coefficient of our variable "distance to nearest market" is not significant (0.005; p =0.774) and the results of our 2SLS analysis remain unchanged, suggesting that proximity to local markets does not influence overall marketing innovation.

5.8. Do Businesses with Larger Stores Innovate their Marketing Practices More?

Differences in store size (in terms of total area of the store) could have an impact on the extent to which micro-entrepreneurs innovate. Larger stores may use more pricing practices and may provide more promotions and customer service. To test this formally, we included store size as a control in the main 2SLS analysis (Table A2.13.).[16] The results are broadly unchanged, and store size does not have a significant effect on marketing practice innovation (-0.38; p=0.229).

6. Discussion

We show that in contexts where formal ownership of productive assets is limited, leasing has a strong positive impact on innovation in marketing practices. We also show that changes in property rights laws have a strong impact on the possession and leasing of productive assets. Indeed, the impact of these changes plays out across multiple generations, over a period of more than 60 years. Our findings have implications for research and practice.

6.1 Implications for Research

Our paper examines how risk due to institutional characteristics impacts innovation in marketing practices. We would like to highlight three areas where our work contributes to existing research. First, our focus on institutional characteristics highlights an often neglected aspect of risk: the risk that comes from exogenous shocks that are often completely outside the marketer's control, and hence unavoidable. By contrast, most prior research has focussed on the risk associated with particular actions: new products, new promotions and brand extensions (a

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[16] Measuring store size in our context turned out to be a non-trivial task – please see Appendix A3. for details.

notable exception is Sudhir and Talukdar 2015). The risks we explore in this paper are often significantly more important, and not only in the emerging market context that we study. Increasingly, even developed economies face emerging technological areas such as cryptocurrencies (e.g., bitcoin) or digital sharing and gig-economy services (such as Uber and Airbnb) where regulations are still unformed or unclear. This lack of regulatory and institutional clarity can create perceptions of both actionable and unactionable risk in the minds of consumers and firms which, in the mid to long term, can either stifle innovation and economic activity or result in the formation of semi-formal institutions that elude the grasp of policymakers. The results of our research suggest potentially promising avenues to study exogenous risks – and in particular how and why certain market actors might view these risks as actionable, while others view them as non-actionable.

Second, most work on marketing innovation has focused on "new to the world" innovations (cf. Hauser et al. 2006). This paper highlights the importance of "new to the context" innovations. These may not be novel, or may differ from context to context (e.g., bulk breaking may be prevalent in one context, while giving credit to customers may be commonplace elsewhere). While new to the world innovations – what we refer to as 'large-I' innovations – are the ones that have the potential to generate billions in wealth and transform society, our work highlights the big impact that 'small-i' innovations can have on the lives of hundreds of millions of micro-entrepreneurs. This ties in to an existing puzzle in the large literature on skills development among micro-entrepreneurs in emerging markets. The broad, somewhat dispiriting, conclusion of that body of work is that most skills training has no effect (see J-PAL 2019, Fischer and Karlan 2015; Mckenzie 2021 offers a slightly more optimistic take). However, almost none of that prior work (Anderson et al. 2018 being a notable exception) has examined the efficacy of marketing actions of the kind that we study in our paper. Moreover, demand for insights on 'small-i' innovations is high: 70% of respondents in surveys of micro-entrepreneurs by Fisher and Karlan (2015) sought "some form of assistance on sales and marketing". To follow the phraseology used earlier, a fruitful line of research would be to identify the effectiveness of 'small-i' marketing actions in a particular context, perhaps through Randomized Control Trials (e.g., see Anderson et al. 2021).

Third, while there is now a rich body of work in economics highlighting the long reach of history, marketing has generally been immune to this approach. The little work that has used history in marketing has generally adopted a descriptive or qualitative approach. Bronnenberg et al. (2012), who study the impact on brand preferences of historical migration patterns, and Chen and Zhong (2019), who study the impact on brand preferences of traumatic wartime experiences,

are notable exceptions. Our work goes beyond the work on consumer choices and quantifies the power of historical events in shaping current actions by marketing practitioners. This approach can be extended to a wide variety of marketing outcomes – be they channel arrangements, pricing policies, or patterns of consumption. In turn, there are several historical events that one could study (e.g., historical trauma or success). The reach of this approach is enhanced when one considers the power of vicarious experiences: it is not even necessary that one personally experience the trauma or success; the power of inter-generational or intra-community transmission could be enough to engender transformations in the marketing or consumption behavior of those far removed in time or distance.

6.2 Implications for Practice

Our work was inspired by a desire to understand the marketing lives of micro-entrepreneurs in an emerging market. The development of this understanding helps uncover several practical implications. First, a fairly obvious point, but one that cannot be reiterated enough: the micro-entrepreneurs we study do not just run businesses. They are also members of a supply chain for products generally manufactured by large multinational firms, and consumers for the products made by such firms. As such, enhancing the productivity and profits of these micro-entrepreneurs has beneficial ripple effects for the large firms that are typically the focus of our inquiry in marketing research. An understanding of the kinds of interventions that could help small micro-entrepreneurs in emerging markets could help large multinationals craft effective support policies, leading to quintessentially win-win outcomes.

Second, marketers in the developed world are often used to viewing most risks as actionable. This is understandable, given the milieu to which they are most exposed. Our research suggests a less sanguine approach might be useful: marketers going into emerging markets need to be aware that the long shadow of history might well imply that there are non-actionable risks in the environment that could blight any plans they have. While one can never anticipate all such risks, an awareness of their existence could help firms not be blindsided by blowback from a distant historical action.

Finally, our results have important policy implications. We show that, because of the unpredictability and preventability of expropriation, possession (without ownership) limits the extent to which micro-entrepreneurs innovate their marketing practices and perform well. Yet, despite the well-known importance of establishing and implementing property rights laws, developing countries have seen little tangible change in this area. From a government's perspective, there are two main issues. First, it is difficult for governments to measure the size of the informal economy. Second, bringing the informal economy into the formal economy requires

government commitment and investment. If the informal sector remains outside the formal economy, governments can justify a lack of investment in infrastructure for informal communities by using the fact that they live on illegal land as an excuse. But once informal settlements become formal and legal, governments are held responsible for investing in and providing infrastructure such as roads, electricity, healthcare, water, sanitation, and security for these settlements. This is expensive and difficult to do, as informal settlements are generally built haphazardly and without much planning.

Micro-entrepreneurs, on the other hand, often do not want to formalize their businesses, mainly because they fear high taxes on their already small incomes (La Porta and Shleifer 2014). This fear is in turn due to a lack of transparency on the part of governments in many developing countries and the lack of trust the poor have in the government's ability to solve their problems.

To break this deadlock, we suggest that governments in developing countries offer creative leasing programs as a feasible intermediary solution, until issues linked to implementing formal property rights are resolved. Second, we suggest that governments properly examine the long-term impact of their property rights policies. In this study, we find that micro-entrepreneurs in Ezbet Khairallah whose parents were born outside Cairo and Alexandria and were affected by the 1952 Land Reform Law, tend to possess and not lease their stores. We also find that the risk of expropriation linked to possession results in less innovation in marketing practices and poorer performance. Sadly, therefore, a property rights law that was originally intended to alleviate poverty and provide social justice has had the unintended consequence of a long-term compounding of poverty and social injustice over multiple generations.

6.3 Limitations and Future Research

As an early attempt at studying an understudied (and difficult to study) phenomenon, this study suffers from several limitations. Some of these limitations also offer opportunities for future research. First, while we intend our theory to be generally applicable to markets with weak property rights regimes (i.e., where possession and the threat of expropriation is widespread), we restrict our empirical work to one slum in one city in one (albeit large and typical) developing country. This focus helps us rule out sources of heterogeneity and therefore enhances the internal validity of the study. Additionally, focusing on a country such as Egypt, which has a poor property rights regime and many micro-entrepreneurs, provides a suitable context that is a fair representation of other slums in the developing world. Nevertheless, our findings may not generalize to micro-entrepreneurs from other cities and countries. Future research should explore the generalizability of our findings to other contexts, and thus enhance our understanding of the little-studied lives of micro-entrepreneurs worldwide.

Second, although our study makes broad claims about the impact of leasing versus possession on micro-enterprise innovation in marketing practices and performance, we limit our focus to a single industry and a particular form of business within this industry, namely the retail industry and grocery stores. Focusing on one industry is necessary for the comparability of marketing practices and is a common methodological approach in marketing. Ideally, future research would explore the generalizability of our findings to other sectors and industries. It would also be interesting to examine how and when micro-entrepreneurs engage in category differentiation as a marketing practice, and more specifically, why they choose to change categories altogether, for example by moving from groceries to home appliances. Finally, it would be good to explore further the link between property rights and occupational choice.

Third, while we focus on micro-enterprises in emerging markets, such businesses exist in developed markets as well. Future research, by studying such firms across contexts with differing institutions, can help identify the precise role that institutions play more generally in driving marketing practices worldwide. Indeed, this work could be the basis for a more general understanding of marketing in micro-enterprises relative to small and medium sized and large firms in countries across the globe.

Fourth, like every empirical study, ours offers many opportunities for methodological improvement. To take the most obvious, we infer causality using an instrumental variables approach; while we conduct extensive checks on the validity and strength of our instrument, there is no such thing as a perfect instrument. Future work could pursue causal inference through alternative techniques such as Randomized Control Trials. Finally, while we examine one mechanism through which informal property rights affect marketing practice innovation, it is reasonable to suppose that there might be multiple mechanisms at play (e.g., fatalism), a possibility for future research to explore.

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Figure 1. Impact of Overall Innovation on Observed Footfall

Fitted values   ● Overall Innovation
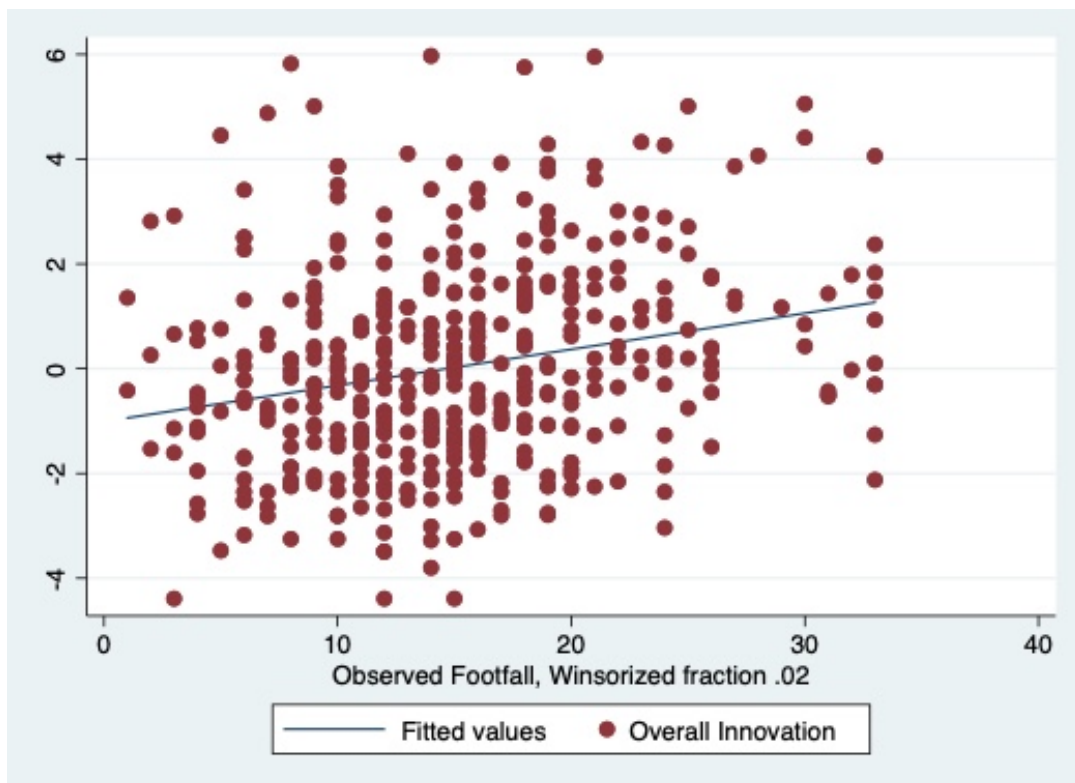
Figure 2. Impact of Overall Innovation on Observed Revenue

Fitted values   ● Overall Innovation
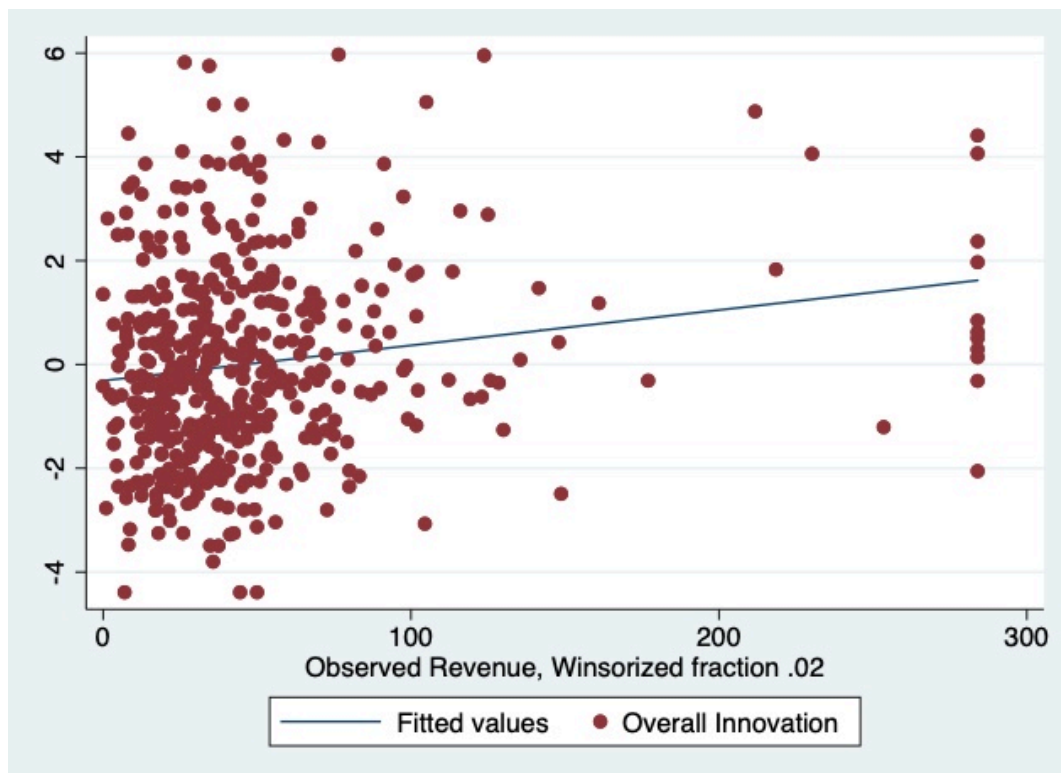
Figure 3. Impact of Overall Innovation on Reported Revenue
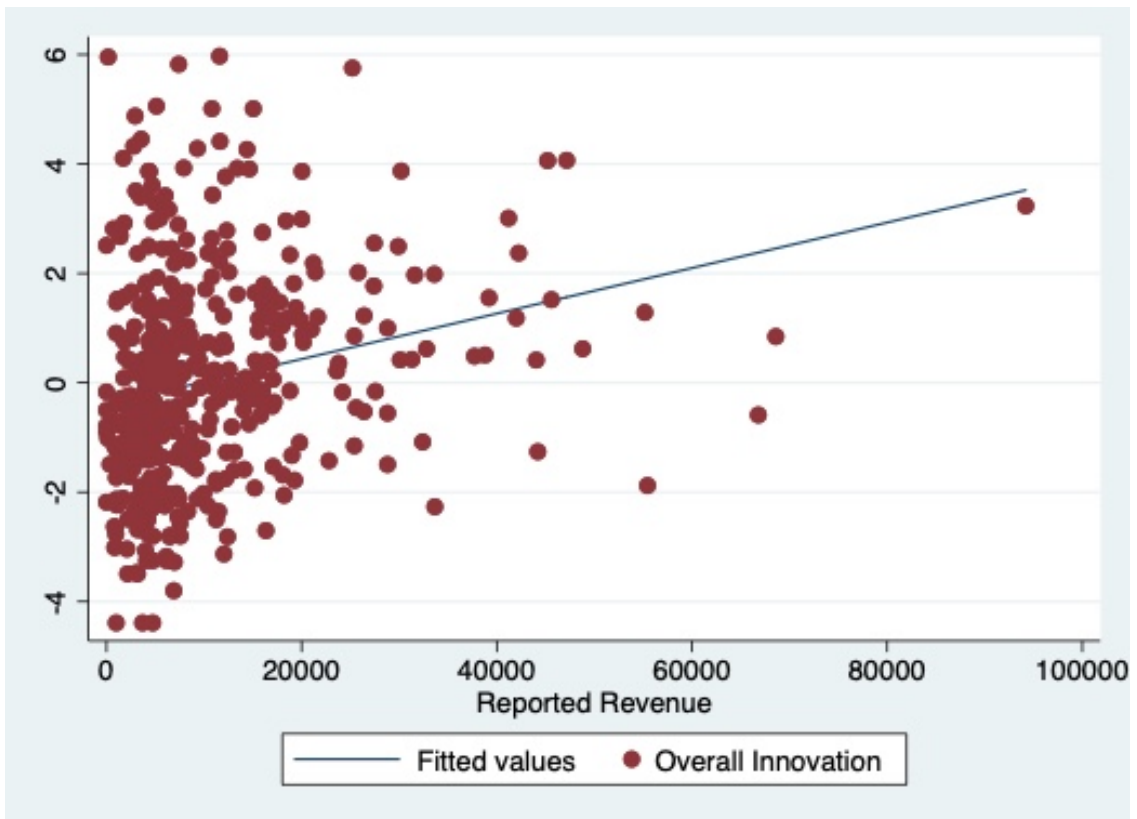
Figure 4. Impact of Overall Innovation on Reported Profit
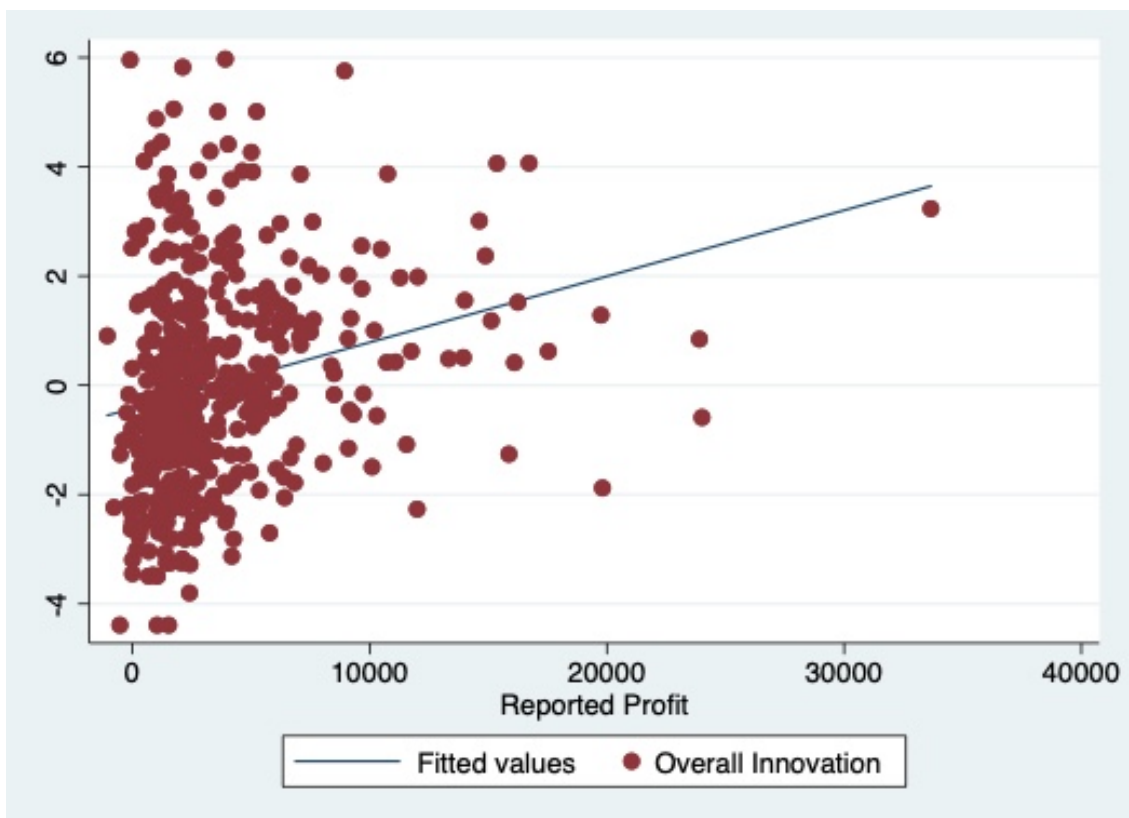
Figure 5. Schematic Representation of the Logic Behind the Instrument

Change in property rights law

(Link 1)

Ownership patterns in governorates

(Link 2)

Parents' birthplace (instrument)

(Link 3)

Informal property right for micro-entrepreneur in Cairo
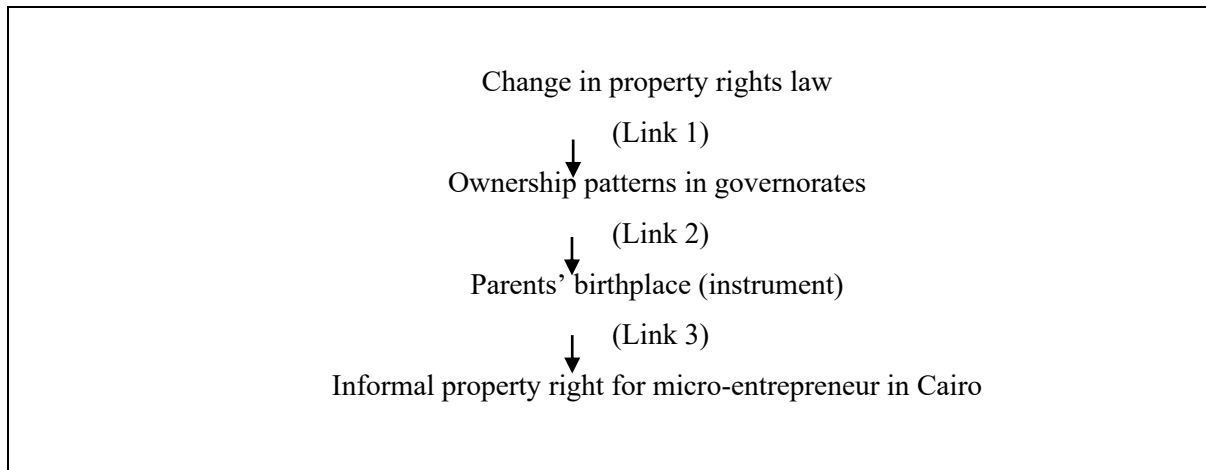
Figure 6. Informal Property Rights and Exposure to Land Reform Law
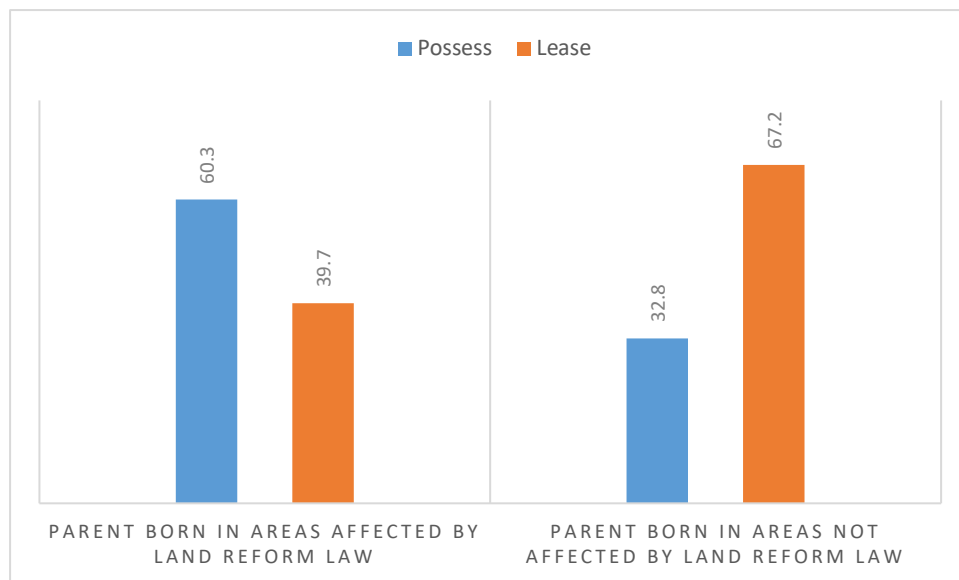
Table 1. Outcome Variables: Tactics Included in the Measures

Measure	No, I do not implement this tactic	Yes, I do implement this tactic
Product (Service) Innovation		
Allows bulk breaking	72.17%	27.83%
Selling seasonal products	87.17%	12.83%
Allows bargaining	80.87%	19.13%
Opening longer hours	72.61%	27.39
Pricing Innovation		
Price tagging	68.40%	31.60%
Reduce price on products close to expiry day	64.14%	35.86%
Offering discounts based on customers' income	68.97 %	31.03%
Product bundling	65.19%	34.71%
Promotion Practices		
Use of self-created promotional material (e.g., paper signs)	69.07%	30.93%
Use of manufacturer provided promotional materials	80.81%	19.19%

Table 2. Outcome Variables: Summary Statistics

Outcome Variable	Min.	Max.	Mean	Median	Mode
Product (service) practice (no. of service tactics implemented)	0	4	0.87	1	0
Price practice (no. of pricing tactics implemented)	0	4	1.28	1	1
Promotion practice (no. of promotion tactics implemented)	0	2	0.5	0	0
Place practice (distance in meters from key locations in the slum)	0	1653.22	316.23	252.89	N/A
Marketing practice innovation (standardized measure)	-3.64	6.64	$-4.30e^{-9}$	-5.51	N/A
Performance: Observed footfall	1	33	14.99	14	N/A
Performance: Observed revenue	0	284	49.40	37	N/A
Performance: Reported revenue	0	94200	10138.82	6400	N/A
Performance: Reported profit	-1061.11	33655	3496.76	2275.17	N/A

Table 2. Control Variables

Control Variable	Description
Micro-entrepreneur specific controls	
Psychological factors:	
Future focus	Micro-entrepreneurs' self-report of whether they think about the future.
Intent to scale up the business	Micro-entrepreneurs' self-report of their intent to scale up the business.
Exhaustion index	Micro-entrepreneurs' self-report of how exhausting they perceive running certain errands (e.g., going to the market, buying supplies and visiting family and friends).
Impulsiveness	Micro-entrepreneurs' self-report of Barratt Impulsiveness Scale relating to the speed of decision making and savings behavior.
Optimism (Landier and Thesmar 2006)	Micro-entrepreneurs' self-report of their expectations of good or bad events occurring in life.
Achievement orientation (McClelland 1985)	Micro-entrepreneurs' self-report of the satisfaction obtained from doing well and a feeling of competition with others.
Demographic factors (potentially affected by parents' birthplace)	
Education	Micro-entrepreneurs' self-reported highest attained degree.
Parents owned a business	Micro-entrepreneurs' self-report of whether or not their father or mother were micro-entrepreneurs themselves.
Cairo birth	Micro-entrepreneurs' self-report of whether they were born in Cairo.
Have children	Micro-entrepreneurs' self-report of whether or not they have children.
Number of dependents	Micro-entrepreneurs' self-report of the number of individuals who are financially dependent on them.
General individual-level factors	
Gender	Gender of the micro-entrepreneur is a binary variable: 1 indicates that the micro-entrepreneur is female, and 0 indicates that the micro-entrepreneur is male.
Age	Micro-entrepreneurs' self-reported age.
Ability (Frederick's cognitive reflection test; Frederick 2005)	To use Frederick's cognitive reflection test, we had to slightly adapt its questions to fit our context and to make them clearer to our respondents. For example, one of the questions in the test is: "A bat and a ball cost $1.10 in total. The bat costs $1.00 more than the ball. How much does the ball cost?" For this question, instead of a bat and a ball, we used a bottle of oil and a bag of detergent.
Worked in private sector before	Micro-entrepreneurs' self-report of whether they have worked in a private sector company before or not.
Worked in public sector before	Micro-entrepreneurs' self-report of whether they have worked in a public-sector company before or not.
Traveled for Haj pilgrimage	Micro-entrepreneurs' self-report of whether they have travelled for Haj pilgrimage before or not.

Table 3 (contd.)

Control Variable	Description
Business specific controls	
Age of the business	Micro-entrepreneurs' self-report measure of when they have started their business.
Size	Micro-entrepreneurs' self-reported measure of the number of paid employees working in the store.
Business is the only source of income	Micro-entrepreneurs' self-report on whether this business is their only source of income or not.
Perceived competition	Micro-entrepreneurs' self-reported measure of the number of competitors they think they have.
Number of main suppliers	Micro-entrepreneurs' self-reported measure of the number of main suppliers they are dealing with.
Number of SKUs	Micro-entrepreneurs' self-reported measure of the number of SKUs that they are offering.

Table 3. Descriptive Statistics

Sample size: 460 stores

General descriptive statistics	
Percentage of stores leased	52.83%
Percentage of stores possessed	47.17%
Daily revenue	7.13 USD/day
Daily profit (given a profit margin of 5-10% a day)	0.076 USD/day
% with access to electricity	80.36%
% with access to running water	17.19%
% with access to a separate warehouse	3.57%
% with access to a deep-freezer for ice cream	30.13%
% with access to a refrigerator	84.3%
% with access to a scale	78.12%
Micro-entrepreneur specific controls	
Psychological factors	
% thinking of the future	75.40%
% reporting an intention to scale up their business	89.29%
Exhaustion index	28.25 (SD 1.91)
Impulsiveness	2.93 (SD 0.29)
Optimism	1.08 (SD 0.35)
Achievement orientation	1.86 (SD0.95)
Demographic factors (potentially affected by parents' birthplace)	
Education (% never attended school)	52.00%
% whose parents owned a business	16.63%
% born in Cairo	44.78%
% who have children	93.11%
Number of dependents	3.05 (SD 1.58)
General individual-level factors	
% females	60.14%
Age of the entrepreneur	45.92 years (SD 13.89)
Ability (Frederick's cognitive reflection test)	0.39 (SD 0.62)
% worked in private sector before	7%
% worked in public sector before	4.75%
% who traveled for Haj pilgrimage	14%
Business specific controls	
Age of the business (years)	6.39 (SD 7.75)
Number of paid employees	1.17 (SD 0.76)
Number of SKUs	49.98 (SD 17.84)
Average perceived number of competitors	3.43 (SD 1.99)
Average number of suppliers	1.34 (SD 0.48)
% reporting business as only source of income	75.43%

Table 4. Model-free Results

Outcome Variable	Possess	Lease	p-value
Product (Service) Practices (no. of services offered)	0.72	1.04	<0.01***
Pricing Practices (no. of pricing practices implemented)	1.06	1.53	<0.01***
Promotion Practices (no. of promotion practices implemented)	0.3	0.73	<0.01***
Place Practices (distance in meters from key locations in the slum)	401.81	287.43	<0.01***
Overall innovation (standardized measure)	-0.35	0.59	<0.01***
Performance: Observed footfall	13.72	16.39	<0.01***
Performance: Observed revenue	42.87	56.62	<0.01***
Performance: Reported revenue	8488.99	11964.32	<0.01***
Performance: Reported profit	2940.509	4119.653	<0.01***

Note. The p-value is for a two-sample t-test of the difference in means for possessors versus leasers for each of the outcome variables.
***Significant at the 1 percent level.

Table 5. Sample Composition: Informal Property Rights and Exposure to Land Reform Law

	Possess	Lease	Total
Parents born in areas affected by land reform law	202 (44%)	133 (29%)	335 (73%)
Parents born in areas *not* affected by land reform law	41 (9%)	84 (18%)	125 (27%)
Total	243 (53%)	217 (47%)	460 (100%)

Table 6. Impact of Informal Property Rights on Marketing Practice Innovation

	Panel A: OLS results			
	(1) Marketing Practice Innovation	(2) Marketing Practice Innovation	(3) Marketing Practice Innovation	(4) Marketing Practice Innovation
Lease	1.06***	1.00***	0.85***	0.82***
	(0.2)	(0.24)	(0.25)	(0.27)
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	0.11	0.12	0.14	0.27
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) Marketing Practice Innovation	(2) Marketing Practice Innovation	(3) Marketing Practice Innovation	(4) Marketing Practice Innovation
Lease	3.96***	4.07***	4.11***	4.67***
	(1.00)	(1.08)	(1.19)	(1.45)
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. Panel A shows the results of the OLS regression while Panel B and C show the results for the 2SLS regression of the impact of Informal property rights on overall marketing practice innovation.

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

Table 7. Robustness of Results to Omitted Variable Bias (Oster 2019)

Dependent variable	(1) Baseline effect β $(S.E.)\,[R]$	(2) Controlled Effect β $(S.E.)\,[R]$	(3) $\delta^{Rmax}\,for$ $\beta = 0$
Product (Service) Practices	0.31*** (0.1)[0.02]	0.33** (0.2)[0.16]	4.39
Price Practices	0.47*** (0.1)[0.05]	0.49*** (0.14)[0.21]	9.72
Promotion Practices	0.42*** (0.07)[0.08]	0.37*** (0.09)[0.28]	3.07
Place Practices	-114.38*** (31.13)[0.03]	-152.60*** (48.50)[0.22]	8.21
Marketing Practice Innovation	0.94*** (0.2)[0.05]	0.90*** (0.28)[0.25]	5.52

Notes. Column (1) shows the estimated treatment effects for the baseline model (no control variables). Column (2) presents the point estimates for the model with all the control variables. Column (3) reports values of δ, for an R_{max} value of 1.3 $R^\sim$, where $R^\sim$ is the R-squared value from the regression with all observed controls included. ***Significant at the 1 percent level; **Significant at the 5 percent level.

Table 8. Overidentification Test

Dependent variable: Marketing Practice Innovation	(1)
Instruments included	Parent birthplace and micro-entrepreneur born post 1978
Panel A: 2nd Stage 2SLS	
Lease	3.84*** (0.98)
Panel B: 1st Stage for Lease	
Parent born in areas affected by land reform law	0.34*** (0.09)
Micro-entrepreneur born post 1978	0.23*** (0.07)
R-Square	0. 1
F-stat	12.78
Panel C: Results from overidentification test	
p-value from chi-square	0.29
Panel D: Second stage with parent birthplace as exogenous variable	
Lease	2.48 (1.41)
Parent born in areas affected by land reform law	0.80 (0.66)

Notes. Panel A reports the two-stage least-squares estimates for the additional instrument with standardized Marketing Practice Innovation measure as the dependent variable, and Panel B reports the corresponding first stage results. Panel C reports the p-value for the null hypothesis that the coefficient on lease in the second-stage regression (i.e., in Panel A) is the same as when instrumented using Parent's birthplace along with the alternative instrument indicated. Panel D reports results from the regression in which Parents' birthplace is included as an exogenous variable and lease is instrumented using the alternative instrument indicated. Standard errors are in parentheses. All regressions have 363 observations.
***Significant at the 1 percent level.

Table 9. Checking for "As If" Random Assignment (Full Sample)

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 factors			
Psychological factors			
% exhibiting future focus	75.62%	74.79%	0.86
% reporting an intention to scale up their business	88.12%	92.44%	0.19
Exhaustion index	28.16	28.47	0.13
Impulsiveness	2.93	2.94	0.76
Optimism	1.08	1.11	0.36
Achievement Orientation	1.89	1.78	0.30
Demographic factors (potentially affected by the parents' birthplace)			
% never attended school	58.39%	34.78%	<0.002***
% of entrepreneurs whose parents owned a business	82.09	80.80	0.75
% born in Cairo	24.18%	100%	<0.002***
% who have children	93.99%	90.48%	0.22
Number of individuals financially dependent on them	3.04	3.05	0.96
General individual-level factors			
% females	60%	60.5%	0.92
Age of the entrepreneur	47.86 years	40.76 years	<0.002***
Ability (Frederick's cognitive reflection test)	0.36	0.46	0.13
% worked in private sector before	7.19	6.50	0.80
% worked in public sector before	5.31	3.25	0.36
% who traveled for Haj Pilgrimage	16.25	8.13	0.03
Business specific factors			
Age of the business	6.6 years	5.85 years	0.37
% reporting business as only source of income	74.63%	77.60%	0.51
Number of paid employees	1.13	1.29	0.04
Number of SKUs	49.19	52.12	0.12
Perceived number of competitors	3.56	3.06	0.05
Average number of suppliers	1.31	1.44	0.01

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 which is denoted as ***.

Table 10. Governorate Comparison

Variable	Years	Governorates *not* affected by land reform law	Governorates affected by land reform law	p-value
Total population	1966	3,000,000	1,050,379	0.0034
% population growth	1960 to 1965	0.04	0.04	0.23
% population male	1966	0.51	0.71	0.79
% population rural	1966	0.00	0.55	0.04
Access to Education				
Primary education: number of schools (per 1000 individuals)	1963	0.41	0.15	0.04
Secondary education: number of schools (per 1000 individuals)	1963	0.102	0.07	0.77
High school education: number of schools (per 1000 individuals)	1963	0.04	0.015	0.0038
Access to jobs and wages				
Number of workers per firm	1962	0.05	0.10	0.81
Average wage	1962	356.5	368.7	0.90
Infrastructure				
Access to water: % of population subscribers	1961	0.07	0.01	<0.003***
Access to electricity: kw per 1000 individuals	1961	119.68	91.23	0.86
Housing - number of units (per 1000 individuals)	1966	55.83	161.38	0.01
Access to healthcare				
Number of out-patient units (per 1000 individuals)	1961	367.12	535.55	0.13
Number of in-patient units (per 1000 individuals)	1961	17.74	53.75	0.72
Number of individuals per bed	1961	318	720.09	0.06
Access to information and cultural activities				
Number of cinemas (per 1000 individuals)	1961	0.03	0.02	0.94
Number of TVs (per 1000 individuals)	1961	5.00	0.4	<0.003***

Notes. The p-value is for a two-sample t-test of the difference in means between those governorates affected by the Land Reform Law and those governorates that were not. After the Bonferroni correction our critical value (95%) is 0.003 at the 95% level, which is denoted as ***.

Table 11. Impact of Informal Property Rights on Marketing Practice Innovation (2SLS)

First Stage 2SLS estimates: Dependent variable: Lease					
Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Lease	Lease	Lease	Lease	Lease
Parents not born in land reform area	0.35***	0.35***	0.35***	0.35***	0.35***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
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
F-stat	14.37	14.37	14.37	14.37	14.37
F-stat p-value	<0.001***	<0.001***	<0.001***	<0.001***	< 0.001 ***
R-Square	0.25	0.25	0.25	0.25	0.25
Second Stage 2SLS estimates					
Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Marketing Practice Innovation	Product (services)	Price	Promotion	Place
Lease	4.67***	2.57***	2.3***	1.45***	-637.18***
	(1.45)	(0.83)	(0.72)	(0.46)	(225.31)
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***	0.01***
Observations	249	249	249	249	249

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

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

Table 12. Impact of Informal Property Rights on Performance (2SLS)

First Stage 2SLS estimates: Dependent variable: Lease				
Dependent Variable	(1)	(2)	(3)	(4)
	Lease	Lease	Lease	Lease
Parents not born in land reform area	0.33***	0.33***	0.33***	0.33***
	(0.09)	(0.09)	(0.09)	(0.09)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	yes	yes	yes	yes
General individual-specific factors	yes	yes	yes	yes
Business specific factors	yes	yes	yes	yes
F-stat	14.54	14.54	14.54	14.54
F-stat p-value	<0.001***	<0.001***	<0.001***	<0.001***
R-Square	0.23	0.23	0.23	0.23
Second Stage 2SLS estimates				
Dependent Variable	(1)	(2)	(3)	(4)
	Observed Footfall	Observed Revenue	Reported Revenue	Reported Profit
Lease	10.46***	59.97**	11725.09**	3964.91
	(4.04)	(30.14)	(5878.82)	(2090.02)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	yes	yes	yes	yes
General individual-specific factors	yes	yes	yes	yes
Business specific factors	yes	yes	yes	yes
Hausman test p-value	0.01	0.05	0.17	0.21
Observations	266	266	266	266

Notes. The first stage estimation is identical across all regressions. Reported revenues and profits are at the monthly level. Observed footfall and revenues were at 20-minute intervals.

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

Table 13. Impact of Marketing Practice Innovation on Performance (OLS)

	(1) Observed Footfall	(2) Observed Revenue	(3) Reported Revenue	(4) Reported Profit
Marketing Practice Innovation	0.7***	2.76	1179.76***	425.26***
	(0.2)	(1.58)	(320.86)	(115.2)
Psychological factors	yes	yes	yes	yes
Demographic factors (potentially affected by parents' birthplace)	yes	yes	yes	yes
General individual-specific factors	yes	yes	yes	yes
Business specific factors	yes	yes	yes	yes
R-Square	0.24	0.21	0.38	0.38
Adjusted R-Square	0.16	0.13	0.31	0.31
Observations	249	249	249	249

Notes. Reported revenues and profits are at the monthly level. Observed footfall and revenues were at 20-minute intervals.

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

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: Dependent variable: Lease					
	(1)	(2)	(3)	(4)	(5)
	Lease	Lease	Lease	Lease	Lease
Parents not born in land reform area	0.35***	0.35***	0.35***	0.35***	0.35***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Individual-level controls measuring incentive to improve their business	yes	yes	yes	yes	yes
Individual-level controls potentially affected by the Patents' birthplace	yes	yes	yes	yes	yes
General individual specific controls	yes	yes	yes	yes	yes
Business specific controls	yes	yes	yes	yes	yes
F-stat	14.37	14.37	14.37	14.37	14.37
F-stat p-value	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
R-squared	0.25	0.25	0.25	0.25	0.25
Second Stage 2SLS estimates					
Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Overall Innovation	Product (services)	Price	Promotion	Place
Lease	4.66***	2.57***	2.3***	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)	(95.6)
Exhaustion index	-0.37***	-0.15**	-0.18***	-0.07**	13.83
	(0.1)	(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 A1.2. Impact of Informal Property Rights on Overall Marketing Practice Innovation (contd.)

Dependent Variable	(1) Overall Innovation	(2) Product (Services)	(3) Price	(4) Promotion	(5) Place
Optimism	0.19	0.1	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)
% never attended 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)	(0.2)	(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	0.2	0.01	-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)

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

Table A1.2. Impact of Informal Property Rights on Overall Marketing Practice Innovation (contd.)

Dependent Variable	(1) Overall Innovation	(2) Product (services)	(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

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 Product (Service) Practices

	Panel A: OLS results			
	(1) Product Practices	(2) Product Practices	(3) Product Practices	(4) Product Practices
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 Practices	(2) Product Practices	(3) Product Practices	(4) Product Practices
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

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 Pricing Practices

	Panel A: OLS results			
	(1) Pricing Practices	(2) Pricing Practices	(3) Pricing Practices	(4) Pricing Practices
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	0.1	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	0.2	0.26	0.25
	Panel C: 2SLS: 2nd stage results			
	(1) Pricing Practices	(2) Pricing Practices	(3) Pricing Practices	(4) Pricing Practices
Lease	2.36***	1.98***	2.1***	2.3***
	(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

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

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

	Panel A: OLS results			
	(1) Promotion Practices	(2) Promotion Practices	(3) Promotion Practices	(4) Promotion Practices
Lease	0.48***	0.46***	0.44***	0.37***
	(0.07)	(0.08)	(0.08)	(0.1)
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	0.15	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 Practices	(2) Promotion Practices	(3) Promotion Practices	(4) Promotion Practices
Lease	1.29***	1.44***	1.48***	1.45***
	(0.32)	(0.36)	(0.4)	(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

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

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

	Panel A: OLS results			
	(1) Place Practices	(2) Place Practices	(3) Place Practices	(4) Place Practices
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	0.1	0.12	0.15	0.24
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***
	(0.06)	(0.06)	(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) Place Practices	(2) Place Practices	(3) Place Practices	(4) Place Practices
Lease	-593.33***	-446.7***	-518.62***	-637.18***
	(161.73)	(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

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 Business 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

Note. 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* know how to read or write	86.88%	80.67%	0.03
Average age of entrepreneurs' parents	67.86 years	60.76 years	<0.01***
Average number of years the micro-entrepreneurs' parents have been living in Cairo	40.04 years	43.27 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%	0.373
Parents	23.16%	27.42%	15.15%	0.373
A relative/ a family member	9.47%	6.45%	15.15%	0.373
Friends	5.26%	3.23%	9.09%	0.373
Previous employer	0%	0%	0%	0.373
I have learned from businesses around me	13.68%	14.52%	12.12%	0.373
Occupation of micro-entrepreneur's father				
Daily Wage worker	43.16%	43.55%	42.42%	0.916
Repair person	5.26%	4.84%	6.06%	0.800
Factory worker	9.47%	8.06%	12.12%	0.520
Office job	10.53%	9.68%	12.12%	0.712
Grocery store owner	24.21%	25.81%	21.21%	0.619
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%	0.463
Unemployed	1.05%	0.00%	3.03%	0.168
Occupation of micro-entrepreneur's mother				
Daily Wage worker	2.11%	3.23%	0.00%	0.297
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%	0.580
Store owner (non-grocery)	1.05%	0.00%	3.03%	0.168
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%	0.748

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	Marketing Practice Innovation
Lease	0.73 ***
	(0.28)
Parent *did* own a business	-0.22
	(0.83)
Lease * Parent did own a business	1.8
	(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

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	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
	(1.2)
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

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	Marketing Practice Innovation
Lease	4.12***
	(1.73)
Parental age	0.00
	(0.17)
Lease * Parental age	-0.04
	(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

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	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

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	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

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 controls	yes
Business specific controls	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

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 (2SLS)

Dependent variable:	Overall 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.
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 (2SLS)

Dependent variable	Overall Innovation
Amount of rent paid	-0.00
	(0.003)
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

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***
	(0.1)
Distance to nearest market	- 0.004
	(0.003)
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 Innovation	
Lease	5.57***
	(1.92)
Distance to nearest market	0.005
	(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

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 Innovation	
Lease	4.49***
	(1.57)
Store size	-0.38
	(0.32)
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	161

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)			
% never attended 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			
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: Dependent variable: Lease				
Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Lease	Lease	Lease	Lease	Lease
Parents not born in Land Reform area	0.35***	0.35***	0.35***	0.35***	0.35***
	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
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
F-stat	12.73	12.73	12.73	12.73	12.73
F-stat p-value	<0.001***	<0.001***	<0.001***	<0.001***	<0.001***
R-squared	0.39	0.39	0.39	0.39	0.39
	Second Stage 2SLS estimates				
Dependent Variable	(1)	(2)	(3)	(4)	(5)
	Marketing Practice Innovation	Product (Service)	Price	Promotion	Place
Lease	3.95***	2.45***	2.15***	1.71***	-751.62***
	(1.31)	(0.8)	(0.69)	(0.5)	(217.1)
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. The first stage estimation is identical across all regressions.
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 D1 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
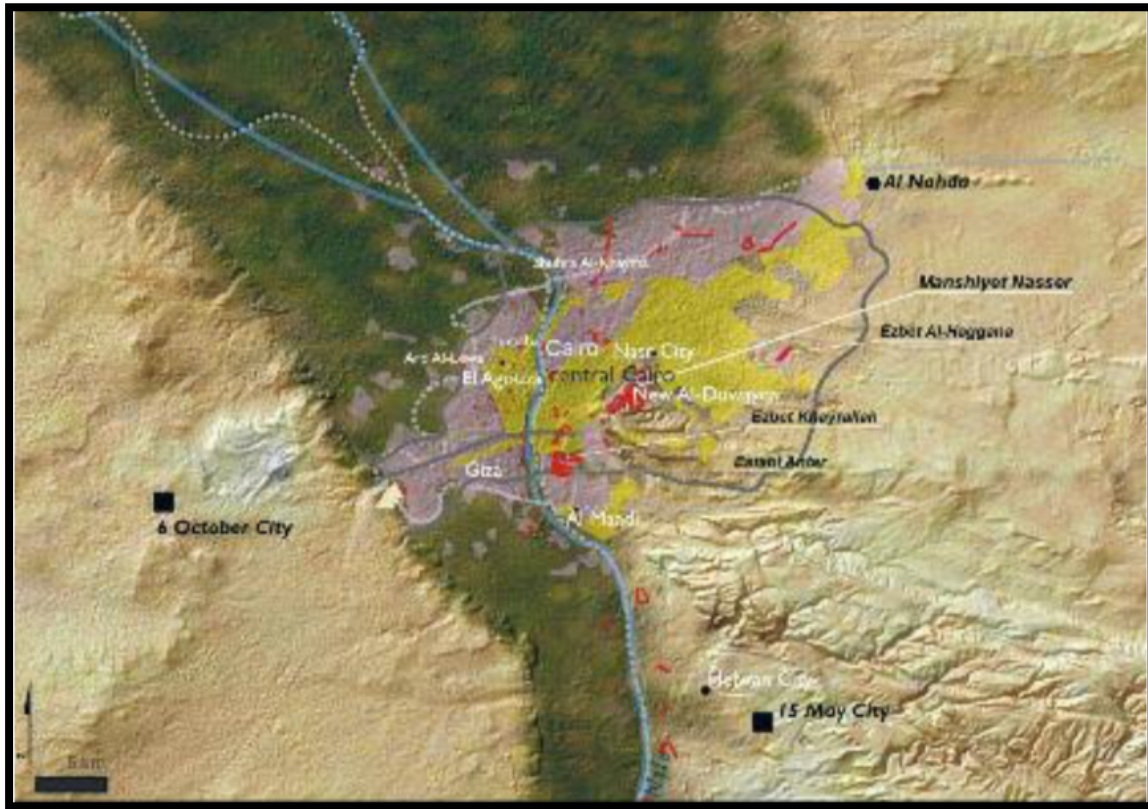
Informal Settlements ▮   Formal Settlements ▮   Unsafe Areas ▮   Areas of resettlement ■

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, etc.

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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