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Is there demand for formality among informal firms?

Evidence from microfirms in downtown Lima

Miguel Jaramillo

13

GRADE
Grupo de Análisis para el Desarrollo

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ABSTRACT

Experimental data from microfirms in downtown Lima is exploited to analyse the demand for formality, i.e., obtaining an operating license. The results are paradoxical: most firms report greater disadvantages than advantages of being informal, yet when encouraged to obtain the license, only one out of four firms takes up the incentive. Thus, for some firms formalisation may not be desirable at any cost. This is likely to be associated with the recurrent costs of being formal, the low perceived value of the benefits of formalisation, and the limited growth perspectives of these firms. An additional implication is that self-report about willingness to formalise or reasons for not formalising is unreliable.

Keywords: firm behaviour, informality, demand for formality, Peru
JEL codes: D21, E26, L26, 017

INTRODUCTION

After several decades of academic debate, informality is still a central policy issue in developing countries. Informality imposes costs on society in the form of a small tax revenue base, congestion of public services, which must serve a much broader population than that contributing to its financing, and unfair competition, factors which tend to translate into lower economic growth. Weak state structures have thus far made it impossible to keep track of the increase in the number of informal enterprises, let alone to find ways to lead those already active onto the path of legality. Presently, the stock of output and employment attributable to the informal sector is a sizable part of the economies even of middle income and OECD countries[1].

Formalisation is a firm's decision that has to do with the entrepreneur's outlook on the firm's prospects and with the costs of formalising. For growth-oriented firms it may make sense to become formal, but for subsistence firms it may make little sense. The question of whether the informal sector is made of growth-oriented ("opportunity") or subsistence ("necessity") entrepreneurs is largely unsettled three decades after De Soto's influential depiction of the informal as a repressed entrepreneur (De Soto 1986). Recent work by

1 Schneider (2007) estimates the size of the informal economy for 145 countries. The average size for developing and transition countries is around 40% of gross domestic product (GDP), while in OECD countries it is 16.3%, with 5 out of 21 countries topping the 20% mark.

De Mel et al. (2008) questions this view and suggests that most own-account workers look more like wage earners than entrepreneurs. In the other direction, looking at the Peruvian labour market, Yamada (1996) concludes that in a context marked by strong heterogeneity, self-employment is not a refuge but an option. Along this line, Maloney (2004) concludes that the informal sector in Latin America may best be described as a basically voluntary entrepreneurial sector.

Clearly, informal firms are a heterogeneous lot and portions of them (the so-called subsistence units) lack the productivity levels they would need to pay for most regulatory costs. However, another significant portion may be able to reap benefits from formalising their activities. Thus, policy measures should target this group of firms and induce them to formalise by reducing the costs of being in the formal sector as well as enhancing its benefits. There is, however, little evidence on the motivations and conditioning factors that shape the decision of informal entrepreneurs to stay informal or move to the formal sector.

This paper addresses the question of why some firms formalise and others do not by examining experimental evidence on informal firms in downtown Lima. The experiment consisted in encouraging a random sample of firms to formalise by subsidising the full money cost and providing guidance through the process of obtaining an operating license. Two rounds of cross-sectional data are exploited to identify factors associated with the demand for formality. I implement two analyses and then contrast the results. First, I examine reasons, motivations and circumstances for obtaining/not obtaining license. Second I ran probit models of the decision to formalise. The results are paradoxical: most firms report greater disadvantages than advantages of being informal, yet when encouraged to obtain the license, only one out of four firms takes up the incentive. Thus, for some firms

formalisation may not be desirable at any cost. This is likely associated with the recurrent costs of being formal and the limited growth perspectives of these firms.

The paper is organised as follows. Following this introduction, the relevant literature is reviewed. Section 3 presents a conceptual framework. Section 4 focuses on methodological aspects. Section 5 presents the results. Section 6 concludes.

1. LITERATURE DISCUSSION

The question of formal versus informal status goes back quite a while in the economics literature. Its origins date back to the classic dual labour markets models of Lewis (1954) and Harris-Todaro (1970). In these models self-employment is a consequence of the incapacity of the modern/formal sector to incorporate an elastic supply of labour leaving low-productivity rural activities. Confronted with insufficient opportunities for salaried employment, workers opt to generate their own employment. These self-generated jobs may, however, be quickly abandoned in the face of an opportunity to engage in wage labour in the formal sector. The result is a segmented labour market, where self-employment is not really an option but a refuge[2].

This view still prevails in part of the literature (c.f., Tokman 2007). Another strand, however, takes a different view: the self-employed may not be a residual from the formal sector but a natural entrepreneur forced to produce outside the legal boundaries by an institutional environment littered with hurdles and barriers to private productive initiative[3]. The regulatory hurdles and barriers translate into a level of costs that the entrepreneur cannot afford, given his/her firm's low productivity levels. The question of the effects of regulation

2 A useful review of these models is in Fields (2005).

3 De Soto (1986) has popularized this view, but see also the broad survey by Schneider and Enste (2000) for a view that sees institutional factors, extending from increasing taxation to regulatory burden, as the driving force behind informality.

on entrepreneurship has produced an ever-growing body of literature. One source of empirical support for the idea of the negative role of regulation is macro-level cross-country data analysis, which shows that cost of regulation correlates positively with level of informality (Djankov et al. 2002; Loayza, Oviedo and Serven 2005). Using data for European countries, Klapper, Laeven and Rajan (2006) conclude that costly regulations hamper the creation of new firms, particularly in industries that should naturally have high entry. Also, new entrants tend to be larger and incumbent firms in naturally high-entry industries tend to grow more slowly.

However, other studies diverge from these conclusions. Van Stel, Storey and Thurik (2007), using a database of 39 countries across the five continents (including 13 poor countries), find that lowering entry barriers may result in lower levels of informality but not in higher entrepreneurship rates. Their findings indicate that entry regulation influences the distribution of business activity between the formal and the informal economy, rather than influencing the total volume of activity. Therefore, they question the view that 'heavily regulated' countries as regards firm entry need only to lower entry barriers in order to become more enterprising and thus wealthier. Hence, deregulation, while useful to curb informality, seems insufficient to promote entrepreneurship.

In spite of the continuing academic debate, the idea that regulatory costs hurt entrepreneurship and cause informality has already had a major influence in policy making. This is the idea, for instance, behind the influential World Bank and IFC *Doing Business Project*. By annually publishing indicators of the ease of doing business in a large set of countries and then ranking them, this research has led to a call for lowering regulatory barriers in order to enable formalisation and stimulate growth (World Bank and IFC 2011). The visibility of this

work has put pressure on politicians and generated strong momentum for reforming regulations to address informality.

However, this approach has also attracted substantial criticism. Arruñada (2007) argues that there is an excessive and pernicious focus on initial costs of setting up a firm while both the value of services provided by registration and the reduction of transaction costs over the life-cycle of a firm are disregarded. Altenburg and von Drachenfels (2006) label the *Doing Business* approach minimalist and question its potential to address both informality and private sector development. Their central contention is that this approach is far from sufficient to deliver on its promise. Specifically, they argue that the idea that formalisation and growth of formerly informal firms will take place once deregulation is implemented is based on two questionable assumptions about firms operating in the informal economy. First, that a majority of the people in the informal economy are vibrant entrepreneurs who are only waiting for their chance to expand their businesses once they are formalised and, second, that cumbersome registration procedures are the major barrier to growth. Testing the second assumption requires assessing empirically different types of obstacles to business growth, from poor human capital endowments to credit constraints to lack of access to technology, and modelling their interactions with the institutional environment. This has yet to be done. The first assumption has, however, already been put to the test in the literature, and brings us back to the question of whether the informal sector is a refuge sought by "necessity entrepreneurs" or a source of natural entrepreneurship.

Clearly, how much entrepreneurial potential there really is in the informal economy is a matter of dispute. To contribute to this debate, which they dub the De Soto (mostly "opportunity entrepreneurship" constrained by 'unfair' regulations) vs. Tokman (mostly "necessity entrepreneurship" constrained by multiple deprivations) debate, De Mel,

McKenzie and Woodruff (2008) study a panel of Sri Lankan firms and compare the characteristics of microentrepreneurs, self-employed, and wage earners. They conclude that no less than two-thirds of own-account workers can be classified as wage workers rather than entrepreneurs. Woodruff (2007) has extended this argument, characterizing the self-employment sector as a self-help safety net.

In the other direction, looking at the Peruvian labour market, Yamada (1996) concludes that in a context marked by strong heterogeneity, self-employment is not a refuge but an option. He finds that, on average, self-employed workers earn 20% more than what they would if they were wage earners in the formal sector. This differential is explained by the entrepreneurial ability of the self-employed, who, the author concludes, overwhelmingly self-select themselves out of the wage labour force. Only about one third of the self-employed would do better as wage earners. Along this line, Maloney (2004) has examined transitions between wage labour and self-employment as well as characteristics and choices of microentrepreneurs in Mexico, Brazil, and Argentina. He concludes that the informal sector in Latin America may best be described as a basically voluntary entrepreneurial sector.

One clear conclusion from this debate is that the informal sector is quite heterogeneous and a place where one may find those left out of the formal wage labour market, but also potential entrepreneurs. At the centre of the debate is the question of which group dominates. The actual mix may differ from country to country. While there is no necessary link, one would expect that subsistence units run by 'necessity entrepreneurs' would find little incentive to become formal, while 'opportunity entrepreneurs' would be more likely to formalise[4].

4 The link is not necessary because it may be that, for instance, opportunity entrepreneurs find room to thrive in informality, at least at some stage of their firms' development. Conversely, necessity entrepreneurs may find it desirable to formalise if, for instance, there is a serious enforcement effort by authorities.

Thus, one might expect formalisation not to be attractive for everyone in the informal sector, and consequently, no matter how much the cost of formalising is lowered, as long as it remains greater than zero, there will be informal firms[5]. Also, one would expect that it is among those firms that perceive the greater potential gains from changing their status that demand for formalisation would be concentrated. However, we have little evidence on transitions from informality to formality among microfirms. Analyses of a registration reform in Mexico have produced contradictory evidence. Bruhn (2011) and Kaplan et al. (2011) find that reforms increased registration, but, using different data, they are in stark disagreement on whether this is explained by formalisation or by new entrants. Monteiro and Assuncão (2011) and Fajnzylber et al. (2011) focus on a tax reduction and simplification program in Brazil, also finding a positive impact on registration. However, their cross-sectional data does not allow them to identify transitions.

Thus, why some (informal) firms formalise and others do not is a question on which little empirical evidence has been produced. In this paper I try to cast light on it by examining data from a unique experiment among informal firms in downtown Lima.

5 Results by McKenzie and Sakho (2010) for Bolivia are consistent with this idea.

2. CONCEPTUAL FRAMEWORK

In order to analyse the decision to formalise, the starting point is that firm owners decide whether they get an operating license for their businesses by contrasting the advantages and disadvantages of operating with and without a license. Among the advantages of operating with a license we have: to legally work in a specific location and to legally access certain markets. A license may also allow firms to obtain credit from formal financial firms, to be protected by the judicial system as business units, and to avoid being subject to the extraction of rents by public officers. Firms without a license may face problems to access business opportunities with larger firms, training programs provided by public agencies, and in general, they may have to keep the scope of their businesses small in order to avoid detection by authorities.

On the cost side, in addition to the cost of registration, firms have to comply with health and safety regulations. They will eventually receive inspection visits, which, as shown below, is the most frequently cited disadvantage of being formal. There are no specific municipal taxes on business and there is no link between municipalities and tax or labour authorities. However, just like any other neighbour, a business has to pay charges related to municipal services (i.e., street cleaning, garbage disposal, public lighting), so called "*arbitrios*", which informal firms may be in a better position to avoid. Although legally these are not taxes, in common language and understanding they are considered municipal taxes. Moreover, being registered puts firms in the radar

of municipal authorities and makes them subject to fines if found in violation of regulations or standards.

The characteristics of the firm may influence the perception of the balance between benefits (advantages) and costs (disadvantages) of operating with a license. The basic idea is that firm's outcomes (like sales and output) are a function of capital inputs and labour inputs that are transformed by a technology function. Institutional factors, such as administrative barriers to do business, among others, affect the effectiveness of technology in transforming input into output and the choices regarding the allocations of inputs for production. So-called subsistence micro-entrepreneurs may perceive that they do not have the required productivity levels or growth potential to be gainfully inserted in the formal economy networks. In this case the disadvantages may outweigh the potential advantages of operating formally. Contrastingly, other individuals may feel that their microfirms have growth potential and see obtaining a license as a necessary investment to realize such potential. Thus, we may have heterogeneous responses to a reduction in the costs of obtaining a license: for some firms it may tip the scale to the benefit side, for others it may not be worth to have it even if given away, as there are costs of operating with license, such as complying with health and safety regulations or be liable for fines.

The institutional context also influences the decision to operate formally by affecting the costs of obtaining a license and therefore, affecting the costs of operating with and without license. The process to get an operating license is an important barrier among the set of regulations that a firm has to face in order to become formal. In Latin America, most of the municipalities use the operating license as an instrument to enforce zoning, health, and public safety regulations. Although advances have been made in recent years as far as simplifying procedures and reducing the cost of obtaining an operating license, some entrepreneurs may still prefer to stay operating without a license.

3. METHODOLOGICAL ASPECTS

4.1 Identifying demand for formality

Approaches to empirically address the decision to formalise may be grouped in two categories. On the one hand, one may want to focus on the motivations and rationale of micro-entrepreneurs and relate these to their decisions to formalise or not. One may be able to elicit these factors through a structured questionnaire or in-depth interviews. Alternatively, one may want to collect data on the firm and entrepreneur's characteristics and test whether there is a relationship between certain characteristics and the decision to formalise. One problem in this setting is that formal and informal firms are different in both observable and non-observable ways. In other words, each firm has a propensity to operate formally, a function of certain characteristics of the firm and its owner. Some of these characteristics, such as risk aversion, entrepreneurship, motivation, and managerial skills, are not observable to the researcher. In this context a plain comparison between firms with license and firms without license is not a valid exercise to estimate the demand for formality. Any difference found in the outcome variable through this comparison may be due to the unobserved characteristics. Experimental designs, however, solve this problem.

In this paper I take both approaches and contrast their respective results. First, I examine empirical evidence on the motivations and

circumstances, costs and benefits associated to the formalisation decision of a group of informal firms in downtown Lima. Second, I estimate probit models of the decision to formalise. A unique experimental panel data set of microfirms is used. At baseline no firm in the sample has a valid license. Over time some of them will get it while others will not. Since getting a license is a choice variable that correlates with features of the firms and its owners, exogenous variability is generated by encouraging a random sub-sample of firms to get the license.

Baseline data are used to analyse the costs and benefits of having or not having an operating license as perceived by firm owners. For this I exploit the fact that a (small) portion of firms report having had a provisional license to elicit the motivations of license holders. Provisional licenses were non-renewable and good for one year until August 2007 when new legislation did away with them. The second part of the analysis focuses on the results of the encouragement, using the second round data. I analyse the factors involved in firm owners' decision of taking up or not taking up the encouragement and thus getting or not getting a license by estimating probit models.

The focus is on operating license because this is more informative on informality in Peru than tax registration, as non-registration with the tax authority (SUNAT) in non-agricultural sectors is quite small. In effect, according to the 2008 economic census 882,743 firms were operating in 2007 in all sectors except agriculture, while SUNAT had 1,043,726 registered firms at the end of that year (INEI 2008; SUNAT 2012). While a firm may have more than one register, only some large firms, of which there are no more than 10,000 in total, do this. The rest of the difference may be explained by firms in the agricultural sector, which are not very many, and by omissions in the census. Thus, one may rightly conclude that few firms are not registered with the tax authority.

4.2 Data description

Data used in this analysis come from two rounds of a panel of informal firms located in downtown Lima (El Cercado)[6]. The two rounds were implemented in 2008. A total of 604 firm operators were interviewed in the first round. Lacking a sample framework for Lima's informal sector, firms were identified through fieldwork covering the areas where, according to informants, which included municipal authorities, informality was concentrated. A brief questionnaire was administered to select firms into the sample. Four pieces of information were necessary to decide whether a firm was part of the study sample: whether it had a license or not, whether it was located in a shopping mall or permanent fair grounds, whether it had at least one paid employee, and which activity it conducted. As explained above, we needed firms without license. We also wanted to exclude firms located in shopping malls ('galerías') and permanent fair grounds ('campos feriales'), as firms operating in these areas are not required by law to have an individual license. We also needed to exclude firms that because of their line of activity required a special license and not the standard one. Finally, firms needed to have at least one employee to make sure there was a minimum firm structure to the business. Using these selection criteria implies that the sample does not represent all informal microfirms in El Cercado. However, it is likely that it represents well microfirms in El Cercado not operating in galleries or permanent fairs with at least one employee.

Firms that qualified to be in the sample were administered a full questionnaire, covering information about firms' outcomes, such as

6 The two rounds examined here are part of a study that aims to assess the impact of formality on firms' performance. See Alcázar et al. 2007. A similar study design was implemented in Sri Lanka shortly after this. See De Mel et al. 2012.

sales and profits; inputs, such as investment, access to credit, labour, and training; and characteristics of the entrepreneur and the firm. Critical for this analysis, a set of questions was included to elicit information on aspects related to the motivations involved in the decision to formalise/stay informal, such as entrepreneurs' perceived benefits and costs associated with formalisation. The second round was implemented six months later, after conducting a process of encouraging a random sample of the firms to get their licenses.

4. WHO ARE THE INFORMAL? CHARACTERISTICS OF THE FIRMS

Tables A1 and A2 in the Appendix summarize the main features of firms and entrepreneurs in our sample. All firms qualify as microfirms as they have no more than 6 workers. Most (61.6%) have only 1 worker and the second largest group (23.1%) has 2 workers only. Thus, sample firms are at the lower end of firms' size distribution. This is also reflected in their area size, which averages about 32 square meters. This seems particularly small if we consider that there are a good number (23%) of restaurants, cafes, and other food-dispensing businesses in the sample.

Most of the firms are in commerce. This includes a diverse set of establishments, from neighbourhood convenience stores to jewellers or information technology supplies providers. The second largest group is in the food sector and includes restaurants, cafes, ice-cream parlours, and bakers. The third largest group is in the service sector (20.3%) and includes printing, internet and phoning services, beauty parlours, and repair shops. Very few of these businesses, independent of the sector they belong to, have an autonomous legal existence. That is, most of them have not incorporated. Also, they are almost exclusively individually owned businesses, with only one in every twenty involving a partnership.

Moving to the owners' characteristics, the average entrepreneur in our sample is 41 years old. On average, experience in business is considerable, 5.5 years. However, this number is misleading, as

variance is large, going from less than 1 to 45 years. The largest group (42%) has no more than one year of business experience and only 22% have six years or more. In addition, for about four out of five entrepreneurs in the sample, the present business venture is their first. As a result, median business experience is just 3 years. As far as education, however, the business owner in our sample fares better than Lima's overall labour force: 84% of entrepreneurs in our sample have at least completed secondary education, compared to 73% among Lima's labour force, and 40.5% of them have postsecondary studies, which compares to 37% among Lima's workforce.

Somewhat surprisingly, most of them (56%) turn out to be women. This gender ratio compares favourably with the population of self-employed in Metropolitan Lima that have at least one employee, among which 50.3% are women. However, if we further narrow the category to include only self-employed women in the trade or service sector with 1 to 6 employees, it jumps to 61.9%. Thus, far from being an anomaly, predominance of women entrepreneurs among the type of business we are focusing on seems to be the rule[7]. Finally, slightly more than one quarter of our entrepreneurs report that they own the locale of their businesses. In most of these cases, four out of five, the locale is also the owner's house.

Table A2 summarises the information concerning the more operational features of sample firms. One out of five firms requested credit from formal financial entities in the last three years and more than 90% of them obtained it. This rate of success may seem large, but one needs to consider that this is a self-selected sample, as those that perceive that they have a low probability of success probably did

7 This finding contrasts with Carr and Chen (2004) and Chen at al. (2005), who suggest a minor role for women as employers in the informal sector.

not bother to apply. In addition, some respondents may be ashamed to admit that their credit applications were rejected. It may also be noted that an additional 11.7% requested, and all of them got, credit from informal sources. The main source in this case is family and friends, but informal lenders figure as well. The amounts granted by formal financial entities are not small for the type of firm, close to US$ 2,200, but the variance is quite large. The median is below the average, US$ 1,700, indicating that most credits are for amounts below the average.

Access to training is very limited, as only 1 out of every 7 firms had any during the previous year. The proportion increases to 1 in every 5 if we exclude firms with 2 or less employees. In both cases training was mostly, two thirds of the time, used by the owner. Also, the firms in our sample are very isolated, as only a tiny minority belong to any producers or business association. Only about one out of five has made investments in the last six months in either equipment or infrastructure.

Finally, the average monthly expenditure is about US$ 1,300, while reported revenues border on US$ 1,800. Reported net income or profit is US$ 490, which represents about three times the minimum wage, and 20% above mean labour earnings in Lima, US$ 409 at the time of the survey. Note, however, that the variance of these numbers is quite large, going from US$3 to US$4,500 monthly.

6.1 The demand for formality: rationale for being formal/informal

A starting point to analyse the demand for formalisation among small firms is to ask for what reasons an entrepreneur would decide to formalise or not formalise his or her firm. Since our baseline data set includes a (small) portion of firms (11%) that reported having had a provisional license, we can ask them why they got their license. Table 1 sets out the different reasons for becoming/not becoming formal. Two comments seem in order. First, "being on the legal side" seems to have some value for entrepreneurs, as nine out of ten mention it as a reason to become formal. This evidence calls into question the idea of informality as part of an alternative culture that tends to disregard or downplay the legal system. How much of this is just lip service without much content is an open question, however. Second, if we classify reasons in two groups, one with those aspects entrepreneurs want to avoid, call them 'negative reasons', and the other with those aspects that the entrepreneur wants to take advantage of, call them 'positive reasons', we find that the former predominates. In effect, avoiding fines or bribes is the reason most often mentioned to be formal. Among the 'positive reasons', greater visibility (through publicity) and access to credit are the most important, but enlarging their market through business with larger firms or participation in public biddings is also mentioned.

Among those businesses that had not gotten their licenses, the reasons for not obtaining them can be classified in four groups. The first is timing: the business is new and they have not had the time to start the process of registering. One third of the firms report this. The second has to do with the perceived costs and administrative burden of the process. Close to half of the firms in the sample (45%) argue that the process of getting a license is long and tedious, while more than a third (36%) thinks that the license is too expensive. Since it was possible to mark more than one answer, it is possible that there is considerable overlap among those that marked these two answers. The third group of causes is associated with information issues. One out of ten businesses claims that their type of business does not have a license and an additional 6%, that a license is not mandatory. Finally, the fourth group includes those firms that believe that they do not meet the prerequisites, regarding safety (7%) or other aspects (15%).

Table 1
Reasons for obtaining/not obtaining a license

Reasons for obtaining a license

	N=64	
	Yes	% Yes/Business
Being on the legal side	58	91%
Avoid paying fines	35	55%
Avoid paying bribes	11	17%
Do advertising	8	13%
Access to credit	8	13%
Do business with larger firms	4	6%
Participate in public programs	4	6%
Participate in public biddings	1	2%
Others	3	5%
Total	132	

Reasons for not obtaining a license

	N=540	
	Yes	% Yes/Business
The procedure is lengthy and tedious	245	45%
Too expensive	194	36%
My business is new, so I have not had time to get the license	174	32%
No business like mine has a license	54	10%
License is not mandatory	35	6%
I do not fulfil safety requirements	38	7%
I do not fulfil other requirements	82	15%
Others	32	6%
The business is small	6	1%
I do not know if I will continue in the locale/business	15	3%
Problems with the locale	12	2%
License is in the process	18	3%
Total	905	

In addition to their stated reasons for being/not being formal, the entrepreneurs have a perception of what the advantages and disadvantages are of having/not having a license, based on their own experience. Table 2 presents the perceptions of those that have a license. Aside from the fact that one out of five entrepreneurs does not perceive any practical advantage, the answers are pretty much consistent with the reasons for becoming formal. The one most frequently mentioned is that they do not have to pay fines anymore; about three out of five firms mention this as an advantage. Not having to pay bribes is also a frequent answer, involving one out of five firms. Among the "positive" advantages, being able to use publicity (25%) and to access to credit (22%) are the most important. Market expansion is also perceived by some firms as an advantage of having license, as one out of ten firms mentions having business with larger firms, and one out

of fifteen mentions participation in public biddings. Finally, very few firms (3%) find an advantage in being able to participate in public programs.

Table 2
Advantages and disadvantages of having a license: perceptions of those that have a license

Advantages of having a license

	N=64	
	Yes	% Yes/Business
I do not have to pay fines	37	58%
I do not have to pay bribes	14	22%
I can do advertising	16	25%
I have access to credit	14	22%
No advantage	12	19%
I can do business with larger firms	6	9%
I can participate in public biddings	4	6%
I can participate in public programs	2	3%
Others	5	8%
Total	110	

Disadvantages of having a license

	N=64	
	Yes	% Yes/Business
No disadvantage	39	61%
I receive inspections from the municipality	14	22%
I have to pay taxes	9	14%
I receive inspections on safety	5	8%
I have to spend on accounting	1	2%
Others	5	8%
Total	73	

Concerning disadvantages, six out of ten license holders perceive none. Among those mentioned, the most frequent disadvantage is related to inspection visits from the municipality or safety authorities. This is mentioned by more than half of those firms perceiving some disadvantage. Rather few firms mention taxes, which may be associated to the fact that there are no specific municipal taxes on firms.

Table 3
Advantages and disadvantages of having a license: perceptions of those that DO NOT have a license

Advantages of not having a license

	N=540	
	Yes	%Yes/Business
No advantage	340	63%
I do not have to pay municipal taxes	91	17%
I do not have to pay fines	67	12%
I do not receive inspections from the municipality	63	12%
I do not receive safety inspections	29	5%
I do not have to spend money on administrative procedures	9	2%
Does not know/does not answer	4	1%
Others	6	1%
Total	609	

Disadvantages of not having a license

	N=540	
	Yes	%Yes/Business
Risk of paying fines	367	68%
Risk of paying bribes	194	36%
I cannot put a sign	158	29%
I cannot have access to credit	121	22%
I cannot do advertising	95	18%

	N=540	
	Yes	%Yes/Business
No disadvantage	65	12%
I cannot do business with larger firms	58	11%
I cannot participate in public biddings	30	6%
I cannot participate in public programs	29	5%
It is a source of worries	13	2%
I have to buy more expensive/lower quality inputs	3	1%
Others	9	2%
Total	1142	

Table 3 focuses on the views of the unlicensed. Most of them (63%) see no advantage in their informal status. Among the perceived advantages, the two most frequently identified are not to have to pay municipal taxes and not to receive inspections, both mentioned with similar frequency, by about one third of those who see advantages. Not having to pay fines is the next important advantage, identified by about one-fourth of those perceiving disadvantages. One reasonable concern is that firm owners' reports may understate the benefits of being informal, because they may not be willing to admit any outright infraction of the law. We have no way to test the validity and importance of this concern. However, we consider this issue in discussing our results below.

A small proportion of informal firms (12%) perceive no disadvantage arising from their status. Among the disadvantages, the two most commonly mentioned are: the risk of having to pay fines, mentioned by 68% of the businesses, and the risk of having to pay bribes, identified by 36% of the businesses. A second group of disadvantages has to do with lack of visibility: not being able to post a sign for their shop (29%) or, more generally, not being able to use publicity (18%). Not having access to credit is also identified

by 22% of businesses as a disadvantage associated with not having license. A restricted market also falls in this category, as 11% of informal businesses claim that they cannot do business with larger firms or participate in public biddings (6%). Finally, only one out of twenty firms feels that not having access to government programs is a disadvantage associated with not having a license. Thus, government programs are not sufficiently attractive or accessible to prompt informal firms to formalise.

To sum up, broadly speaking, one would say that the disadvantages identified by those firms that do not have a license mirror the advantages perceived by those that have a license: risk/avoidance of fines, invisibility/visibility, no access/access to credit. Thus, the perceptions of both formal and informal firms tend to confirm one another as regards the advantages and disadvantages of their respective status.

What does this evidence tell us about the demand for formality? First, it is quite clear that perceived costs and benefits from being formal/informal in regards to operating license vary from firm to firm. On balance, however, most firms see more benefits (advantages) than costs (disadvantages) of being formal. In effect, while about one-fifth of formal firms see no advantage to their status, almost two-thirds of informal firms see no advantage to theirs. Conversely, three out of five formal firms see no disadvantage to their status, while only one out of every eight informal firms sees no disadvantage to theirs. The question that naturally arises is, of course, why, then, is there so much informality? According to the entrepreneurs' views, which Table 4 below presents, the issues are still the administrative burden and money cost of formalising procedures, and lack of information. It is interesting to note that, contrary to De Soto's (2000) predictions, only a small share of firms (one out of five) would be motivated if the license facilitated access to credit.

Table 4
Circumstances under which firms would consider obtaining an operating license

	N=540	
	Yes	% Yes/Business
If procedures are simplified	374	69%
If the price goes down	253	47%
If more information is provided by the municipality	198	37%
If it helps to access credit	117	22%
If it helps to access training	47	9%
If taxes are lower	42	8%
If there is more monitoring and enforcement of the law	23	4%
If the municipality would grant me a license	12	2%
If business goes well	9	2%
If I had more time	6	1%
Others	36	7%
Total	1117	

6.2 Are microfirms in downtown Lima really willing to formalise?

After the baseline survey about one half of sample firms was randomized into receiving an encouragement to get the license. The encouragement consisted of paying for the cost of the license (US$97 for businesses with an area of less than 100 square meters and US$128 for those with more than 100 square meters) and providing guidance through the procedures with the municipality. Using the follow-up survey, I exploit the fact that not all firms encouraged took up the incentive to analyse factors associated with the demand for formalisation.

Table 5 summarizes the outcome of the encouragement process. About one out of four of those firms encouraged to get the license actually obtained it. Among those that did not obtain the license,

close to one third (30.6%, or 23 percent of the overall sample) were unable to get it because they did not comply with zoning standards or safety requirements (or both). This is an important finding because it indicates that business informality is linked with other types of informality and simplifying the procedure to obtain a license is insufficient to promote formality among this type of firms. The second important finding is that about half of sample firms did not get the license even when they reportedly fulfilled the requirements and did not have to pay for it. This indicates that a substantial portion of firms is at best indifferent between having and not having a license or, at worst, prefer not to have one. Among the reasons reported for this, burdensome and costly procedures are still the most frequent, even after the offer was made to cover the money costs. Also about one of every six firm owners that did not obtain the license claims either that the license is not mandatory or that it does not apply to his/her type of business, which suggests information problems.

Table 5
Results of encouragement to formalise and reasons for not taking it up

	Number of entries	% of firms
Encouraged firms	232	100.0
Firms that obtained the license	59	25.4
Firms that did not obtain the license	173	74.6
Reasons for not getting a license:		
I do not fulfil all the requirements		21.2
The procedure for obtaining a license is lengthy and tedious		21.2
Too expensive		13.7
No business like mine has a license		11.3
I do not fulfil the safety requirements		9.4

	Number of entries	% of firms
My business is new, so I have not had time to get the license		8.5
The license is not mandatory		4.7
I don't know if I'll continue with this business/locale		2.4
Others		7.5
Total		100. 0

What factors may be affecting the decision to obtain/not to obtain a license? In order to address this question, firms that took up the incentive and formalised are compared with those that did not. To do this, we ran probit models with the dependent variable being whether or not the firm obtained a license. Explanatory variables include features of the firm and the firm owner, including stated disadvantages of not having a license. Table 6 presents the results from two different specifications, controlling and not controlling for firm sector[8].

Table 6
Determinants of obtaining a license: probit marginal effects

Marginal Effects	Model A	Model B
Number of workers	0.0874***	0.0912***
	(0.0329)	(0.0330)
Age of business	0.00685	0.00742
	(0.00687)	(0.00699)
Age of owner	0.00356	0.00346
	(0.00261)	(0.00260)
Gender of owner	-0.0394	-0.0311
	(0.0607)	(0.0621)

8 Other specifications were also estimated. One of these excluded from the sample firms that were not able to get a license because they did not complied with the requirements. Others included additional controls, such as capital investment, self-reported value, legal form, and ownership of other businesses. Results were qualitatively identical.

Marginal Effects	Model A	Model B
Education	0.113*	0.119*
	(0.0654)	(0.0656)
First business	0.0210	0.0193
	(0.0694)	(0.0694)
Can't do business with larger firms	-0.0243	-0.0249
	(0.111)	(0.110)
Can't post a sign or use publicity	0.201**	0.204***
	(0.0785)	(0.0783)
Sector		0.0591
		(0.0625)
Locale is part of dwelling house	-0.196***	-0.209***
	(0.0602)	(0.0587)
Observations	227	227
Pseudo R2	0.111	0.111

Standard errors in parentheses ** p<0.05 * p<0.1

In both models, three variables predict formalisation positively: the firm's number of workers, owner having postsecondary education, and owner's perception that not being able to post a sign is a disadvantage of informality. Each additional worker increases the chances of getting a license by 9-10 percentage points. Likewise, the owner having postsecondary education increases the chances of getting a license by 11-12 percentage points. Finally, if the owner perceives that not having a license limits the visibility of her or his firm, the chances of the owner getting a license increase by 20 points. On the other hand, owning the locale and using it at the same time as dwelling house reduces the probability of formalising in about as much.

The fact that an extra worker increases the probability of formalising indicates that bigger firms are more likely to formalise. This may be due to the fact that bigger firms are more visible to

authorities. It may also indicate that firms with more workers are possibly more productive and may find higher returns in formalising. In the same direction, firm owners with higher education may also be able to identify higher benefits in formalising than owners with lower educational levels.

Those firm owners who stated that not being allowed to post a sign was a disadvantage of informality were more likely to formalise after the encouragement underscores the importance of visibility as a benefit of formality. It is also interesting in that it indicates that when the costs of going through the formalisation process are lowered, those who identify a direct benefit to formalisation will tend to go ahead with the process. Being able to put a sign is a direct benefit of formalising while other benefits, such as doing business with larger firms, require additional work and may not be perceived as directly associated to the process. Finally, the fact that owning the locale where the firm operates and using it as dwelling reduces the probability of formalising is somewhat intriguing. It suggests that businesses with this characteristic are using a part of their dwellings for a side activity rather than having a commitment to develop a business.

6. CONCLUSIONS

Our results suggest a paradox: most firms see more benefits (advantages) than costs (disadvantages) in being formal, yet about half of firms does not get their licenses when the associated money cost is reduced to zero. In effect, while just about one-fifth of formal firms see no advantage to their status, as many as two-thirds of informal firms see no advantage to theirs. Conversely, three out of five formal firms see no disadvantage to their status while only one out of every eight informal firms sees no disadvantage to theirs. However, confronted with the opportunity to obtain the license without any payment involved, most informal firms prefer not to obtain it. Hence, the results of our experiment suggest that for some firms formalisation is not desirable at any cost and, consequently, demand for formality among this type of firms is low. An additional implication is that self-report about willingness to formalise or reasons for not formalising is unreliable.

A first reason for the reluctance to register may be associated with the recurrent costs of being formal. As Jaramillo (2004) and Arruñada (2007) have suggested, recurrent costs associated with formality may be more important than initial registration costs. As shown above, receiving inspections is the most frequently identified disadvantage (or cost) of being formal. Making sure that inspections do not constitute an unnecessary burden on the firms is an area where municipalities can work to make formality more attractive to them. Second, it may also be the case that some firms do not perceive much

benefit from being formal. As the regression results indicate, most currently assumed potential advantages of having a license, such as doing business with larger firms, participating in public biddings, or getting access to credit, do not correlate significantly with obtaining the license. Only the perception of the firm owner that without a license he or she cannot use publicity to increase the visibility of his/her firm is positively correlated with obtaining the license.

Third, it may be that microfirm owners are understating the actual benefits of informality, because they feel uncomfortable about admitting benefits from an illegal status. Finally, it is important to note that about one out of every four informal firms did not fulfil the requirements to obtain a license. In one third of these cases firms did not meet safety requirements, which can range from inadequate electricity connections all the way to ruinous buildings. In other cases, property titling problems or illegal building modifications make it impossible for businesses to obtain a license. The point that this type of evidence suggests is that promotion of business formalisation in terms of getting a license cannot generally be done separately from other types of informality. Enforcement of rules that protect public goods, such as safety regulations or building standards, is part of the problem.

As suggested by the literature, the demand for formality is heterogeneous among informal microfirms in downtown Lima. In addition to the potential gains of greater visibility mentioned above, the only two other factors that predict formalisation are the owner's having postsecondary education and larger size of firm. Formalisation policies have better chances of being effective if targeted to firms with these two characteristics. Necessity entrepreneurs may best be served by social policies.

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Table A1
Characteristics of firms and entrepreneurs

Firms characteristics	Mean	Standard deviation	Min.	Max.
Number of workers	1.6	0.96	1	6
Area size (m2)	31.7	34.2	2	430
Age (years)	2.6	4.5	0.9	45
Activity sector				
Trade sector (%)	52.1			
Food sector (%)	22.8			
Service sector (%)	20.3			
Legal form				
Incorporated (%)	6.6			
Partnership (%)	4.5			
Owners characteristics				
Age	41.3	12.3	18	84
Experience in business (years)	5.5	7	0.9	45
Age at first business	31	10.6	16	62
Female (%)	56			
Did not complete secondary education (%)	16.2			
Completed secondary (%)	43.1			
Vocational postsecondary (%)	24.0			
University (%)	16.5			
First business (%)	78.7			
Owns locale (%)	27			

Table A2
Business features

Access to credit	Average	Standard deviation	Min.	Max.
Asked for credit from formal entities (%)	18.4%			
Obtained credit from formal entities (%)	16.1%			
Credit amount from formal entities (US$)	2,171	2,503	172	12,069
Credit amount from informal entities	654	694	35	3,448
Interest rate from formal entities	35.3	30.1	7.1	164
Interest rate from informal entities	25.8	18.4	8	92
Training				
Access to training (%)	13.7%			
Networking				
Belongs to producers association (%)	2.5%			
Recent investments				
Machinery/equipment (%)	19.3%			
Infrastructure (%)	18.9%			
Monthly expenditures (US$)*	1,307.20	1,684.50	21.8	13,206.90
Monthly revenue (US$)*	1,784.60	2,059.30	16.1	16,896.60
Monthly profits (US$)*	490.10	558.60	3.4	4,482.80

*Based on an exchange rate of 2.90 nuevos soles per dollar.

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