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On the effect of the costs of operating formally: New experimental evidence☆

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ABSTRACT

This paper analyzes the impact of the elimination of the initial fixed costs of business registration on the decision of informal firms to operate formally in Bogotá, Colombia. The Chamber of Commerce of Bogotá (CCB) conducts workshops for prospective formal-sector entrants and arranges personalized meetings for them with CCB agents. The CCB's decision to significantly reduce the transaction costs of registration and the entry into force of Act No. 1429 of 2010, which eliminated the costs of the initial procedure for registering as a formal enterprise and provided tax exemptions during the first years after formalization, provided us with an ideal natural experiment for studying how the elimination of the initial fixed costs of formalization would influence firms' decision to operate formally or not. We obtained two important results. First, while a workshop treatment had no effect on firms' formalization decisions, meetings at the firm with CCB agents raised the likelihood that a business would begin to operate formally by 5.5 percentage points for all the firms that were invited, at random, to participate in this segment of the intervention and by 32 percentage points for the firms that accepted the invitation. Second, the effect on the treated firms did not persist over time. In fact, after a year of formal operation, the effect disappeared. These results indicate that substantial reductions in the fixed costs of operating formally are not an effective means of influencing formalization choices, since such reductions had no lasting effect on formalization decisions.

1. Introduction

Informality is widespread in most developing countries. Policymakers are concerned about this problem because it entails an inefficient allocation of resources, inasmuch as formal and informal firms compete in the same market but have different marginal costs (Hsieh and Klenow, 2009). Galiani and Weinschelbaum (2012) develop a general equilibrium model in which both firms and workers choose whether to operate formally or informally. On that basis, they conduct an extensive static comparative analysis. Since the work of De Soto (1989), a great deal of emphasis has been placed on the burden represented by fixed formal-sector entry costs. Another major barrier to formality is thought to be the high taxes levied on profits and labor. While there are several studies that evaluate the costs and benefits of operating formally, there are only a few studies that provide experimental evidence regarding the impact of fixed costs on firms' decisions whether to operate formally or not.

This paper analyzes the impact of the elimination of initial fixed business registration costs on informal firms' decisions whether to operate formally or not in Colombia. In order to enter the formal sector of the Colombian economy, firms must register with the tax agency (*Dirección de Impuestos y Aduanas Nacionales* (DIAN)) and obtain a taxpayer identification number and card (*Registro Único Tributario* (RUT)), as well as obtain a license (*matrícula mercantil*) from the local chamber of commerce. Fees are charged for these procedures. Firms also need to renew their licenses every year, which increases the fixed costs of operating in the formal sector of the economy. In addition, in general, firms have to pay payroll taxes, value added taxes and income taxes.

In this paper we evaluate two interventions which were led by ECON ESTUDIO (EE), a research institute in Colombia (www.econestudio.com), working in cooperation with the Chamber of Commerce of Bogotá (CCB). These initiatives were designed to eliminate the initial fixed costs for firms that wished to operate formally. EE, together with the CCB, organized workshops (the first intervention) and arranged personal meetings (the second

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intervention) to inform entrepreneurs about registration procedures and the advantages of operating formally. In both treatments, firms that were interested in starting the process of formalization were subsequently assisted by CCB agents in completing all the necessary paperwork. In addition to the assistance of the CCB agents, the Formalization and Job Creation Act No. 1429 of December 2010 establishes that the registration process is to be cost-free for small businesses (the population of our study) that are registering for the first time.[1] This initiative thus provided us with an ideal natural experiment for studying how the elimination of the initial fixed costs of formalization would influence firms' decisions to operate formally or not, thanks to the combination of the experiments (workshops and meetings), which eliminated all the transaction costs of registration, and Act No. 1429, which eliminated the costs of initial registration for firms created between 2011 and 2014. What is more, Act No. 1429 also establishes that, in the short run, firms are to be exempted from all taxes, thus giving them a clean slate for the start-up of their formal-sector operations. This intervention was expected not only to induce firms that were on the verge of entering the formal sector to actually do so, but also to give other firms the opportunity to experiment with formality at no cost for a year. This latter aspect also added a special feature to our experiment, since it enabled us to analyze the sustainability of the project-induced decision to operate formally once the firms had to renew their licenses (the fee for which, in the first year after registration, was cut by 50% under Act No. 1429). The importance of Act No. 1429 is that it establishes the business environment in which the firms in our experiment operate.

Thus, we were able to take advantage of this natural experiment to study the effect of the virtual elimination of formalization costs on firms' formalization decisions in a context in which no tax liabilities would be incurred for at least two years. In addition, we were also able to test whether the effects of this intervention would be sustainable once firms had had the opportunity to learn about the advantages or disadvantages of operating formally and had to opt to remain in the formal sector by paying a small fee (which would still be 50% less than it would otherwise have been).

EE conducted a randomized control trial to evaluate these programs' impact on the decision of a sample of informal firms in southern Bogotá as to whether to formalize or not. Bogotá, the capital city of Colombia, has a large concentration of small businesses. Because no frame of reference was available that could be used to identify which firms should be included in the baseline sample, we started with one neighborhood, Restrepo, in the center of the locality of Antonio Nariño, which had not come within the scope of the CCB interventions. In October 2010, a group of research assistants went door-to-door to screen firms, asking their owners or managers some basic questions that helped them to identify informal firms that could be included in the baseline sample. The objective was to pinpoint those firms which had not taken any steps to begin the formalization process. In order to obtain a large sample, the survey area was expanded by adding the areas located in concentric circles surrounding Restrepo, thus maintaining this neighborhood in the center of the circle; we also made sure that the additional survey areas were ones in which the CCB programs had not yet been implemented.

By matching our baseline sample data with the CCB's official records, we were able to obtain exact information on which firms actually formalized after the interventions were conducted. Furthermore, this data also showed which of the firms that did decide to formalize as a result of the intervention remained in the formal sector when the time came for them to renew their business licenses.

[1] This law defines small businesses as firms with fewer than 50 employees and total assets amounting to the equivalent of less than 5000 minimum legal monthly wages (MLMW). One MLMW was equivalent to Col$ 515,000 in 2011 (US$ 265 using the exchange rate as of December 31, 2011). All firms included in our sample fit this definition.

We have two important results to report. First, while the workshop treatment had no effect on firms' decisions regarding formalization, the CCB agents' visits raised the likelihood of formal operation by 5.5 percentage points for all the firms that were randomly invited to participate (the intention-to-treat parameter) and by 32 percentage points for those firms that had been invited and then accepted the invitation (the local average treatment effect). Second, and very interestingly, the effect of the treatment did not persist over time. After a year of formal operation, both effects disappeared. What is more, this was not the result of businesses in the control group entering the formal sector in order to "catch up" with the others but instead reflects the decisions of formalized firms not to renew their licenses. This is a very interesting result, since it suggests that some firms that experiment with formality do not find that it is advantageous for them to continue operating as formal-sector enterprises even when they do not have to pay taxes and only have to pay 50% of the license renewal fee.

These results show that a substantial reduction in the fixed costs of operating formally (i.e., the costs of acquiring information about formalization plus the costs of formalizing a firm) does not play a key role in a firm's decision whether or not to formalize, since that reduction had no enduring effect on the decision to operate in the formal sector. A considerable number of the firms in the study chose to become formal when it was cost-free but, later, when they would be called upon to pay a relatively small fee, they decided to return to the informal sector.

There is a large body of literature on the impacts of different types of programs on informality. Bruhn (2011) and Kaplan, Piedra and Seira (2011) use different panel datasets to analyze the effect of a Mexican program implemented in 2002 which reduced the time required to register as a business from 30 to 2 days. Bruhn (2011) uses data from the Mexican National Employment Survey and finds that the program raised the registration rate of eligible firms by 5% but that this increase was a reflection of the creation of new firms rather than the formalization of existing informal enterprises. She also finds that formal employment in eligible industries increased by 2.8%. Kaplan et al. (2011) use data from the Mexican Social Security Institute and also find that the program increased the number of formal firms. They do not find significant effects in terms of the formal employment rate. Monteiro and Assunção (2012) and Fajnzylber, Maloney and Montes-Rojas (2011) analyze a simplification program in Brazil which reduced both the costs of registration and business taxes. The first of these studies relies on a difference-in-differences strategy applied to ineligible firms as a control group for eligible ones. It shows that the program increased formalization by 13 percentage points in the case of retail firms but had no impact on other sectors. Furthermore, these researchers find that the effect is stronger for mid-sized firms. Fajnzylber et al. (2011) rely instead on a regression discontinuity design and find that the program did have an effect on formalization: a 7.5% increase in the number of firms registered as formal legal entities, a 6.3% increase in the registration of micro-enterprises and a 7.2% increase in registration with the tax authorities. In addition, they find that the program had an effect on other outcomes, since the intervention raised the revenues, employment figures and profits of the formalized firms. However, these authors have not been able to disentangle the various components of the program in order to determine which of those components was responsible for the documented effects. McKenzie and Sakho (2010) rely on an instrumental variables (IV) approach, using the distance to the registration office as an instrument for gauging registration costs in Bolivia. They find that firms with from 2 to 5 employees that register as businesses increase their profits, but that the profits of smaller or bigger firms that register as businesses actually decrease. Their results thus show that, in the presence of high formalization costs, while some firms would stand to gain in net terms if they were to register as businesses with the tax authorities, others would lose from doing so. In the latter case,