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THE REGULATION OF ENTRY*

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We present new data on the regulation of entry of start-up firms in 85 countries. The data cover the number of procedures, official time, and official cost that a start-up must bear before it can operate legally. The official costs of entry are extremely high in most countries. Countries with heavier regulation of entry have higher corruption and larger unofficial economies, but not better quality of public or private goods. Countries with more democratic and limited governments have lighter regulation of entry. The evidence is inconsistent with public interest theories of regulation, but supports the public choice view that entry regulation benefits politicians and bureaucrats.

I. INTRODUCTION

Countries differ significantly in the way in which they regulate the entry of new businesses. To meet government requirements for starting to operate a business in Mozambique, an entrepreneur must complete 19 procedures taking at least 149 business days and pay US\$256 in fees. To do the same, an entrepreneur in Italy needs to follow 16 different procedures, pay US\$3946 in fees, and wait at least 62 business days to acquire the

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necessary permits. In contrast, an entrepreneur in Canada can finish the process in two days by paying US\$280 in fees and completing only two procedures.

In this paper we describe the required procedures governing entry regulation, as well as the time and the cost of following these procedures, in 85 countries. We focus on legal requirements that need to be met before a business can officially open its doors, the official cost of meeting these requirements, and the minimum time it takes to meet them if the government does not delay the process. We then use these data to evaluate economic theories of regulation. Our work owes a great deal to De Soto's [1990] path-breaking study of entry regulation in Peru. Unlike De Soto, we look at the official requirements, official cost, and official time—and do not measure corruption and bureaucratic delays that further raise the cost of entry.

Pigou's [1938] public interest theory of regulation holds that unregulated markets exhibit frequent failures, ranging from monopoly power to externalities. A government that pursues social efficiency counters these failures and protects the public through regulation. As applied to entry, this view holds that the government screens new entrants to make sure that consumers buy high quality products from "desirable" sellers. Such regulation reduces market failures such as low quality products from fly-by-night operators and externalities such as pollution. It is "done to ensure that new companies meet minimum standards to provide a good or service. By being registered, new companies acquire a type of official approval, which makes them reputable enough to engage in transactions with the general public and other businesses" [SRI 1999, p. 14]. The public interest theory predicts that stricter regulation of entry, as measured by a higher number of procedures in particular, should be associated with socially superior outcomes.

The public choice theory [Tullock 1967; Stigler 1971; Peltzman 1976] sees the government as less benign and regulation as socially inefficient. It comes in two flavors. In Stigler's [1971] theory of regulatory capture, "regulation is acquired by the industry and is designed and operated primarily for its benefit." Industry incumbents are able to acquire regulations that create rents for themselves, since they typically face lower information and organization costs than do the dispersed consumers. In this theory the regulation of entry keeps out the competitors and raises incumbents' profits. Because stricter regulation raises bar-

riers to entry, it should lead to greater market power and profits rather than benefits to consumers.

A second strand of the public choice theory, which we call the *tollbooth* view, holds that regulation is pursued for the benefit of politicians and bureaucrats [McChesney 1987; De Soto 1990; Shleifer and Vishny 1998]. Politicians use regulation both to create rents and to extract them through campaign contributions, votes, and bribes. "An important reason why many of these permits and regulations exist is probably to give officials the power to deny them and to collect bribes in return for providing the permits" [Shleifer and Vishny 1993, p. 601]. The capture and tollbooth theories are closely related, in that they both address rent creation and extraction through the political process. The capture theory emphasizes the benefits to the industry, while the tollbooth theory stresses those to the politicians even when the industry is left worse off by regulation.

In principle, the collection of bribes in exchange for release from regulation can be efficient. In effect, the government can become an equity holder in a regulated firm. In practice, however, the creation of rents for the bureaucrats and politicians through regulation is often inefficient, in part because the regulators are disorganized, and in part because the policies they pursue to increase the rents from corruption are distortionary. The analogy to tollbooths on a highway is useful. Efficient regulation may call for one toll for the use of a road, or even no tolls if the operation of the road is most efficiently financed through general tax revenues. In a political equilibrium, however, each town through which the road passes might be able to erect its own tollbooth. Toll collectors may also block alternative routes so as to force the traffic onto the toll road. For both of these reasons, political toll collection is inefficient.

In the tollbooth theory the regulation of entry enables the regulators to collect bribes from the potential entrants and serves no social purpose. "When someone has finally made the decision to invest, he then is subjected to some of the worst treatment imaginable. . . In a few cases this treatment consists of outright extortion: presenting the investor with insurmountable delays or repeated obstacles unless he makes a large payoff. . ." [World Bank 1999, p. 10]. More extensive regulation should be associated with socially inferior outcomes, particularly corruption.

We assess the regulation of entry around the world from the perspective of these theories by addressing two broad sets of

questions. First, what are the consequences of the regulation of entry, and in particular, who gets the rents? If the regulation of entry serves the public interest, it should be associated with higher quality of goods, fewer damaging externalities, and greater competition. Public choice theory, in contrast, predicts that stricter regulation is most clearly associated with less competition and higher corruption.

A second question we examine to distinguish the alternative theories of regulation is which governments regulate entry? The public interest model predicts that governments whose interests are more closely aligned with those of the consumers, which we think of as the more representative and more limited governments, should *ceteris paribus* regulate entry more strictly. In contrast, the public choice model predicts that the governments least subject to popular oversight should pursue the strictest regulations, to benefit themselves and possibly the incumbent firms. Knowing who regulates thus helps to discriminate among the theories.

Our analysis of exhaustive data on entry regulation in 85 countries leads to the following conclusions. The number of procedures required to start up a firm varies from the low of 2 in Canada to the high of 21 in the Dominican Republic, with the world average of around 10. The minimum official time for such a start-up varies from the low of 2 business days in Australia and Canada to the high of 152 in Madagascar, assuming that there are no delays by either the applicant or the regulators, with the world average of 47 business days. The official cost of following these procedures for a simple firm ranges from under 0.5 percent of per capita GDP in the United States to over 4.6 times per capita GDP in the Dominican Republic, with the worldwide average of 47 percent of annual per capita income. For an entrepreneur, legal entry is extremely cumbersome, time-consuming, and expensive in most countries in the world.

In a cross section of countries, we do not find that stricter regulation of entry is associated with higher quality products, better pollution records or health outcomes, or keener competition. But stricter regulation of entry *is* associated with sharply higher levels of corruption, and a greater relative size of the unofficial economy. This evidence favors public choice over the public interest theories of regulation.

In response, a public interest theorist could perhaps argue that heavy regulation in some countries is a reflection of both

significant market failures and the unavailability of alternative mechanisms of addressing them, such as good courts or free press. In addition, corruption and a large unofficial economy may be inadvertent consequences of benevolent regulation, and hence cannot be used as evidence against the public interest view. Such inadvertent consequences might obtain as a side effect of screening out bad entrants [Banerjee 1997; Acemoglu and Verdier 2000], or simply as a result of a well-intended but misguided transplant of rich-country regulations into poor countries. Because of this logic, the question of which countries regulate entry more heavily may be better suited conceptually to distinguish the alternative theories.

We find that the countries with more open access to political power, greater constraints on the executive, and greater political rights have less burdensome regulation of entry—even controlling for per capita income—than do the countries with less representative, less limited, and less free governments. The per capita income control is crucial for this analysis because it could be argued that richer countries have both better governments and a lower need for the regulation of entry, perhaps because they have fewer market failures or better alternative ways of dealing with them. The fact that better governments regulate entry less, along with the straightforward interpretation of the evidence on corruption and the unofficial economy, point to the tollbooth theory: entry is regulated because doing so benefits the regulators.

The next section describes the sample. Section III presents our basic results on the extent of entry regulation around the world. Section IV asks who gets the rents from regulation. Section V presents the main results on which governments regulate. Section VI concludes.

II. DATA

A. *Construction of the Database*

This paper is based on a new data set, which describes the regulation of entry by start-up companies in 85 countries in 1999. We are interested in all the procedures that an entrepreneur needs to carry out to begin legally operating a firm involved in industrial or commercial activity. Specifically, we record all procedures that are officially required of an entrepreneur in order to

obtain all necessary permits and to notify and file with all requisite authorities. We also calculate the official costs and time necessary for the completion of each procedure under normal circumstances. The study assumes that the information is readily available and that all governmental bodies function efficiently and without corruption.

We collect data on entry regulation using all available written information on start-up procedures from government publications, reports of development agencies such as the World Bank and USAID, and government web pages on the Internet. We then contact the relevant government agencies to check the accuracy of the data. Finally, for each country we commission at least one independent report on entry regulation from a local law firm, and work with that firm and government officials to eliminate disagreements among them.

We use official sources for the number of procedures, time, and cost. If official sources are conflicting or the laws are ambiguous, we follow the most authoritative source. In the absence of express legal definitions, we take the government official's report as the source. If several official sources have different estimates of time and cost, we take the median. Absent official estimates of time and cost, we take the estimates of local incorporation lawyers. If several unofficial (e.g., a private lawyer) sources have different estimates, we again take the median.

Our countries span a wide range of income levels and political systems. The sample includes fourteen African countries, nine East Asian countries including China and Vietnam, three South Asian countries (India, Pakistan, and Sri Lanka), all Central and Eastern European countries except for Albania and some of the former Yugoslav republics, eight former Soviet Union republics and Mongolia, ten Latin American countries, two Caribbean countries (Dominican Republic and Jamaica), six Middle Eastern countries (Egypt, Israel, Jordan, Lebanon, Morocco, and Tunisia), and all major developed countries.

We record the procedures related to obtaining all the necessary permits and licenses, and completing all the required inscriptions, verifications, and notifications for the company to be legally in operation. When there are multiple ways to begin operating legally, we choose the fastest in terms of time. In some countries, entrepreneurs may not bother to follow official procedures or bypass them by paying bribes or hiring the services of "facilitators." An entrepreneur in Georgia can start up a company

after going through 13 procedures in 69 business days and paying \$375 in fees. Alternatively, he may hire a legal advisory firm that completes the start-up process for \$610 in three business days. In the analysis, we use the first set of numbers. We do so because we are primarily interested in understanding the structure of official regulation.

Regulations of start-up companies vary across regions within a country, across industries, and across firm sizes. For concreteness, we focus on a “standardized” firm, which has the following characteristics: it performs general industrial or commercial activities, it operates in the largest city¹ (by population), it is exempt from industry-specific requirements (including environmental ones), it does not participate in foreign trade and does not trade in goods that are subject to excise taxes (e.g., liquor, tobacco, gas), it is a domestically owned limited liability company,² its capital is subscribed in cash (not in-kind contributions) and is the higher of (i) 10 times GDP per capita in 1999 or (ii) the minimum capital requirement for the particular type of business entity, it rents (i.e., does not own) land and business premises, it has between 5 and 50 employees one month after the commencement of operations all of whom are nationals, it has turnover of up to 10 times its start-up capital, and it does not qualify for investment incentives. Although different legal forms are used in different countries to set up the simplest firm, to make comparisons we need to look at the same form.

Our data almost surely underestimate the cost and complexity of entry.³ Start-up procedures in the provinces are often slower than in the capital. Industry-specific requirements add procedures. Foreign ownership frequently involves additional verifications and procedures. Contributions in kind often require assessment of value, a complex procedure that depends on the quality of property registries. Finally, purchasing land can be quite difficult and even impossible in some of the countries of the sample (for example, in the Kyrgyz Republic).

1. In practice, the largest city coincides with the capital city except in Australia (Melbourne), Brazil (Sao Paulo), Canada (Toronto), Germany (Frankfurt), Kazakhstan (Almaty), the Netherlands (Amsterdam), South Africa (Johannesburg), Turkey (Istanbul), and the United States (New York).

2. If the Company Law allows for more than one privately owned business form with limited liability, we choose the more popular business form among small companies in the country.

3. The World Economic Forum [2001] surveys business people on how important administrative regulations are as an obstacle to new business. Our three measures are strongly positively correlated with these subjective assessments.

B. Definitions of Variables

We use three measures of entry regulation: the number of procedures that firms must go through, the official time required to complete the process, and its official cost. In the public interest theory, a more thorough screening process requires more procedures and demands more time. In the public choice theory, more procedures and longer delays facilitate bribe extraction (tollbooth view) or make entry less attractive to potential competitors (capture view).

Theoretical predictions regarding our measure of cost are ambiguous. A benevolent social planner who wants to spend significant resources on screening new entrants may choose to finance such activity with broad taxes rather than with the direct fees that we measure, leading to low costs as we measure them. A corrupt regulator may also want to set fees low in order to raise his own bribe income if, for example, fees are verifiable and cannot be expropriated by the regulator.⁴ In contrast, higher fees are unambiguously desirable as a tool to deter entry under the *capture theory*. Because of these ambiguities, we present statistics on cost mainly to describe an important attribute of regulation and not to discriminate among theories.

We keep track of all the procedures required by law to start a business. A separate activity in the start-up process is a "procedure" only if it requires the entrepreneur to interact with outside entities: state and local government offices, lawyers, auditors, company seal manufacturers, notaries, etc. For example, all limited liability companies need to hold an inaugural meeting of shareholders to formally adopt the Company Articles and Bylaws. Since this activity involves only the entrepreneurs, we do not count it as a procedure. Similarly, most companies hire a lawyer to draft their Articles of Association. However, we do not count that as a procedure unless the law requires that a lawyer be involved. In the same vein, we ignore procedures that the entrepreneur can avoid altogether (e.g., reserving exclusive rights over a proposed company name until registration is completed) or that can be performed after business commences.⁵ Finally, when ob-

4. Shleifer and Vishny [1993] distinguish corruption with theft from corruption without theft. In the latter case, the regulator must remit the official fee to the Treasury, and therefore has no interest in that fee being high.

5. In several countries, our consultants advised us that certain procedures, while not required, are highly recommended, because failure to follow them may result in significant delays and additional costs. We collected data on these

component of the cost that goes to the government, which in the sample averages about half the total cost. The results for this cost variable are generally weaker than for the total out-of-pocket cost, but go in the same direction. Our basic cost estimates also ignore the opportunity cost of the entrepreneur's time and the forgone profits associated with bureaucratic delay. To address this concern, we calculate a "full cost" measure, which adds up the official expenses and an estimate of the value of the entrepreneur's time, valuing his time at the country's per capita income per working day. We report this number below, and have replicated the analysis using it as a measure of cost. The results obtained using this cost measure are very similar to those using the raw data on time and cost, and hence are not presented.

Table I lists typical procedures associated with setting up a firm in our sample. The procedures are further divided by their function: screening (a residual category, which generally aims to keep out "unattractive" projects or entrepreneurs), health and safety, labor, taxes, and environment. The basic procedure in starting up a business, present everywhere, is registering with the Companies' Registry. This can take more than one procedure; sometimes there is a "preliminary license" and a "final" license. Combined with that procedure, or as a separate procedure, is the check for uniqueness of the proposed company name. Add-on procedures comprise the requirements to notarize the Company Deeds, to open a bank account and deposit of start-up capital, and to publish a notification of the company's establishment in an official or business paper. Additional screening procedures that include obtaining different certificates and filing with agencies other than the Registry may add up to 97 days in delays, as is the case in Madagascar. Another set of basic screening procedures, present in almost every country in the data set, covers certain mandatory municipal procedures, registrations with statistical offices and with Chambers of Commerce and Industry (or respective Ministries). In the Dominican Republic these procedures take seven procedures and fourteen days. There is large cross-country variation in terms of the number, time, and cost of screening procedures as the Company Registry performs many of these tasks automatically in the most efficient countries but the entrepreneur does much of the legwork in the less efficient ones.

Additional procedures appear in four areas. The first covers tax-related procedures, which require seven procedures and twenty days in Madagascar. The second is labor regulations,

