About *Doing Business*: measuring for impact

The private sector provides an estimated 90% of jobs in developing economies.[1] Where government policies support a dynamic business environment—with firms making investments, creating jobs and increasing productivity—all people have greater opportunities. A growing body of evidence suggests that policy makers seeking to strengthen the private sector need to pay attention not only to macroeconomic factors but also to the quality of laws, regulations and institutional arrangements that shape daily economic life.[2]

This is the 10th *Doing Business* report. When the first report was produced, in 2003, there were few globally available and regularly updated indicators for monitoring such microeconomic issues as business regulations affecting local firms. Earlier efforts from the 1980s drew on perceptions data, but these expert or business surveys focused on broad aspects of the business environment and often captured the experiences of businesses. These surveys also lacked the specificity and cross-country comparability that *Doing Business* provides—by focusing on well-defined transactions, laws and institutions rather than generic, perceptions-based questions on the business environment.

Doing Business seeks to measure business regulations for domestic firms through an objective lens. The project looks primarily at small and medium-size companies in the largest business city. Based on standardized case studies, it presents quantitative indicators on the regulations that apply to firms at different stages of their life cycle. The results for each economy can be compared with those for 184 other economies and over time.

Over the years the choice of indicators for *Doing Business* has been guided by a rich pool of data collected through the World Bank Enterprise Surveys. These data highlight the main obstacles to business activity as reported by entrepreneurs in well over 100 economies. Among the factors that the surveys have identified as important to businesses have been taxes (tax administration as well as tax rates) and electricity—inspiring the design of the paying taxes and getting electricity indicators. In addition, the design of the *Doing Business* indicators has drawn on theoretical insights gleaned from extensive research literature.[3] The *Doing Business* methodology makes it possible to update the indicators in a relatively inexpensive and replicable way.

The *Doing Business* methodology is also responsive to the needs of policy makers. Rules and regulations are under the direct control of policy makers—and policy makers intending to change the experience and behavior of businesses will often start by changing rules and regulations that affect them. *Doing Business* goes beyond identifying that a problem exists and points to specific regulations or regulatory procedures that may lend themselves to regulatory reform. And its quantitative measures of business regulation enable research on how specific regulations affect firm behavior and economic outcomes.

The first *Doing Business* report covered 5 topics and 133 economies. This year's report covers 11 topics and 185 economies.

Ten topics are included in the aggregate ranking on the ease of doing business, and 9 in the distance to frontier measure.[4] The project has benefited from feedback from governments, academics, practitioners and reviewers.[5] The initial goal remains: to provide an objective basis for understanding and improving the regulatory environment for business.

WHAT *DOING BUSINESS* COVERS

Doing Business captures several important dimensions of the regulatory environment as they apply to local firms. It provides quantitative measures of regulations for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. *Doing Business* also looks at regulations on employing workers. Pending further progress on research in this area, this year's report does not present rankings of economies on the employing workers indicators or include the topic in the aggregate ranking on the ease of doing business. It does present the data on the employing workers indicators. Additional data on labor regulations collected in 185 economies are available on the *Doing Business* website.[6]

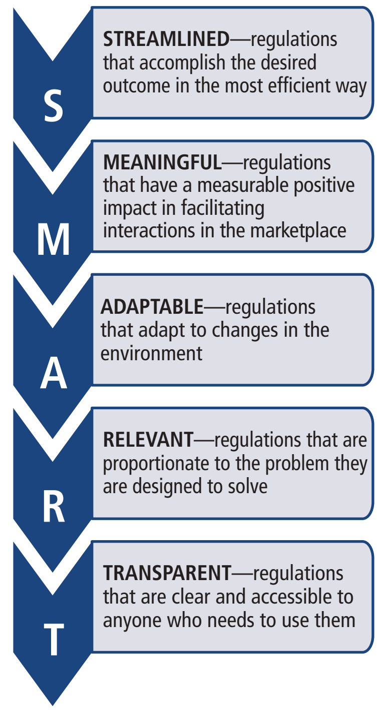
The foundation of *Doing Business* is the notion that economic activity, particularly private sector development, benefits from clear and coherent rules: Rules that set out and clarify property rights and facilitate the resolution of disputes. And rules that enhance the predictability of economic interactions and provide contractual partners with essential protections against arbitrariness and abuse. Where such rules are reasonably efficient in design, are transparent and accessible to those for whom they are intended and can be implemented at a reasonable cost, they are much more effective in shaping the incentives of economic agents in ways that promote growth and development. The quality of the rules also has a crucial bearing on how societies distribute the benefits and bear the costs of development strategies and policies.

Consistent with the view that rules matter, some *Doing Business* indicators give a higher score for more regulation and better-functioning institutions (such as courts or credit bureaus). In the area of protecting investors, for example, higher scores are given for stricter disclosure requirements for related-party transactions. Higher scores are also given for a simplified way of applying regulation that keeps compliance costs for firms low—such as by allowing firms to comply with business start-up formalities in a one-stop shop or through a single online portal. Finally, *Doing Business* scores reward economies that apply a risk-based approach to regulation as a way to address social and environmental concerns—such as by imposing a greater regulatory burden on activities that pose a high risk to the population and a lesser one on lower-risk activities.

Thus the economies that rank highest on the ease of doing business are not those where there is no regulation—but those where governments have managed to create rules that facilitate interactions in the marketplace without needlessly hindering the development of the private sector. In essence, *Doing Business* is about smart business regulations, not necessarily fewer regulations (figure 2.1).

In constructing the indicators the *Doing Business* project uses 2 types of data. The first come from readings of laws and regulations in each economy. The *Doing Business* team, in collaboration with local expert respondents, examines the company law to find the disclosure requirements for related-party transactions. It reads the civil law to find the number of procedures necessary to resolve a commercial sale dispute before local courts. It reviews the labor code to find data on a range of issues concerning employer-employee relations. And it plumbs other legal instruments for other key pieces of data used in the indicators, several of which have a large legal dimension.

FIGURE 2.1 What are SMART business regulations as defined by *Doing Business*?



Indeed, about three-quarters of the data used in *Doing Business* are of this factual type, reducing the need to have a larger sample size of experts in order to improve accuracy. The local expert respondents play a vital role in corroborating the *Doing Business* team's understanding and interpretation of rules and laws.

Data of the second type serve as inputs into indicators on the complexity and cost of regulatory processes. These indicators measure the efficiency in achieving a regulatory goal, such as the number of procedures to obtain a building permit or the time taken to grant legal identity to a business. In this group of indicators cost estimates are recorded from official fee schedules where applicable. Time estimates often involve an element of judgment by respondents who routinely administer the relevant regulations or undertake the relevant transactions.[7] These experts have several rounds of interaction with the *Doing Business* team, involving conference calls, written correspondence and visits by the team until there is convergence on the final answer. To construct the time indicators, a regulatory process such as starting a business is broken down into clearly defined steps and procedures (for more details, see the discussion on methodology in this chapter). Here *Doing Business* builds on Hernando de Soto's pioneering work in applying the time-and-motion approach in the 1980s to show the obstacles to setting up a garment factory on the outskirts of Lima.[8]

TABLE 2.1 *Doing Business*—benchmarking 11 areas of business regulation

Complexity and cost of regulatory processes	
Starting a business	Procedures, time, cost and paid-in minimum capital requirement
Dealing with construction permits	Procedures, time and cost
Getting electricity	Procedures, time and cost
Registering property	Procedures, time and cost
Paying taxes	Payments, time and total tax rate
Trading across borders	Documents, time and cost
Strength of legal institutions	
Getting credit	Movable collateral laws and credit information systems
Protecting investors	Disclosure and liability in related-party transactions
Enforcing contracts	Procedures, time and cost to resolve a commercial dispute
Resolving insolvency	Time, cost, outcome and recovery rate
Employing workers[a]	Flexibility in the regulation of employment

a. The employing workers indicators are not included in this year's ranking on the ease of doing business nor in the calculation of any data on the strength of legal institutions included in figures in the report.

WHAT *DOING BUSINESS* DOES NOT COVER

The *Doing Business* data have key limitations that should be kept in mind by those who use them.

Limited in scope

The *Doing Business* indicators are limited in scope. In particular:

- *Doing Business* does not measure the full range of factors, policies and institutions that affect the quality of the business environment in an economy or its national competitiveness. It does not, for example, capture aspects of security, the prevalence of bribery and corruption, market size, macroeconomic stability (including whether the government manages its public finances in a sustainable way), the state of the financial system or the level of training and skills of the labor force.
- Even within the relatively small set of indicators included in *Doing Business*, the focus is deliberately narrow. The getting electricity indicators, for example, capture the procedures, time and cost involved for a business to obtain a permanent electricity connection to supply a standardized warehouse. Through these indicators *Doing Business* thus provides a narrow perspective on the range of infrastructure challenges that firms face, particularly in the developing world. It does not address the extent to which inadequate roads, rail, ports and communications may add to firms' costs and undermine competitiveness. *Doing Business* covers 11 areas of a company's life cycle, through 11 specific sets of indicators (table 2.1). Similar to the indicators on getting electricity, those on starting a business or protecting investors do not cover all aspects of commercial legislation. And those on employing workers do not cover all areas of labor regulation; for example, they do not measure regulations addressing health and safety issues at work or the right of collective bargaining.
- *Doing Business* does not attempt to measure all costs and benefits of a particular law or regulation to society as a whole. The paying taxes indicators, for example, measure the total tax rate, which in isolation is a cost to the business. The indicators do not measure, nor are they intended to measure, the benefits of the social and economic programs funded through tax revenues. Measuring business laws and regulations provides one input into the debate on the regulatory burden associated with achieving regulatory objectives. Those objectives can differ across economies.

Limited to standardized case scenarios

A key consideration for the *Doing Business* indicators is that they should ensure comparability of the data across a global set of economies. The indicators are therefore developed around standardized case scenarios with specific assumptions. One such assumption is the location of a notional business in the largest business city of the economy. The reality is that business regulations and their enforcement very often differ within a country, particularly in federal states and large economies. But gathering data for every relevant jurisdiction in each of the 185 economies covered by *Doing Business* would be far too costly.

Doing Business recognizes the limitations of the standardized case scenarios and assumptions. But while such assumptions come at the expense of generality, they also help ensure the comparability of data. For this reason it is common to see limiting assumptions of this kind in economic indicators. Inflation statistics, for example, are often based on prices of a set of consumer goods in a few urban areas, since collecting nationally representative price data at high frequencies may be prohibitively costly in many countries. To capture regional variation in the business environment within economies, *Doing Business* has complemented its global indicators with subnational studies in some economies where resources and interest have come together (box 2.1).

Some *Doing Business* topics include complex and highly differentiated areas. Here the standardized cases and assumptions are carefully considered and defined. For example, the standardized case scenario usually involves a limited liability company or its legal equivalent. The considerations in defining this assumption are twofold. First, private limited liability companies are, empirically, the most prevalent business form in many economies around the world. Second, this choice reflects the focus of *Doing Business* on expanding opportunities for entrepreneurship: investors are encouraged to venture into business when potential losses are limited to their capital participation.

Limited to the formal sector

The *Doing Business* indicators assume that entrepreneurs have knowledge of and comply with applicable regulations. In practice, entrepreneurs may not know what needs to be done or how to comply and may lose considerable time in trying to find out. Or they may deliberately avoid compliance altogether—by not registering for social security, for example. Where regulation is particularly onerous, levels of informality tend to be higher (figure 2.2).

Informality comes at a cost. Compared with their formal sector counterparts, firms in the informal sector typically grow more slowly, have poorer access to credit and employ fewer workers—and these workers remain outside the protections of labor law.[9] All this may be even more so for female-owned businesses, according to country-specific research.[10] Firms in the informal sector are also less likely to pay taxes.

Doing Business measures one set of factors that help explain the occurrence of informality and give policy makers insights into potential areas of reform. Gaining a fuller understanding of the broader business environment, and a broader perspective on policy challenges, requires combining insights from *Doing Business* with data from other sources, such as the World Bank Enterprise Surveys.[11]

BOX 2.1 COMPARING REGULATIONS AT THE LOCAL LEVEL: SUBNATIONAL *DOING BUSINESS* REPORTS

Subnational *Doing Business* reports expand the indicators beyond the largest business city in an economy. They capture local differences in regulations or in the implementation of national regulations across cities within an economy (as in Colombia) or region (as in South East Europe). Projects are undertaken at the request of central governments, which often contribute financing, as in Mexico. In some cases local governments also provide funding, as in the Russian Federation.

Subnational indicators provide governments with standard measures, based on laws and regulations, that allow objective comparisons both domestically and internationally. As a diagnostic tool, they identify bottlenecks as well as highlight good practices that are easily replicable in other cities sharing a similar legal framework.

Governments take ownership of a subnational project by participating in all steps of its design and implementation—choosing the cities to be benchmarked, the indicators that can capture local differences and the frequency of benchmarking. All levels of government are involved—national, regional and municipal.

Subnational projects create a space for discussing regulatory reform and provide opportunities for governments and agencies to learn from one another, through the report and through peer-to-peer learning workshops. Even after the report is launched, knowledge sharing continues. In Mexico 28 of 32 states hold regular exchanges.

Repeated benchmarking creates healthy competition between cities to improve their regulatory environment. The dissemination of the results reinforces this process and gives cities an opportunity to tell their stories. Fifteen economies have requested 2 or more rounds of benchmarking since 2005 (including Colombia, Indonesia and Nigeria), and many have expanded the geographic coverage to more cities (including Russia). In Mexico each successive round has captured an increase in the number of states improving their regulatory environment in each of the 4 indicator sets included—reaching 100% of states in 2011.

Since 2005 subnational reports have covered 335 cities in 54 economies, including Brazil, China, the Arab Republic of Egypt, India, Kenya, Morocco, Pakistan and the Philippines.[1]

This year studies were updated in Indonesia, Kenya, Mexico, Russia and the United Arab Emirates. Studies are ongoing in Hargeisa (Somaliland) as well as in 23 cities and 4 ports in Colombia, 15 cities and 3 ports in Egypt and 13 cities and 7 ports in Italy. In addition, 3 regional reports were published:

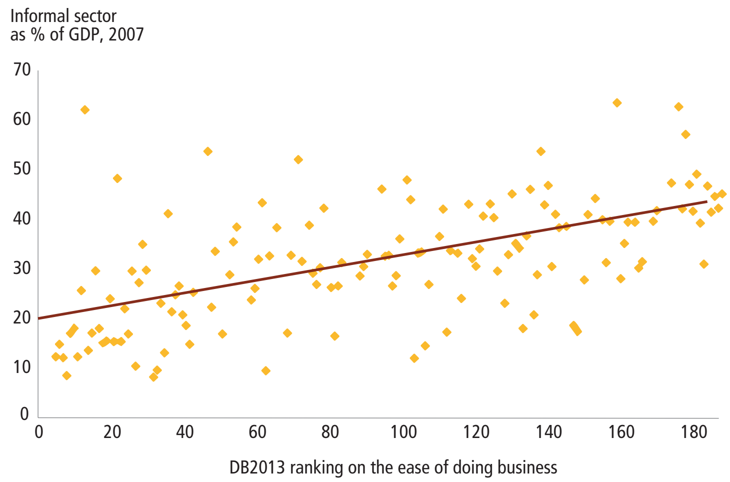
- *Doing Business in OHADA,* comparing business regulations in the 16 member states of the Organization for the Harmonization of Business Law in Africa (Benin, Burkina Faso, Cameroon, the Central African Republic, Chad, the Comoros, the Republic of Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea, Guinea-Bissau, Mali, Niger, Senegal and Togo).
- *Doing Business in the East African Community,* covering 5 economies (Burundi, Kenya, Rwanda, Tanzania and Uganda).
- *Doing Business in the Arab World,* covering 20 economies (Algeria, Bahrain, the Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, the Syrian Arab Republic, Tunisia, the United Arab Emirates, West Bank and Gaza, and the Republic of Yemen).

1. Subnational reports are available on the *Doing Business* website at http://www.doingbusiness.org/subnational.

WHY THIS FOCUS?

Why does *Doing Business* focus on the regulatory environment for small and medium-size enterprises? These enterprises are key drivers of competition, growth and job creation, particularly in developing economies. But in these economies up to 65% of economic activity takes place in the informal sector, often because of excessive bureaucracy and regulation—and in the informal sector firms lack access to the opportunities and protections that the law provides. Even firms operating in the formal sector might not have equal access to these opportunities and protections. Where regulation is burdensome and competition limited, success tends to depend on whom one knows. But where regulation is transparent, efficient and implemented in a simple way, it becomes easier for aspiring entrepreneurs to compete, innovate and grow.

FIGURE 2.2 Higher levels of informality are associated with lower *Doing Business* rankings



Note: The correlation between the 2 variables is 0.57. Relationships are significant at the 5% level after controlling for income per capita. The data sample includes 143 economies.
Source: Doing Business database; Schneider, Buehn and Montenegro 2010.

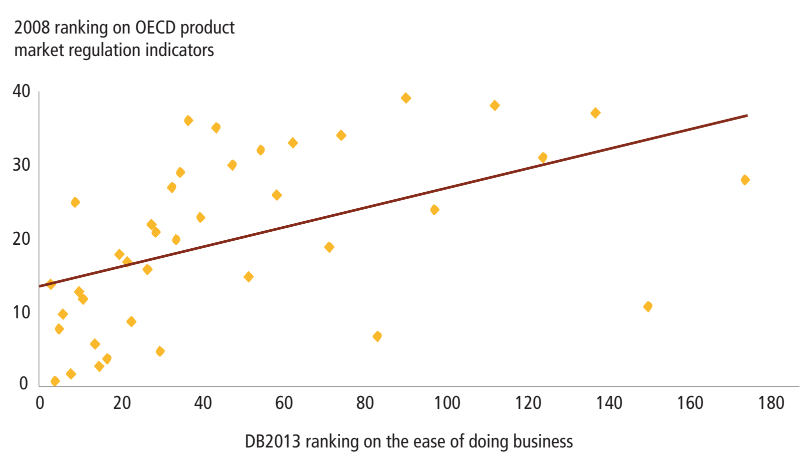
Do the focus areas of *Doing Business* matter for development and poverty reduction? The World Bank study *Voices of the Poor* asked 60,000 poor people around the world how they thought they might escape poverty.[12] The answers were unequivocal: women and men alike pin their hopes, above all, on income from their own business or wages earned in employment. Enabling growth—and ensuring that all people, regardless of income level, can participate in its benefits—requires an environment where new entrants with drive and good ideas can get started in business and where good firms can invest and grow, thereby generating more jobs. In this sense *Doing Business* values good rules as a key to social inclusion.

In effect, *Doing Business* functions as a barometer of the regulatory environment for domestic businesses. To use a medical analogy, *Doing Business* is similar to a cholesterol test. A cholesterol test does not tell us everything about our health. But our cholesterol level is easier to measure than our overall health, and the test provides us with important information, warning us when we need to adjust our behavior. Similarly, *Doing Business* does not tell us everything we need to know about the regulatory environment for domestic businesses. But its indicators cover aspects that are more easily measured than the entire regulatory environment, and they provide important information about where change is needed. What type of change or regulatory reform is right, however, can vary substantially across economies.

To test whether *Doing Business* serves as a proxy for the broader business environment and for competitiveness, one approach is to look at correlations between the *Doing Business* rankings and other major economic benchmarks. The indicator set closest to *Doing Business* in what it measures is the set of indicators on product market regulation compiled by the Organisation for Economic Co-operation and Development (OECD). These are designed to help assess the extent to which the regulatory environment promotes or inhibits competition. They include measures of the extent of price controls, the licensing and permit system, the degree of simplification of rules and procedures, the administrative burdens and legal and regulatory barriers, the prevalence of discriminatory procedures and the degree of government control over business enterprises.[13] These indicators—for the 39 countries that are covered, several of them large emerging markets—are correlated with the *Doing Business* rankings (the correlation here is 0.53) (figure 2.3).

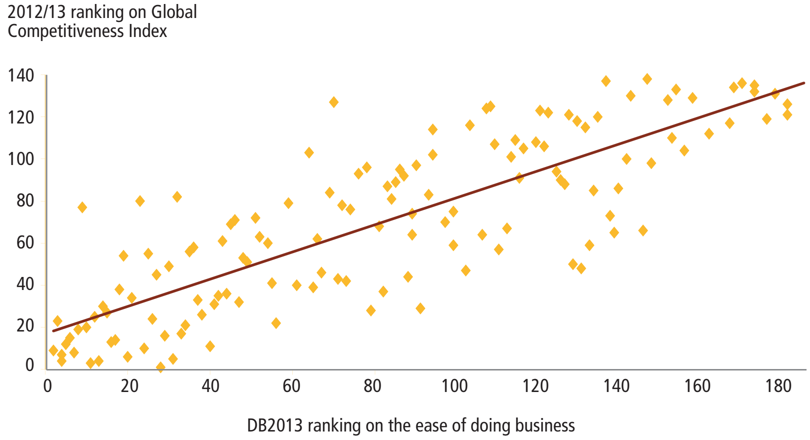
There is a high correlation (0.83) between the *Doing Business* rankings and the rankings on the World Economic Forum's Global Competitiveness Index, a much broader measure capturing such factors as macroeconomic stability, aspects of human capital, the soundness of public institutions and the sophistication of the business community (figure 2.4).[14] Self-reported experiences with business regulations, such as those captured by the

FIGURE 2.3 A significant correlation between *Doing Business* rankings and OECD rankings on product market regulation



Note: Relationships are significant at the 5% level after controlling for income per capita.
Source: Doing Business database; OECD data.

FIGURE 2.4 A strong correlation between *Doing Business* rankings and World Economic Forum rankings on global competitiveness



Note: Relationships are significant at the 5% level after controlling for income per capita.
Source: Doing Business database; WEF 2012.

Global Competitiveness Index, often vary much more within economies (across respondents in the same economy) than across economies.[15] A high correlation such as this one can therefore coexist with significant differences within economies.

DOING BUSINESS AS A BENCHMARKING EXERCISE

By capturing key dimensions of regulatory regimes, *Doing Business* provides a rich opportunity for benchmarking. Such a benchmarking exercise is necessarily incomplete, just as the *Doing Business* data are limited in scope. It is useful when it aids judgment, but not when it supplants judgment.

Since 2006 *Doing Business* has sought to provide 2 perspectives on the data it collects: it presents “absolute” indicators for each economy for each of the 11 regulatory topics it addresses, and it provides rankings of economies for 10 topics, by topic and also in the aggregate. Judgment is required in interpreting these measures for any economy and in determining a sensible and politically feasible path for regulatory reform.

Reviewing the *Doing Business* rankings in isolation may reveal unexpected results. Some economies may rank unexpectedly high on some topics. And some economies that have had rapid growth or attracted a great deal of investment may rank lower than others that appear to be less dynamic.

As economies develop, they may add to or improve on regulations that protect investor and property rights. Many also tend to streamline existing regulations and prune outdated ones. One finding of *Doing Business* is that dynamic and growing economies continually reform and update their business regulations and the implementation of those regulations, while many poor economies still work with regulatory systems dating to the late 1800s.

For reform-minded governments, how much the regulatory environment for local entrepreneurs improves in an absolute sense matters far more than their economy’s ranking relative to other economies. To aid in assessing the absolute level of regulatory performance and how it improves over time, this year’s report again presents the distance to frontier measure. This measure shows the distance of each economy to the “frontier,” which represents the highest performance observed on each of the indicators across all economies included in *Doing Business* since 2003.

At any point in time the distance to frontier measure shows how far an economy is from the highest performance. And comparing an economy’s score at 2 points in time allows users to assess the absolute change over time in the economy’s regulatory environment as measured by *Doing Business*, rather than simply the change in the economy’s performance relative to others. In this way the distance to frontier measure complements the yearly ease of doing business ranking, which compares economies with one another at a point in time.

Each topic covered by *Doing Business* relates to a different aspect of the business regulatory environment. The rankings of each economy vary, sometimes significantly, across topics. A quick way to assess the variability of an economy’s regulatory performance across the different areas of business regulation is to look at the topic rankings (see the country tables). Guatemala, for example, stands at 93 in the overall ease of doing business ranking. Its ranking is 12 on the ease of getting credit, 20 on the ease of registering property and 34 on the ease of getting electricity. At the same time, it has a ranking of 124 on the ease of paying taxes, 158 on the strength of investor protections and 172 on the ease of starting a business (see figure 1.2 in the executive summary).

WHAT 10 YEARS OF DATA SHOW

A growing body of empirical research shows that particular areas of business regulation, and particular regulatory reforms in those areas, are associated with vital social and economic outcomes—including firm creation, employment, formality, international trade, access to financial services and the survival of struggling but viable firms.[16] This research has been made possible by a decade of *Doing Business* data combined with other data sets. Some 1,245 research articles published in peer-reviewed academic journals, and about 4,071 working papers available through Google Scholar, refer to the *Doing Business* data.[17]

Determining the empirical impact of regulatory reforms is not easy. One possible approach is cross-country correlation analysis. But with this method it is difficult to isolate the effect of a particular regulatory reform because of all the other factors that may vary across economies and that may not have been taken into account in the analysis. How then do researchers determine whether social or economic outcomes would have been different without a specific regulatory reform? A growing number of studies have been able to investigate such questions by analyzing regulatory changes within a country over time or by using panel estimations. Others have focused on regulatory reforms relevant only for particular firms or industries within a country. The broader literature, using a range of different empirical strategies, has produced a number of interesting findings, including those described below.

Smarter business regulation promotes economic growth. Economies with better business regulation grow faster. One study found that for economies in the best quartile of business regulation as measured by *Doing Business*, the difference in business regulation with those in the worst quartile is associated with a 2.3 percentage point increase in annual growth rates.[18] Another found that regulatory reforms making it easier to do business in relatively low-income economies are associated with an increase in growth rates of 0.4 percentage point in the following year.[19]

Simpler business registration promotes greater entrepreneurship and firm productivity. Economies that have efficient business registration also tend to have a higher entry rate by new firms and greater business density.[20] Faster business registration is associated with more businesses registering in industries with the strongest potential for growth, such as those experiencing expansionary global demand or technology shifts.[21] And easier start-up is associated with more investment in industries often sheltered from competition, including transport, utilities and communications.[22] Empirical evidence also suggests that more efficient business entry regulations improve firm productivity and macroeconomic performance.[23]

Lower costs for business registration improve formal employment opportunities. Because new firms are often set up by high-skilled workers, lowering entry costs often leads to higher take-up rates for education, more jobs for high-skilled workers and higher average productivity.[24] And by increasing formal registration, it can also boost legal certainty—because the newly formal firms are now covered by the legal system, benefiting themselves as well as their customers and suppliers.[25]

Country-specific studies confirm that simplifying entry regulations can promote the establishment of new formal sector firms:

- In Colombia the introduction of one-stop shops for business registration in different cities across the country was followed by a 5.2% increase in new firm registrations.[26]
- In Mexico a study analyzing the effects of a program simplifying municipal licensing found that it led to a 5% increase in the number of registered businesses and a 2.2% increase in employment. Moreover, competition from new entrants lowered prices by 0.6% and the income of incumbent businesses by 3.2%.[27] A second study found that the program was more effective in municipalities with less corruption and cheaper additional registration procedures.[28] Yet another found that simpler licensing may result in both more wage workers and more formal enterprises, depending on the personal characteristics of informal business owners: those with characteristics similar to wage workers were more likely to become wage workers, while those with characteristics similar to entrepreneurs in the formal sector were more likely to become formal business owners.[29]
- In India a study found that the progressive elimination of the "license raj"—the system regulating entry and production in industry—led to a 6% increase in new firm registrations.[30] Another study found that simpler entry regulation and labor market flexibility were complementary: in Indian states with more flexible employment regulations informal firms decreased by 25% more, and real output grew by 18% more, than in states with less flexible regulations.[31] A third study found that the licensing reform resulted in an aggregate productivity increase of 22% among the firms affected.[32]
- In Portugal the introduction of a one-stop shop for businesses led to a 17% increase in new firm registrations. The reform favored mostly small-scale entrepreneurs with low levels of education operating in low-tech sectors such as agriculture, construction and retail.[33]

An effective regulatory environment improves trade performance. Strengthening the institutional environment for trade—such as by increasing customs efficiency—can boost trade volumes.[34] In Sub-Saharan Africa an inefficient trade environment was found to be among the main factors in poor trade performance.[35] One study found that a 1-day reduction in inland travel times leads to a 7% increase in exports.[36] Another found that among the factors that improve trade performance are access to finance, the quality of infrastructure and the government's ability to formulate and implement sound policies and regulations that promote private sector development.[37] The same study showed that the more constrained economies are in their access to foreign markets, the more they can benefit from improvements in the investment climate. Yet another study found that improvements in transport efficiency and the business environment have a greater marginal effect on exports in lower-income economies than in high-income ones.[38] One study even suggests that behind-the-border measures to improve logistics performance and facilitate trade may have a larger effect on trade, especially on exports, than tariff reduction would.[39]

Other areas of regulation matter for trade performance. Economies with good contract enforcement tend to produce and export more customized products than those with poor contract enforcement.[40] Since production of high-quality output is a precondition for firms to become exporters, reforms that lower the cost of high-quality production increase the positive effect of trade reforms.[41] Moreover, reforms removing barriers to trade need to be accompanied by other reforms, such as those making labor markets more flexible, to increase productivity and growth.[42]

Sound financial market infrastructure—including courts, creditor and insolvency laws, and credit and collateral registries—improves access to credit. Businesses worldwide identify access to credit as one of the main obstacles they face.[43] Good credit information systems and strong collateral laws help overcome this obstacle. An analysis of reforms improving collateral law in 12 transition economies concludes that they had a positive effect on the volume of bank lending.[44] Greater information sharing through credit bureaus is associated with higher bank profitability and lower bank risk. And stronger creditor rights and the existence of public or private credit registries are associated with a higher ratio of private credit to GDP.[45]

Country-specific studies confirm that efficient debt recovery and exit processes are key in determining credit conditions and in ensuring that less productive firms are either restructured or exit the market:

- In India the establishment of specialized debt recovery tribunals had a range of positive effects, including speeding up the resolution of debt recovery claims, allowing lenders to seize more collateral on defaulting loans, increasing the probability of repayment by 28% and reducing interest rates on loans by 1–2 percentage points.[46]
- Brazil's extensive bankruptcy reform in 2005 was associated with a 22% reduction in the cost of debt and a 39% increase in the aggregate level of credit.[47]
- Introducing streamlined mechanisms for reorganization has been shown to reduce the number of liquidations because it encourages more viable firms to opt for reorganization. Indeed, it reduced the number of liquidations by 14% in Colombia and by 8.4% in Belgium.[48] One important feature of Colombia's new system is that it better distinguishes between viable and nonviable firms, making it more likely that financially distressed but fundamentally viable firms will survive.
- Improving investor protections, developing financial markets and promoting more active markets for corporate control reduce the persistence of family-controlled firms over time, expanding opportunity for firms with more diversified capital structures.[49]

HOW GOVERNMENTS USE *DOING BUSINESS*

Doing Business offers policy makers a benchmarking tool useful in stimulating policy debate, both by exposing potential challenges and by identifying good practices and lessons learned. The initial debate on the results highlighted by the data typically turns into a deeper discussion on the relevance of the data to the economy and on areas where business regulation reform is needed, including areas well beyond those measured by *Doing Business*.

Reform-minded governments seeking success stories in business regulation refer to *Doing Business* for examples (box 2.2). Saudi Arabia, for example, used the company law of France as a model for revising its own law. Many African governments look to Mauritius—the region's strongest performer on *Doing Business* indicators—as a source of good practices to inspire regulatory reforms in their own countries. Governments shared knowledge of business regulations before the *Doing Business* project began. But *Doing Business* made it easier by creating a common language comparing business regulations around the world.

Over the past 10 years governments worldwide have been actively improving the regulatory environment for domestic companies. Most reforms relating to *Doing Business* topics have been nested in broader reform programs aimed at enhancing economic competitiveness, as in Colombia, Kenya and Liberia. In structuring reform programs for the business environment, governments use multiple data sources and indicators. This recognizes the reality that the *Doing Business* data on their own provide an incomplete roadmap for successful business regulation reforms.[50] It also reflects the need to respond to many stakeholders and interest groups, all of whom bring important issues and concerns to the reform debate.

When the World Bank Group engages with governments on the subject of improving the investment climate, the dialogue aims to encourage the critical use of the *Doing Business* data—to sharpen judgment and promote broad-based reforms that enhance the investment climate rather than a narrow focus on improving the *Doing Business* rankings. The World Bank Group uses a vast range of indicators and analytics in this policy dialogue, including its Global Poverty Monitoring Indicators, World Development Indicators, Logistics Performance Indicators and many others. The open data initiative has made data for many such indicators conveniently available to the public at http://data.worldbank.org.

METHODOLOGY AND DATA

The *Doing Business* data are based on domestic laws and regulations as well as administrative requirements. The data cover 185 economies—including small economies and some of the poorest economies, for which little or no data are available in other data sets. (For a detailed explanation of the *Doing Business* methodology, see the data notes.)

BOX 2.2 HOW ECONOMIES HAVE USED *DOING BUSINESS* IN REGULATORY REFORM PROGRAMS

To ensure the coordination of efforts across agencies, such economies as Brunei Darussalam, Colombia and Rwanda have formed regulatory reform committees, reporting directly to the president. These committees use the *Doing Business* indicators as one input to inform their programs for improving the business environment. More than 35 other economies have formed such committees at the interministerial level. In East and South Asia they include India; Korea; Malaysia; the Philippines; Taiwan, China; and Vietnam. In the Middle East and North Africa: Morocco, Saudi Arabia and the United Arab Emirates. In Eastern Europe and Central Asia: Georgia, Kazakhstan, Kosovo, the Kyrgyz Republic, the former Yugoslav Republic of Macedonia, Moldova, Montenegro and Tajikistan. In Sub-Saharan Africa: Botswana, Burundi, the Central African Republic, the Comoros, the Democratic Republic of Congo, the Republic of Congo, Côte d'Ivoire, Kenya, Liberia, Malawi, Mali, Nigeria, Sierra Leone, Togo and Zambia. And in Latin America: Chile, the Dominican Republic, Guatemala, Mexico, Panama and Peru. Since 2003 governments have reported more than 350 regulatory reforms that have been informed by *Doing Business*.[1]

Many economies share knowledge on the regulatory reform process related to the areas measured in *Doing Business*. Among the most common venues for this knowledge sharing are peer-to-peer learning events—workshops where officials from different governments across a region or even across the globe meet to discuss the challenges of regulatory reform and share their experiences. In recent years such events have taken place in Colombia (for Latin America and the Caribbean), in Rwanda (for Sub-Saharan Africa), in Georgia (for Eastern Europe and Central Asia), in Malaysia (for East Asia and the Pacific) and in Morocco (for the Middle East and North Africa). In addition, regional organizations such as APEC, featured in a case study in this year's report, use the *Doing Business* data as a tool and common language to set an agenda for business regulation reform.

1. These are reforms for which *Doing Business* is aware that information provided by the *Doing Business* report was used in shaping the reform agenda.

Doing Business respondents

Over the past 10 years more than 18,000 professionals in 185 economies have assisted in providing the data that inform the *Doing Business* indicators. This year's report draws on the inputs of more than 9,600 professionals.[51] Table 20.2 in the data notes lists the number of respondents for each indicator set. The *Doing Business* website shows the number of respondents for each economy and each indicator. Respondents are professionals who routinely administer or advise on the legal and regulatory requirements covered in each *Doing Business* topic. They are selected on the basis of their expertise in the specific areas covered by *Doing Business*. Because of the focus on legal and regulatory arrangements, most of the respondents are legal professionals such as lawyers, judges or notaries. The credit information survey is answered by officials of the credit registry or bureau. Freight forwarders, accountants, architects, engineers and other professionals answer the surveys related to trading across borders, taxes and construction permits. Certain public officials (such as registrars from the commercial or property registry) also provide information that is incorporated into the indicators.

Information sources for the data

Most of the *Doing Business* indicators are based on laws and regulations. In addition, most of the cost indicators are backed by official fee schedules. *Doing Business* respondents both fill out written questionnaires and provide references to the relevant laws, regulations and fee schedules, aiding data checking and quality assurance. Having representative samples of respondents is not an issue, as the texts of the relevant laws and regulations are collected and answers checked for accuracy.

For some indicators—for example, those on dealing with construction permits, enforcing contracts and resolving insolvency—the time component and part of the cost component (where fee schedules are lacking) are based on actual practice rather than the law on the books. This introduces a degree of judgment. The *Doing Business* approach has therefore been to work with legal practitioners or professionals who regularly undertake the transactions involved. Following the standard methodological approach for time-and-motion studies, *Doing Business* breaks down each process or transaction, such as starting a business or registering a building, into separate steps to ensure a better estimate of time. The time estimate for each step is given by practitioners with significant and routine experience in the transaction. When time estimates differ, further interactions with respondents are pursued to converge on one estimate that reflects the majority of applicable cases.

The *Doing Business* approach to data collection contrasts with that of firm surveys, which capture perceptions and experiences of businesses. A corporate lawyer registering 100–150 businesses a year will be more familiar with the process than an entrepreneur, who will register a business only once or maybe twice. A bankruptcy attorney or judge dealing with dozens of cases a year will have more insight into bankruptcy than a company that may undergo the process once.

Development of the methodology

The methodology for calculating each indicator is transparent, objective and easily replicable. Leading academics collaborate in the development of the indicators, ensuring academic rigor. Eight of the background papers underlying the indicators have been published in leading economic journals.[52]

Doing Business uses a simple averaging approach for weighting component indicators and calculating rankings and the distance to frontier measure. Other approaches were explored, including using principal components and unobserved components.[53] They turn out to yield results nearly identical to those of simple averaging. In the absence of a strong theoretical framework that assigns different weights to the topics covered for the 185 economies by *Doing Business*, the simplest method is used: weighting all topics equally and, within each topic, giving equal weight to each of the topic components (for more details, see the chapter on the ease of doing business and distance to frontier).[54]

Improvements to the methodology

The methodology has undergone continual improvement over the years. For enforcing contracts, for example, the amount of the disputed claim in the case study was increased from 50% of income per capita to 200% after the first year of data collection, as it became clear that smaller claims were unlikely to go to court.

Another change related to starting a business. The minimum capital requirement can be an obstacle for potential entrepreneurs. *Doing Business* measured the required minimum capital regardless of whether it had to be paid up front or not. In many economies only part of the minimum capital has to be paid up front. To reflect the relevant barrier to entry, the paid-in minimum capital has been used rather than the required minimum capital.

This year's report includes an update in the ranking methodology for paying taxes. Last year's report introduced a threshold for the total tax rate for the purpose of calculating the ranking on the ease of paying taxes. This change came as a result of consultations on the survey instrument and methodology for the paying taxes indicators with external stakeholders, including participants in the International Tax Dialogue. All economies with a total tax rate below the threshold (which is calculated and adjusted on a yearly basis) now receive the same ranking on the total tax rate indicator. This year's threshold is set at the 15th percentile of the total tax rate distribution, which translates into a threshold for the total tax rate of 25.7%.

Data adjustments

All changes in methodology are explained in the data notes as well as on the *Doing Business* website. In addition, data time series for each indicator and economy are available on the website, beginning with the first year the indicator or economy was included in the report. To provide a comparable time series for research, the data set is back-calculated to adjust for changes in methodology and any revisions in data due to corrections. The data set is not back-calculated for year-to-year revisions in income per capita data (that is, when the income per capita data are revised by the original data sources, *Doing Business* does not update the cost measures for previous years). The website also makes available all original data sets used for background papers.

Information on data corrections is provided in the data notes and on the website. A transparent complaint procedure allows anyone to challenge the data. If errors are confirmed after a data verification process, they are expeditiously corrected.

NOTES

1. World Bank 2005; Stampini and others 2011.
2. See, for example, Alesina and others (2005); Perotti and Volpin (2005); Fisman and Sarria-Allende (2010); Antunes and Cavalcanti (2007); Barseghyan (2008); Klapper, Lewin and Quesada Delgado (2009); Freund and Bolaky (2008); Chang, Kaltani and Loayza (2009); Helpman, Melitz and Rubinstein (2008); Klapper, Laeven and Rajan (2006); World Bank (2005); and Ardagna and Lusardi (2010).
3. This includes Djankov and others (2002); Djankov, McLiesh and Shleifer (2007); Djankov, La Porta and others (2008); Djankov, Freund and Pham (2010); Djankov and others (2003); Djankov, Hart and others (2008); Botero and others (2004); and Djankov and others (2010).
4. For more details on how the aggregate ranking is created, see the chapter on the ease of doing business and distance to frontier.
5. This has included a review by the World Bank Independent Evaluation Group (2008), input from the International Tax Dialogue and regular input from the Indicators Advisory Group.
6. http://www.doingbusiness.org.
7. Local experts in 185 economies are surveyed annually to collect and update the data. The local experts for each economy are listed on the *Doing Business* website (http://www.doingbusiness.org) and in the acknowledgments at the end of this report.
8. De Soto 2000.
9. Schneider 2005; La Porta and Shleifer 2008.
10. Amin 2011.
11. http://www.enterprisesurveys.org.
12. Narayan and others 2000.
13. OECD, "Indicators of Product Market Regulation," http://www.oecd.org/. The measures are aggregated into 3 broad families that capture state control, barriers to entrepreneurship and barriers to international trade and investment. The 39 countries included in the OECD market regulation indicators are Australia, Austria, Belgium, Brazil, Canada, Chile, China, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Russia, the Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.
14. The World Economic Forum's *Global Competitiveness Report* uses *Doing Business* data sets on starting a business, employing workers, protecting investors and getting credit (legal rights), representing 7 of a total of 113 different indicators (or 6.19%).
15. Hallward-Driemeier, Khun-Jush and Pritchett (2010), analyzing data from World Bank Enterprise Surveys for Sub-Saharan Africa, show that de jure measures such as *Doing Business* indicators are virtually uncorrelated with ex post firm-level responses, providing evidence that deals rather than rules prevail in Africa. The authors find that the gap between de jure and de facto conditions grows with the formal regulatory burden. The evidence also shows that more burdensome processes open up more space for making deals and that firms may not incur the official costs of compliance but still pay to avoid them.

16. Much attention has been given to exploring links to microeconomic outcomes, such as firm creation and employment. Recent research focuses on how business regulations affect the behavior of firms by creating incentives (or disincentives) to register and operate formally, to create jobs, to innovate and to increase productivity. For details, see Djankov and others (2002); Alesina and others (2005); Banerjee and Duflo (2005); Perotti and Volpin (2005); Klapper, Laeven and Rajan (2006); Fisman and Sarria-Allende (2010); Antunes and Cavalcanti (2007); Barseghyan (2008); Eifert (2009); Klapper, Lewin and Quesada Delgado (2009); Djankov, Freund and Pham (2010); Klapper and Love (2011a); Chari (2011); and Bruhn (2011).
17. According to searches for citations of the 9 background papers that serve as the basis for the *Doing Business* indicators in the Social Science Citation Index and on Google Scholar (http://scholar.google.com).
18. Djankov, McLiesh and Ramalho 2006.
19. Eifert 2009.
20. Klapper, Lewin and Quesada Delgado 2009. *Entry rate* refers to newly registered firms as a percentage of total registered firms. *Business density* is defined as the total number of businesses as a percentage of the working-age population (ages 18–65).
21. Ciccone and Papaioannou 2007.
22. Alesina and others 2005.
23. Loayza, Oviedo and Servén 2005; Barseghyan 2008.
24. Dulleck, Frijters and Winter-Ebmer 2006; Calderon, Chong and Leon 2007; Micco and Pagés 2006.
25. Masatlioglu and Rigolini 2008; Djankov 2009.
26. Cardenas and Rozo 2009.
27. Bruhn 2011.
28. Kaplan, Piedra and Seira 2007.
29. Bruhn 2012.
30. Aghion and others 2008.
31. Sharma 2009.
32. Chari 2011.
33. Branstetter and others 2010.
34. Djankov, Freund and Pham 2010.
35. Iwanow and Kirkpatrick 2009.
36. Freund and Rocha 2011.
37. Seker 2011.
38. Portugal-Perez and Wilson 2011.
39. Hoekman and Nicita 2011.
40. Nunn 2007.
41. Rauch 2010.
42. Chang, Kaltani and Loayza 2009; Cuñat and Melitz 2007.
43. http://www.enterprisesurveys.org.
44. Haselmann, Pistor and Vig 2010. The countries studied were Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, Slovenia and Ukraine.
45. Djankov, McLiesh and Shleifer 2007; Houston and others 2010.
46. Visaria 2009. In a follow-up study, von Lilienfeld-Toal, Mookherjee and Visaria (2012) found that the average effects identified by Visaria (2009) differ between wealthy and poor borrowers when the credit supply is inelastic (because of limits in such resources as funds, staff and information). In particular, they found that in the short term after the debt recovery tribunals are introduced, borrowers with less collateral may experience a reduction in access to credit while those with more collateral may experience an increase. But the authors also point out that this short-term effect disappears over time as banks are able to increase their resources and the credit supply becomes elastic.
47. Funchal 2008.
48. Giné and Love (2010) on Colombia; Dewaelheyns and Van Hulle (2008) on Belgium.
49. Franks and others 2011.
50. One recent study using *Doing Business* indicators illustrates the difficulties in using highly disaggregated indicators to identify reform priorities (Kraay and Tawara 2011).
51. While about 9,600 contributors provided data for this year's report, many of them completed a survey for more than one *Doing Business* indicator set. Indeed, the total number of surveys completed for this year's report is more than 12,000, which represents a truer measure of the inputs received. The average number of surveys per indicator set and economy is just under 6. For more details, see http://www.doingbusiness.org/contributors/doing-business.
52. All background papers are available on the *Doing Business* website (http://www.doingbusiness.org).
53. For more details, see the chapter on the ease of doing business and distance to frontier.
54. A technical note on the different aggregation and weighting methods is available on the *Doing Business* website (http://www.doingbusiness.org).