Highlights from the *Doing Business* research conference

- *Doing Business* data have inspired and enabled abundant research: 2,024 research articles published in peer-reviewed academic journals since 2003, and 5,098 working papers posted online.
- The World Bank Group convened an international research conference, "*Doing Business*: Past, Present and Future of Business Regulation," in the winter of 2014.
- According to findings of research presented at the conference, business-friendly regulation has a positive association with the entry of new firms, the profits of innovative firms, reductions in unemployment, growth in bank lending, inflows of foreign direct investment and expansions in franchises.
- Striking a balance in the amount of regulation matters. Having some business entry regulation helps define the playing field for firms and reduces the cost of information search for those entering new markets. But too much regulation increases the cost of doing business, dissuading firms from entering markets at all and thus hurting economic development prospects.
- Corruption acts as "sand" and not "grease" in the wheels of policy implementation. Firms confronted with demands for bribes wait about 1.5 times as long to get a construction permit, operating license or electricity connection as firms that did not have to pay bribes.

Data produced by *Doing Business* have inspired and enabled abundant empirical research on critical questions puzzling economists, policy makers and international development professionals. Researchers have used these data to investigate the importance of business-friendly regulation for the creation of new firms, for the productivity and profitability of existing ones and for such key outcomes as growth, employment, investment and informality. Since 2003, when the first *Doing Business* report was published, 2,024 research articles have been published in peer-reviewed academic journals and 5,098 working papers have been posted online.[1]

As a stock-taking exercise, the World Bank Group convened an international research conference, "*Doing Business*: Past, Present and Future of Business Regulation," in the winter of 2014.[2] The conference brought together academics, World Bank Group staff and development professionals from around the world to showcase and discuss the impact of regulatory reform and to offer guidance for the *Doing Business* project in the years to come. Researchers presented 28 papers in the 8 thematic sessions, covering such issues as entry regulation, entrepreneurship, innovation, financial infrastructure, foreign direct investment, trade, labor markets, growth, corruption and transparency in regulation.

This chapter presents the main findings and methodology of selected papers from the conference. All these papers point to important practical implications for policy makers—about how sensible regulation can help stimulate the creation of new firms, help attract investment, facilitate a reduction in unemployment, aid innovative firms and support greater lending to the private sector, and about how bribery and corruption act as "sand" and not "grease" in the wheels of policy implementation (see table 13A.1 at the end of the chapter for a summary).

WHAT MATTERS FOR ENTREPRENEURSHIP?

Several papers look at factors that encourage or discourage entrepreneurship. Klapper, Love and Randall (2014) investigate the relationship between entrepreneurship and economic growth and the effect of the 2008–09 global financial crisis on new firm registration. The authors explore the change in new firm registrations in 109 countries over the period 2002–12, which includes precrisis, crisis and recovery periods related to the global financial crisis as well as myriad other economic fluctuations at the region and country level. They find strongly procyclical results: country-specific GDP growth is associated with higher new firm registrations, even after the global macroeconomic shocks are controlled for. Moreover, they find that growth has a stronger association with entrepreneurship in economies with a higher level of financial development and a better business regulatory environment (as measured by the *Doing Business* indicators).

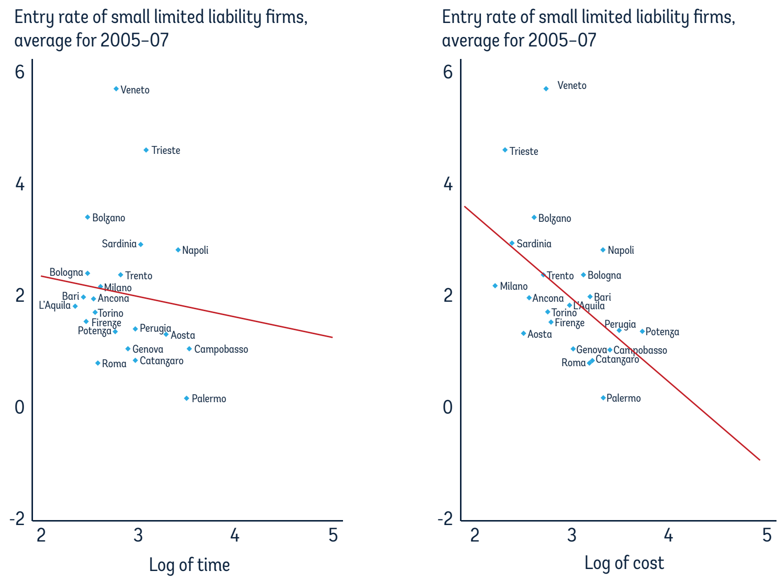
One important policy implication of their findings is that fostering an efficient regulatory environment for the financial and private sector can contribute to economic growth by aiding the efficient exit of insolvent firms during economic slowdowns and encouraging a speedier recovery in the formation of new firms during economic expansions.

A growing body of empirical evidence based on cross-country variations shows that excessive regulation or burdensome legal procedures for starting a company can deter the entry of new firms and thus affect economic performance. But less is known about the effects on economic performance when the regulatory burden or entry regulation varies within countries—and as subnational *Doing Business* reports have shown, there is evidence of great variation in the regulatory burden within some countries.

While most research in this area focuses on developing or emerging economies, Bripi (2013) focuses on Italy, analyzing how differences among provinces in the local regulatory burden affect firm creation. Italy is a particularly interesting case because it has great heterogeneity in entrepreneurship and economic performance, with marked differences between the more developed regions of the Center and North and the less developed ones of the South.

The author analyzes differences in bureaucratic burdens across Italian provinces before a major reform (single notice) that reduced the number of procedures and the time for starting a business. In the period examined there was a negative correlation between the time and cost of procedures and the entry rate of small limited liability firms (figure 13.1). After controlling for the effect of additional variables,

FIGURE 13.1 Bureaucratic time delays and costs are associated with lower entry by small limited liability firms across Italian provinces



Note: Entry rate is the ratio of the number of newly registered small limited liability firms to the total number of limited liability firms.
Source: Bripi 2013.

including measures of local financial development and efficiency of bankruptcy procedures, the author finds that bureaucratic time delays (and, to a lesser extent, costs) due to inefficient regulatory procedures reduced the entry rate in industries that should have "naturally" high entry rates relative to low-entry sectors. The estimates show robust evidence of the negative effect of time delays on the entry rate of small limited liability firms. The relationship between cost and the entry rate is also statistically significant, though it depends on the specification used. For example, the effect of cost is significant only in less developed provinces, in those with a higher level of corruption and in the service sectors (not in manufacturing).

Overall, the results confirm the view that the regulatory burden on new start-ups matters for business creation. In particular, they provide evidence that the administrative burden in the years just before the reform was a significant obstacle to entrepreneurship (and ultimately economic performance) in the heavily regulated provinces of the South relative to the more lightly regulated ones of the Center and North of Italy.

Audretsch, Belitski and Desai (2014) investigate how the overall business environment affects urban entrepreneurship. They look at a few dimensions of the business environment (such as those measured by the *Doing Business* indicators on starting a business, registering property, paying taxes, enforcing contracts and trading across borders) and types of regulatory reform (those affecting measures of time, cost and procedures)—and examine the links between these aspects and 2 measures of entrepreneurship, new business creation and self-employment.

The authors find that the national business environment is associated with both measures of entrepreneurship and that the type of regulatory reform can affect entrepreneurship outcomes. In particular, they find evidence that specific regulatory dimensions (such as contract enforcement) as well as particular types of regulatory reform within each dimension (such as those affecting cost measures) are associated with the rate of self-employment and new business creation.

Audretsch, Belitski and Desai find evidence that different dimensions and pillars (time, cost, number of procedures) of the business environment could have different effects on entrepreneurship. They also find that in some cases their 2 measures of entrepreneurship (new business creation and self-employment) are affected differently by the same regulatory dimension or same type of regulatory reform.

CAN REGULATION ATTRACT INVESTMENT?

Jovanovic and Jovanovic (2014) analyze whether business regulation—as measured by *Doing Business* indicators—affects inflows of foreign direct investment in 28 Eastern European and Central Asian countries. They find that greater regulatory efficiency as measured by *Doing Business* indicators has a positive association with foreign direct investment inflows from OECD countries. For example, a country in which 9 documents are required to export is likely to have investment inflows around 37% lower than those in a country in which 7 such documents are required. This effect seems strong, so it may also include the effects of other barriers to trade, such as the cost or time to export, both of which are highly correlated with the number of documents required to export (with a correlation coefficient of around 0.75). The authors also find that a reduction in the cost of starting a business is positively associated with an increase in foreign direct investment inflows.

Eight of the 9 sets of *Doing Business* indicators included in the analysis appear to have a statistically significant relationship with foreign direct investment inflows (starting a business, dealing with construction permits, registering property, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency); none of the getting credit indicators do. The indicators measuring cost appear to be more important than those measuring time and number of procedures. The authors therefore conclude that governments may be able to attract foreign direct investment by creating a more efficient and more business-friendly regulatory environment.

Hoffman, Munemo and Watson (2014) look at how different aspects of the business climate affect the location decisions of U.S. franchise companies. They find that a stable system of governance, citizen participation and good-quality public services all increase the chances of franchise location in a country. Of particular interest are the findings on business entry regulation. Having some regulation helps define the playing field for firms and reduces the cost of information search for those entering new markets. But too much regulation increases the cost of doing business, dissuading firms from entering markets at all and thus hurting economic development prospects. Excessive taxation also discourages the entry of franchisors into a country. The findings suggest a diminishing return from regulation after a certain point.

INNOVATION AND THE CONSTRAINTS OF RED TAPE

Innovation is a key source of economic growth, so understanding the dynamics of innovative firms is important. Using firm-level panel data from emerging economies, Yang (2014) examines the relationship between the business climate and profitability for innovative and noninnovative firms. The author finds that in business climates where nonregulatory elements (such as infrastructure or levels of crime) are poor, innovative firms have higher profits than noninnovative firms. But in business climates where regulatory or governance-related elements (such as corruption or the time and cost to start a business) are poor, innovative firms have lower profits.

Innovative firms tend to have more-educated managers, better technologies and better access to finance, which may explain their greater ability to cope in poor business climates. But they may also suffer more from red tape. Innovative firms may experience greater friction as they attempt to expand or to enter new markets—because creating new products requires interactions with government officials to apply for licenses or permits, where firms can encounter bureaucratic delays or requests for bribes.

HOW DEBT ENFORCEMENT CAN BOOST LENDING

Legal protections of creditors' rights are critical to support bank lending to the private sector. Judicial efficiency and substantive law defining creditors' rights have been shown to be positively correlated with bank lending. But in India bank lending to the private sector has more than doubled in the past 2 decades despite few improvements in judicial efficiency and substantive law. What explains the expansion in bank lending over this period? Rathinam (2014) looks at the short- and long-term effect of the introduction of debt recovery tribunals, a procedural law innovation that reduced the transaction cost of availing the law. These quasi-judicial bodies bypass the overburdened civil courts in adjudicating financial disputes involving banks. Debt recovery tribunals were introduced in a staggered way across Indian states, allowing comparison of lending by banks with and without access to the tribunals.

Rathinam finds that the introduction of debt recovery tribunals changed the perception of lenders in the short run: banks with access to tribunals loaned more than those without access. In the long run the debt recovery tribunals have had an effect on lending, even after both bank- and state-specific fixed effects are controlled for. This finding confirms the argument that good substantive law, if effectively enforced, enhances investors' and creditors' confidence in the system, which results in a larger volume of credit and ultimately greater economic growth. While confirming the causal link from law to finance, the author also points to the role of procedural law in enhancing adjudication and thus the availability of credit to the private sector.

CAN REGULATION HELP REDUCE UNEMPLOYMENT?

Freund and Rijkers (forthcoming) investigate the factors that lead to swift, substantial and sustained reductions in unemployment. The authors examine the incidence and determinants of episodes of drastic reductions in the unemployment rate—reductions of at least 3.25 percentage points of the initial level that persist for a minimum of 3 years. They identify 43 such episodes over a period of nearly 3 decades in 94 high-income, middle-income and transition economies.

Unemployment reduction episodes often coincide with an acceleration of growth and an improvement in macroeconomic conditions. Such episodes are much more prevalent in countries with higher levels of unemployment and, given unemployment, are more likely in those with better regulation. An efficient legal system that enforces contracts expeditiously is particularly important for reducing unemployment. The authors' findings suggest that while employment is largely related to the business cycle, better regulation can reduce the likelihood of high unemployment and promote a more rapid recovery if unemployment builds up. They also underscore the importance of effective contract enforcement and secure property rights in enabling growth in employment.

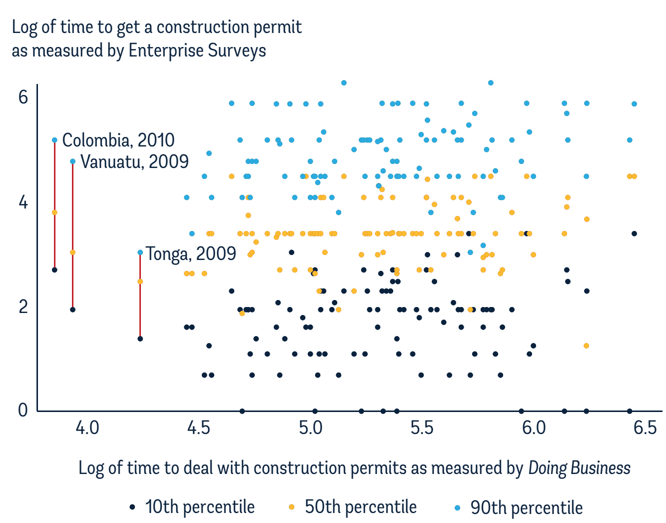
CORRUPTION—SAND OR GREASE?

Freund, Hallward-Driemeier and Rijkers (2014) investigate whether corruption accelerates policy implementation. The authors start by documenting striking differences between the time it takes to complete regulatory procedures in practice and the time it takes when complying with the law. These are shown in figure 13.2, which plots the 10th percentile, median and 90th percentile de facto log times to get a construction permit in a given country and year as reported by entrepreneurs in the World Bank Enterprise Surveys against the time it should take to complete all the formalities to build a warehouse according to the *Doing Business* indicators. The authors link this heterogeneity to the incidence of demands for bribes.

The authors examine the relationship between requests for bribes and the time it takes to complete various regulatory requirements—getting a construction permit, obtaining an operating license, obtaining an electricity connection and clearing customs. They test 3 predictions implied by the "grease the wheels" hypothesis, which contends that bribes act as speed money: that all else being equal, firms confronted with requests for bribes should get things done faster; that firms with a higher opportunity cost of waiting are willing to pay more and consequently face shorter wait times; and that bribing is more beneficial where regulation is onerous.

The data are inconsistent with all 3 predictions. In the authors' preferred specifications, all else being equal, firms confronted with demands for bribes wait about 1.5 times as long to get a construction permit, operating license

FIGURE 13.2 A striking difference between the time it takes for construction permitting in practice and the time it takes when complying with the law



Note: The sample comprises 106 countries. Data are for the most recent year available.
Source: Freund, Hallward-Driemeier and Rijkers 2014.

or electricity connection as firms that did not have to pay bribes—and they wait 1.2 times as long to clear customs when exporting and 1.4 times as long when importing. The results are robust to controlling for firm fixed effects and at odds with the notion that corruption enhances efficiency.

CONCLUSION

The research papers reviewed in this chapter show that business-friendly regulation is integral to economic growth and development.[3] Where regulation is streamlined and judicious, it unleashes innovation, promotes the creation of jobs and helps attract foreign direct investment.

But while these papers answer many questions, they also pose many new ones. For example, Hoffman, Munemo and Watson (2014) suggest that an important area for future research is to find out what the right amount of regulation is for business entry. And the pioneering study by Audretsch, Belitski and Desai (2014) invites follow-up research on the impact of multiple dimensions of the national business environment on firms in different cities. The expansion of the global *Doing Business* sample to the second largest business city in 11 large economies, along with the data published by the subnational *Doing Business* reports, will enable further research to explore the effects of business regulations across different cities within a country—and to better understand the reasons for differences in outcomes.

NOTES

1. Based on searches for citations of the 8 background papers that form the basis for the *Doing Business* indicators in the Social Science Citation Index and Google Scholar (http://scholar.google.com).
2. The conference took place at Georgetown University's McDonough School of Business in Washington, DC. It was cosponsored by the U.S. Agency for International Development and the Kauffman Foundation. More information is available at http://www.doingbusiness.org/special-features/conference.
3. For a comprehensive review of the literature on the effects of business regulation, see *Doing Business 2014*.

TABLE 13A.1 Summary of the main findings and methodology of selected papers from the *Doing Business* research conference

Theme	Main findings	Methodology overview	Data sources
Entrepreneurship	*Klapper, Love and Randall (2014)* GDP growth, especially if combined with a higher level of financial development and a better business regulatory environment, is associated with higher new firm registrations.	The initial empirical exercise uses a simple model with entry density as the dependent variable and economic growth (as a proxy for the business cycle) as the main independent variable. The authors then investigate heterogeneity in the relationship between the business cycle and new firm registration.	World Bank, Entrepreneurship Database; World Bank, World Development Indicators database; *Doing Business* database
Entrepreneurship	*Bripi (2013)* Bureaucratic time delays and, to a lesser extent, costs due to inefficient regulatory procedures can reduce the firm entry rate in industries that should have "naturally" high entry rates relative to low-entry sectors.	The analysis focuses on cross-industry and cross-province interaction effects to investigate the impact of regulation on firm entry.	Bank of Italy data set measuring the time and costs of regulation across Italian regions
Entrepreneurship	*Audretsch, Belitski and Desai (2014)* Specific national regulatory dimensions (such as contract enforcement) as well as different types of reform within a dimension (such as those affecting cost) are associated with the rate of new business start-ups and self-employment in European cities.	Panel data random effects regression is used to examine how the business environment affects new business creation and self-employment in a panel of European cities.	Eurostat Urban Audit database, regional and city statistics; *Doing Business* database
Investment	*Jovanovic and Jovanovic (2014)* Greater regulatory efficiency as measured by *Doing Business* indicators has a positive association with foreign direct investment flows from OECD countries to Eastern European and Central Asian countries.	The analysis uses the generalized method of moments technique on data on bilateral foreign direct investment flows from 22 OECD countries to 28 Eastern European and Central Asian countries during 2004–11.	World Bank, World Development Indicators database; Organisation for Economic Co-operation and Development data; International Monetary Fund (IMF), World Economic Outlook and International Financial Statistics databases; International Labour Organization data; *Doing Business* database
Investment	*Hoffman, Munemo and Watson (2014)* Having some business entry regulation helps define the playing field for firms and reduces the cost of information search for those entering new markets. But too much regulation increases the cost of doing business, dissuading firms from entering markets at all.	The analysis tests several hypotheses using a model with franchise expansion (the number of units planned for a country in the future divided by its urban population) as the dependent variable and several independent variables, including the *Doing Business* distance to frontier measure, entry regulation (measured by the cost of business start-up procedures as a percentage of GNI per capita) and the national corporate tax rate (measured as a percentage of profits). Additional explanatory variables include economic development (measured by real GDP per capita), measures of media infrastructure and of governance, and a dummy variable estimating the impact of the 2008–09 financial crisis on franchise expansion.	Press announcements by U.S. franchise companies on expansion plans or moves made into specific international markets during 2005–11 (to develop the sample); *Doing Business* database; World Bank, World Development Indicators database; Worldwide Governance Indicators
Innovation	*Yang (2014)* The profits of innovative firms are lower in business climates where regulatory or governance-related factors (such as corruption or the time and cost to start a business) are poor.	The analysis exploits the panel structure of the data. A first-difference regression is estimated. A number of control variables are used, and further robustness checks are applied.	World Bank Enterprise Surveys; *Doing Business* database; World Bank data catalog
Debt enforcement	*Rathinam (2014)* In India the introduction of debt recovery tribunals—a procedural law innovation that bypasses the overburdened civil courts in adjudicating financial disputes involving banks—explains increased bank lending.	The analysis uses a differences-in-differences model and data on lending by commercial banks in India (including advances to the commercial sector and total secured loans extended) for the years before and after the introduction of debt recovery tribunals (1993 and 1995).	Centre for Monitoring Indian Economy, PROWESS database; Reserve Bank of India, annual accounts data on scheduled commercial banks

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Theme	Main findings	Methodology overview	Data sources
Unemployment	*Freund and Rijkers (forthcoming)* Episodes of drastic reductions in the unemployment rate are much more prevalent in countries with higher levels of unemployment and, given unemployment, are more likely in those with better regulation.	The authors use an event-studies approach to examine how countries achieved episodes of drastic reductions in the unemployment rate over the period 1980–2008. They examine the determinants of such episodes by estimating a probit model, with the potential for an unemployment reduction episode as the dependent variable. After performing several robustness checks, they use Bayesian model averaging to investigate which aspects of regulation matter most.	World Bank, World Development Indicators database; IMF data; Worldwide Governance Indicators; Heritage Foundation's *Index of Economic Freedom; Doing Business* database
Corruption and transparency	*Freund, Hallward-Driemeier and Rijkers (2014)* Firms confronted with demands for bribes wait about 1.5 times as long to get a construction permit, operating license or electricity connection as firms that did not have to pay bribes—and they wait 1.2 times as long to clear customs when exporting and 1.4 times as long when importing.	The analysis tests 3 related hypotheses (whether bribe requests and the time to complete regulatory processes are positively correlated; and whether "greasing the wheels" is more evident for firms with the highest opportunity cost of waiting or in countries where regulations are most burdensome) by modeling the log of policy implementation time (the time it takes to export, import, get a construction permit or obtain an operating license) as a function of firm characteristics. A dummy variable indicating whether a bribe was solicited or expected is added. Results are robust to controlling for firm fixed effects and comparing within-firm heterogeneity in wait times for different government services.	World Bank Enterprise Surveys; *Doing Business* database