Data notes

The indicators presented and analyzed in *Doing Business* measure business regulation and the protection of property rights—and their effect on businesses, especially small and medium-size domestic firms. First, the indicators document the degree of regulation, such as the number of procedures to start a business or register commercial property. Second, they gauge regulatory outcomes, such as the time and cost to enforce a contract, go through bankruptcy or trade across borders. Third, they measure the extent of legal protections of property, for example, the protections of investors against looting by company directors or the scope of assets that can be used as collateral according to secured transactions laws. Fourth, they measure the flexibility of employment regulation. Finally, a set of indicators documents the tax burden on businesses. The data for all sets of indicators in *Doing Business 2007* are for April 2006.

The *Doing Business* data are collected in a standardized way. To start, the *Doing Business* team, with academic advisers, designs a survey. The survey uses a simple business case to ensure comparability across countries and over time—with assumptions about the legal form of the business, its size, its location and the nature of its operations. Surveys are administered through more than 5,000 local experts, including lawyers, business consultants, accountants, government officials and other professionals routinely administering or advising on legal and regulatory requirements. These experts have several (typically 4) rounds of interaction with the *Doing Business* team, involving conference calls, written correspondence and country visits. For *Doing Business 2007* team members visited 65 countries to verify data and expand the pool of respondents. The data from surveys are subjected to numerous tests for robustness, which lead to revisions or expansions of the information collected.

The *Doing Business* methodology offers several advantages. It is transparent, using factual information about what laws and regulations say and allowing multiple interactions with local respondents to clarify potential misinterpretations of questions. 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. The methodology is inexpensive and easily replicable, so data can be collected in a large sample of economies—175 published in *Doing Business 2007*. Because standard assumptions are used in the data collection, comparisons and benchmarks are valid across countries. And the data not only highlight the extent of obstacles to doing business but also help identify their source, supporting policymakers in designing reform.

The *Doing Business* methodology has 5 limitations that should be considered when interpreting the data. First, the collected data refer to businesses in the country's most populous city and may not be representative of regulatory practices in other parts of the country. Second, the data often focus on a specific business form—a limited liability company of a specified size—and may not be representative of the regulation on other businesses, for example, sole proprietorships. Third, transactions described in a standardized case study refer to a specific set of issues and may not represent the full set of issues a business encounters. Fourth, the measures of time involve an element of judgment by the expert respondents. When sources indicate different estimates, the time indicators reported in *Doing Business* represent the median values of several responses given under the assumptions of the case study. Fifth, the methodology assumes that a business has full information on what is required and does not waste time when completing procedures. In practice, completing a procedure may take longer if the business lacks information or is unable to follow up promptly.

The methodology for 4 of the *Doing Business* topics changed for *Doing Business 2007*. For paying taxes, the total tax rate measure now includes all labor contributions paid by the employer (such as social security contributions) and excludes consumption taxes (such as sales tax or value added tax). And the measure is now expressed as a percentage of commercial profits rather than gross profits. This change reflects the total tax burden borne by businesses. For enforcing contracts, the case study was revised to reflect a typical contractual dispute over the quality of goods rather than a simple debt default. For trading across borders, *Doing Business* now reports the cost associated with exporting and importing cargo in addition to the time and number of documents required. And for employing workers, hiring costs are no longer included in the calculation of the ease of employing workers.

Doing Business now publishes more than 8,750 data points. Since the publication of *Doing Business* in 2006, 19 challenges to last year's data have been received. In 6 cases—Algeria, France, Hong Kong (China), Jordan, Morocco and the United Kingdom—every data point was reviewed by government experts. The challenges resulted in 12 corrections to the data. In other cases complaints were resolved without a need for corrections, through explanations of the assumptions underlying the methodology and the date as of which data are collected. In addition, the *Doing Business* team has corrected 37 data points as a result of new information obtained during its travel and the recruitment of additional respondents. The ease of doing business index reflects these changes. For these reasons—as well as the addition of 20 new economies—this year's rankings on the ease of doing business are not comparable with the rankings reported in *Doing Business in 2006*. To make comparisons across time, table 1.2 reports recalculated rankings for last year.

The laws and regulations underlying the *Doing Business* data are now available on the *Doing Business* website at http://www.doingbusiness.org. All the sample surveys and the details underlying the indicators are also published on the website. Questions on the methodology and challenges to data may be submitted through the "Ask a Question" function on the *Doing Business* home page. Updated indicators, as well as any revisions of or corrections to the printed data, are posted continuously on the website.

Economy characteristics

Region and income group

Doing Business uses the World Bank regional and income group classifications, available at http://www.worldbank.org/data/countryclass/countryclass.html. Throughout the report the term *rich economies* refers to the high-income group, *middle-income economies* to the upper-middle-income group and *poor economies* to the lower-middle-income and low-income groups.

Population

Doing Business 2007 reports midyear 2005 population statistics as published in *World Development Indicators 2006*.

Gross national income (GNI) per capita

Doing Business 2007 reports 2005 income per capita as published in the World Bank's *World Development Indicators 2006*. Income is calculated using the Atlas method (current US$). For cost indicators expressed as a percentage of income per capita, 2005 GNI in local currency units is used as the denominator. GNI data were not available from the World Bank for Equatorial Guinea, Puerto Rico and West Bank and Gaza. In these cases GDP or GNP per capita data from the Economist Intelligence Unit 2005 country profiles were used.

Starting a business

Doing Business records all procedures that are officially required for an entrepreneur to start up and formally operate an industrial or commercial business. These include obtaining all necessary licenses and permits and completing any required notifications, verifications or inscriptions for the company and employees with relevant authorities.

After a study of laws, regulations and publicly available information on business entry, a detailed list of procedures is developed, along with the time and cost of complying with each procedure under normal circumstances and the paid-in minimum capital requirements. Subsequently, local incorporation lawyers and government officials complete and verify the data. On average 4 law firms participate in each country.

Information is also collected on the sequence in which procedures are to be completed and whether procedures may be carried out simultaneously. It is assumed that any required information is readily available and that all agencies involved in the start-up process function efficiently and without corruption. If answers by local experts differ, inquiries continue until the data are reconciled.

To make the data comparable across countries, several assumptions about the business and the procedures are used.

Assumptions about the business

The business:

- Is a limited liability company. If there is more than one type of limited liability company in the country, the limited liability form most popular among domestic firms is chosen. Information on the most popular form is obtained from incorporation lawyers or the statistical office.
- Operates in the country's most populous city.
- Is 100% domestically owned and has 5 owners, none of whom is a legal entity.
- Has start-up capital of 10 times income per capita at the end of 2005, paid in cash.

- Performs general industrial or commercial activities, such as the production or sale of products or services to the public. It does not perform foreign trade activities and does not handle products subject to a special tax regime, for example, liquor or tobacco. The business is not using heavily polluting production processes.
- Leases the commercial plant and offices and is not a proprietor of real estate.
- Does not qualify for investment incentives or any special benefits.
- Has up to 50 employees 1 month after the commencement of operations, all of them nationals.
- Has a turnover of at least 100 times income per capita.
- Has a company deed 10 pages long.

Procedures

A procedure is defined as any interaction of the company founder with external parties (government agencies, lawyers, auditors, notaries). Interactions between company founders or company officers and employees are not counted as procedures. Procedures that must be completed in the same building but in different offices are counted as separate procedures. The founders are assumed to complete all procedures themselves, without middlemen, facilitators, accountants or lawyers, unless the use of such a third party is mandated by law.

Both pre- and post-incorporation procedures that are officially required for an entrepreneur to formally operate a business are recorded. Procedures that are not required to start and formally operate a business are ignored. For example, obtaining exclusive rights over the company name is not counted in a country where businesses may use a number as identification.

Procedures required for official correspondence or transactions with public agencies are included. For example, if a company seal or stamp is required on official documents, such as tax declarations, obtaining it is counted. Similarly, if a company must open a bank account before registering for sales tax or value added tax, this transaction is included as a procedure. Shortcuts are counted only if they fulfill 3 criteria: they are legal, they are available to the general public, and avoiding them causes substantial delays.

Only procedures required of all businesses are covered. Industry-specific procedures are excluded. For example, procedures to comply with environmental regulations are included only when they apply to all businesses conducting general commercial or industrial activities. Procedures that the company undergoes to connect to electricity, water, gas and waste disposal services are not included.

Time

Time is recorded in calendar days. The measure captures the median duration that incorporation lawyers indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is 1 day. Although procedures may take place simultaneously, they cannot start on the same day. A procedure is considered completed once the company has received the final document, such as the company registration certificate or tax number. If a procedure can be accelerated for an additional cost, the fastest procedure is chosen. It is assumed that the entrepreneur does not waste time and commits to completing each remaining procedure without delay. The time that the entrepreneur spends on gathering information is ignored. It is assumed that the entrepreneur is aware of all entry regulations and their sequence from the beginning but has had no prior contact with any of the officials.

Cost

Cost is recorded as a percentage of the country's income per capita. Only official costs are recorded. The company law, the commercial code and specific regulations and fee schedules are used as sources for calculating costs. In the absence of fee schedules, a government officer's estimate is taken as an official source. In the absence of a government officer's estimate, estimates of incorporation lawyers are used. If several incorporation lawyers provide different estimates, the median reported value is applied. In all cases the cost excludes bribes.

Paid-in minimum capital

The paid-in minimum capital requirement reflects the amount that the entrepreneur needs to deposit in a bank before registration starts and is recorded as a percentage of the country's income per capita. The amount is typically specified in the commercial code or the company law. Many countries have a minimum capital requirement but allow businesses to pay only a part of it before registration, with the rest to be paid after the first year of operation. In Mozambique in March 2006, for example, the minimum capital requirement for limited liability companies was 1,500,000 meticais, of which half was payable before registration. The paid-in minimum capital recorded for Mozambique is therefore 750,000 meticais, or 10% of income per capita. In the Philippines the minimum capital requirement was 5,000 pesos, but only a quarter needed to be paid before registration. The paid-in minimum capital recorded for the Philippines is therefore 1,250 pesos, or 2% of income per capita.

This methodology was developed in Djankov and others (2002) and is adopted here with minor changes.

Dealing with licenses

Doing Business records all procedures required for a business in the construction industry to build a standardized warehouse as an example of dealing with licenses. These procedures include obtaining all necessary licenses and permits, receiving all required inspections and completing all required notifications and submitting the relevant documents (for example, building plans and site maps) to the authorities. *Doing Business* also records procedures for obtaining utility connections, such as electricity, telephone, water and sewerage. Procedures necessary to be able to use the property as collateral or transfer it to another business are also counted. The survey divides the process of building a warehouse into distinct procedures and calculates the time and cost of completing each procedure under normal circumstances.

Information is collected from construction lawyers, construction firms, utility service providers and public officials who deal with building regulations. To make the data comparable across countries, several assumptions about the business, the warehouse project and the procedures are used.

Assumptions about the construction company

The business (BuildCo):

- Is a limited liability company.
- Operates in the country's most populous city.
- Is 100% domestically owned and has 5 owners, none of whom is a legal entity.
- Carries out construction projects, such as building a warehouse.
- Has up to 20 builders and other employees, all of them nationals with the technical expertise and professional experience necessary to develop architectural and technical plans for building a warehouse.

Assumptions about the warehouse project

The warehouse:

- Has 2 stories and approximately 14,000 square feet (1,300.6 square meters). Each floor is 9 feet, 10 inches (3 meters) high.
- Is located in a periurban area of the country's most populous city.
- Is located on a land plot of 10,000 square feet (929 square meters), which is 100% owned by BuildCo and is accurately registered in the cadastre and land registry.
- Is a new construction (there was no previous construction on the land).
- Has complete architectural and technical plans.
- Will be connected to electricity, water, sewerage and one land phone line. The connection to each utility network will be 32 feet, 10 inches (10 meters) long.
- Will require a 10-ampere power connection and 140 kilowatts of electricity.
- Will be used for storing books.

Procedures

A procedure is any interaction of the company's employees or managers with external parties, including government agencies, public inspectors, notaries, the land registry and cadastre and technical experts apart from architects and engineers. Interactions between company employees, such as development of the warehouse plans and inspections conducted by employees, are not counted as procedures. Procedures that the company undergoes to connect to electricity, water, sewerage and phone services are included. All procedures that are legally or in practice required for building a warehouse are counted, even if they may be avoided in exceptional cases.

Time

Time is recorded in calendar days. The measure captures the median duration that local experts indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is 1 day. If a procedure can be accelerated legally for an additional cost, the fastest procedure is chosen. It is assumed that BuildCo does not waste time and commits to completing each remaining procedure without delay. The time that BuildCo spends on gathering information is ignored. It is assumed that BuildCo is aware of all building requirements and their sequence from the beginning.

Cost

Cost is recorded as a percentage of the country's income per capita. Only official costs are recorded. The building code, specific regulations and fee schedules and information from local experts are used as sources for costs. If several local partners provide different estimates, the median reported value is used. All the fees associated with completing the procedures to legally build a warehouse, including utility hook-up, are included.

Employing workers

Doing Business measures the regulation of employment, specifically as it affects the hiring and firing of workers and the rigidity of working hours. The data on employing workers are based on a detailed survey of employment regulations that is completed by local law firms. The employment laws of most countries are available online in the NATLEX database, published by the International Labour Organization. Laws and regulations as well as secondary sources are reviewed to ensure accuracy. Conflicting answers are further checked against 2 additional sources, including a local legal treatise on employment regulation.

To make the data comparable across countries, several assumptions about the worker and the business are used.

Assumptions about the worker

The worker:

- Is a nonexecutive, full-time male employee who has worked in the same company for 20 years.
- Earns a salary plus benefits equal to the country's average wage during the entire period of his employment.
- Is a lawful citizen with a wife and 2 children. The family resides in the country's most populous city.
- Is not a member of a labor union, unless membership is mandatory.

Assumptions about the business

The business:

- Is a limited liability company.
- Operates in the country's most populous city.
- Is 100% domestically owned.
- Operates in the manufacturing sector.
- Has 201 employees.
- Abides by every law and regulation but does not grant workers more benefits than what is legally mandated.
- Is subject to collective bargaining agreements in countries where such bargaining covers more than half the manufacturing sector.

Rigidity of employment index

The rigidity of employment index is the average of three subindices: a difficulty of hiring index, a rigidity of hours index and a difficulty of firing index. All the subindices have several components. And all take values between 0 and 100, with higher values indicating more rigid regulation.

The difficulty of hiring index measures (i) whether term contracts can be used only for temporary tasks; (ii) the maximum cumulative duration of term contracts; and (iii) the ratio of the minimum wage for a trainee or first-time employee to the average value added per worker. A country is assigned a score of 1 if term contracts can be used only for temporary tasks and a score of 0 if they can be used for any task. A score of 1 is assigned if the maximum cumulative duration of term contracts is less than 3 years; 0.5 if it is between 3 and 5 years; and 0 if term contracts can last 5 years or more. Finally, a score of 1 is assigned if the ratio of the minimum wage to the average value added per worker is higher than 0.75; 0.67 for a ratio greater than 0.50 and less than or equal to 0.75; 0.33 for a ratio greater than 0.25 and less than or equal to 0.50; and 0 for a ratio less than or equal to 0.25. In the Central African Republic, for example, term contracts are allowed only for temporary tasks (a score of 1), and they can be used for a maximum of 2 years (a score of 1). The ratio of the mandated minimum wage to the value added per worker is 0.66 (a score of 0.67). Averaging the three subindices and scaling the index to 100 gives the Central African Republic a score of 89.

The rigidity of hours index has 5 components: (i) whether night work is unrestricted; (ii) whether weekend work is unrestricted; (iii) whether the workweek can consist of 5.5 days; (iv) whether the workweek can extend to 50 hours or more (including overtime) for 2 months a year; and (v) whether paid annual vacation is 21 working days or fewer. For each of these questions, if the answer is no, the country is assigned a score of 1; otherwise a score of 0 is assigned. For example, Montenegro imposes restrictions on night work (a score of 1) and weekend work (a score of 1), allows 5.5-day workweeks (a score of 0), permits 50-hour workweeks for 2 months (a score of 0) and requires paid vacation of 20 working days (a score of 0). Averaging the scores and scaling the result to 100 gives a final index of 40 for Montenegro.

The difficulty of firing index has 8 components: (i) whether redundancy is disallowed as a basis for terminating workers; (ii) whether the employer needs to notify a third party (such as a government agency) to terminate 1 redundant worker; (iii) whether the employer needs to notify a third party to terminate a group of more than 20 redundant workers; (iv) whether the employer needs approval from a third party to terminate 1 redundant worker; (v) whether the employer needs approval from a third party to terminate a group of more than 20 redundant workers; (vi) whether the law requires the employer to consider reassignment or retraining options before redundancy termination; (vii) whether priority rules apply for redundancies; and (viii) whether priority rules apply for reemployment. For the first question an answer of yes for workers of any income level gives a score of 10 and means that the rest of the questions do not apply. An answer of yes to question (iv) gives a score of 2. For every other question, if the answer is yes, a score of 1 is assigned; otherwise a score of 0 is given. Questions (i) and (iv), as the most restrictive regulations, have greater weight in the construction of the index.

In Tunisia, for example, redundancy is allowed as grounds for termination (a score of 0). An employer has to both notify a third party (a score of 1) and obtain its approval (a score of 2) to terminate a single redundant worker, and has to both notify a third party (a score of 1) and obtain its approval (a score of 1) to terminate a group of redundant workers. The law mandates consideration of retraining or alternative placement before termination (a score of 1). There are priority rules for termination (a score of 1) and reemployment (a score of 1). Adding up the scores and scaling to 100 gives a final index of 80 for Tunisia.

Nonwage labor cost

The nonwage labor cost indicator measures all social security payments (including retirement fund; sickness, maternity and health insurance; workplace injury; family allowance; and other obligatory contributions) and payroll taxes associated with hiring an employee in fiscal year 2005. The cost is expressed as a percentage of the worker's salary. In Bolivia, for example, the taxes paid by the employer amount to 13.7% of the worker's wages and include 10% for sickness, maternity and temporary disability benefits; 1.7% for permanent disability and survivor benefits; and 2% for housing.

Firing cost

The firing cost indicator measures the cost of advance notice requirements, severance payments and penalties due when terminating a redundant worker, expressed in weekly wages. One month is recorded as 4 and 1/3 weeks. In Mozambique, for example, an employer is required to give 90 days' notice before a redundancy termination, and the severance pay for workers with 20 years of service equals 30 months of wages. No penalty is levied. Altogether, the employer pays the equivalent of 143 weeks of salary to dismiss the worker.

This methodology was developed in Botero and others (2004) and is adopted here with minor changes.

Registering property

Doing Business records the full sequence of procedures necessary when a business purchases land and a building to transfer the property title from the seller to the buyer so that the buyer can use the property for expanding its business, as collateral in taking new loans or, if necessary, to sell to another business. Every required procedure is included, whether it is the responsibility of the seller or the buyer or must be completed by a third party on their behalf. Local property lawyers and property registries provide information on required procedures as well as the time and cost to complete each of them.

To make the data comparable across countries, several assumptions about the business, the property and the procedures are used.

Assumptions about the business

The business:

- Is a limited liability company.
- Is located in a periurban area of the country's most populous city.
- Is 100% domestically and privately owned.
- Has 50 employees, all of whom are nationals.
- Performs general commercial activities.

Assumptions about the property

The property:

- Has a value of 50 times income per capita.
- Is fully owned by another domestic limited liability company.
- Has no mortgages attached and has been under the same ownership for the past 10 years.
- Is adequately measured and filed in the cadastre, registered in the land registry and free of title disputes.
- Is located in a periurban commercial zone, and no rezoning is required.
- Consists of land and a building. The land area is 6,000 square feet (557.4 square meters). A 2-story warehouse of 10,000 square feet (929 square meters) is located on the land. The warehouse is 10 years old, is in good condition and complies with all safety standards, building codes and other legal requirements. The property of land and building will be transferred in its entirety.
- Will not be subject to renovations or additional building following the purchase.
- Has no trees, natural water sources, natural reserves or historical monuments of any kind.
- Will not be used for special purposes, and no special permits, such as for residential use, industrial plants, waste storage or certain types of agricultural activities, are required.
- Has no occupants (legal or illegal), and no other party holds a legal interest in it.

Procedures

A procedure is defined as any interaction of the buyer or the seller, their agents (if an agent is legally or in practice required) or the property with external parties, including government agencies, inspectors, notaries and lawyers. Interactions between company officers and employees are not considered. All procedures that are legally or in practice required for registering property are recorded, even if they may be avoided in exceptional cases. It is assumed that the buyer follows the fastest legal option available and used by the general public. Although the business may use lawyers or other professionals where necessary in the registration process, it is assumed that it does not employ an outside facilitator in the registration process unless legally or in practice required to do so.

Time

Time is recorded in calendar days. The measure captures the median duration that property lawyers or registry officials indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is 1 day. Although procedures may take place simultaneously, they cannot start on the same day. It is assumed that the buyer does not waste time and commits to completing each remaining procedure without delay. If a procedure can be accelerated for an additional cost, the fastest legal procedure available and used by the general public is chosen. If procedures can be undertaken simultaneously, it is assumed that they are. It is assumed that the parties involved are aware of all regulations and their sequence from the beginning. Time spent on gathering information is not considered.

Cost

Cost is recorded as a percentage of the property value, assumed to be equivalent to 50 times income per capita. Only official costs required by law are recorded, including fees, transfer taxes, stamp duties and any other payment to the property registry, notaries, public agencies or lawyers. Other taxes, such as capital gains tax or value added tax, are excluded from the cost measure. If cost estimates differ among sources, the median reported value is used.

Getting credit

Doing Business constructs measures of the legal rights of borrowers and lenders and the sharing of credit information. The first set of indicators describes how well collateral and bankruptcy laws facilitate lending. The second set measures the coverage, scope, quality and accessibility of credit information available through public and private credit registries.

The data on the legal rights of borrowers and lenders are gathered through a survey of financial lawyers and verified through analysis of laws and regulations as well as public sources of information on collateral and bankruptcy laws. The data on credit information sharing are built in two stages. First, banking supervision authorities and public information sources are surveyed to confirm the presence of public credit registries and private credit information bureaus. Second, when applicable, a detailed survey on the public or private credit registry's structure, law and associated rules is administered to the credit registry. Survey responses are verified through several rounds of follow-up communication with respondents as well as by contacting third parties and consulting public sources. The survey data are confirmed through teleconference calls in most countries.

Strength of legal rights index

The strength of legal rights index measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index includes 7 aspects related to legal rights in collateral law and 3 aspects in bankruptcy law. A score of 1 is assigned for each of the following features of the laws:

- General rather than specific description of assets is permitted in collateral agreements.
- General rather than specific description of debt is permitted in collateral agreements.
- Any legal or natural person may grant or take security in the property.
- A unified registry operates that includes charges over movable property.
- Secured creditors have priority outside of bankruptcy.
- Secured creditors, rather than other parties such as government or workers, are paid first out of the proceeds from liquidating a bankrupt firm.
- Secured creditors are able to seize their collateral when a debtor enters reorganization; there is no "automatic stay" or "asset freeze" imposed by the court.
- Management does not stay during reorganization. An administrator is responsible for managing the business during reorganization.
- Parties may agree on enforcement procedures by contract.
- Creditors may both seize and sell collateral out of court without restriction.

The index ranges from 0 to 10, with higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit.

Depth of credit information index

The depth of credit information index measures rules affecting the scope, accessibility and quality of credit information available through either public or private credit registries. A score of 1 is assigned for each of the following 6 features of the credit information system:

- Both positive (for example, amount of loan and on-time repayment pattern) and negative (for instance, number and amount of defaults, late payments, bankruptcies) credit information is distributed.
- Data on both firms and individuals are distributed.
- Data from retailers, trade creditors or utilities as well as financial institutions are distributed.

- More than 2 years of historical data are distributed.
- Data on loans above 1% of income per capita are distributed.
- By law, borrowers have the right to access their data.

The index ranges from 0 to 6, with higher values indicating the availability of more credit information, from either a public registry or a private bureau, to facilitate lending decisions. In Turkey, for example, both a public and a private registry operate. Both distribute positive and negative information (a score of 1). The private bureau distributes data only on individuals, but the public registry covers firms as well as individuals (a score of 1). The public and private registries share data among financial institutions only; no data are collected from retailers or utilities (a score of 0). The private bureau distributes more than 2 years of historical data (a score of 1). The public registry collects data only on loans of $3,132 (66% of income per capita) or more, but the private bureau collects information on loans of any value (a score of 1). Borrowers have the right to access their data (a score of 1). Summing across the indicators gives Turkey a total score of 5.

Public credit registry coverage

The public credit registry coverage indicator reports the number of individuals and firms listed in a public credit registry with current information on repayment history, unpaid debts or credit outstanding. The number is expressed as a percentage of the adult population. A public credit registry is defined as a database managed by the public sector, usually by the central bank or the superintendent of banks, that collects information on the creditworthiness of borrowers (persons or businesses) in the financial system and makes it available to financial institutions. If no public registry operates, the coverage value is 0.

Private credit bureau coverage

The private credit bureau coverage indicator reports the number of individuals or firms listed by a private credit bureau with current information on repayment history, unpaid debts or credit outstanding. The number is expressed as a percentage of the adult population. A private credit bureau is defined as a private firm or nonprofit organization that maintains a database on the creditworthiness of borrowers (persons or businesses) in the financial system and facilitates the exchange of credit information among banks and financial institutions. Credit investigative bureaus and credit reporting firms that do not directly facilitate information exchange between banks and other financial institutions are not considered. If no private bureau operates, the coverage value is 0.

This methodology was developed in Djankov, McLiesh and Shleifer (forthcoming) and is adopted here with minor changes.

Protecting investors

Doing Business measures the strength of minority shareholder protections against directors' misuse of corporate assets for personal gain. The indicators distinguish 3 dimensions of investor protection: transparency of transactions (extent of disclosure index), liability for self-dealing (extent of director liability index) and shareholders' ability to sue officers and directors for misconduct (ease of shareholder suits index). The data come from a survey of corporate lawyers and are based on company laws, court rules of evidence and securities regulations.

To make the data comparable across countries, several assumptions about the business and the transaction are used.

Assumptions about the business

The business (Buyer):

- Is a publicly traded corporation listed on the country's most important stock exchange. If the number of publicly traded companies listed on that exchange is less than 10, or if there is no stock exchange in the country, it is assumed that Buyer is a large private company with multiple shareholders.
- Has a board of directors and a chief executive officer (CEO) who may legally act on behalf of Buyer where permitted, even if this is not specifically required by law.
- Has only national shareholders.
- Has invested only in the country and has no subsidiaries or operations abroad.
- Is a food manufacturer.
- Has its own distribution network.

Assumptions about the transaction

- Mr. James is Buyer's controlling shareholder and a member of Buyer's board of directors. He owns 60% of Buyer and elected 2 directors to Buyer's 5-member board.
- Mr. James also owns 90% of Seller, a company that operates a chain of retail hardware stores. Seller recently closed a large number of its stores.
- Mr. James proposes to Buyer that it purchase Seller's unused fleet of trucks to expand Buyer's distribution of its food products. Buyer agrees. The price is equal to 10% of Buyer's assets and is higher than the market value.
- The proposed transaction is part of the company's ordinary course of business and is not outside the authority of the company.
- Buyer enters into the transaction. All required approvals are obtained, and all required disclosures made.
- The transaction is unfair to Buyer. Shareholders sue Mr. James and the other parties that approved the transaction.

Extent of disclosure index

The extent of disclosure index has 5 components: (i) what corporate body can provide legally sufficient approval for the transaction (a score of 0 is assigned if it is the CEO or the managing director alone; 1 if the board of directors or shareholders must vote and Mr. James is permitted to vote; 2 if the board of directors must vote and Mr. James is not permitted to vote; 3 if shareholders must vote and Mr. James is not permitted to vote); (ii) whether immediate disclosure of the transaction to the public, the shareholders or both is required (a score of 0 is assigned if no disclosure is required; 1 if disclosure on the terms of the transaction but not Mr. James's conflict of interest is required; 2 if disclosure on both the terms and Mr. James's conflict of interest is required); (iii) whether disclosure in the annual report is required (a score of 0 is assigned if no disclosure on the transaction is required; 1 if disclosure on the terms of the transaction but not Mr. James's conflict of interest is required; 2 if disclosure on both the terms and Mr. James's conflict of interest is required); (iv) whether disclosure by Mr. James to the board of directors is required (a score of 0 is assigned if no disclosure is required; 1 if a general disclosure of the existence of a conflict of interest is required without any specifics; 2 if full disclosure of all material facts relating to Mr. James's interest in the Buyer-Seller transaction is required); and (v) whether it is required that an external body, for example, an external auditor, review the transaction before it takes place (a score of 0 is assigned if no; 1 if yes).

The index ranges from 0 to 10, with higher values indicating greater disclosure. In Poland, for example, the board of directors must approve the transaction and Mr. James is not allowed to vote (a score of 2). Buyer is required to disclose immediately all information affecting the stock price, including the conflict of interest (a score of 2). In its annual report Buyer must also disclose the terms of the transaction and Mr. James's ownership in Buyer and Seller (a score of 2). Before the transaction Mr. James must disclose his conflict of interest to the other directors, but he is not required to provide specific information about it (a score of 1). Poland does not require an external body to review the transaction (a score of 0). Adding these numbers gives Poland a score of 7 on the extent of disclosure index.

Extent of director liability index

The extent of director liability index measures (i) a shareholder plaintiff's ability to hold Mr. James liable for damage the Buyer-Seller transaction causes to the company (a score of 0 is assigned if Mr. James cannot be held liable or can be held liable only for fraud or bad faith; 1 if Mr. James can be held liable only if he influenced the approval of the transaction or was negligent; 2 if Mr. James can be held liable when the transaction was unfair or prejudicial to the other shareholders); (ii) a shareholder plaintiff's ability to hold the approving body (the CEO or board of directors) liable for damage the transaction causes to the company (a score of 0 is assigned if the approving body cannot be held liable or can be held liable only for fraud or bad faith; 1 if the approving body can be held liable for negligence; 2 if the approving body can be held liable when the transaction is unfair or prejudicial to the other shareholders); (iii) whether a court can void the transaction upon a successful claim by a shareholder plaintiff (a score of 0 is assigned if rescission is unavailable or is available only in case of fraud or bad faith; 1 if rescission is available when the transaction is oppressive or prejudicial to the other shareholders; 2 if rescission is available when the transaction is unfair or entails a conflict of interest); (iv) whether Mr. James pays damages for the harm caused to the company upon a successful claim by the shareholder plaintiff (a score of 0 is assigned if no; 1 if yes); (v) whether Mr. James repays profits made from the transaction upon a successful claim by the shareholder plaintiff (a score of 0 is assigned if no; 1 if yes); (vi) whether fines and imprisonment can be applied against Mr. James (a score of 0 is assigned if no; 1 if yes); and (vii) shareholder plaintiffs' ability to sue directly or derivatively for damage the transaction causes to the company (a score of 0 is assigned if suits are unavailable or are available only for shareholders holding more than 10% of the company's share capital; 1 if direct or derivative suits are available for shareholders holding 10% or less of share capital).

The index ranges from 0 to 10, with higher values indicating greater liability of directors. To hold Mr. James liable in Panama, for example, a plaintiff must prove that Mr. James influenced the approving body or acted negligently (a score of 1). To hold the other directors liable, a plaintiff must prove that they acted negligently (a score of 1). The unfair transaction cannot be voided (a score of 0). If Mr. James is found liable, he must pay damages (a score of 1) but he is not required to disgorge his profits (a score of 0). Mr. James cannot be fined or imprisoned (a score of 0). Direct suits are available for shareholders holding 10% or less of share capital (a score of 1). Adding these numbers gives Panama a score of 4 on the extent of director liability index.

Ease of shareholder suits index

The ease of shareholder suits index measures (i) the range of documents available to the shareholder plaintiff from the defendant and witnesses during trial (a score of 1 is assigned for each of the following types of documents available: information that the defendant has indicated he intends to rely on for his defense; information that directly proves specific facts in the plaintiff's claim; any information relevant to the subject matter of the claim; and any information that may lead to the discovery of relevant information); (ii) whether the plaintiff can directly examine the defendant and witnesses during trial (a score of 0 is assigned if no; 1 if yes, with prior approval of the questions by the judge; 2 if yes, without prior approval); (iii) whether the plaintiff can obtain any documents from the defendant without identifying them specifically (a score of 0 is assigned if no; 1 if yes); (iv) whether shareholders owning

10% or less of the company's share capital can request that a government inspector investigate the Buyer-Seller transaction (a score of 0 is assigned if no; 1 if yes); (v) whether shareholders owning 10% or less of the company's share capital have the right to inspect the transaction documents before filing suit (a score of 0 is assigned if no; 1 if yes); and (vi) whether the standard of proof for civil suits is lower than that for a criminal case (a score of 0 is assigned if no; 1 if yes).

The index ranges from 0 to 10, with higher values indicating greater powers of shareholders to challenge the transaction. In Greece, for example, the plaintiff can access documents that the defendant intends to rely on for his defense and that directly prove facts in the plaintiff's claim (a score of 2). The plaintiff can examine the defendant and witnesses during trial, though only with prior approval of the questions by the court (a score of 1). The plaintiff must specifically identify the documents being sought (for example, the Buyer-Seller purchase agreement of July 15, 2005) and cannot just request categories (for example, all documents related to the transaction) (a score of 0). A shareholder holding 5% of Buyer's shares can request that a government inspector review suspected mismanagement by Mr. James and the CEO (a score of 1). And any shareholder can inspect the transaction documents before deciding whether to sue (a score of 1). The standard of proof for civil suits is the same as that for criminal suits (a score of 0). Adding these numbers gives Greece a score of 5 on the ease of shareholder suits index.

Strength of investor protection index

The strength of investor protection index is the average of the extent of disclosure index, the extent of director liability index and the ease of shareholder suits index. The index ranges from 0 to 10, with higher values indicating better investor protection.

This methodology was developed in Djankov, La Porta, Lopez-de-Silanes and Shleifer (2005) and is adopted here with minor changes.

Paying taxes

Doing Business records the tax that a medium-size company must pay or withhold in a given year, as well as measures of the administrative burden in paying taxes. Taxes are measured at all levels of government and include the profit or corporate income tax, social security contributions and labor taxes paid by the employer, property taxes, property transfer taxes, the dividend tax, the capital gains tax, the financial transactions tax, waste collection taxes and vehicle and road taxes.

To measure the tax paid by a standardized business and the complexity of a country's tax law, a case study is prepared with a set of financial statements and assumptions about transactions made over the year. Experts in each country compute the taxes owed in their jurisdiction based on the standardized case facts. Information on the frequency of filing, audits and other costs of compliance is also compiled. The project was developed and implemented in cooperation with PricewaterhouseCoopers.

To make the data comparable across countries, several assumptions about the business and the taxes are used.

Assumptions about the business

The business:

- Is a limited liability, taxable company. If there is more than one type of limited liability company in the country, the limited liability form most popular among domestic firms is chosen. Incorporation lawyers or the statistical office report the most popular form.
- Started operations on January 1, 2004. At that time the company purchased all the assets shown in its balance sheet and hired all its workers.
- Operates in the country's most populous city.
- Is 100% domestically owned and has 5 owners, all of whom are natural persons.
- Has a start-up capital of 102 times income per capita at the end of 2004.
- Performs general industrial or commercial activities. Specifically, it produces ceramic flowerpots and sells them at retail. It does not participate in foreign trade (no import or export) and does not handle products subject to a special tax regime, for example, liquor or tobacco.
- Owns 2 plots of land, 1 building, machinery, office equipment, computers and 1 truck and leases another truck.
- Does not qualify for investment incentives or any special benefits apart from those related to the age or size of the company.
- Has 60 employees—4 managers, 8 assistants and 48 workers. All are nationals, and 1 of the managers is also an owner.
- Has a turnover of 1,050 times income per capita.
- Makes a loss in the first year of operation.
- Has the same gross margin (pre-tax) across all economies.
- Distributes 50% of its profits as dividends to the owners at the end of the second year.
- Sells one of its plots of land at a profit during the second year.
- Is subject to a series of detailed assumptions on expenses and transactions to further standardize the case.

Assumptions about the taxes

- All the taxes paid or withheld in the second year of operation are recorded. A tax is considered distinct if it has a different name or is collected by a different agency. Taxes with the same name and agency, but charged at different rates depending on the business, are counted as the same tax.

- The number of times the company pays or withholds taxes in a year is the number of different taxes multiplied by the frequency of payment (or withholding) for each tax. The frequency of payment includes advance payments (or withholding) as well as regular payments (or withholding).

Tax payments

The tax payments indicator reflects the total number of taxes paid, the method of payment, the frequency of payment and the number of agencies involved for this standardized case during the second year of operation. It includes payments made by the company on consumption taxes, such as sales tax or value added tax. These taxes are traditionally withheld on behalf of the consumer. The number of payments takes into account electronic filing. Where full electronic filing is allowed, the tax is counted as paid once a year even if the payment is more frequent.

Time

Time is recorded in hours per year. The indicator measures the time to prepare, file and pay (or withhold) three major types of taxes: the corporate income tax, value added or sales tax and labor taxes, including payroll taxes and social security contributions. Preparation time includes the time to collect all information necessary to compute the tax payable. If separate accounting books must be kept for tax purposes—or separate calculations must be made for tax purposes—the time associated with these processes is included. Filing time includes the time to complete all necessary tax forms and make all necessary calculations. Payment time is the hours needed to make the payment online or at the tax office. When taxes are paid in person, the time includes delays while waiting.

Total tax rate

The total tax rate measures the amount of taxes payable by the business in the second year of operation, expressed as a share of commercial profits. *Doing Business 2007* reports tax rates for fiscal year 2005. The total amount of taxes is the sum of all the different taxes payable after accounting for deductions and exemptions. The taxes withheld (such as sales tax or value added tax) but not paid by the company are excluded. The taxes included can be divided into five categories: profit or corporate income tax, social security contributions and other labor taxes paid by the employer, property taxes, turnover taxes and other small taxes (such as municipal fees and vehicle and fuel taxes).

Commercial profits are defined as sales minus cost of goods sold, minus gross salaries, minus administrative expenses, minus other deductible expenses, minus deductible provisions, plus capital gains (from the property sale) minus interest expense, plus interest income and minus commercial depreciation. To compute the commercial depreciation, a straight-line depreciation method is applied with the following rates: 0% for the land, 5% for the building, 10% for the machinery, 33% for the computers, 20% for the office equipment, 20% for the truck and 10% for business development expenses.

The methodology is consistent with the total tax calculation applied by PricewaterhouseCoopers.

This methodology was developed in "Tax Burdens around the World," an ongoing research project by Simeon Djankov, Caralee McLiesh, Rita Ramalho and Andrei Shleifer.

Trading across borders

Doing Business compiles procedural requirements for exporting and importing a standardized cargo of goods. Every official procedure for exporting and importing the goods is recorded—from the contractual agreement between the two parties to the delivery of goods—along with the time and cost necessary for completion. All documents required for clearance of the goods across the border are also recorded. For exporting goods, procedures range from packing the goods at the factory to their departure from the port of exit. For importing goods, procedures range from the vessel's arrival at the port of entry to the cargo's delivery at the factory warehouse.

Local freight forwarders, shipping lines, customs brokers and port officials provide information on required documents and cost as well as the time to complete each procedure. To make the data comparable across countries, several assumptions about the business and the traded goods are used.

Assumptions about the business

The business:

- Has 200 or more employees.
- Is located in the country's most populous city.
- Is a private, limited liability company. It does not operate within an export processing zone or an industrial estate with special export or import privileges.
- Is domestically owned with no foreign ownership.
- Exports more than 10% of its sales.

Assumptions about the traded goods

The traded product travels in a dry-cargo, 20-foot, full container load. The product:

- Is not hazardous nor does it include military items.
- Does not require refrigeration or any other special environment.
- Does not require any special phytosanitary or environmental safety standards other than accepted international standards.

- Falls under one of the following Standard International Trade Classification (SITC) Revision categories:
  - SITC 65: textile yarn, fabrics and made-up articles.
  - SITC 84: articles of apparel and clothing accessories.
  - SITC 07: coffee, tea, cocoa, spices and manufactures thereof.

Documents

All documents required to export and import the goods are recorded. It is assumed that the contract has already been agreed upon and signed by both parties. Documents include bank documents, customs declaration and clearance documents, port filing documents, import licenses and other official documents exchanged between the concerned parties. Documents filed simultaneously are considered different documents but with the same time frame for completion.

Time

Time is recorded in calendar days. The time calculation for a procedure starts from the moment it is initiated and runs until it is completed. If a procedure can be accelerated for an additional cost, the fastest legal procedure is chosen. It is assumed that neither the exporter nor the importer wastes time and that each commits to completing each remaining procedure without delay. Procedures that can be completed in parallel are measured as simultaneous for the purpose of measuring time. The waiting time between procedures (for example, during unloading of the cargo) is included in the measure.

Cost

Cost is recorded as the fees levied on a 20-foot container in United States dollars. All the fees associated with completing the procedures to export or import the goods are included. These include costs for documents, administrative fees for customs clearance and technical control, terminal handling charges and inland transport. The cost measure does not include tariffs or trade taxes. Only official costs are recorded.

Enforcing contracts

Indicators on enforcing contracts measure the efficiency of the judicial system in resolving a commercial dispute. The data are built by following the step-by-step evolution of a payment dispute before local courts. The data are collected through study of the codes of civil procedure and other court regulations as well as surveys completed by local litigation lawyers (and, in a quarter of the countries, by judges as well).

Assumptions about the case

- The value of the claim equals 200% of the country's income per capita.
- The plaintiff has fully complied with the contract (that is, the plaintiff is 100% right).
- The case represents a lawful transaction between businesses located in the country's most populous city.
- The plaintiff files a lawsuit to enforce the contract.
- A court in the most populous city decides the dispute.
- The defendant attempts to delay service of process but it is finally accomplished.
- The defendant opposes the complaint (default judgment is not an option) on the grounds that the delivered goods were not of adequate quality.
- The plaintiff introduces documentary evidence and calls one witness. The defendant calls one witness. Neither party presents objections.
- The judgment is in favor of the plaintiff and the defendant does not appeal the judgment.
- The plaintiff takes all required steps for prompt enforcement of the judgment. The debt is successfully collected through sale of the defendant's movable assets (such as a vehicle) at a public auction.

Procedures

A procedure is defined as any interaction mandated by law or court regulation between the parties, or between them and the judge (or administrator) or court officer. This includes steps to file the case, steps for trial and judgment and steps necessary to enforce the judgment.

Time

Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between actions. The respondents make separate estimates of the average duration of different stages of dispute resolution: the completion of service of process (time to file the case), the issuance of judgment (time for the trial) and the moment of payment (time for enforcement).

Cost

Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita. Only official costs required by law are recorded, including court costs and average attorney fees where the use of attorneys is mandatory or common.

This methodology was developed in Djankov and others (2003) and is adopted here with minor changes.

Closing a business

Doing Business studies the time, cost and outcomes of bankruptcy proceedings involving domestic entities. The data are derived from survey responses by local insolvency lawyers and verified through a study of laws and regulations as well as public information on bankruptcy systems.

To make the data comparable across countries, several assumptions about the business and the case are used.

Assumptions about the business

The business:

- Is a limited liability company.
- Operates in the country's most populous city.
- Is 100% domestically owned, with the founder, who is also the chairman of the supervisory board, owning 51% (no other shareholder holds more than 5% of shares).
- Has downtown real estate, where it runs a hotel, as its major asset.
- Has a professional general manager.
- Has had average annual revenue of 1,000 times income per capita over the past 3 years.
- Has 201 employees and 50 suppliers, each of whom is owed money for the last delivery.
- Borrowed from a domestic bank 5 years ago (the loan has 10 years to full repayment) and bought real estate (the hotel building), using it as security for the bank loan.
- Has observed the payment schedule and all other conditions of the loan up to now.
- Has a mortgage, with the value of the mortgage principal being exactly equal to the market value of the hotel.

Assumptions about the case

- The business is experiencing liquidity problems. The company's loss in 2005 reduced its net worth to a negative figure. There is no cash to pay the bank interest or principal in full, due tomorrow. Therefore, the business defaults on its loan. Management believes that losses will be incurred in 2007 and 2008 as well.
- The bank holds a floating charge against the hotel in countries where floating charges are possible. If the law does not permit a floating charge but contracts commonly use some other provision to that effect, this provision is specified in the lending contract.
- The business has too many creditors to renegotiate out of court. It has the following options: a procedure aimed at rehabilitation or any procedure that will reorganize the business to permit further operation; a procedure aimed at liquidation; or a procedure aimed at selling the hotel, as a going concern or piecemeal, enforced either through court (or by a government authority like a debt collection agency) or out of court (receivership).

Time

Time is recorded in calendar years. It captures the estimated duration required to complete a bankruptcy. Information is collected on the sequence of the bankruptcy procedures and on whether any procedures can be carried out simultaneously. Delays due to legal derailment tactics that parties to the bankruptcy may use—in particular, the extension of response periods or appeals—are considered.

Cost

The cost of the bankruptcy proceedings is recorded as a percentage of the estate's value. The cost is calculated on the basis of survey responses by practicing insolvency lawyers. If several respondents report different estimates, the median reported value is used. Only official costs are recorded, including court costs as well as fees of insolvency practitioners, independent assessors, lawyers and accountants. The cost figures are averages of the estimates on a multiple-choice question, where the respondents choose among the following options: 0–2%, 3–5%, 6–8%, 9–10%, 11–18%, 19–25%, 26–33%, 34–50%, 51–75% and more than 75% of the estate value of the bankrupt business.

Recovery rate

The recovery rate is recorded as cents on the dollar recovered by claimants—creditors, tax authorities and employees—through the bankruptcy proceedings. The calculation takes into account whether the business is kept as a going concern during the proceedings, as well as bankruptcy costs and the loss in value due to the time spent closing down. If the business keeps operating, no value is lost on the initial claim, set at 100 cents on the dollar. If it does not, the initial 100 cents on the dollar are reduced to 70 cents on the dollar. Then the official costs of the insolvency procedure are deducted (1 cent for each percentage of the initial value). Finally, the value lost as a result of the time that the money remains tied up in insolvency procedures is taken into account, including the loss of value due to depreciation of the hotel furniture. Consistent with international accounting practice, the depreciation rate for furniture is taken to be 20%. The furniture is assumed to account for a quarter of the total value of assets. The recovery rate is the present value of the remaining proceeds, based on end-2005 lending rates from the International Monetary Fund's *International Financial Statistics*, supplemented with data from central banks.

This methodology was developed in "Efficiency in Bankruptcy," an ongoing research project by Simeon Djankov, Oliver Hart, Caralee McLiesh and Andrei Shleifer.

Ease of doing business

The ease of doing business index ranks economies from 1 to 175. The index is calculated as the ranking on the simple average of country percentile rankings on each of the 10 topics covered in *Doing Business 2007*. The ranking on each topic is the simple average of the percentile rankings on its component indicators (table 12.1).

One example: The ranking on starting a business is the average of the country percentile rankings on the procedures, time, cost and paid-in minimum capital requirement to register a business. In Iceland it takes 5 procedures, 5 days and 3% of annual income per capita in fees to open a business. The minimum capital required amounts to 16% of income per capita. On these 4 indicators Iceland ranks in the 7th, 1st, 8th and 48th percentiles. So on average, Iceland ranks in the 18th percentile on the ease of starting a business. It ranks in the 55th percentile on protecting investors, 18th percentile on trading across borders, 10th percentile on enforcing contracts, 7th percentile on closing a business and so on. Higher ranks indicate simpler regulation and stronger protections of property rights. The simple average of Iceland's percentile rankings on all topics is 20%. When all countries are ordered by their average percentile rank, Iceland is in 12th place.

Each indicator set studies a different aspect of the business environment. Country rankings vary, sometimes significantly, across indicator sets. For example, Iceland ranks in the 7th percentile on closing a business, its highest ranking, and in the 55th percentile on protecting investors, its lowest. This points to priorities for reform: Protecting investors is one place to start in further improving business conditions in Iceland. Across all 175 economies the average correlation coefficient between the 10 sets of indicators is 0.39, and the coefficients between any 2 sets of indicators range from 0.16 (between employing workers and trading across borders) to 0.66 (between closing a business and enforcing contracts). The low correlations suggest that countries rarely score universally well or universally badly on the indicators. In other words, there is much room for partial reform.

When an economy has no laws or regulations covering a specific area—for example bankruptcy—it receives a "no practice" mark. Similarly, if regulation exists but is never used in practice, or if a competing regulation prohibits such practice, the economy receives a "no practice" mark. This puts it at the bottom of the ranking.

The ease of doing business index is limited in scope. It does not account for a country's proximity to large markets, the quality of its infrastructure services (other than services related to trading across borders), the security of property from theft and looting, macroeconomic conditions or the strength of underlying institutions. There remains a large unfinished agenda for research into what regulation constitutes binding constraints, what package of reforms is most effective and how these issues are shaped by the country context. The *Doing Business* indicators provide a new empirical data set that may improve understanding of these issues.

Doing Business 2007 uses a simple method to calculate the top reformers (table 1.1). First, it selects the economies that reformed three or more of the ten *Doing Business* topics (table 12.2). This year, 23 economies met this criterion: Armenia, Australia, Bulgaria, China, Croatia, Czech Republic, El Salvador, France, Georgia, Ghana, Guatemala, India, Israel, Latvia, Lithuania, Mexico, Morocco, Nicaragua, Nigeria, Peru, Romania, Rwanda and Tanzania. Second, these selected economies are ranked on the increase in the rank in the ease of doing business from the previous year. For example, Croatia, Mexico, and Nicaragua reformed in 3 aspects of business regulation each. But Croatia's rank improved from 134 to 124, Mexico's rank improved from 62 to 43 and Nicaragua's improved from 72 to 67. These represent a 10 place, 19 place and 5 place improvement in rankings, respectively. Mexico therefore ranks ahead of Croatia in the top 10 reformers list; Nicaragua doesn't make it.

This methodology was developed in Djankov, McLiesh and Ramalho (forthcoming) and adopted with minor changes here.

TABLE 12.1
Which indicators make up the ranking?

Starting a business Procedures, time, cost and paid-in minimum capital to open a new business	**Protecting investors** Indices of the extent of disclosure, extent of director liability and ease of shareholder suits
Dealing with licenses Procedures, time and cost of business inspections and licensing (construction industry)	**Paying taxes** Number of tax payments, time to prepare tax returns and total taxes as a share of commercial profits
Employing workers Difficulty of hiring index, rigidity of hours index, difficulty of firing index and firing cost	**Trading across borders** Documents, time and cost to export and import
Registering property Procedures, time and cost to register commercial real estate	**Enforcing contracts** Procedures, time and cost to resolve a commercial dispute
Getting credit Strength of legal rights index, depth of credit information index	**Closing a business** Recovery rate in bankruptcy

TABLE 12.2

■ Positive reform
● Negative reform

Economy	REFORMS IN 2005/06 Starting a business	Dealing with licenses	Employing workers	Registering property	Getting credit	Protecting investors	Paying taxes	Trading across borders	Enforcing contracts	Closing a business
Afghanistan										
Albania							■			
Algeria					■		■			
Angola										
Antigua and Barbuda	■						■			
Argentina			■							
Armenia	■	■		■	■					
Australia			■	■					■	
Austria										
Azerbaijan	■				■					
Bangladesh										
Belarus	■				●		■			
Belgium	■									
Belize										
Benin	■									
Bhutan										
Bolivia			●							
Bosnia and Herzegovina				■			■			
Botswana				■						
Brazil									■	
Bulgaria	■				■		■			
Burkina Faso	■									
Burundi									■	■
Cambodia		■						■		
Cameroon										
Canada		■								
Cape Verde										
Central African Republic				■			●			
Chad									■	
Chile										■
China	■				■	■		■		
Colombia						■		■		
Comoros										
Congo, Dem. Rep.										
Congo, Rep.										
Costa Rica										
Côte d'Ivoire				■						
Croatia	■			■					■	
Czech Republic	■				■		■			
Denmark					■				■	
Djibouti			●							
Dominica										
Dominican Republic					■		●		■	
Ecuador										
Egypt	■						■			
El Salvador	■			■	■					
Equatorial Guinea										
Eritrea		●								
Estonia							■		■	
Ethiopia	■									
Fiji										
Finland										
France		■			■			■	■	■
Gabon										
Gambia									■	
Georgia	■	■	■		■			■	■	
Germany		■				■				
Ghana				■			■	■		
Greece			■	■						

■ Positive reform
● Negative reform

Economy	Starting a business	Dealing with licenses	Employing workers	Registering property	Getting credit	Protecting investors	Paying taxes	Trading across borders	Enforcing contracts	Closing a business
	REFORMS IN 2005/06									
Grenada										
Guatemala	■	■		■						
Guinea										
Guinea-Bissau							■			
Guyana									■	
Haiti										
Honduras	■				■					
Hong Kong, China						■		■		
Hungary					●		■			
Iceland										
India	■				■	■	■	■		
Indonesia	■									
Iran										
Iraq										
Ireland	■									
Israel					■	■	■			
Italy									■	■
Jamaica								■		
Japan	■				■					
Jordan								■		
Kazakhstan					■					
Kenya		■						■		
Kiribati										
Korea		■								■
Kuwait				■						
Kyrgyz Republic				■	■					
Lao PDR	■				■					
Latvia		■					■			■
Lebanon										
Lesotho	■						■			
Lithuania	■		■				■			
FYR Macedonia	■		■	●					■	
Madagascar	■									
Malawi										
Malaysia										
Maldives			●							
Mali		■		■						
Marshall Islands										
Mauritania				■						
Mauritius				■	■					
Mexico	■					■	■			
Micronesia	■									■
Moldova		■					■			
Mongolia										
Montenegro							■			
Morocco	■			■			■			
Mozambique	■									
Namibia										
Nepal										
Netherlands	■									
New Zealand		●				■				
Nicaragua				■	■			■		
Niger	■	■								
Nigeria				■				■	■	
Norway			●							
Oman										
Pakistan							■	■		
Palau	●									
Panama					■					

■ Positive reform
● Negative reform

Economy	Starting a business	Dealing with licenses	Employing workers	Registering property	Getting credit	Protecting investors	Paying taxes	Trading across borders	Enforcing contracts	Closing a business
	REFORMS IN 2005/06									
Papua New Guinea										
Paraguay							■			
Peru	■				■	■			■	●
Philippines										
Poland						■				
Portugal	■									
Puerto Rico										■
Romania		■	■		■	■		■		■
Russia	■						■			
Rwanda	■						■		■	
Samoa										
São Tomé and Principe										
Saudi Arabia	■									
Senegal							■			
Serbia			●		■			■		■
Seychelles				■						
Sierra Leone							■			
Singapore										
Slovakia									■	■
Slovenia										
Solomon Islands										
South Africa				■						
Spain		■		■						
Sri Lanka							●			
St. Kitts and Nevis										
St. Lucia										
St. Vincent and the Grenadines										
Sudan							■			
Suriname										
Swaziland	●			■						
Sweden						■				
Switzerland	■						■			
Syria	■							■		
Taiwan, China										
Tajikistan										
Tanzania	■			■		■		■		
Thailand					■					
Timor-Leste		●								
Togo				●				■		
Tonga										
Trinidad and Tobago										
Tunisia						■				
Turkey							■			
Uganda	■			●						
Ukraine	■	■								
United Arab Emirates										
United Kingdom						■				
United States										■
Uruguay	■				■					
Uzbekistan							●			●
Vanuatu										
Venezuela				●	●			●		
Vietnam		■	■							
West Bank and Gaza										
Yemen							■			
Zambia										
Zimbabwe			●							