

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 complexity of regulation, such as the number of procedures to start a business or to register and transfer commercial property. Second, they gauge the time and cost to achieve a regulatory goal or comply with regulation, 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 range of assets that can be used as collateral according to secured transactions laws. Fourth, a set of

indicators documents the tax burden on businesses. Finally, a set of data covers different aspects of employment regulation. The 11 sets of indicators measured in *Doing Business* were added over time, and the sample of economies expanded (table 21.1).

The data for all sets of indicators in *Doing Business 2014* are for June 2013.¹

METHODOLOGY

The *Doing Business* data are collected in a standardized way. To start, the *Doing Business* team, with academic advisers, designs a questionnaire. The questionnaire uses a simple business case to ensure comparability across economies

TABLE 21.1 Topics and economies covered by each *Doing Business* report

Topic	DB 2004	DB 2005	DB 2006	DB 2007	DB 2008	DB 2009	DB 2010	DB 2011	DB 2012	DB 2013	DB 2014
Getting electricity											
Dealing with construction permits											
Trading across borders											
Paying taxes											
Protecting investors											
Registering property											
Getting credit											
Resolving insolvency											
Enforcing contracts											
Employing workers											
Starting a business											
Number of economies	133	145	155	175	178	181	183	183	183	185	189

Note: Data for the economies added to the sample each year are back-calculated to the previous year. The exception is Kosovo, which was added to the sample after it became a member of the World Bank Group.

and over time—with assumptions about the legal form of the business, its size, its location and the nature of its operations. Questionnaires are administered to more than 10,200 local experts, including lawyers, business consultants, accountants, freight forwarders, government officials and other professionals routinely administering or advising on legal and regulatory requirements (table 21.2). These experts have several rounds of interaction with the *Doing Business* team, involving conference calls, written correspondence and visits by the team. For *Doing Business 2014* team members visited 33 economies to verify data and recruit respondents. The data from questionnaires are subjected to numerous rounds of verification, leading 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; *Doing Business* is not a statistical survey, and 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. Because standard assumptions are used

ECONOMY CHARACTERISTICS

Gross national income per capita

Doing Business 2014 reports 2012 income per capita as published in the World Bank's *World Development Indicators 2013*. Income is calculated using the Atlas method (current U.S. dollars). For cost indicators expressed as a percentage of income per capita, 2012 gross national income (GNI) in U.S. dollars is used as the denominator. GNI data were not available from the World Bank for Afghanistan, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Djibouti, the Islamic Republic of Iran, Kuwait, Libya, Myanmar, New Zealand, Oman, San Marino, the Syrian Arab Republic, West Bank and Gaza, and the Republic of Yemen. In these cases GDP or GNP per capita data and growth rates from other sources, such as the International Monetary Fund's World Economic Outlook database and the Economist Intelligence Unit, were used.

Region and income group

Doing Business uses the World Bank regional and income group classifications, available at <http://data.worldbank.org/about/country-classifications>. The World Bank does not assign regional classifications to high-income economies. For the purpose of the *Doing Business* report, high-income OECD economies are assigned the "regional" classification *OECD high income*. Figures and tables presenting regional averages include economies from all income groups (low, lower middle, upper middle and high income).

Population

Doing Business 2014 reports midyear 2012 population statistics as published in *World Development Indicators 2013*.

in the data collection, comparisons and benchmarks are valid across economies. Finally, the data not only highlight the extent of specific regulatory obstacles to business but also identify their source and point to what might be reformed.

LIMITS TO WHAT IS MEASURED

The *Doing Business* methodology has 5 limitations that should be considered when interpreting the data. First, the

TABLE 21.2 How many experts does *Doing Business* consult?

Indicator set	Respondents	Economies with given number of respondents (%)		
		1–2	3–5	5+
Starting a business	1,831	5	28	67
Dealing with construction permits	956	25	37	38
Getting electricity	811	25	50	24
Registering property	1,189	17	35	47
Getting credit	1,453	7	33	60
Protecting investors	1,110	24	37	40
Paying taxes	1,186	8	39	52
Trading across borders	1,040	20	49	31
Enforcing contracts	1,248	18	39	43
Resolving insolvency	1,047	23	37	40
Employing workers	1,155	19	40	42
Total	13,026	17	39	44

collected data refer to businesses in the economy's largest business city (which in some economies differs from the capital) and may not be representative of regulation in other parts of the economy. To address this limitation, subnational *Doing Business* indicators were created (box 21.1). Second, the data often focus on a specific business form—generally a limited liability company (or its legal equivalent) 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 scenario 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 standardized case.

Finally, 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. Alternatively, the business may choose to disregard some burdensome procedures. For both reasons the time delays reported in *Doing Business 2014* would differ from the

recollection of entrepreneurs reported in the World Bank Enterprise Surveys or other perception surveys.

CHANGES IN WHAT IS MEASURED

The methodology for 2 indicator sets—trading across borders and paying taxes—was updated this year. For trading across borders, documents that are required purely for purposes of preferential treatment are no longer included in the list of documents (for example, a certificate of origin if the use is only to qualify for a preferential tariff rate under trade agreements). For paying taxes, the value of fuel taxes is no longer included in the total tax rate because of the difficulty of computing these taxes in a consistent way across all economies covered. The fuel tax amounts are in most cases very small, and measuring these amounts is often complicated because they depend on fuel consumption. Fuel taxes continue to be counted in the number of payments.

In a change involving several indicator sets, the rule establishing that each procedure must take at least 1 day was removed for procedures that can be fully completed online in just a few hours. This change affects the time indicator for starting a business, dealing with construction permits and registering property.² For procedures that can be fully

completed online, the duration is now set at half a day rather than a full day.

The threshold for the total tax rate introduced in 2011 for the purpose of calculating the ranking on the ease of paying taxes was updated. All economies with a total tax rate below the threshold (which is calculated and adjusted on a yearly basis) receive the same ranking on the total tax rate indicator. The threshold is not based on any economic theory of an “optimal tax rate” that minimizes distortions or maximizes efficiency in the tax system of an economy overall. Instead, it is mainly empirical in nature, set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the paying taxes indicators. This reduces the bias in the indicators toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardized case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology). This year the threshold is 25.5%.

DATA CHALLENGES AND REVISIONS

Most laws and regulations underlying the *Doing Business* data are available on the *Doing Business* website at <http://www.doingbusiness.org>. All the sample questionnaires and the details underlying the indicators are also published on the website. Questions on the methodology and challenges to data can be submitted through the website's “Ask a Question” function at <http://www.doingbusiness.org>.

Doing Business publishes 10,584 indicators (56 indicators per country) each year. To create these indicators, the team measures more than about 58,000 data points, each of which is made available on the *Doing Business* website. Historical data for each indicator and economy are available on the website, beginning with the first year the indicator or economy was included in the report. To provide a comparable time series for research, the data set is back-calculated to adjust for

BOX 21.1 Subnational *Doing Business* indicators

This year *Doing Business* completed subnational studies in Colombia, Italy and the city of Hargeisa (Somaliland) and is currently updating indicators in Egypt, Mexico and Nigeria. *Doing Business* also published regional studies for the g7+ and the East African Community. The g7+ group is a country-owned and country-led global mechanism established in April 2010 to monitor, report and draw attention to the unique challenges faced by fragile states. The member countries included in the report are Afghanistan, Burundi, the Central African Republic, Chad, the Comoros, the Democratic Republic of Congo, Côte d'Ivoire, Guinea, Guinea-Bissau, Haiti, Liberia, Papua New Guinea, Sierra Leone, the Solomon Islands, South Sudan, Timor-Leste and Togo.

The subnational studies point to differences in business regulation and its implementation—as well as in the pace of regulatory reform—across cities in the same economy. For several economies subnational studies are now periodically updated to measure change over time or to expand geographic coverage to additional cities. This year that is the case for all the subnational studies published.

changes in methodology and any revisions in data due to corrections. The website also makes available all original data sets used for background papers. The correction rate between *Doing Business 2013* and *Doing Business 2014* is 8.5%.³

Governments submit queries on the data and provide new information to *Doing Business*. During the *Doing Business 2014* production cycle the team received 82 such queries from governments.

STARTING A BUSINESS

Doing Business records all procedures officially required, or commonly done in practice, for an entrepreneur to start up and formally operate an industrial or commercial business, as well as the time and cost to complete these procedures and the paid-in minimum capital requirement (figure 21.1). These procedures include obtaining all necessary licenses and permits and completing any required notifications, verifications or inscriptions for the company and employees with relevant authorities. The ranking on the ease of starting a business is the simple average of the percentile rankings on its component indicators (figure 21.2).

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 to comply with each procedure under normal circumstances and the paid-in minimum capital requirement. Subsequently, local incorporation lawyers, notaries and

government officials complete and verify the data.

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 the entrepreneur will pay no bribes. If answers by local experts differ, inquiries continue until the data are reconciled.

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

Assumptions about the business

The business:

- Is a limited liability company (or its legal equivalent). If there is more than one type of limited liability company in the economy, 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 economy's largest business city (see table 21A.1 at the end of the data notes).
- 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, paid in cash.
- Performs general industrial or commercial activities, such as the production or sale to the public of products

or services. The business does not perform foreign trade activities and does not handle products subject to a special tax regime, for example, liquor or tobacco. It is not using heavily polluting production processes.

- Leases the commercial plant or offices and is not a proprietor of real estate.
- Does not qualify for investment incentives or any special benefits.
- Has at least 10 and up to 50 employees 1 month after the commencement of operations, all of them domestic 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 founders with external parties (for example, government agencies, lawyers, auditors or 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 or at different counters are counted separately. If founders have to visit the same office several times for different sequential procedures, each is counted separately. 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 or solicited by the majority of entrepreneurs. If the services

FIGURE 21.1 What are the time, cost, paid-in minimum capital and number of procedures to get a local limited liability company up and running?

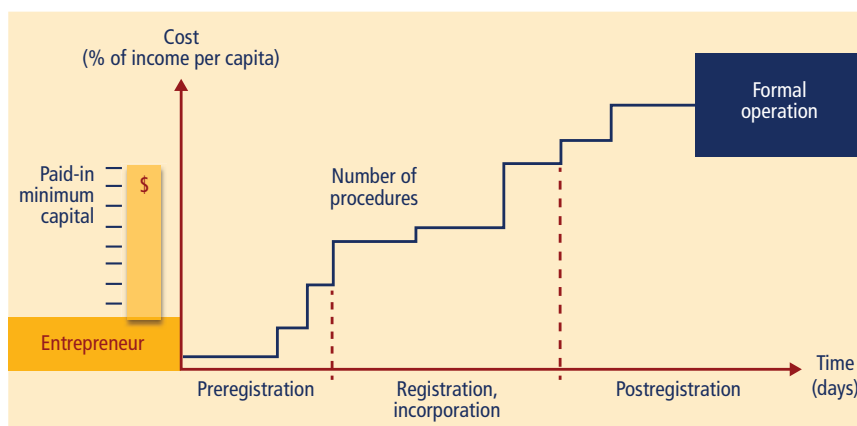
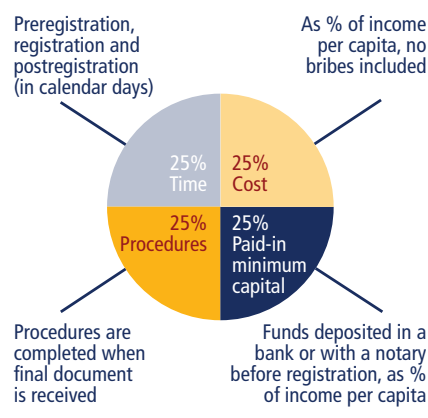


FIGURE 21.2 Starting a business: getting a local limited liability company up and running
Rankings are based on 4 indicators



of professionals are required, procedures conducted by such professionals on behalf of the company are counted separately. Each electronic procedure is counted separately. If 2 procedures can be completed through the same website but require separate filings, they are counted as 2 separate procedures.

Both pre- and postincorporation procedures that are officially required for an entrepreneur to formally operate a business are recorded (table 21.3).

Procedures required for official correspondence or transactions with public agencies are also included. For example, if a company seal or stamp is required on official documents, such as tax declarations, obtaining the seal or stamp 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 4 criteria: they are legal, they are available to the general public, they are used by the majority of companies, 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 in practice to complete a procedure with minimum follow-up with government agencies and no extra payments. It is assumed that the minimum time required for each procedure is 1 day, except for procedures that can be fully completed online, for which the time required is recorded as half a day. Although procedures may take place simultaneously, they cannot start on the same day (that is, simultaneous procedures start on consecutive days), again with the exception of procedures that can be fully completed online. A procedure is considered completed once the company has received the final incorporation 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 if that option is more beneficial to the economy's ranking. 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 requirements 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 economy's income per capita. It includes all official fees and fees for legal or

professional services if such services are required by law. Fees for purchasing and legalizing company books are included if these transactions are required by law. Although value added tax registration can be counted as a separate procedure, value added tax is not part of the incorporation cost. 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 or with a notary before registration and up to 3 months following incorporation and is recorded as a percentage of the economy's income per capita. The amount is typically specified in the commercial code or the company law. Many economies require minimum capital 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 Turkey in June 2013, for example, the minimum capital requirement was 10,000 Turkish liras, of which one-fourth needed to be paid before registration. The paid-in minimum capital recorded for Turkey is therefore 2,500 Turkish liras, or 14.35% of income per capita.

The data details on starting a business can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov and others (2002) and is adopted here with minor changes.

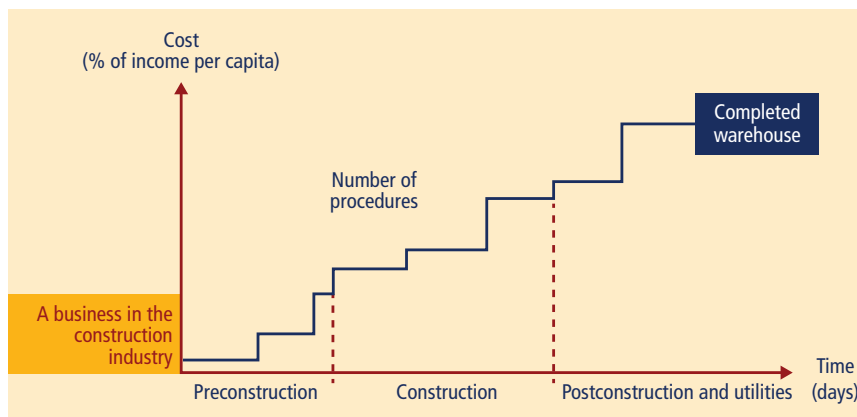
DEALING WITH CONSTRUCTION PERMITS

Doing Business records all procedures required for a business in the construction industry to build a warehouse (figure 21.3). These procedures include obtaining and submitting all relevant project-specific documents (for example, building plans,

TABLE 21.3 What do the starting a business indicators measure?

Procedures to legally start and operate a company (number)
Preregistration (for example, name verification or reservation, notarization)
Registration in the economy's largest business city
Postregistration (for example, social security registration, company seal)
Time required to complete each procedure (calendar days)
Does not include time spent gathering information
Each procedure starts on a separate day (2 procedures cannot start on the same day). Procedures that can be fully completed online are an exception to this rule.
Procedure considered completed once final incorporation document is received
No prior contact with officials
Cost required to complete each procedure (% of income per capita)
Official costs only, no bribes
No professional fees unless services required by law
Paid-in minimum capital (% of income per capita)
Funds deposited in a bank or with a notary before registration (or within 3 months)

FIGURE 21.3 What are the time, cost and number of procedures to comply with formalities to build a warehouse?



site maps and certificates of urbanism) to the authorities; hiring external third-party supervisors, engineers or inspectors (if necessary); obtaining all necessary clearances, licenses, permits and certificates; submitting all required notifications; and requesting and receiving all necessary inspections (unless completed by a private, third-party inspector). *Doing Business* also records procedures for obtaining connections for water, sewerage and a fixed landline. Procedures necessary to register the property so that it can be used as collateral or transferred to another entity are also counted. The questionnaire divides the process of building a warehouse into distinct procedures and solicits data for calculating the time and cost to complete

each procedure. The ranking on the ease of dealing with construction permits is the simple average of the percentile rankings on its component indicators (figure 21.4).

Information is collected from experts in construction licensing, including architects, civil engineers, construction lawyers, construction firms, utility service providers and public officials who deal with building regulations, including approvals, permit issuance and inspections. To make the data comparable across economies, several assumptions about the business, the warehouse project and the utility connections are used.

Assumptions about the construction company

The business (BuildCo):

- Is a limited liability company.
- Operates in the economy’s largest business city (see table 21A.1).
- Is 100% domestically and privately owned.
- Has 5 owners, none of whom is a legal entity.
- Is fully licensed and insured to carry out construction projects, such as building warehouses.
- Has 60 builders and other employees, all of them nationals with the technical expertise and professional experience necessary to obtain construction permits and approvals.
- Has at least 1 employee who is a licensed architect or engineer and registered with the local association of

architects or engineers.

- Has paid all taxes and taken out all necessary insurance applicable to its general business activity (for example, accidental insurance for construction workers and third-person liability).
- Owns the land on which the warehouse is built.

Assumptions about the warehouse

The warehouse:

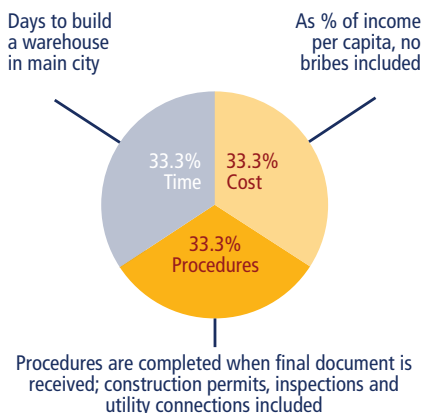
- Will be used for general storage activities, such as storage of books or stationery. The warehouse will not be used for any goods requiring special conditions, such as food, chemicals or pharmaceuticals.
- Has 2 stories, both above ground, with a total surface of 1,300.6 square meters (14,000 square feet). Each floor is 3 meters (9 feet, 10 inches) high.
- Has road access and is located in the periurban area of the economy’s largest business city (that is, on the fringes of the city but still within its official limits).
- Is not located in a special economic or industrial zone. The zoning requirements for warehouses are met by building in an area where similar warehouses can be found.
- Is located on a land plot of 929 square meters (10,000 square feet) that 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 prepared by a licensed architect.
- Will include all technical equipment required to make the warehouse fully operational.
- Will take 30 weeks to construct (excluding all delays due to administrative and regulatory requirements).

Assumptions about the utility connections

The water and sewerage connection:

- Is 10 meters (32 feet, 10 inches) from the existing water source and sewer tap.
- Does not require water for fire protection reasons; a fire extinguishing

FIGURE 21.4 Dealing with construction permits: building a warehouse. Rankings are based on 3 indicators



Procedures are completed when final document is received; construction permits, inspections and utility connections included

system (dry system) will be used instead. If a wet fire protection system is required by law, it is assumed that the water demand specified below also covers the water needed for fire protection.

- Has an average water use of 662 liters (175 gallons) a day and an average wastewater flow of 568 liters (150 gallons) a day.
- Has a peak water use of 1,325 liters (350 gallons) a day and a peak wastewater flow of 1,136 liters (300 gallons) a day.
- Will have a constant level of water demand and wastewater flow throughout the year.

The telephone connection:

- Is 10 meters (32 feet, 10 inches) from the main telephone network.
- Is a fixed landline.

Procedures

A procedure is any interaction of the company's employees or managers, or any party acting on behalf of the company, with external parties, including government agencies, notaries, the land registry, the cadastre, utility companies and public inspectors—or the hiring of private inspectors and technical experts apart from in-house architects and engineers. Interactions between company employees, such as development of the warehouse plans and inspections conducted by employees, are not counted as procedures. But interactions necessary to obtain any plans, drawings or other documents from external parties, or to have such documents approved or stamped by external parties, are counted as procedures. Procedures that the company undergoes to connect to water, sewerage and telephone services are included. All procedures that are legally required, or that are done in practice by the majority of companies, to build a warehouse are counted, even if they may be avoided in exceptional cases (table 21.4).

Time

Time is recorded in calendar days. The measure captures the median duration that local experts indicate is necessary to complete a procedure in practice. It is assumed that the minimum time required for

each procedure is 1 day, except for procedures that can be fully completed online, for which the time required is recorded as half a day. Although procedures may take place simultaneously, they cannot start on the same day (that is, simultaneous procedures start on consecutive days), again with the exception of procedures that can be fully completed online. If a procedure can be accelerated legally for an additional cost and the accelerated procedure is used by the majority of companies, 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 economy's income per capita. Only

official costs are recorded. All the fees associated with completing the procedures to legally build a warehouse are recorded, including those associated with obtaining land use approvals and preconstruction design clearances; receiving inspections before, during and after construction; obtaining utility connections; and registering the warehouse property. Nonrecurring taxes required for the completion of the warehouse project are also recorded. Sales taxes (such as value added tax) or capital gains taxes are not recorded. Nor are deposits that must be paid up front and are later refunded. The building code, information from local experts and specific regulations and fee schedules are used as sources for costs. If several local partners provide different estimates, the median reported value is used.

The data details on dealing with construction permits can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list.

TABLE 21.4 What do the dealing with construction permits indicators measure?

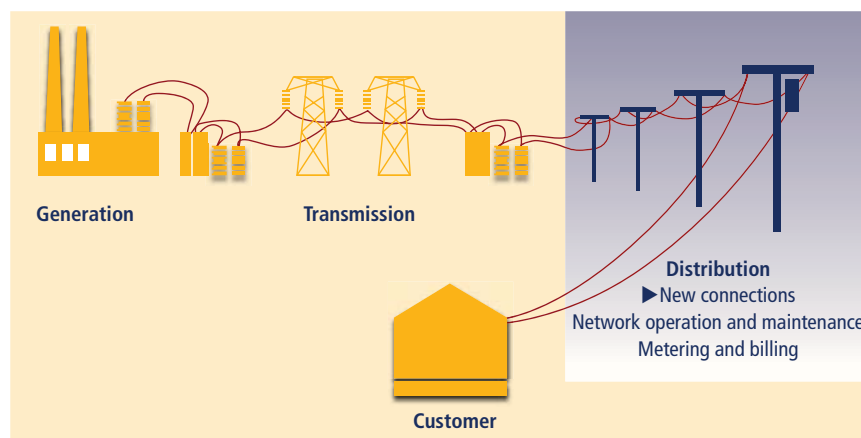
Procedures to legally build a warehouse (number)
Submitting all relevant documents and obtaining all necessary clearances, licenses, permits and certificates
Submitting all required notifications and receiving all necessary inspections
Obtaining utility connections for water, sewerage and a land telephone line
Registering the warehouse after its completion (if required for use as collateral or for transfer of the warehouse)
Time required to complete each procedure (calendar days)
Does not include time spent gathering information
Each procedure starts on a separate day. Procedures that can be fully completed online are an exception to this rule.
Procedure considered completed once final document is received
No prior contact with officials
Cost required to complete each procedure (% of income per capita)
Official costs only, no bribes

GETTING ELECTRICITY

Doing Business records all procedures required for a business to obtain a permanent electricity connection and supply for a standardized warehouse (figure 21.5). These procedures include applications and contracts with electricity utilities, all necessary inspections and clearances from the utility and other agencies and the external and final connection works. The questionnaire divides the process of getting an electricity connection into distinct procedures and solicits data for calculating the time and cost to complete each procedure. The ranking on the ease of getting electricity is the simple average of the percentile rankings on its component indicators (figure 21.6).

Data are collected from the electricity distribution utility, then completed and verified by electricity regulatory agencies and independent professionals such as electrical engineers, electrical contractors and construction companies. The electricity distribution utility consulted is the one serving the area (or areas) where warehouses are located. If there is a choice of distribution utilities, the one serving the largest number of customers is selected.

FIGURE 21.5 *Doing Business* measures the connection process at the level of distribution utilities



To make the data comparable across economies, several assumptions about the warehouse and the electricity connection are used.

Assumptions about the warehouse

The warehouse:

- Is owned by a local entrepreneur.
- Is located in the economy's largest business city (see table 21A.1).
- Is located within the city's official limits and in an area where other warehouses are located (a nonresidential area).
- Is not located in a special economic or investment zone; that is, the electricity connection is not eligible for subsidization or faster service under a special investment promotion regime. If several options for location are available, the warehouse is located where electricity is most easily available.
- Has road access. The connection works involve the crossing of a road (for excavation, overhead lines and the like), but they are all carried out on public land; that is, there is no crossing onto another owner's private property.
- Is located in an area with no physical constraints. For example, the property is not near a railway.
- Is used for storage of refrigerated goods.
- Is a new construction (that is, there was no previous construction on the land where it is located). It is being connected to electricity for the first time.

- Has 2 stories, both above ground, with a total surface area of approximately 1,300.6 square meters (14,000 square feet). The plot of land on which it is built is 929 square meters (10,000 square feet).

Assumptions about the electricity connection

The electricity connection:

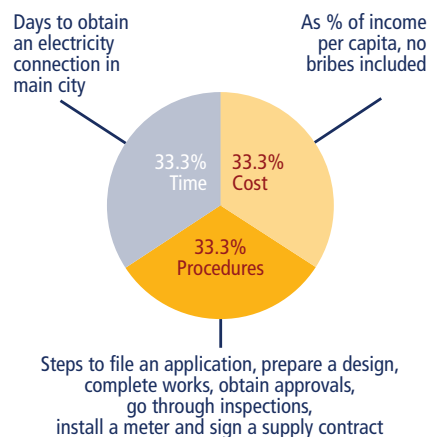
- Is a permanent one.
- Is a 3-phase, 4-wire Y, 140-kilovolt-ampere (kVA) (subscribed capacity) connection.
- Is 150 meters long. The connection is to either the low-voltage or the medium-voltage distribution network and either overhead or underground, whichever is more common in the economy and in the area where the warehouse is located. The length of any connection in the customer's private domain is negligible.
- Involves the installation of only one electricity meter. The monthly electricity consumption will be 0.07 gigawatt-hour (GWh). The internal electrical wiring has already been completed.

Procedures

A procedure is defined as any interaction of the company's employees or its main electrician or electrical engineer (that is, the one who may have done the internal wiring) with external parties such as the electricity distribution utility, electricity

FIGURE 21.6 Getting electricity: obtaining an electricity connection

Rankings are based on 3 indicators



supply utilities, government agencies, electrical contractors and electrical firms. Interactions between company employees and steps related to the internal electrical wiring, such as the design and execution of the internal electrical installation plans, are not counted as procedures. Procedures that must be completed with the same utility but with different departments are counted as separate procedures (table 21.5).

The company's employees are assumed to complete all procedures themselves unless the use of a third party is mandated (for example, if only an electrician registered with the utility is allowed to submit an application). If the company can, but is not required to, request the services of professionals (such as a private firm rather than the utility for the external works), these procedures are recorded if they are commonly done. For all procedures, only the most likely cases (for example, more than 50% of the time the utility has the material) and those followed in practice for connecting a warehouse to electricity are counted.

Time

Time is recorded in calendar days. The measure captures the median duration that the electricity utility and experts indicate is necessary in practice, rather than required by law, to complete a procedure with minimum follow-up and no extra payments. It is also 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 (that is, simultaneous procedures start on consecutive days). It is assumed that the company does not waste time and commits to completing each remaining procedure without delay. The time that the company spends on gathering information is ignored. It is assumed that the company is aware of all electricity connection requirements and their sequence from the beginning.

Cost

Cost is recorded as a percentage of the economy's income per capita. Costs are recorded exclusive of value added tax. All the fees and costs associated with completing the procedures to connect a warehouse to electricity are recorded, including those related to obtaining clearances from government agencies, applying for the connection, receiving inspections of both the site and the internal wiring, purchasing material, getting the

actual connection works and paying a security deposit. Information from local experts and specific regulations and fee schedules are used as sources for costs. If several local partners provide different estimates, the median reported value is used. In all cases the cost excludes bribes.

Security deposit

Utilities require security deposits as a guarantee against the possible failure of customers to pay their consumption bills. For this reason the security deposit for a new customer is most often calculated as a function of the customer's estimated consumption.

Doing Business does not record the full amount of the security deposit. If the deposit is based on the customer's actual consumption, this basis is the one assumed in the case study. Rather than the full amount of the security deposit, *Doing Business* records the present value of the losses in interest earnings experienced by the customer because the utility holds the security deposit over a prolonged period, in most cases until the end of the contract (assumed to be after 5 years). In cases where the security deposit is used to cover the first monthly consumption bills, it is not recorded. To calculate the present value of the lost interest earnings, the end-2012 lending rates from the International Monetary Fund's *International Financial Statistics* are used. In cases where the security deposit is returned with interest, the difference between the lending rate and the interest paid by the utility is used to calculate the present value.

In some economies the security deposit can be put up in the form of a bond: the company can obtain from a bank or an insurance company a guarantee issued on the assets it holds with that financial institution. In contrast to the scenario in which the customer pays the deposit in cash to the utility, in this scenario the company does not lose ownership control over the full amount and can continue using it. In return the company will pay the bank a commission for obtaining the bond. The commission charged may vary depending on the credit standing of the company. The best possible credit standing and thus the lowest possible commission are assumed. Where a bond

can be put up, the value recorded for the deposit is the annual commission times the 5 years assumed to be the length of the contract. If both options exist, the cheaper alternative is recorded.

In Honduras in June 2013 a customer requesting a 140-kVA electricity connection would have had to put up a security deposit of 126,894 Honduran lempiras (L) in cash or check, and the deposit would have been returned only at the end of the contract. The customer could instead have invested this money at the prevailing lending rate of 18.45%. Over the 5 years of the contract this would imply a present value of lost interest earnings of L 72,475. In contrast, if the customer chose to settle the deposit with a bank guarantee at an annual rate of 2.5%, the amount lost over the 5 years would be just L 15,862.

The data details on getting electricity can be found for each economy at <http://www.doingbusiness.org>.

TABLE 21.5 What do the getting electricity indicators measure?

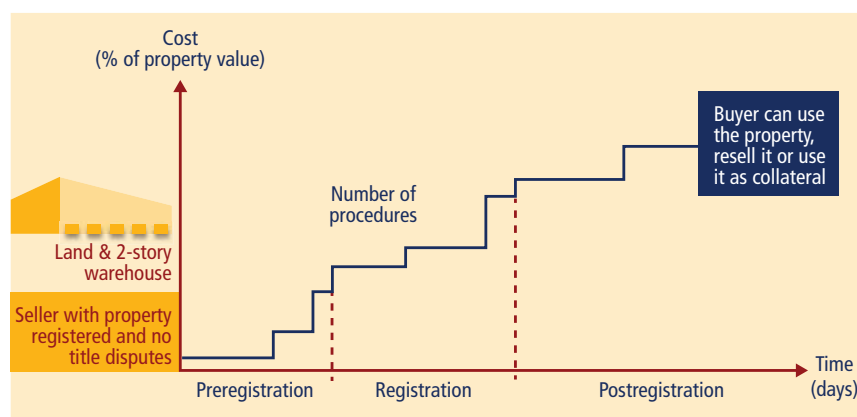
Procedures to obtain an electricity connection (number)
Submitting all relevant documents and obtaining all necessary clearances and permits
Completing all required notifications and receiving all necessary inspections
Obtaining external installation works and possibly purchasing material for these works
Concluding any necessary supply contract and obtaining final supply
Time required to complete each procedure (calendar days)
Is at least 1 calendar day
Each procedure starts on a separate day
Does not include time spent gathering information
Reflects the time spent in practice, with little follow-up and no prior contact with officials
Cost required to complete each procedure (% of income per capita)
Official costs only, no bribes
Value added tax excluded

REGISTERING PROPERTY

Doing Business records the full sequence of procedures necessary for a business (buyer) to purchase a property from another business (seller) and to transfer the property title to the buyer's name so that the buyer can use the property for expanding its business, use the property as collateral in taking new loans or, if necessary, sell the property to another business. The process starts with obtaining the necessary documents, such as a copy of the seller's title if necessary, and conducting due diligence if required. The transaction is considered complete when it is opposable to third parties and when the buyer can use the property, use it as collateral for a bank loan or resell it (figure 21.7). The ranking on the ease of registering property is the simple average of the percentile rankings on its component indicators (figure 21.8).

Every procedure required by law or necessary in practice 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, notaries and property registries provide information on procedures as well as the

FIGURE 21.7 What are the time, cost and number of procedures required to transfer property between 2 local companies?



time and cost to complete each of them. The registering property indicators do not measure the accessibility of property registration systems, the legal security offered by formal registration, the use of informal property registration systems or the equity of land policies.

To make the data comparable across economies, several assumptions about the parties to the transaction, the property and the procedures are used.

Assumptions about the parties

The parties (buyer and seller):

- Are limited liability companies.
- Are located in the periurban area of the economy's largest business city (see table 21A.1).
- Are 100% domestically and privately owned.
- Have 50 employees each, all of whom are nationals.
- Perform general commercial activities.

Assumptions about the property

The property:

- Has a value of 50 times income per capita. The sale price equals the value.
- Is fully owned by the seller.
- Has no mortgages attached and has been under the same ownership for the past 10 years.
- Is registered in the land registry or cadastre, or both, and is free of title disputes.

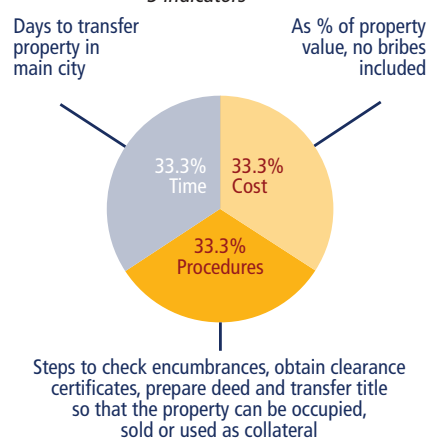
- Is located in a periurban commercial zone, and no rezoning is required.
- Consists of land and a building. The land area is 557.4 square meters (6,000 square feet). A 2-story warehouse of 929 square meters (10,000 square feet) is located on the land. The warehouse is 10 years old, is in good condition and complies with all safety standards, building codes and other legal requirements. It has no heating system. 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, 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

FIGURE 21.8 Registering property: transfer of property between 2 local companies

Rankings are based on 3 indicators



they may be avoided in exceptional cases (table 21.6). It is assumed that the buyer follows the fastest legal option available and used by the majority of property owners. Although the buyer may use lawyers or other professionals where necessary in the registration process, it is assumed that the buyer 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, notaries or registry officials indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is 1 day, except for procedures that can be fully completed online, for which the time required is recorded as half a day. Although procedures may take place simultaneously, they cannot start on the same day, again with the exception of procedures that can be fully completed online. 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 majority of property owners 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 requirements 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. Both costs borne by the buyer and those borne by the seller are included. If cost estimates differ among sources, the median reported value is used.

The data details on registering property can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list.

TABLE 21.6 What do the registering property indicators measure?
Procedures to legally transfer title on immovable property (number)
Preregistration procedures (for example, checking for liens, notarizing sales agreement, paying property transfer taxes)
Registration procedures in the economy's largest business city
Postregistration procedures (for example, filing title with municipality)
Time required to complete each procedure (calendar days)
Does not include time spent gathering information
Each procedure starts on a separate day. Procedures that can be fully completed online are an exception to this rule.
Procedure considered completed once final document is received
No prior contact with officials
Cost required to complete each procedure (% of property value)
Official costs only, no bribes
No value added or capital gains taxes included

GETTING CREDIT

Doing Business measures the legal rights of borrowers and lenders with respect to secured transactions through one set of indicators and the sharing of credit information through another. The first set of indicators measures whether certain features that facilitate lending exist within the applicable collateral and bankruptcy laws. The second set measures the coverage, scope and accessibility of credit information available through public credit registries and private credit bureaus (figure 21.9). The ranking on the ease of getting credit is based on the percentile rankings on the sum of its component indicators: the depth of credit information index and the strength of legal rights index (figure 21.10).

Legal rights

The data on the legal rights of borrowers and lenders are gathered through a questionnaire administered to financial lawyers and verified through analysis of laws and regulations as well as public sources of information on collateral and bankruptcy laws. Questionnaire responses are verified through several rounds of follow-up communication with respondents as well as by contacting third parties and consulting public sources. The questionnaire data are confirmed through teleconference calls or on-site visits in all economies.

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 (table 21.7). Two case scenarios, case A and case B, are used to determine the scope of the secured transactions system. The case scenarios involve a secured borrower, the incorporated company ABC, and a secured lender, BizBank. For example, in some economies the legal framework for secured transactions will allow only case A or case B to apply (not both). Both cases examine the same set of legal provisions relating to the use of movable collateral.

Several assumptions about the secured borrower and lender are used:

- ABC is a domestically incorporated, limited liability company.
- The company has up to 50 employees.
- ABC has its headquarters and only base of operations in the economy's largest business city (see table 21A.1).
- Both ABC and BizBank are 100% domestically owned.

The case scenarios also involve assumptions. In case A, as collateral for the loan, ABC grants BizBank a nonpossessory security interest in one category of movable assets, for example, its machinery or its inventory. ABC wants to keep both possession and ownership of the collateral. In economies where the law does not allow nonpossessory security interests in movable property, ABC and BizBank use a fiduciary transfer-of-title arrangement (or a similar substitute for nonpossessory security interests). The strength of legal rights index does not cover functional equivalents

FIGURE 21.9 Do lenders have credit information on entrepreneurs seeking credit? Is the law favorable to borrowers and lenders using movable assets as collateral?

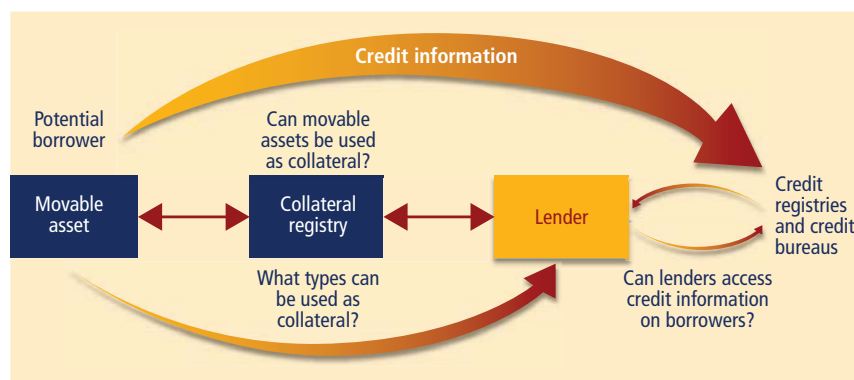
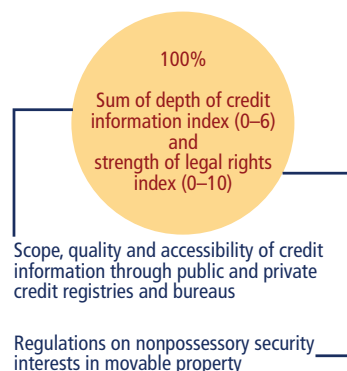


FIGURE 21.10 Getting credit: collateral rules and credit information
Rankings are based on 2 indicators



Note: Private bureau coverage and public registry coverage are measured but do not count for the rankings.

to security over movable assets (for example, leasing or reservation of title).

In case B, ABC grants BizBank a business charge, enterprise charge, floating charge or any charge that gives BizBank a security interest over ABC's combined movable assets (or as much of ABC's movable assets as possible). ABC keeps ownership and possession of the assets.

TABLE 21.7 What do the getting credit indicators measure?

Strength of legal rights index (0–10)
Protection of rights of borrowers and lenders through collateral laws
Protection of secured creditors' rights through bankruptcy laws
Depth of credit information index (0–6)
Scope and accessibility of credit information distributed by public credit registries and private credit bureaus
Public credit registry coverage (% of adults)
Number of individuals and firms listed in a public credit registry as percentage of adult population
Private credit bureau coverage (% of adults)
Number of individuals and firms listed in largest private credit bureau as percentage of adult population

The strength of legal rights index includes 8 aspects related to legal rights in collateral law and 2 aspects in bankruptcy law. A score of 1 is assigned for each of the following features of the laws:

- Any business may use movable assets as collateral while keeping possession of the assets, and any financial institution may accept such assets as collateral.
- The law allows a business to grant a nonpossessory security right in a single category of movable assets (such as accounts receivable or inventory), without requiring a specific description of the collateral.
- The law allows a business to grant a nonpossessory security right in substantially all its movable assets, without requiring a specific description of the collateral.
- A security right may be given over future or after-acquired assets and may extend automatically to the products, proceeds or replacements of the original assets.
- A general description of debts and obligations is permitted in the collateral agreement and in registration documents; all types of debts and obligations can be secured between the parties, and the collateral agreement can include a maximum amount for which the assets are encumbered.
- A collateral registry or registration institution for security interests over movable property is in operation, unified geographically and by asset type, with an electronic database indexed by debtors' names.
- Secured creditors are paid first (for example, before tax claims and employee claims) when a debtor defaults outside an insolvency procedure.
- Secured creditors are paid first (for example, before tax claims and employee claims) when a business is liquidated.
- Secured creditors either are not subject to an automatic stay or moratorium on enforcement procedures when a debtor enters a court-supervised reorganization procedure, or the law provides secured creditors with grounds for relief from an automatic stay or moratorium (for example, if the movable property is in danger) or sets a time limit for the automatic stay.

- The law allows parties to agree in a collateral agreement that the lender may enforce its security right out of court.

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

Credit information

The data on credit information sharing are built in 2 stages. First, banking supervision authorities and public information sources are surveyed to confirm the presence of a public credit registry or private credit bureau. Second, when applicable, a detailed questionnaire on the public credit registry's or private credit bureau's structure, laws and associated rules is administered to the entity itself. Questionnaire responses are verified through several rounds of follow-up communication with respondents as well as by contacting third parties and consulting public sources. The questionnaire data are confirmed through teleconference calls or on-site visits in all economies.

Depth of credit information index

The depth of credit information index measures rules and practices affecting the coverage, scope and accessibility of credit information available through either a public credit registry or a private credit bureau. A score of 1 is assigned for each of the following 6 features of the public credit registry or private credit bureau (or both):

- Data on both firms and individuals are distributed.
- Both positive credit information (for example, outstanding loan amounts and pattern of on-time repayments) and negative information (for example, late payments and the number and amount of defaults and bankruptcies) are distributed.
- Data from retailers and utility companies as well as financial institutions are distributed.
- More than 2 years of historical data are distributed. Credit registries and bureaus that erase data on defaults as soon as they are repaid obtain a score of 0 for this indicator.

- Data on loan amounts below 1% of income per capita are distributed. Note that a credit registry or bureau must have a minimum coverage of 1% of the adult population to score a 1 on this indicator.
- By law, borrowers have the right to access their data in the largest credit registry or bureau in the economy.

The index ranges from 0 to 6, with higher values indicating the availability of more credit information, from either a public credit registry or a private credit bureau, to facilitate lending decisions. If the credit registry or bureau is not operational or has a coverage of less than 0.1% of the adult population, the score on the depth of credit information index is 0.

In Lithuania, for example, both a public credit registry and a private credit bureau operate. Both distribute positive and negative information (a score of 1). Both distribute data on firms and individuals (a score of 1). Both distribute more than 2 years of historical data (a score of 1). Although the public credit registry does not distribute data from retailers or utilities, the private credit bureau does do so (a score of 1). Although the public credit registry has a threshold of 1,000 litai, the private credit bureau distributes data on loans of any value (a score of 1). Borrowers have the right to access their data in both the public credit registry and the private credit bureau (a score of 1). Summing across the indicators gives Lithuania a total score of 6.

Public credit registry coverage

The public credit registry coverage indicator reports the number of individuals and firms listed in a public credit registry's database as of January 1, 2013, with information on their borrowing history from the past 5 years. The number is expressed as a percentage of the adult population (the population age 15 and above in 2012 according to the World Bank's *World Development Indicators*). 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 (individuals or firms) in the financial system and facilitates the exchange of credit information among banks and other regulated

financial institutions. If no public registry operates, the coverage value is 0.0%.

Private credit bureau coverage

The private credit bureau coverage indicator reports the number of individuals and firms listed in a private credit bureau's database as of January 1, 2013, with information on their borrowing history from the past 5 years. The number is expressed as a percentage of the adult population (the population age 15 and above in 2012 according to the World Bank's *World Development Indicators*). A private credit bureau is defined as a private firm or nonprofit organization that maintains a database on the creditworthiness of borrowers (individuals or firms) in the financial system and facilitates the exchange of credit information among creditors. Credit investigative bureaus and credit reporting firms that do not directly facilitate information exchange among banks and other financial institutions are not considered. If no private bureau operates, the coverage value is 0.0%.

The data details on getting credit can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov, McLiesh and Shleifer (2007) 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 protections: transparency of related-party 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) (figure 21.11). The data come from a questionnaire administered to corporate and securities lawyers and are based on securities regulations, company laws, civil procedure codes and court rules of evidence. The ranking on the strength of investor protection index is the simple average of the percentile rankings on its component indicators (figure 21.12).

To make the data comparable across economies, 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 economy'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 economy, 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 a supervisory board (applicable to economies with a 2-tier board system) on which 60% of the shareholder-

FIGURE 21.11 How well are minority shareholders protected against self-dealing in related-party transactions?

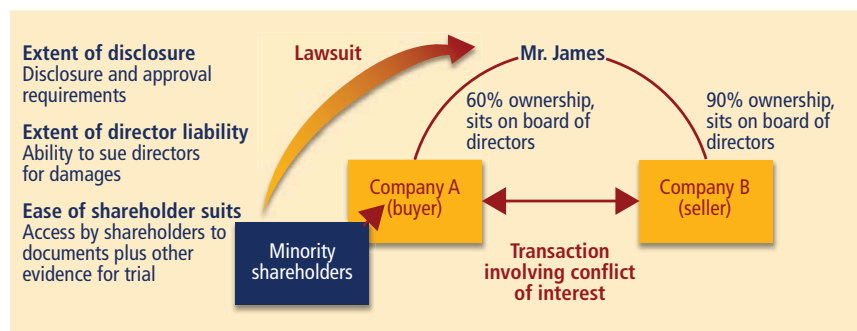
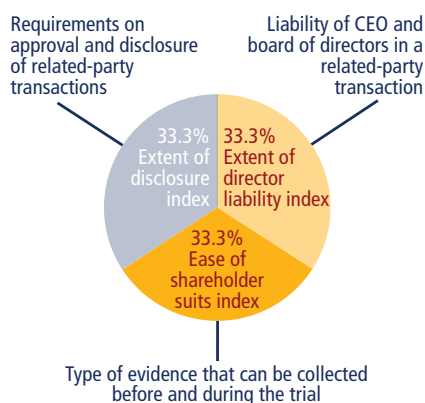


FIGURE 21.12 Protecting investors: minority shareholder rights in related-party transactions
Rankings are based on 3 indicators



elected members have been appointed by Mr. James.

- Is a manufacturing company.
- 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 that Buyer purchase Seller’s unused fleet of trucks to expand Buyer’s distribution of its food products, a proposal to which 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 (that is, the transaction is not fraudulent).
- The transaction causes damages 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 (table 21.8):

- Which 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, the supervisory board or shareholders must vote and Mr. James is permitted to vote; 2 if the board of directors or the supervisory board must vote and Mr. James is not permitted to vote; 3 if shareholders must vote and Mr. James is not permitted to vote.
- Whether immediate disclosure of the transaction to the public, the regulator or the shareholders is required.⁴ A score of 0 is assigned if no disclosure is required; 1 if disclosure on the terms of the transaction is required but not on Mr. James’s conflict of interest; 2 if disclosure on both the terms and Mr. James’s conflict of interest is required.
- 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 is required but not on Mr. James’s conflict of interest; 2 if disclosure on both the terms and Mr. James’s conflict of interest is required.
- Whether disclosure by Mr. James to the board of directors or the supervisory board 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.
- 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 has 7 components:⁵

- Whether a shareholder plaintiff is able to hold Mr. James liable for the 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, bad faith or gross negligence; 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

TABLE 21.8 What do the protecting investors indicators measure?

Extent of disclosure index (0–10)
Approval process for related-party transactions
Disclosure requirements in case of related-party transactions
Extent of director liability index (0–10)
Ability of minority shareholders to file a direct or derivative lawsuit
Ability of minority shareholders to hold interested parties and members of the approving body liable for prejudicial related-party transactions
Available legal remedies (damages, disgorgement of profits, fines, imprisonment and rescission of the transaction)
Ease of shareholder suits index (0–10)
Access to internal corporate documents (directly or through a government inspector)
Documents and information available during trial
Strength of investor protection index (0–10)
Simple average of the extent of disclosure, extent of director liability and ease of shareholder suits indices

the transaction is unfair or prejudicial to the other shareholders.

- Whether a shareholder plaintiff is able to hold the approving body (the CEO, members of the board of directors or members of the supervisory board) liable for the 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, bad faith or gross negligence; 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.
- 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, bad faith or gross negligence; 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.
- 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.
- 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.
- Whether both fines and imprisonment can be applied against Mr. James. A score of 0 is assigned if no; 1 if yes.
- Whether shareholder plaintiffs are able to sue directly or derivatively for the 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. Assuming that the prejudicial transaction was duly approved and disclosed, in order 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 prejudicial 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 and imprisoned (a score of 0). Direct or derivative 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 has 6 components:

- What range of documents is 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.
- 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.
- Whether the plaintiff can obtain categories of relevant documents from the defendant without identifying each document specifically. A score of 0 is assigned if no; 1 if yes.
- Whether shareholders owning 10% or less of the company's share capital can request that a government inspector investigate the Buyer-Seller transaction without filing suit in court. A score of 0 is assigned if no; 1 if yes.
- 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.
- 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 Croatia, for example, the plaintiff can access documents that the defendant intends to rely on for his defense (a score of 1). The plaintiff can examine the defendant and witnesses during trial, without prior approval of the questions by the court (a score of 2). The plaintiff must specifically identify the documents being sought (for example, the Buyer-Seller purchase agreement of July 15, 2006) and cannot simply 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 without filing suit in court (a score of 1). Shareholders cannot inspect the transaction documents before deciding whether to sue (a score of 0). The standard of proof for civil suits is the same as that for a criminal case (a score of 0). Adding these numbers gives Croatia a score of 4 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 more investor protection.

The data details on protecting investors can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov and others (2008).

PAYING TAXES

Doing Business records the taxes and mandatory contributions that a medium-size company must pay in a given year as well as measures of the administrative burden of paying taxes and contributions (figure 21.13). The project was developed and implemented in cooperation with PwC.⁶ Taxes and contributions measured include the profit or corporate income tax, social contributions and labor taxes paid by the employer, property taxes, property transfer taxes, dividend tax, capital gains

tax, financial transactions tax, waste collection taxes, vehicle and road taxes, and any other small taxes or fees.

The ranking on the ease of paying taxes is the simple average of the percentile rankings on its component indicators, with a threshold being applied to one of the component indicators, the total tax rate (figure 21.14). The threshold is defined as the highest total tax rate among the top 15% of economies in the ranking on the total tax rate. It is calculated and adjusted on a yearly basis. This year's threshold is 25.5%. All economies with a total tax rate below this threshold receive the same score as the economy at the threshold. The threshold is not based on any economic theory of an "optimal tax rate" that minimizes distortions or maximizes efficiency in the tax system of an economy overall. Instead, it is mainly empirical in nature, set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the paying taxes indicators. This reduces the bias in the indicators toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardized case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology).

Doing Business measures all taxes and contributions that are government mandated (at any level—federal, state or lo-

cal) and that apply to the standardized business and have an impact in its financial statements. In doing so, *Doing Business* goes beyond the traditional definition of a tax. As defined for the purposes of government national accounts, taxes include only compulsory, unrequited payments to general government. *Doing Business* departs from this definition because it measures imposed charges that affect business accounts, not government accounts. One main difference relates to labor contributions. The *Doing Business* measure includes government-mandated contributions paid by the employer to a required private pension fund or workers' insurance fund. The indicator includes, for example, Australia's compulsory superannuation guarantee and workers' compensation insurance. For the purpose of calculating the total tax rate (defined below), only taxes borne are included. For example, value added taxes are generally excluded (provided they are not irrecoverable) because they do not affect the accounting profits of the business—that is, they are not reflected in the income statement. They are, however, included for the purpose of the compliance measures (time and payments), as they add to the burden of complying with the tax system.

Doing Business uses a case scenario to measure the taxes and contributions paid by a standardized business and the complexity of an economy's tax compliance system. This case scenario uses a set of financial statements and assumptions about transactions made over the course of the year. In each economy tax experts from a

number of different firms (in many economies these include PwC) compute the taxes and mandatory contributions due in their jurisdiction based on the standardized case study facts. Information is also compiled on the frequency of filing and payments as well as time taken to comply with tax laws in an economy. To make the data comparable across economies, several assumptions about the business and the taxes and contributions are used.

The methodology for the paying taxes indicators has benefited from discussion with members of the International Tax Dialogue and other stakeholders, which led to a refinement of the questions on the time to pay taxes, the collection of additional data on the labor tax wedge for further research and the introduction of a threshold applied to the total tax rate for the purpose of calculating the ranking on the ease of paying taxes.

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 economy, the limited liability form most common among domestic firms is chosen. The most common form is reported by incorporation lawyers or the statistical office.
- Started operations on January 1, 2011.

FIGURE 21.13 What are the time, total tax rate and number of payments necessary for a local medium-size company to pay all taxes?

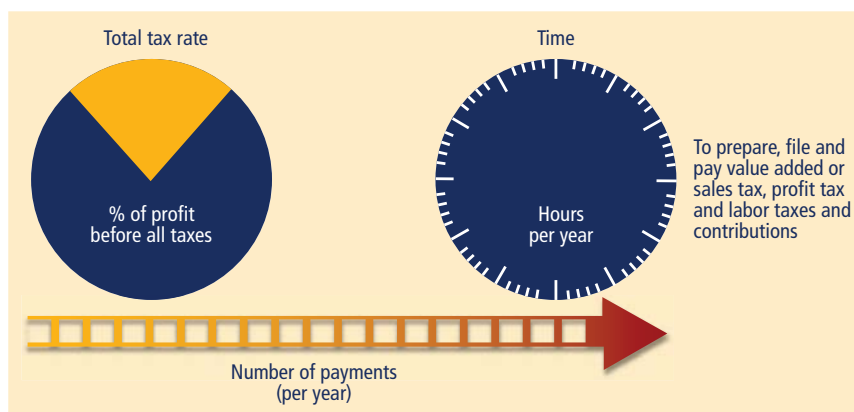
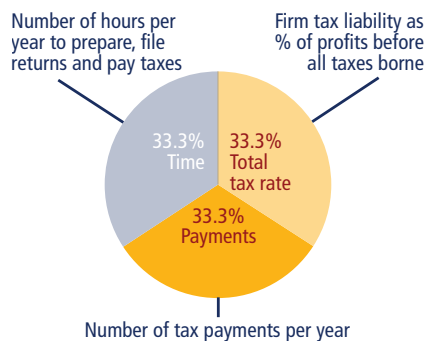


FIGURE 21.14 Paying taxes: tax compliance for a local manufacturing company

Rankings are based on 3 indicators



Note: All economies below the threshold receive the same score in the total tax rate component as the economies at the threshold.

At that time the company purchased all the assets shown in its balance sheet and hired all its workers.

- Operates in the economy's largest business city (see table 21A.1).
- Is 100% domestically owned and has 5 owners, all of whom are natural persons.
- At the end of 2011, has a start-up capital of 102 times income per capita.
- 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.
- At the beginning of 2012, owns 2 plots of land, 1 building, machinery, office equipment, computers and 1 truck and leases 1 truck.
- Does not qualify for investment incentives or any 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 manager is also an owner. The company pays for additional medical insurance for employees (not mandated by any law) as an additional benefit. In addition, in some economies reimbursable business travel and client entertainment expenses are considered fringe benefits. When applicable, it is assumed that the company pays the fringe benefit tax on this expense or that the benefit becomes taxable income for the employee. The case study assumes no additional salary additions for meals, transportation, education or others.
- Has a turnover of 1,050 times income per capita.
- Makes a loss in the first year of operation.
- Has a gross margin (pretax) of 20% (that is, sales are 120% of the cost of goods sold).
- Distributes 50% of its net profits as dividends to the owners at the end of the second year.
- Sells one of its plots of land at a profit

at the beginning of the second year.

- Has annual fuel costs for its trucks equal to twice income per capita.
- Is subject to a series of detailed assumptions on expenses and transactions to further standardize the case. All financial statement variables are proportional to 2005 income per capita. For example, the owner who is also a manager spends 10% of income per capita on traveling for the company (20% of this owner's expenses are purely private, 20% are for entertaining customers and 60% for business travel).

Assumptions about the taxes and contributions

- All the taxes and contributions recorded are those paid in the second year of operation (calendar year 2012). A tax or contribution is considered distinct if it has a different name or is collected by a different agency. Taxes and contributions with the same name and agency, but charged at different rates depending on the business, are counted as the same tax or contribution.
- The number of times the company pays taxes and contributions in a year is the number of different taxes or contributions 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 and contributions paid, the method of payment, the frequency of payment, the frequency of filing and the number of agencies involved for this standardized case study company during the second year of operation (table 21.9). It includes taxes withheld by the company, such as sales tax, value added tax and employee-borne labor taxes. These taxes are traditionally collected by the company from the consumer or employee on behalf of the tax agencies. Although they do not affect the income statements of the company, they add to the administrative burden of complying

with the tax system and so are included in the tax payments measure.

The number of payments takes into account electronic filing. Where full electronic filing and payment is allowed and it is used by the majority of medium-size businesses, the tax is counted as paid once a year even if filings and payments are more frequent. For payments made through third parties, such as tax on interest paid by a financial institution or fuel tax paid by a fuel distributor, only one payment is included even if payments are more frequent.

Where 2 or more taxes or contributions are filed for and paid jointly using the same form, each of these joint payments is counted once. For example, if mandatory health insurance contributions and mandatory pension contributions are filed for and paid together, only one of these contributions would be included in the number of payments.

TABLE 21.9 What do the paying taxes indicators measure?

Tax payments for a manufacturing company in 2012 (number per year adjusted for electronic and joint filing and payment)

Total number of taxes and contributions paid, including consumption taxes (value added tax, sales tax or goods and service tax)

Method and frequency of filing and payment

Time required to comply with 3 major taxes (hours per year)

Collecting information and computing the tax payable

Completing tax return forms, filing with proper agencies

Arranging payment or withholding

Preparing separate mandatory tax accounting books, if required

Total tax rate (% of profit before all taxes)

Profit or corporate income tax

Social contributions and labor taxes paid by the employer

Property and property transfer taxes

Dividend, capital gains and financial transactions taxes

Waste collection, vehicle, road and other taxes

Time

Time is recorded in hours per year. The indicator measures the time taken to prepare, file and pay 3 major types of taxes and contributions: the corporate income tax, value added or sales tax, and labor taxes, including payroll taxes and social contributions. Preparation time includes the time to collect all information necessary to compute the tax payable and to calculate the amount payable. If separate accounting books must be kept for tax purposes—or separate calculations made—the time associated with these processes is included. This extra time is included only if the regular accounting work is not enough to fulfill the tax accounting requirements. Filing time includes the time to complete all necessary tax return forms and file the relevant returns at the tax authority. Payment time considers the hours needed to make the payment online or at the tax authorities. Where taxes and contributions are paid in person, the time includes delays while waiting.

Total tax rate

The total tax rate measures the amount of taxes and mandatory contributions borne by the business in the second year of operation, expressed as a share of commercial profit. *Doing Business 2014* reports the total tax rate for calendar year 2012. The total amount of taxes borne is the sum of all the different taxes and contributions payable after accounting for allowable deductions and exemptions. The taxes withheld (such as personal income tax) or collected by the company and remitted to the tax authorities (such as value added tax, sales tax or goods and

service tax) but not borne by the company are excluded. The taxes included can be divided into 5 categories: profit or corporate income tax, social contributions and labor taxes paid by the employer (in respect of which all mandatory contributions are included, even if paid to a private entity such as a required pension fund), property taxes, turnover taxes and other taxes (such as municipal fees and vehicle taxes). Fuel taxes are no longer included in the total tax rate because of the difficulty of computing these taxes in a consistent way for all economies covered. The fuel tax amounts are in most cases very small, and measuring these amounts is often complicated because they depend on fuel consumption. Fuel taxes continue to be counted in the number of payments.

The total tax rate is designed to provide a comprehensive measure of the cost of all the taxes a business bears. It differs from the statutory tax rate, which merely provides the factor to be applied to the tax base. In computing the total tax rate, the actual tax payable is divided by commercial profit. Data for Kiribati are provided as an example (table 21.10).

Commercial profit is essentially net profit before all taxes borne. It differs from the conventional profit before tax, reported in financial statements. In computing profit before tax, many of the taxes borne by a firm are deductible. In computing commercial profit, these taxes are not deductible. Commercial profit therefore presents a clear picture of the actual profit of a business before any of the taxes it bears in the course of the fiscal year.

Commercial profit is computed as sales minus cost of goods sold, minus gross salaries, minus administrative expenses, minus other expenses, minus 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. Commercial profit amounts to 59.4 times income per capita.

The methodology for calculating the total tax rate is broadly consistent with the Total Tax Contribution framework developed by PwC and the calculation within this framework for taxes borne. But while the work undertaken by PwC is usually based on data received from the largest companies in the economy, *Doing Business* focuses on a case study for a standardized medium-size company.

The data details on paying taxes can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov and others (2010).

TRADING ACROSS BORDERS

Doing Business measures the time and cost (excluding tariffs) associated with exporting and importing a standardized cargo of goods by sea transport. The time and cost necessary to complete every official procedure for exporting and importing the goods are recorded; however, the time and cost for sea transport are not included. All documents needed by the trader to export or import the goods across the border are also recorded. For exporting goods, procedures range from packing the goods into the container at the warehouse 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 warehouse. For landlocked economies, these include procedures at the inland border post, since the port is located in the transit economy. Payment is made by letter of credit, and the time,

TABLE 21.10 Computing the total tax rate for Kiribati

Type of tax (tax base)	Statutory rate <i>r</i> (%)	Statutory tax base <i>b</i> (\$A)	Actual tax payable <i>a</i> = <i>r</i> × <i>b</i> (\$A)	Commercial profit* <i>c</i> (\$A)	Total tax rate <i>t</i> = <i>a</i> / <i>c</i> (%)
Corporate income tax (taxable income)	20.0–35.0	87,565	25,647	109,801	23.4
Employer-paid social security contributions (taxable wages)	7.5	123,854	9,289	109,801	8.5
Total			34,936		31.8

* Profit before all taxes borne.

Note: Commercial profit is assumed to be 59.4 times income per capita. \$A is Australian dollar.

Source: *Doing Business* database.

cost and documents required for the issuance or advising of a letter of credit are taken into account (figure 21.15). The ranking on the ease of trading across borders is the simple average of the percentile rankings on its component indicators (figure 21.16).

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

Assumptions about the traded goods

The traded product travels in a dry-cargo, 20-foot,⁷ full container load. It weighs 10 tons and is valued at \$20,000. 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.
- Is one of the economy’s leading export or import products.

FIGURE 21.15 How much time, how many documents and what cost to export and import by sea transport?

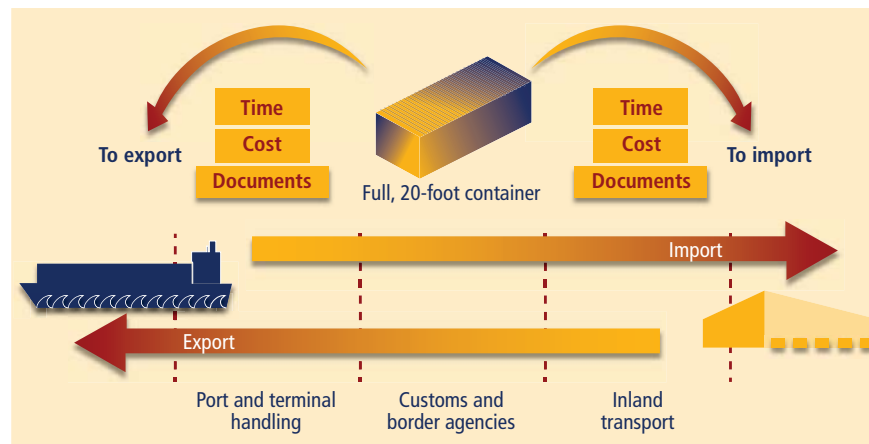
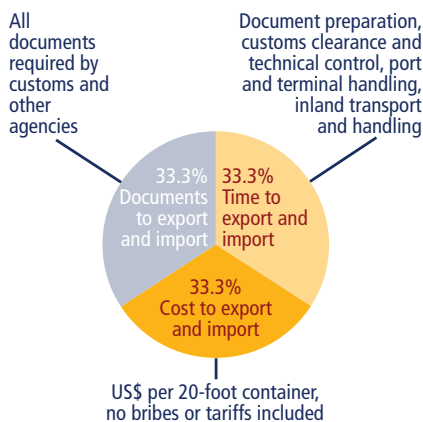


FIGURE 21.16 Trading across borders: exporting and importing by sea transport
Rankings are based on 3 indicators



Assumptions about the business

The business:

- Has at least 60 employees.
- Is located in the economy’s largest business city (see table 21A.1).
- Is a private, limited liability company.
- Does not operate in an export processing zone or an industrial estate with special export or import privileges.
- Is 100% domestically owned.
- Exports more than 10% of its sales.

Documents

All documents required per shipment to export and import the goods are recorded (table 21.11). It is assumed that a new contract is drafted per shipment and that the contract has already been agreed upon and executed by both parties. Documents required for clearance by relevant agencies—including government ministries, customs, port authorities and other control agencies—are taken into account. For landlocked economies, documents required by authorities in the transit economy are also included. Since payment is by letter of credit, all documents required by banks for the issuance or securing of a letter of credit are also taken into account. Documents that are requested at the time of clearance but that are valid for a year or longer and do not require renewal per shipment (for example, an annual tax clearance certificate) are not included. Documents that are required purely for purposes of preferential treatment are no longer included—for example, a certificate

of origin if the use is only to qualify for a preferential tariff rate under trade agreements. It is assumed that the exporter will

TABLE 21.11 What do the trading across borders indicators measure?

Documents required to export and import (number)
Bank documents
Customs clearance documents
Port and terminal handling documents
Transport documents
Time required to export and import (days)
Obtaining, filling out and submitting all the documents
Inland transport and handling
Customs clearance and inspections
Port and terminal handling
Does not include sea transport time
Cost required to export and import (US\$ per container)
All documentation
Inland transport and handling
Customs clearance and inspections
Port and terminal handling
Official costs only, no bribes

always obtain a certificate of origin for its trade partner, however, and the time and cost associated with obtaining it are included in the time and cost to export.

Time

The time for exporting and importing 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 and is available to all trading companies, the fastest legal procedure is chosen. Fast-track procedures applying only to firms located in an export processing zone, or only to certain accredited firms under authorized economic operator programs, are not taken into account because they are not available to all trading companies. Sea transport time is not included. 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. But it is assumed that document preparation, inland transport, customs and other clearance, and port and terminal handling require a minimum time of 1 day each and cannot take place simultaneously. The waiting time between procedures—for example, during unloading of the cargo—is included in the measure.

Cost

Cost measures the fees levied on a 20-foot container in U.S. dollars. All the fees associated with completing the procedures to export or import the goods are taken into account. These include costs for documents, administrative fees for customs clearance and inspections, customs broker fees, port-related charges and inland transport costs. The cost does not include customs tariffs and duties or costs related to sea transport. Only official costs are recorded.

The data details on trading across borders can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov, Freund and Pham (2010) and is adopted here with minor changes.

ENFORCING CONTRACTS

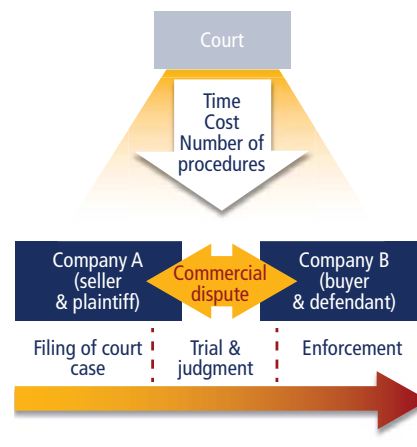
Indicators on enforcing contracts measure the efficiency of the judicial system in resolving a commercial dispute. The data are built by following the step-by-step evolution of a commercial sale dispute before local courts. The data are collected through study of the codes of civil procedure and other court regulations as well as questionnaires completed by local litigation lawyers and by judges (figure 21.17). The ranking on the ease of enforcing contracts is the simple average of the percentile rankings on its component indicators (figure 21.18).

The name of the relevant court in each economy—the court in the largest business city with jurisdiction over commercial cases worth 200% of income per capita—is published at <http://www.doingbusiness.org/data/exploretopics/enforcing-contracts>.

Assumptions about the case

- The value of the claim equals 200% of the economy's income per capita.
- The dispute concerns a lawful transaction between 2 businesses (Seller and Buyer), located in the economy's largest business city (see table 21A.1). Seller sells goods worth 200% of the economy's income per capita to Buyer. After Seller delivers the goods to Buyer, Buyer refuses to pay for the goods on the grounds that the delivered goods were not of adequate quality.
- Seller (the plaintiff) sues Buyer (the defendant) to recover the amount under the sales agreement (that is, 200% of the economy's income per capita). Buyer opposes Seller's claim, saying that the quality of the goods is not adequate. The claim is disputed on the merits. The court cannot decide the case on the basis of documentary evidence or legal title alone.
- A court in the economy's largest business city with jurisdiction over commercial cases worth 200% of income per capita decides the dispute.
- Seller attaches Buyer's movable assets (for example, office equipment and vehicles) before obtaining a judgment because Seller fears that Buyer may become insolvent.

FIGURE 21.17 What are the time, cost and number of procedures to resolve a commercial dispute through the courts?



- An expert opinion is given on the quality of the delivered goods. If it is standard practice in the economy for each party to call its own expert witness, the parties each call one expert witness. If it is standard practice for the judge to appoint an independent expert, the judge does so. In this case the judge does not allow opposing expert testimony.
- The judgment is 100% in favor of Seller: the judge decides that the goods are of adequate quality and that Buyer must pay the agreed price.
- Buyer does not appeal the judgment. Seller decides to start enforcing the

FIGURE 21.18 Enforcing contracts: resolving a commercial dispute through the courts
Rankings are based on 3 indicators

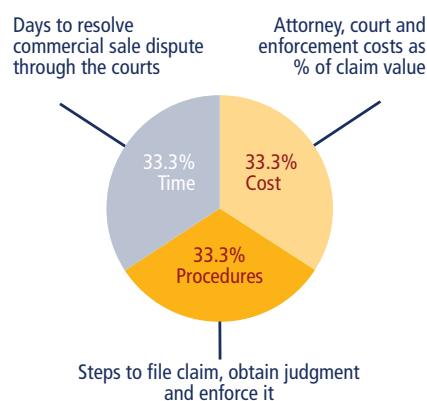


TABLE 21.12 What do the enforcing contracts indicators measure?

Procedures to enforce a contract through the courts (number)
Steps to file and serve the case
Steps for trial and judgment
Steps to enforce the judgment
Time required to complete procedures (calendar days)
Time to file and serve the case
Time for trial and obtaining judgment
Time to enforce the judgment
Cost required to complete procedures (% of claim)
Average attorney fees
Court costs
Enforcement costs

judgment as soon as the time allocated by law for appeal expires.

- Seller takes all required steps for prompt enforcement of the judgment. The money is successfully collected through a public sale of Buyer’s movable assets (for example, office equipment and vehicles).

Procedures

The list of procedural steps compiled for each economy traces the chronology of a commercial dispute before the relevant court. A procedure is defined as any interaction, required by law or commonly used in practice, between the parties or between them and the judge or court officer. Other procedural steps, internal to the court or between the parties and their counsel, may be counted as well. Procedural steps include steps to file and serve the case, steps to assign the case to a judge, steps for trial and judgment and steps necessary to enforce the judgment (table 21.12).

To indicate overall efficiency, 1 procedure is subtracted from the total number for economies that have specialized commercial courts, and 1 procedure for economies that allow electronic filing of the initial complaint in court cases. Some procedural steps that are part of others

are not counted in the total number of procedures.

Time

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

Cost

Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees.

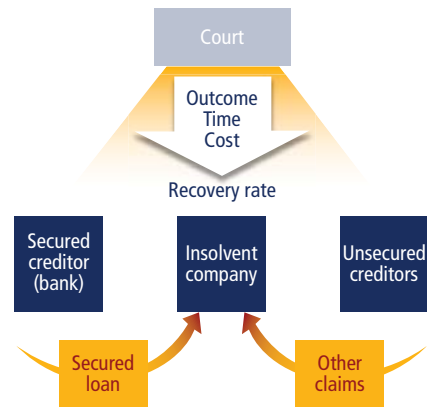
Court costs include all court costs that Seller (plaintiff) must advance to the court, regardless of the final cost to Seller. Enforcement costs are all costs that Seller (plaintiff) must advance to enforce the judgment through a public sale of Buyer’s movable assets, regardless of the final cost to Seller. Average attorney fees are the fees that Seller (plaintiff) must advance to a local attorney to represent Seller in the standardized case.

The data details on enforcing contracts can be found for each economy at <http://www.doingbusiness.org> by selecting the economy in the drop-down list. This methodology was developed by Djankov and others (2003) and is adopted here with minor changes.

RESOLVING INSOLVENCY

Doing Business studies the time, cost and outcome of insolvency proceedings involving domestic entities. The data are derived from questionnaire responses by local insolvency practitioners and verified through a study of laws and regulations as well as public information on bankruptcy systems (figure 21.19). The ranking on the

FIGURE 21.19 What are the time, cost and outcome of the insolvency proceedings against a local company?



ease of resolving insolvency is based on the recovery rate (figure 21.20).

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

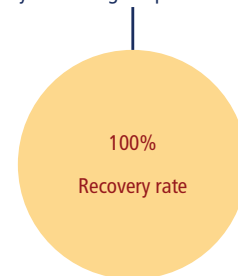
Assumptions about the business

The business:

- Is a limited liability company.
- Operates in the economy’s largest business city (see table 21A.1).

FIGURE 21.20 Resolving insolvency: time, cost and outcome of the insolvency proceedings against a local company. Rankings are based on 1 indicator

Recovery rate is a function of time, cost and other factors such as lending rate and the likelihood of the company continuing to operate



Note: Time and cost do not count separately for the rankings.

- 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 201 employees and 50 suppliers, each of which is owed money for the last delivery.
- Has a 10-year loan agreement with a domestic bank secured by a mortgage over the hotel's real estate property. A universal business charge (for example, a floating charge) is also assumed in economies where such collateral is recognized. If the laws of the economy do not specifically provide for a universal business charge but contracts commonly use some other provision to that effect, this provision is specified in the loan agreement.
- Has observed the payment schedule and all other conditions of the loan up to now.
- The business's market value, operating as a going concern, is 100 times income per capita or \$200,000, whichever is greater. The market value of the company's assets, if sold piecemeal, is 70% of the business's market value.

Assumptions about the case

The business is experiencing liquidity problems. The company's loss in 2012 reduced its net worth to a negative figure. It is January 1, 2013. There is no cash to pay the bank interest or principal in full, due the next day, January 2. The business will therefore default on its loan. Management believes that losses will be incurred in 2013 and 2014 as well.

The amount outstanding under the loan agreement is exactly equal to the market value of the hotel business and represents 74% of the company's total debt. The other 26% of its debt is held by unsecured creditors (suppliers, employees, tax authorities).

The company has too many creditors to negotiate an informal out-of-court workout. The following options are available: a judicial procedure aimed at the rehabilitation or reorganization of the company to permit its continued operation; a

judicial procedure aimed at the liquidation or winding-up of the company; or a debt enforcement or foreclosure procedure against the company, enforced either in court (or through another government authority) or out of court (for example, by appointing a receiver).

Assumptions about the parties

The bank wants to recover as much as possible of its loan, as quickly and cheaply as possible. The unsecured creditors will do everything permitted under the applicable laws to avoid a piecemeal sale of the assets. The majority shareholder wants to keep the company operating and under its control. Management wants to keep the company operating and preserve its employees' jobs. All the parties are local entities or citizens; no foreign parties are involved.

Time

Time for creditors to recover their credit is recorded in calendar years (table 21.13). The period of time measured by *Doing Business* is from the company's default until the payment of some or all of the money owed to the bank. Potential delay tactics by the parties, such as the filing of dilatory appeals or requests for extension, are taken into consideration.

Cost

The cost of the proceedings is recorded as a percentage of the value of the debtor's estate. The cost is calculated on the basis of questionnaire responses and includes court fees and government levies; fees of insolvency administrators, auctioneers, assessors and lawyers; and all other fees and costs.

Outcome

Recovery by creditors depends on whether the hotel business emerges from the proceedings as a going concern or the company's assets are sold piecemeal. If the business keeps operating, no value is lost and the bank can satisfy its claim in full, or recover 100 cents on the dollar. If the assets are sold piecemeal, the maximum amount that can be recovered will not exceed 70% of the bank's claim, which translates into 70 cents on the dollar.

Recovery rate

The recovery rate is recorded as cents on the dollar recouped by creditors through reorganization, liquidation or debt enforcement (foreclosure) proceedings. The calculation takes into account the outcome: whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. Then the costs of the proceedings are deducted (1 cent for each percentage point of the value of the debtor's estate). Finally, the value lost as a result of the time the money remains tied up in insolvency proceedings is taken into account, including the loss of value due to depreciation of the hotel furniture. Consistent with international accounting practice, the annual 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

TABLE 21.13 What do the resolving insolvency indicators measure?

Time required to recover debt (years)

Measured in calendar years

Appeals and requests for extension are included

Cost required to recover debt (% of debtor's estate)

Measured as percentage of estate value

Court fees

Fees of insolvency administrators

Lawyers' fees

Assessors' and auctioneers' fees

Other related fees

Outcome

Whether business continues operating as a going concern or business assets are sold piecemeal

Recovery rate for creditors (cents on the dollar)

Measures the cents on the dollar recovered by creditors

Present value of debt recovered

Official costs of the insolvency proceedings are deducted

Depreciation of furniture is taken into account

Outcome for the business (survival or not) affects the maximum value that can be recovered

remaining proceeds, based on end-2012 lending rates from the International Monetary Fund's *International Financial Statistics*, supplemented with data from central banks and the Economist Intelligence Unit.

No practice

If an economy had zero cases a year over the past 5 years involving a judicial reorganization, judicial liquidation or debt enforcement procedure (foreclosure), the economy receives a “no practice” ranking. This means that creditors are unlikely to recover their money through a formal legal process (in or out of court). The recovery rate for “no practice” economies is zero.

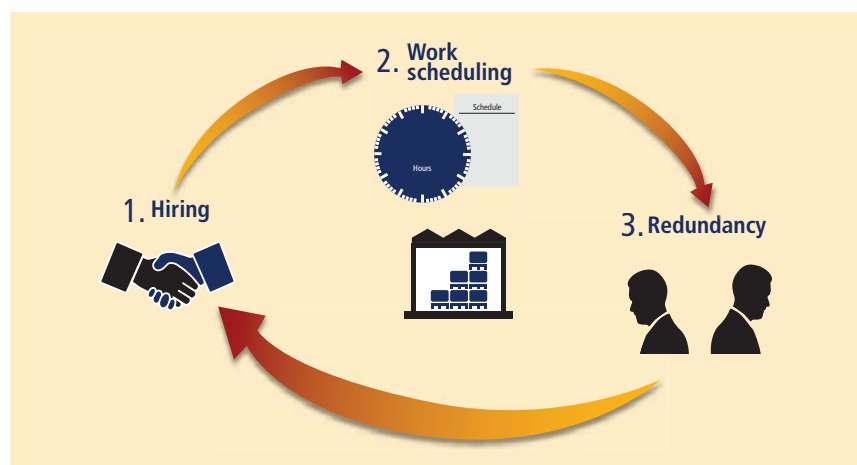
This methodology was developed by Djankov and others (2008) and is adopted here with minor changes.

EMPLOYING WORKERS

Doing Business measures flexibility in the regulation of employment, specifically as it affects the hiring and redundancy of workers and the rigidity of working hours (figure 21.21). Over the period from 2007 to 2011 improvements were made to align the methodology for the employing workers indicators with the letter and spirit of the ILO conventions. Only 4 of the 188 ILO conventions cover areas measured by *Doing Business*: employee termination, weekend work, holiday with pay and night work. The *Doing Business* methodology is fully consistent with these 4 conventions. The ILO conventions covering areas related to the employing workers indicators do not include the ILO core labor standards—8 conventions covering the right to collective bargaining, the elimination of forced labor, the abolition of child labor and equitable treatment in employment practices.

Between 2009 and 2011 the World Bank Group worked with a consultative group—including labor lawyers, employer and employee representatives, and experts from the ILO, the OECD, civil society and the private sector—to review the employing workers methodology and explore future areas of research.⁸ A full report with the conclusions of the consultative group, along with the employing workers methodology it proposed, is available at <http://www.doingbusiness.org/methodology/>

FIGURE 21.21 How flexible are hiring, work scheduling and redundancy rules?



employing-workers. This year *Doing Business* continued research collecting additional data on regulations covering workers' probationary period.

Doing Business 2014 presents the data on the employing workers indicators in an annex. The report does not present rankings of economies on the employing workers indicators or include the topic in the aggregate ranking on the ease of doing business. Detailed data collected on labor regulations are available on the *Doing Business* website (<http://www.doingbusiness.org>). The data on employing workers are based on a detailed questionnaire on employment regulations that is completed by local lawyers and public officials. Employment laws and regulations as well as secondary sources are reviewed to ensure accuracy. To make the data comparable across economies, several assumptions about the worker and the business are used.

Assumptions about the worker

The worker:

- Earns a salary plus benefits equal to the economy's average wage during the entire period of his employment.
- Has a pay period that is the most common for workers in the economy.
- Is a lawful citizen who belongs to the same race and religion as the majority of the economy's population.
- Resides in the economy's largest business city (see table 21A.1).
- 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 economy's largest business city.
- Is 100% domestically owned.
- Operates in the manufacturing sector.
- Has 60 employees.
- Is subject to collective bargaining agreements in economies where such agreements cover more than half the manufacturing sector and apply even to firms not party to them.
- Abides by every law and regulation but does not grant workers more benefits than mandated by law, regulation or (if applicable) collective bargaining agreement.

Rigidity of employment

Rigidity of employment covers 3 areas: difficulty of hiring, rigidity of hours and difficulty of redundancy (table 21.14).

Difficulty of hiring covers (i) whether fixed-term contracts are prohibited for permanent tasks; (ii) the maximum cumulative duration of fixed-term contracts; and (iii) the ratio of the minimum wage for a trainee or first-time employee to the average value added per worker.⁹

Rigidity of hours covers 5 areas: (i) whether there are restrictions on night work; (ii) whether there are restrictions on weekly holiday work; (iii) whether the

TABLE 21.14 What do the employing workers indicators measure?

Rigidity of employment
Difficulty of hiring
Fixed-term contracts prohibited for permanent tasks?
Maximum duration of fixed-term contracts
Ratio of minimum wage for trainee or first-time employee to value added per worker
Rigidity of hours
Restrictions on night work and weekend work?
Allowed maximum length of the workweek in days and hours, including overtime
Fifty-hour workweeks permitted for 2 months due to an increase in production?
Paid annual vacation days
Difficulty of redundancy
Redundancy allowed as grounds for termination?
Notification required for termination of a redundant worker or group of workers?
Approval required for termination of a redundant worker or group of workers?
Employer obligated to reassign or retrain and to follow priority rules for redundancy and reemployment?
Redundancy cost (weeks of salary)
Notice requirements, severance payments and penalties due when terminating a redundant worker, expressed in weeks of salary

workweek can consist of 5.5 days or is more than 6 days; (iv) whether the workweek can extend to 50 hours or more (including overtime) for 2 months a year to respond to a seasonal increase in production; and (v) whether the average paid annual leave for a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is more than 26 working days or fewer than 15 working days.

Difficulty of redundancy looks at 8 questions: (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

9 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 9 redundant workers; (vi) whether the law requires the employer to reassign or retrain a worker before making the worker redundant; (vii) whether priority rules apply for redundancies; and (viii) whether priority rules apply for reemployment.

Redundancy cost

Redundancy cost measures the cost of advance notice requirements, severance payments and penalties due when terminating a redundant worker, expressed in weeks of salary. The average value of notice requirements and severance payments applicable to a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years is considered. One month is recorded as 4 and 1/3 weeks.

The data details on employing workers can be found for each economy at <http://www.doingbusiness.org>. The Doing Business website provides historical data sets to allow comparison of data across years. The employing workers methodology was developed by Botero and others (2004). Doing Business 2014 does not present rankings of economies on the employing workers indicators.

NOTES

1. The data for paying taxes refer to January–December 2012.
2. For getting electricity the rule that each procedure must take a minimum of 1 day still applies because in practice there are no cases in which procedures can be fully completed online in less than a day. For example, even though in some cases it is possible to apply for an electricity connection online, additional requirements mean that the process cannot be completed in less than 1 day.
3. This correction rate reflects changes that exceed 5% up or down.
4. This question is usually regulated by stock exchange or securities laws. Points are awarded

5. When evaluating the regime of liability for company directors for a prejudicial related-party transaction, *Doing Business* assumes that the transaction was duly disclosed and approved. *Doing Business* does not measure director liability in the event of fraud.
6. PwC refers to the network of member firms of PricewaterhouseCoopers International Limited (PwCIL), or, as the context requires, individual member firms of the PwC network. Each member firm is a separate legal entity and does not act as agent of PwCIL or any other member firm. PwCIL does not provide any services to clients. PwCIL is not responsible or liable for the acts or omissions of any of its member firms nor can it control the exercise of their professional judgment or bind them in any way. No member firm is responsible or liable for the acts or omissions of any other member firm nor can it control the exercise of another member firm's professional judgment or bind another member firm or PwCIL in any way.
7. While different types of containers are used around the world, the 2 most important are 20-foot and 40-foot containers. Use of 40-foot containers is growing, but this year's research confirms that 20-foot containers are still common in the majority of economies. According to respondents questioned in each of the 189 economies covered by *Doing Business*, 20-foot and 40-foot containers are equally common in 49% of the economies, 20-foot containers are more common in 29%, and 40-foot containers are mostly relied on in only 10%. For the remaining 12% of economies no data on the use of the 2 types of containers were available. The trading across borders indicators will continue to be based on 20-foot containers because this size remains the most relevant for international trade across the globe.
8. For the terms of reference and composition of the consultative group, see World Bank, "Doing Business Employing Workers Indicator Consultative Group," <http://www.doingbusiness.org>.
9. The average value added per worker is the ratio of an economy's GNI per capita to the working-age population as a percentage of the total population.

TABLE 21A.1 Largest business city in each economy covered by the *Doing Business* report

Economy	City	Economy	City	Economy	City
Afghanistan	Kabul	Greece	Athens	Pakistan	Karachi
Albania	Tirana	Grenada	St. George's	Palau	Koror
Algeria	Algiers	Guatemala	Guatemala City	Panama	Panama City
Angola	Luanda	Guinea	Conakry	Papua New Guinea	Port Moresby
Antigua and Barbuda	St. John's	Guinea-Bissau	Bissau	Paraguay	Asunción
Argentina	Buenos Aires	Guyana	Georgetown	Peru	Lima
Armenia	Yerevan	Haiti	Port-au-Prince	Philippines	Quezon City
Australia	Sydney	Honduras	Tegucigalpa	Poland	Warsaw
Austria	Vienna	Hong Kong SAR, China	Hong Kong SAR, China	Portugal	Lisbon
Azerbaijan	Baku	Hungary	Budapest	Puerto Rico (U.S.)	San Juan
Bahamas, The	Nassau	Iceland	Reykjavik	Qatar	Doha
Bahrain	Manama	India	Mumbai	Romania	Bucharest
Bangladesh	Dhaka	Indonesia	Jakarta	Russian Federation	Moscow
Barbados	Bridgetown	Iran, Islamic Rep.	Tehran	Rwanda	Kigali
Belarus	Minsk	Iraq	Baghdad	Samoa	Apia
Belgium	Brussels	Ireland	Dublin	San Marino	San Marino
Belize	Belize City	Israel	Tel Aviv	São Tomé and Príncipe	São Tomé
Benin	Cotonou	Italy	Rome	Saudi Arabia	Riyadh
Bhutan	Thimphu	Jamaica	Kingston	Senegal	Dakar
Bolivia	La Paz	Japan	Tokyo	Serbia	Belgrade
Bosnia and Herzegovina	Sarajevo	Jordan	Amman	Seychelles	Victoria
Botswana	Gaborone	Kazakhstan	Almaty	Sierra Leone	Freetown
Brazil	São Paulo	Kenya	Nairobi	Singapore	Singapore
Brunei Darussalam	Bandar Seri Begawan	Kiribati	Tarawa	Slovak Republic	Bratislava
Bulgaria	Sofia	Korea, Rep.	Seoul	Slovenia	Ljubljana
Burkina Faso	Ouagadougou	Kosovo	Pristina	Solomon Islands	Honiara
Burundi	Bujumbura	Kuwait	Kuwait City	South Africa	Johannesburg
Cambodia	Phnom Penh	Kyrgyz Republic	Bishkek	South Sudan	Juba
Cameroon	Douala	Lao PDR	Vientiane	Spain	Madrid
Canada	Toronto	Latvia	Riga	Sri Lanka	Colombo
Cape Verde	Praia	Lebanon	Beirut	St. Kitts and Nevis	Basseterre
Central African Republic	Bangui	Lesotho	Maseru	St. Lucia	Castries
Chad	N'Djamena	Liberia	Monrovia	St. Vincent and the Grenadines	Kingstown
Chile	Santiago	Libya	Tripoli	Sudan	Khartoum
China	Shanghai	Lithuania	Vilnius	Suriname	Paramaribo
Colombia	Bogotá	Luxembourg	Luxembourg	Swaziland	Mbabane
Comoros	Moroni	Macedonia, FYR	Skopje	Sweden	Stockholm
Congo, Dem. Rep.	Kinshasa	Madagascar	Antananarivo	Switzerland	Zurich
Congo, Rep.	Brazzaville	Malawi	Blantyre	Syrian Arab Republic	Damascus
Costa Rica	San José	Malaysia	Kuala Lumpur	Taiwan, China	Taipei
Côte d'Ivoire	Abidjan	Maldives	Malé	Tajikistan	Dushanbe
Croatia	Zagreb	Mali	Bamako	Tanzania	Dar es Salaam
Cyprus	Nicosia	Malta	Valletta	Thailand	Bangkok
Czech Republic	Prague	Marshall Islands	Majuro	Timor-Leste	Dili
Denmark	Copenhagen	Mauritania	Nouakchott	Togo	Lomé
Djibouti	Djibouti Ville	Mauritius	Port Louis	Tonga	Nuku'alofa
Dominica	Roseau	Mexico	Mexico City	Trinidad and Tobago	Port of Spain
Dominican Republic	Santo Domingo	Micronesia, Fed. Sts.	Island of Pohnpei	Tunisia	Tunis
Ecuador	Quito	Moldova	Chişinău	Turkey	Istanbul
Egypt, Arab Rep.	Cairo	Mongolia	Ulaanbaatar	Uganda	Kampala
El Salvador	San Salvador	Montenegro	Podgorica	Ukraine	Kiev
Equatorial Guinea	Malabo	Morocco	Casablanca	United Arab Emirates	Dubai
Eritrea	Asmara	Mozambique	Maputo	United Kingdom	London
Estonia	Tallinn	Myanmar	Yangon	United States	New York City
Ethiopia	Addis Ababa	Namibia	Windhoek	Uruguay	Montevideo
Fiji	Suva	Nepal	Kathmandu	Uzbekistan	Tashkent
Finland	Helsinki	Netherlands	Amsterdam	Vanuatu	Port-Vila
France	Paris	New Zealand	Auckland	Venezuela, RB	Caracas
Gabon	Libreville	Nicaragua	Managua	Vietnam	Ho Chi Minh City
Gambia, The	Banjul	Niger	Niamey	West Bank and Gaza	Ramallah
Georgia	Tbilisi	Nigeria	Lagos	Yemen, Rep.	Sana'a
Germany	Berlin	Norway	Oslo	Zambia	Lusaka
Ghana	Accra	Oman	Muscat	Zimbabwe	Harare