

Data Notes

The indicators presented and analyzed in *Doing Business in the European Union 2021: Austria, Belgium and the Netherlands* measure business regulation, the quality and strength of legal frameworks, the protection of property rights—and their effect on businesses, especially small and medium domestic firms. First, the indicators document the complexity of regulation, such as the number of procedures to start a business or to register a transfer of 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 deal with construction permits or enforce a contract. Third, they measure the extent of legal protections of property, for example, the protections of property rights.

This report presents *Doing Business* indicators for 24 cities in Austria, Belgium and the Netherlands. The data for all sets of indicators in *Doing Business in the European Union 2021: Austria, Belgium and the Netherlands* are current as of December 31, 2020. The data for 188 other economies used for comparison are based on the indicators in *Doing Business 2021*, the 18th in a series of annual reports published by the World Bank Group.

METHODOLOGY

The data for *Doing Business in the European Union 2021: Austria, Belgium and the Netherlands* were collected in a standardized way. To start, the team customized the *Doing Business* questionnaires for the

specific study and translated them into Dutch, Flemish, French, and German. The questionnaire uses a simple business case to ensure comparability across locations and economies and over time—with assumptions about the legal form of the business, its size, its location and the nature of its operations.

Questionnaires were administered to more than 550 local experts, including lawyers, business consultants, architects, engineers, notaries, magistrates, government officials and other professionals routinely administering or advising on legal and regulatory requirements. These experts have several rounds of interaction with the project team, involving conference calls, written correspondence and visits by the team. Team members visited all 24 locations, some several times, to verify data and recruit respondents. The data from questionnaires were 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 easily replicable, so data can be collected in a large sample of economies.

Because standard assumptions are used 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 limitations that should be considered when interpreting the data. First, 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). Second, transactions described in a standardized case scenario refer to a specific set of issues and may not represent the full set of issues that a business encounters. Third, 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

Economy characteristics

Gross national income per capita

Doing Business in the European Union 2021: Austria, Belgium and the Netherlands reports 2019 income per capita as published in the World Bank's *World Development Indicators*. Income is calculated using the Atlas method (in current U.S. dollars). For cost indicators expressed as a percentage of income per capita, 2019 gross national income (GNI) per capita in current U.S. dollars is used as the denominator. Austria's income per capita for 2018 is \$ 51,300 (EUR 44,871), Belgium's is \$47,350 (EUR 41,339) and the Netherlands' is \$53,200 (EUR 47,010).

Region and income group

Doing Business uses the World Bank regional and income group classifications, available at <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>.

Exchange rates

The exchange rate for the U.S. dollar used in *Doing Business in the European Union 2021: Austria, Belgium and the Netherlands* is: \$1 = EUR 0.87.

some burdensome procedures. For both reasons the time delays reported in *Doing Business* would differ from the recollection of entrepreneurs reported in the World Bank Enterprise Surveys or other firm-level surveys.

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 6.1). These procedures include the processes entrepreneurs undergo when obtaining all necessary approvals, licenses, permits and completing any required notifications, verifications or inscriptions for the company and employees with relevant authorities.

The ranking of locations on the ease of starting a business is determined by sorting their scores for starting a business. These scores are the simple average of the scores for each of the component indicators (figure 6.2).

Two types of local limited liability companies are considered under the starting a business methodology. They are identical

in all aspects, except that one company is owned by five married women and the other by five married men. The score for each indicator is the average of the scores obtained for each of the component indicators for both of these standardized companies.

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 review 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 locations, several assumptions about the businesses and the procedures are used.

FIGURE 6.1 What are the time, cost, paid-in minimum capital and number of procedures to get a local limited liability company up and running?

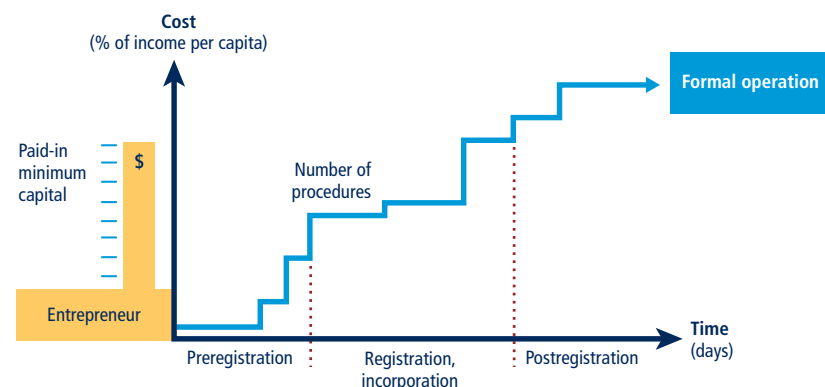
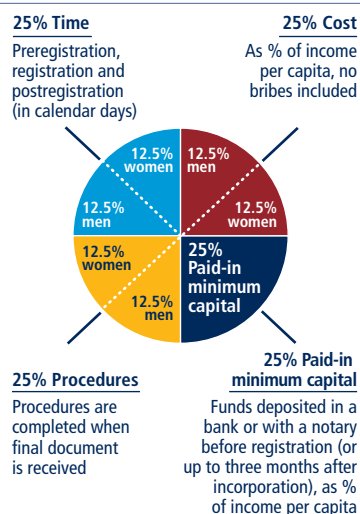


FIGURE 6.2 Starting a business: getting a local limited liability company up and running

Rankings are based on scores for four indicators



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 common among domestic firms is chosen. Information on the most common form is obtained from incorporation lawyers or the statistical office.
- Operates in the selected city.
- Performs general industrial or commercial activities such as the production or sale to the public of goods 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.
- Does not qualify for investment incentives or any special benefits.
- Is 100% domestically owned.
- Has five business owners, none of whom is a legal entity. One business owner holds 30% of the company shares, two owners have 20% of shares each, and two owners have 15% of shares each.

- Is managed by one local director.
- Has between 10 and 50 employees one month after the commencement of operations, all of them domestic nationals.
- Has start-up capital of 10 times income per capita.
- Has an estimated turnover of at least 100 times income per capita.
- Leases the commercial plant or offices and is not a proprietor of real estate.
- Has an annual lease for the office space equivalent to one income per capita.
- Is in an office space of approximately 929 square meters (10,000 square feet).
- Has a company deed that is 10 pages long.

The owners:

- Have reached the legal age of majority and are capable of making decisions as an adult. If there is no legal age of majority, they are assumed to be 30 years old.
- Are in good health and have no criminal record.
- Are married, the marriage is monogamous and registered with the authorities.
- Where the answer differs according to the legal system applicable to the woman or man in question (as may be the case in economies where there is legal plurality), the answer used will be the one that applies to the majority of the population.

Procedures

A procedure is defined as any interaction of the company founders with external parties (for example, government agencies, lawyers, auditors or notaries) or spouses (if legally required). 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 as separate procedures. 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 of professionals are required, procedures conducted by such professionals on behalf of the company are counted as separate procedures. Each electronic procedure is counted as a separate procedure.

Approvals from spouses to own a business or leave the home are considered procedures if required by law or if by failing to obtain such approval the spouse will suffer consequences under the law, such as the loss of right to financial maintenance. Obtaining permissions only required by one gender for company registration and operation, or getting additional documents only required by one gender for a national identification card are considered additional procedures. In that case, only procedures required for one spouse but not the other are counted. Both pre- and post-incorporation procedures that are officially required or commonly done in practice for an entrepreneur to formally operate a business are recorded (table 6.1).

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 in order to complete any subsequent procedure—such as registering for value added tax or showing proof of minimum capital deposit—this transaction is included as a procedure. Shortcuts are counted only if they fulfill four criteria: they are legal, they are available to the general public, they are used by the majority of companies, and avoiding them causes delays.

Only procedures required for all businesses are included. Industry-specific

TABLE 6.1 What do the starting a business indicators measure?

Procedures to legally start and formally operate a company (number)

Preregistration (for example, name verification or reservation, notarization)

Registration in the selected city

Postregistration (for example, social security registration, company seal)

Obtaining approval from spouse to start a business, to leave the home to register the company, or to open a bank account

Obtaining any gender-specific document for company registration and operation, national identification card or the opening of a bank account

Time required to complete each procedure (calendar days)

Does not include time spent gathering information

Each procedure starts on a separate day (two procedures cannot start on the same day)—though procedures that can be fully completed online are an exception to this rule

Registration process considered completed once final incorporation document is received or company can officially start operating

No prior contact with officials takes place

Cost required to complete each procedure (% of income per capita)

Official costs only, no bribes

No professional fees unless services required by law or commonly used in practice

Paid-in minimum capital (% of income per capita)

Funds deposited in a bank or with a notary before registration (or up to three months after incorporation)

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 in the starting a business indicators.

Time

Time is recorded in calendar days. The measure captures the median duration that incorporation lawyers or notaries indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no unofficial payments. It is assumed that the

minimum time required for each procedure is one day, except for procedures that can be fully completed online, for which the minimum 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). A registration process is considered completed once the company has received the final incorporation document or can officially commence business operations. If a procedure can be accelerated legally for an additional cost, the fastest procedure is chosen if that option is more beneficial to the location's score. When obtaining a spouse's approval, it is assumed that permission is granted at no additional cost unless the permission needs to be notarized. It is assumed that the entrepreneur does not waste time and commits to completing each remaining procedure without delay. The time spent by the entrepreneur preparing information to fill in forms is not measured. 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 involved.

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 or commonly used in practice. 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 by incorporation experts are used. If several incorporation experts 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 third party (for example, a notary) before registration or up to three months after incorporation. It 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. The legal provision needs to be adopted, enforced and fully implemented. Any legal limitation of the company's operations or decisions related to the payment of the minimum capital requirement is recorded. In case the legal minimum capital is provided per share, it is multiplied by the number of shareholders owning the company. 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 El Salvador in May 2020, for example, the minimum capital requirement was \$2,000, of which 5% needed to be paid before registration. Therefore, the paid-in minimum capital recorded for El Salvador is \$100, or 2.5% of income per capita.

The data details on starting a business can be found at <http://www.doingbusiness.org>. This methodology was developed by Simeon Djankov, Rafael La Porta, Florencio López-de-Silanes and Andrei Shleifer ("The Regulation of Entry," Quarterly Journal of Economics 117, no. 1 [2002]: 1–37) 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, along with the time and cost to complete each procedure. In addition, *Doing Business* measures the building quality control index, evaluating the quality of building regulations, the strength of quality control and safety mechanisms, liability and insurance regimes, and professional certification requirements. Information is collected

through a questionnaire administered to 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.

The ranking of locations on the ease of dealing with construction permits is determined by sorting their scores for dealing with construction permits. These scores are the simple average of the scores for each of the component indicators (figure 6.3).

EFFICIENCY OF CONSTRUCTION PERMITTING

Doing Business divides the process of building a warehouse into distinct procedures in the questionnaire and solicits data for calculating the time and cost to complete each procedure (figure 6.4). These procedures include, but are not limited to:

- Obtaining all plans and surveys required by the architect and the engineer to start the design of the building plans (for example, topographical surveys, location maps or soil tests).
- Obtaining and submitting all relevant project-specific documents (for

FIGURE 6.3 Dealing with construction permits: efficiency and quality of building regulation

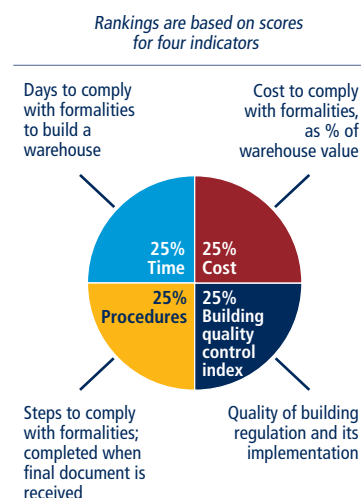
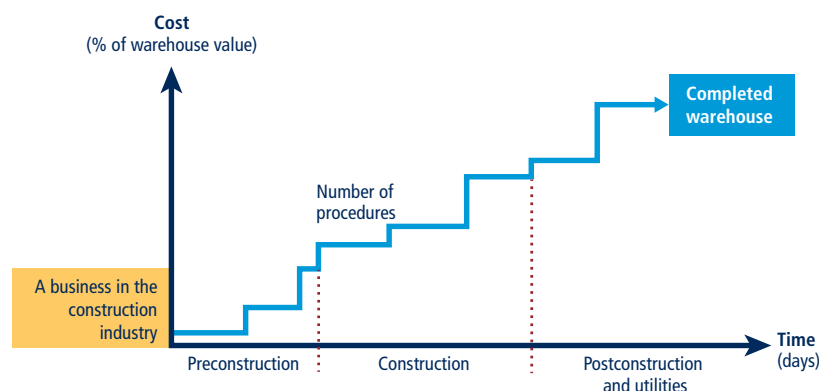


FIGURE 6.4 What are the time, cost and number of procedures to comply with formalities to build a warehouse?



example, building plans, site maps and certificates of urbanism) to the authorities.

- Hiring external third-party supervisors, consultants, engineers or inspectors (if necessary).
- Obtaining all necessary clearances, licenses, permits and certificates.
- Submitting all required notifications for the start and end of construction and for inspections.
- Requesting and receiving all necessary inspections (unless completed by a hired private, third-party inspector).

Doing Business also records procedures for obtaining connections for water and sewerage. Procedures necessary to register the warehouse so that it can be used as collateral or transferred to another entity are also counted.

To make the data comparable across locations, several assumptions about the construction company, the warehouse project and the utility connections are used.

Assumptions about the construction company

The construction company (BuildCo):

- Is a limited liability company (or its legal equivalent).
- Operates in the selected city.
- Is 100% domestically and privately owned.

- Has five 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 a licensed architect and a licensed engineer, both registered with the local association of architects or engineers, where applicable. BuildCo is not assumed to have any other employees who are technical or licensed specialists, such as geological or topographical experts.
- 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 will be built and will sell the warehouse upon its completion.

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.

- Will have two stories, both above ground, with a total constructed area of approximately 1,300.6 square meters (14,000 square feet). Each floor will be 3 meters (9 feet, 10 inches) high.
- Will have road access and be located in the periurban area of the selected city (that is, on the fringes of the city but still within its official limits).
- Will not be located in a special economic or industrial zone.
- Will be located on a land plot of approximately 929 square meters (10,000 square feet) that is 100% owned by BuildCo and is accurately registered in the cadastre and land registry where freehold titles exist. However, when the land is owned by the government and leased by BuildCo, it is assumed that BuildCo will register the land in the cadastre or land registry or both, whichever is applicable, at the completion of the warehouse.
- Is valued at 50 times income per capita.
- Will be a new construction (with no previous construction on the land), with no trees, natural water sources, natural reserves, or historical monuments of any kind on the plot.
- Will have complete architectural and technical plans prepared by a licensed architect and a licensed engineer. If preparation of the plans requires such steps as obtaining further documentation or getting prior approvals from external agencies, these are counted as separate procedures.
- Will include all technical equipment required to be 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 connections:

- Will be 150 meters (492 feet) from the existing water source and sewer tap. If there is no water delivery infrastructure

in the location, a borehole will be dug. If there is no sewerage infrastructure, a septic tank in the smallest size available will be installed or built.

- Will not require water for fire protection reasons; a fire extinguishing 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.
- Will have an average water use of 662 liters (175 gallons) a day and an average wastewater flow of 568 liters (150 gallons) a day. Will have 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.
- Connection pipes will be 1 inch in diameter for water and 4 inches in diameter for sewerage.

Procedures

A procedure is any interaction of the building company's employees, managers, or any party acting on behalf of the company with external parties, including government agencies, notaries, the land registry, the cadastre, utility companies, public inspectors, and the hiring of external private inspectors and technical experts where needed. Interactions between company employees, such as development of the warehouse plans and inspections by the in-house engineer, are not counted as procedures. However, interactions with external parties that are required for the architect to prepare the plans and drawings (such as obtaining topographic or geological surveys), or to have such documents approved or stamped by external parties, are counted as procedures. Procedures that the company undergoes to connect the warehouse to water and sewerage are included. All procedures that are legally required and done in practice by the majority of companies to build a warehouse are recorded, even if they

may be avoided in exceptional cases. For example, obtaining technical conditions for electricity or a clearance of the electrical plans are counted as separate procedures if they are required for obtaining a building permit (table 6.2).

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 one 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, the fastest procedure is chosen if that option is more beneficial to the location's score. It is

TABLE 6.2 What do the indicators on the efficiency of construction permitting 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 and sewerage

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—though 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 warehouse value)

Official costs only, no bribes

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 not taken into account. It is assumed that BuildCo follows all building requirements and their sequence as required.

Cost

Cost is recorded as a percentage of the warehouse value (assumed to be 50 times income per capita). Only official costs are recorded. All 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 at the property registry. 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, specific regulations and fee schedules are used as sources for costs. If several local partners provide different estimates, the median reported value is used.

BUILDING QUALITY CONTROL

The building quality control index is based on six indices—the quality of building regulations, quality control before, during and after construction, liability and insurance regimes, and professional certifications indices (table 6.3). The indicator is based on the same case study assumptions as the measures of efficiency.

Quality of building regulations index

The quality of building regulations index has two components:

- Whether building regulations are easily accessible. A score of 1 is assigned

if building regulations (including the building code) or regulations dealing with construction permits are available on a website that is updated as new regulations are passed; 0.5 if the building regulations are available free of charge (or for a nominal fee) at the relevant permit-issuing authority; 0 if the building regulations must be purchased or if they are not made easily accessible anywhere.

- Whether the requirements for obtaining a building permit are clearly specified. A score of 1 is assigned if the building regulations (including the building code) or any accessible website, brochure, or pamphlet clearly specifies the list of required documents to submit, the fees to be paid, and all required preapprovals of the drawings (example: electrical, water and sewerage, environmental) or plans by the relevant agencies; 0 if none of these sources specify any of these requirements or if these sources specify fewer than the three requirements mentioned above.

The index ranges from 0 to 2, with higher values indicating clearer and more transparent building regulations. In Malta, for example, all relevant legislation can be found on an official government website (a score of 1). The legislation specifies the list of required documents to submit, the fees to be paid, and all required preapprovals of the drawings or plans by the relevant agencies (a score of 1). Adding these numbers gives Malta a score of 2 on the quality of building regulations index.

Quality control before construction index

The quality control before construction index has one component:

- Whether by law, a licensed architect or licensed engineer is part of the committee or team that reviews and approves building permit applications and whether that person has the authority to refuse an application if the plans are not in conformity with

TABLE 6.3 What do the indicators on building quality control measure?

Quality of building regulations index (0–2)
Accessibility of building regulations (0–1)
Clarity of requirements for obtaining a building permit (0–1)
Quality control before construction index (0–1)
Whether licensed or technical experts approve building plans (0–1)
Quality control during construction index (0–3)
Types of inspections legally mandated during construction (0–2)
Implementation of legally mandated inspections in practice (0–1)
Quality control after construction index (0–3)
Final inspection legally mandated after construction (0–2)
Implementation of legally mandated final inspection in practice (0–1)
Liability and insurance regimes index (0–2)
Parties held legally liable for structural flaws after building occupancy (0–1)
Parties legally mandated to obtain insurance to cover structural flaws after building occupancy or insurance commonly obtained in practice (0–1)
Professional certifications index (0–4)
Qualification requirements for individual who approves building plans (0–2)
Qualification requirements for individual who supervises construction or conducts inspections (0–1)
Building quality control index (0–15)
Sum of the quality of building regulations, quality control before construction, quality control during construction, quality control after construction, liability and insurance regimes, and professional certifications indices

regulations. A score of 1 is assigned if the national association of architects or engineers (or its equivalent) must review the building plans, if an independent firm or expert who is a licensed architect or engineer must review the plans, if the architect or engineer who prepared the plans must submit an attestation to the permit-issuing authority stating that the plans are in compliance with the building regulations or if a licensed architect or engineer is part of the committee or team that approves the plans at the relevant permit-issuing authority; 0 if no licensed architect or

engineer is involved in the review of the plans to ensure their compliance with building regulations.

The index ranges from 0 to 1, with higher values indicating better quality control in the review of the building plans. In the Arab Republic of Egypt, for example, the city hall in Cairo must review the building permit application, including the plans and drawings, and a licensed architect is part of the team that reviews the plans and drawings. Egypt, therefore, receives a score of 1 on the quality control before construction index.

Quality control during construction index

The quality control during construction index has two components:

- Whether inspections are mandated by law during the construction process. A score of 2 is assigned if (i) a government agency is legally mandated to conduct technical inspections at different stages during the construction or an in-house engineer (that is, an employee of the building company), an external supervising engineer or firm is legally mandated to conduct technical inspections at different stages during the construction of the building and is required to submit a detailed inspections report at the completion of the construction; and (ii) it is legally mandated to conduct risk-based inspections. A score of 1 is assigned if a government agency is legally mandated to conduct only technical inspections at different stages during the construction or if an in-house engineer (that is, an employee of the building company), an external supervising engineer or an external inspections firm is legally mandated to conduct technical inspections at different stages during the construction of the building and is required to submit a detailed inspections report at the completion of the construction. A score of 0 is assigned if a government agency is legally mandated to conduct unscheduled

inspections, or if no technical inspections are mandated by law.

- Whether inspections during construction are implemented in practice. A score of 1 is assigned if the legally mandated inspections during construction always occur in practice; 0 if the legally mandated inspections do not occur in practice, if the inspections occur most of the time but not always or if inspections are not mandated by law regardless of whether they commonly occur in practice.

The index ranges from 0 to 3, with higher values indicating better quality control during the construction process. In Antigua and Barbuda, for example, the Development Control Authority is legally mandated to conduct phased inspections under the Physical Planning Act of 2003 (a score of 1). However, the Development Control Authority rarely conducts these inspections in practice (a score of 0). Adding these numbers gives Antigua and Barbuda a score of 1 on the quality control during construction index.

Quality control after construction index

The quality control after construction index has two components:

- Whether a final inspection is mandated by law in order to verify that the building was built in compliance with the approved plans and existing building regulations. A score of 2 is assigned if an in-house supervising engineer (that is, an employee of the building company), an external supervising engineer or an external inspections firm is legally mandated to verify that the building has been built in accordance with the approved plans and existing building regulations, or if a government agency is legally mandated to conduct a final inspection upon completion of the building; 0 if no final inspection is mandated by law after construction and no third party is required to verify that the building has been built in accordance with the approved plans and existing building regulations.

- Whether the final inspection is implemented in practice. A score of 1 is assigned if the legally mandated final inspection after construction always occurs in practice or if a supervising engineer or firm attests that the building has been built in accordance with the approved plans and existing building regulations; 0 if the legally mandated final inspection does not occur in practice, if the legally mandated final inspection occurs most of the time but not always, or if a final inspection is not mandated by law regardless of whether or not it commonly occurs in practice.

The index ranges from 0 to 3, with higher values indicating better quality control after the construction process. In Haiti, for example, the Municipality of Port-au-Prince is legally mandated to conduct a final inspection under the National Building Code of 2012 (a score of 2). However, the final inspection does not occur in practice (a score of 0). Adding these numbers gives Haiti a score of 2 on the quality control after construction index.

Liability and insurance regimes index

The liability and insurance regimes index has two components:

- Whether any parties involved in the construction process are held legally liable for latent defects such as structural flaws or problems in the building once it is in use. A score of 1 is assigned if at least two of the following parties are held legally liable for structural flaws or problems in the building once it is in use: the architect or engineer who designed the plans for the building, the professional or agency that conducted technical inspections, or the construction company; 0.5 if only one of the parties is held legally liable for structural flaws or problems in the building once it is in use; 0 if no party is held legally liable for structural flaws or problems in the building once it is in use, if the project owner or investor

is the only party held liable, if liability is determined in court, or if liability is stipulated in a contract.

- Whether any parties involved in the construction process is legally required to obtain a latent defect liability—or decennial (10 years) liability—insurance policy to cover possible structural flaws or problems in the building once it is in use. A score of 1 is assigned if the architect or engineer who designed the plans for the building, the professional or agency that conducted the technical inspections, the construction company, or the project owner or investor is required by law to obtain either a decennial liability insurance policy or a latent defect liability insurance to cover possible structural flaws or problems in the building once it is in use or if a decennial liability insurance policy or a latent defect liability insurance is commonly obtained in practice by the majority of any of these parties even if not required by law. A score of 0 is assigned if no party is required by law to obtain either a decennial liability insurance or a latent defect liability insurance, and such insurance is not commonly obtained in practice by any party, if the requirement to obtain an insurance policy is stipulated in a contract, if any party must obtain a professional insurance or an all risk insurance to cover the safety of workers or any other defects during construction but not a decennial liability insurance or a latent defect liability insurance that would cover defects after the building is in use, or if any party is required to pay for any damages caused on their own without having to obtain an insurance policy.

The index ranges from 0 to 2, with higher values indicating more stringent latent defect liability and insurance regimes. In Madagascar, for example, under article 1792 of the Civil Code both the architect who designed the plans and the construction company are legally held liable for latent defects for a period of 10

years after the completion of the building (a score of 1). However, there is no legal requirement for any party to obtain a decennial liability insurance policy to cover structural defects, nor do most parties obtain such insurance in practice (a score of 0). Adding these numbers gives Madagascar a score of 1 on the liability and insurance regimes index.

Professional certifications index

The professional certifications index has two components:

- The qualification requirements of the professional responsible for verifying that the architectural plans or drawings are in compliance with the building regulations. A score of 2 is assigned if national or state regulations mandate that the professional must have a minimum number of years of practical experience, must have a university degree (a minimum of a bachelor's) in architecture or engineering, and must also either be a registered member of the national order (association) of architects or engineers or pass a qualification exam. A score of 1 is assigned if national or state regulations mandate that the professional must have a university degree (a minimum of a bachelor's) in architecture or engineering and must also either have a minimum number of years of practical experience or be a registered member of the national order (association) of architects or engineers or pass a qualification exam. A score of 0 is assigned if national or state regulations mandate that the professional must meet only one of the above requirements, if they mandate that the professional must meet two of the requirements but neither of the two is to have a university degree, or if no national or state regulation determines the professional's qualification requirements.
- The qualification requirements of the professional who conducts the technical inspections during construction. A score of 2 is assigned if national or state regulations mandate that the

professional must have a minimum number of years of practical experience, must have a university degree (a minimum of a bachelor's) in engineering, and must also either be a registered member of the national order of engineers or pass a qualification exam. A score of 1 is assigned if national or state regulations mandate that the professional must have a university degree (a minimum of a bachelor's) in engineering and must also either have a minimum number of years of practical experience or be a registered member of the national order (association) of engineers or pass a qualification exam. A score of 0 is assigned if national or state regulations mandate that the professional must meet only one of the requirements, if they mandate that the professional must meet two of the requirements but neither of the two is to have a university degree, or if no national or state regulation determines the professional's qualification requirements.

The index ranges from 0 to 4, with higher values indicating stricter professional certification requirements. In Albania, for example, the professional conducting technical inspections during construction must have a minimum number of years of experience, a relevant university degree and must be a registered architect or engineer (a score of 2). However, the professional responsible for verifying that the architectural plans or drawings are in compliance with building regulations must only have a minimum number of years of experience and a university degree in architecture or engineering (a score of 1). Adding these numbers gives Albania a score of 3 on the professional certifications index.

Building quality control index

The building quality control index is the sum of the scores on the quality of building regulations, quality control before construction, quality control during construction, quality control after

construction, liability and insurance regimes, and professional certifications indices. The index ranges from 0 to 15, with higher values indicating better quality control and safety mechanisms in the construction regulatory system.

The data details on dealing with construction permits can be found at <http://www.doingbusiness.org>.

GETTING ELECTRICITY

Doing Business records all procedures required for a business to obtain a permanent electricity connection and supply for a standardized warehouse (figure 6.5). These procedures include applications and contracts with electricity utilities, all necessary inspections and clearances from the distribution utility as well as 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.

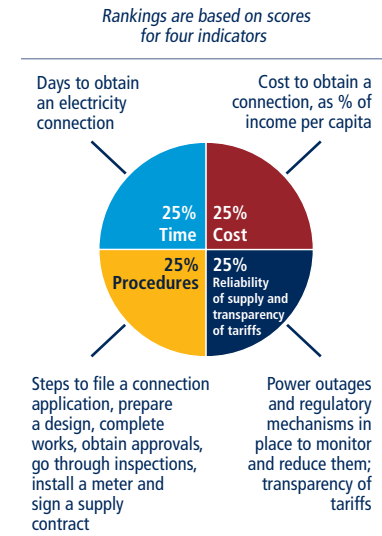
In addition, Doing Business measures the reliability of supply and transparency of tariffs index (included in the aggregate doing business score and ranking on the ease of doing business) and the price of electricity (omitted from these

aggregate measures). The reliability of supply and transparency of tariffs index encompasses quantitative data on the duration and frequency of power outages as well as qualitative information on the mechanisms put in place by the utility for monitoring power outages and restoring power supply, the reporting relationship between the utility and the regulator for power outages, the transparency and accessibility of tariffs and, lastly, whether the utility faces a financial deterrent aimed at limiting outages (such as a requirement to compensate customers or pay fines when outages exceed a certain cap).

The ranking of locations on the ease of getting electricity is determined by sorting their scores for getting electricity. These scores are the simple average of the scores for all the component indicators except the price of electricity (figure 6.6).

Data on the reliability of supply are collected from the electricity distribution utilities or regulators, depending upon the specific technical nature of the data. The rest of the information, including data on transparency of tariffs and procedures for obtaining electricity connection, are collected from all market players—the electricity distribution utility, electricity regulatory agencies and independent

FIGURE 6.6 Getting electricity: efficiency, reliability and transparency



Note: The price of electricity is measured but does not count for the rankings.

professionals such as electrical engineers, electrical contractors and construction companies. The distribution utility consulted is the one serving the area (or areas) where warehouses are most commonly located. If there is a choice of distribution utilities, the one serving the largest number of customers is selected.

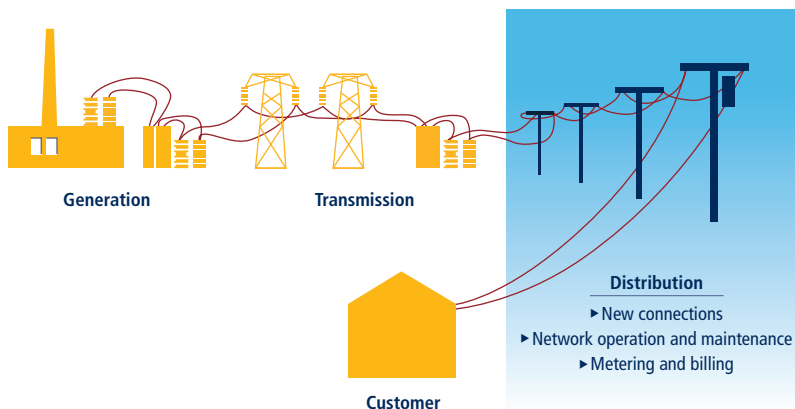
To make the data comparable across locations, several assumptions about the warehouse, the electricity connection and the monthly consumption are used.

Assumptions about the warehouse

The warehouse:

- Is owned by a local entrepreneur.
- Is located in the selected city.
- Is located in an area where similar warehouses are typically located. In this area a new electricity connection is not eligible for a special investment promotion regime (offering special subsidization or faster service, for example).
- Is located in an area with no physical constraints. For example, the property is not near a railway.

FIGURE 6.5 Doing Business measures the connection process at the level of distribution utilities



- Is a new construction and is being connected to electricity for the first time.
- Has two 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).
- Is used for storage of goods.

Assumptions about the electricity connection

The electricity connection:

- Is a permanent one.
- Is a three-phase, four-wire Y connection with a subscribed capacity of 140-kilo-volt-ampere (kVA) with a power factor of 1, when 1 kVA = 1 kilowatt (kW).
- Has a length of 150 meters. The connection is to either the low- or medium-voltage distribution network and is either overhead or underground, whichever is more common in the area where the warehouse is located.
- Requires works that involve the crossing of a 10-meter wide road (by excavation, overhead lines) but are all carried out on public land. There is no crossing of other owners' private property because the warehouse has access to a road.
- Includes only negligible length in the customer's private domain.
- Does not require work to install the internal wiring of the warehouse. This has already been completed up to and including the customer's service panel or switchboard and the meter base. However, internal wiring inspections and certifications that are prerequisites to obtain a new connection are counted as procedures.

Assumptions about the monthly consumption for January

- It is assumed that the warehouse operates 30 days a month from 9:00 a.m. to 5:00 p.m. (8 hours a day), with equipment utilized at 80% of capacity on average and that there are no electricity cuts (assumed for simplicity reasons).

- The monthly energy consumption is 26,880 kilowatt-hours (kWh); hourly consumption is 112 kWh.
- If multiple electricity suppliers exist, the warehouse is served by the cheapest supplier.
- Tariffs effective in January of the current year are used for calculation of the price of electricity for the warehouse. Although January has 31 days, for calculation purposes only 30 days are used.

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 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. However, internal wiring inspections and certifications that are prerequisites to obtain a new connection are counted as procedures. Procedures that must be completed with the same utility but with different departments are counted separately (table 6.4).

The company's employees are assumed to complete all procedures themselves unless the use of a third party is mandated (for example, if an electrician registered with the utility is the only party allowed to submit an application). If the company can, but is not required to request the services of professionals (such as a private firm), procedures will be counted for each interaction that is commonly done in practice.

A procedure is always counted for the external works—whether it is carried out by the utility or a private contractor. However, the external work procedure and the meter installation can be counted as one procedure provided two specific

TABLE 6.4 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 one 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

Reliability of supply and transparency of tariffs index (0–8)

Duration and frequency of power outages (0–3)

Tools to monitor power outages (0–1)

Tools to restore power supply (0–1)

Regulatory monitoring of utilities' performance (0–1)

Financial deterrents aimed at limiting outages (0–1)

Transparency and accessibility of tariffs (0–1)

Price of electricity (cents per kilowatt-hour)

Price based on monthly bill for commercial warehouse in case study

Note: While *Doing Business* measures the price of electricity, it does not include these data when calculating the distance to frontier score for getting electricity or the ranking on the ease of getting electricity.

conditions are met: (i) both the external works and meter installation are carried out by the same company or agency, and (ii) there is no additional interaction for the customer or its main contractor between the external works and the meter installation (such as, for example, a supply contract that needs to be signed or a security deposit that needs to be paid).

If an internal wiring inspection—or a related certification on the installation—is needed to obtain a new connection,

then it is counted as a procedure. However, if an internal inspection and the meter installation occur (i) at the same time, and (ii) without additional follow up or through a separate request, then these are counted as one procedure.

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 assumed that the minimum time required for each procedure is one 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 spent by an entrepreneur on preparing information to fill in forms is not measured. 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 and is 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. If several local partners provide different estimates, the median reported value is used. In all cases the cost excludes bribes.

Security deposit

Utilities may 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 five 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-2018 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 case 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 five years assumed to be the length of the contract. If both options exist, the cheaper alternative is recorded.

In Hong Kong SAR, China, a customer requesting a 140-kVA electricity connection in 2020 would have had to put up a security deposit of 70,533 Hong Kong dollars (approximately \$9,100, the amount for the connection under the case study assumptions). This amount could be paid 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 5.11%. Over the five years of the contract, paying this security deposit would imply a present value of lost interest earnings of 15,519 Hong Kong dollars (\$2,002). In contrast, if the customer chose to settle the deposit with a bank guarantee at an annual rate of 1.5% of the amount of the security deposit, the amount lost over the five years would be 5,290 Hong Kong dollars (\$683). Given that in Hong Kong SAR, China both options are available, settling the deposit with a bank guarantee is recorded, because it is the cheaper alternative.

Reliability of supply and transparency of tariffs index

Doing Business uses the system average interruption duration index (SAIDI) and the system average interruption frequency index (SAIFI) to measure the duration and frequency of power outages in the selected cities of each economy. SAIDI is the average total duration of outages over the course of a year for each customer served, while SAIFI is the average number of service interruptions experienced by a customer in a year. Annual data (covering the calendar year) are collected from distribution utility companies and national regulators on SAIDI and SAIFI. Both SAIDI and SAIFI estimates should include planned and unplanned outages, as well as load shedding.

A location is eligible to obtain a score on the reliability of supply and transparency of tariffs index if it satisfies two conditions. First, the utility must collect data on all types of outages (measuring the average total duration of outages

per customer and the average number of outages per customer). Second, the SAIDI value must be below a threshold of 100 hours and the SAIFI value must be under 100 outages.

A location is not eligible to obtain a score if outages are too frequent or long-lasting for the electricity supply to be considered reliable—that is, if the SAIDI or the SAIFI values exceed the determined thresholds. A location is also not eligible to obtain a score on the index if data on power outages are not collected or collected partially (for example, planned outages or load shedding are not included in the calculation of the SAIDI and SAIFI indices), and if the minimum outage time considered for calculation of the SAIDI and SAIFI indices is over 5 minutes.

For all locations that meet the criteria as determined by *Doing Business*, a score on the reliability of supply and transparency of tariffs index is calculated on the basis of the following six components:

- What the SAIDI and SAIFI values are. If SAIDI and SAIFI are 12 (equivalent to an outage of one hour each month) or below, a score of 1 is assigned. If SAIDI and SAIFI are 4 (equivalent to an outage of one hour each quarter) or below, 1 additional point is assigned. Finally, if SAIDI and SAIFI are 1 (equivalent to an outage of one hour per year) or below, 1 more point is assigned.
- What tools are used by the distribution utility to monitor power outages. A score of 1 is assigned if the utility uses automated tools, such as an Outage/Incident Management System (OMS/IMS) or Supervisory Control and Data Acquisition (SCADA) system; 0 if it relies solely on calls from customers, and records and monitors outages manually.
- What tools are used by the distribution utility to restore power supply. A score of 1 is assigned if the utility uses automated tools, such as an OMS/IMS or SCADA system; 0 if it relies solely on manual resources for service

restoration, such as field crews or maintenance personnel.

- Whether a regulator—that is, a separate and independent entity from the utility—monitors the utility's performance on reliability of supply. A score of 1 is assigned if the regulator performs periodic or real-time reviews; 0 if it does not monitor power outages and does not require the utility to report on reliability of supply.
- Whether financial deterrents exist to limit outages. A score of 1 is assigned if the utility compensates customers when outages exceed a certain cap, if the utility is fined by the regulator when outages exceed a certain cap or if both these conditions are met; 0 if no deterrent mechanism of any kind is available.
- Whether electricity tariffs are transparent and easily available. A score of 1 is assigned if effective tariffs are available online and customers are notified of a change in tariff a full billing cycle (that is, one month) ahead of time; 0 if not.

The index ranges from 0 to 8, with higher values indicating greater reliability of electricity supply and greater transparency of tariffs. In the United Kingdom, for example, the distribution utility company UK Power Networks uses SAIDI and SAIFI metrics to monitor and collect data on power outages. In 2019, the average total duration of power outages in London was 0.24 hours per customer, and the average number of outages experienced by a customer was 0.12. Both SAIDI and SAIFI are below the threshold and indicate less than one outage a year per customer, for a total duration of less than one hour. Hence, the economy meets the eligibility criteria for obtaining a score on the index and receives a score of 3 on the first component of the index. The utility uses the automatic GE PowerOn Control System to identify faults in the network (a score of 1) and restore electricity service (a score of 1). The Office of Gas and Electricity Markets, an independent national regulatory authority, actively

reviews the utility's performance in providing reliable electricity service (a score of 1) and requires the utility to compensate customers if outages last longer than a maximum period defined by the regulator (a score of 1). Customers are notified of a change in tariffs ahead of the next billing cycle and can easily check effective tariffs online (a score of 1). Adding these numbers gives the United Kingdom a total score of 8 on the reliability of supply and transparency of tariffs index.

In contrast, several economies receive a score of 0 on the reliability of supply and transparency of tariffs index. The reason may be that outages occur more than once a month, and none of the mechanisms and tools measured by the index is in place. An economy may also receive a score of 0 if the SAIDI or SAIFI value (or both) exceeds the threshold of 100, or not all outages were considered when calculating the indexes. In Chittagong, Bangladesh, for example, the utility does not include load shedding in the calculation of SAIDI and SAIFI indexes. Thus, according to the established criteria, Chittagong cannot receive a score on the index even though there is an independent regulator that monitors the utility's performance on the reliability of supply.

Price of electricity

Doing Business measures the price of electricity but does not include these data when calculating the score for getting electricity. The data are available on the *Doing Business* website (<http://www.doingbusiness.org>) for each economy covered and are based on standardized assumptions to ensure comparability across economies.

The price of electricity is measured in U.S. cents per kWh. A monthly electricity consumption is assumed, for which a monthly bill is then computed for a warehouse based in the largest business city of the economy for the month of January 2020 (for 11 economies the data are also collected for the second-largest business city). As noted, the warehouse

uses electricity 30 days a month, from 9:00 a.m. to 5:00 p.m., so different tariff schedules may apply if a time-of-use tariff is available.

The data details on getting electricity can be found at <http://www.doingbusiness.org>. The initial methodology was developed by Carolin Geginat and Rita Ramalho ("Electricity Connections and Firm Performance in 183 Countries," Global Indicators Group, World Bank Group, Washington, DC, 2015) and is adopted here with minor changes.

REGISTERING PROPERTY

Doing Business records the full sequence of procedures necessary for a limited liability company (the buyer) to purchase a property from another business (the seller) and to transfer the property title to the buyer's name so that the buyer can use the property for expanding its business, as collateral in taking out new loans or, if necessary, to sell the property to another business. It also measures the time and cost to complete each of these procedures. *Doing Business* also measures the quality of the land administration system in each location. The quality of land administration index has five dimensions: reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution and equal access to property rights.

The ranking of locations on the ease of registering property is determined by sorting their scores for registering property. These scores are the simple average of the scores for each of the component indicators (figure 6.7).

EFFICIENCY OF TRANSFERRING PROPERTY

As recorded by *Doing Business*, the process of transferring property starts with obtaining the necessary documents, such as a recent copy of the seller's title if necessary, and conducting due diligence as required. The transaction is

considered complete when it is opposable to third parties, and when the buyer can use the property for expanding his or her business as collateral for a bank loan or resell it (figure 6.8). 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 time and cost to complete each of them.

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

Assumptions about the parties

The parties (buyer and seller):

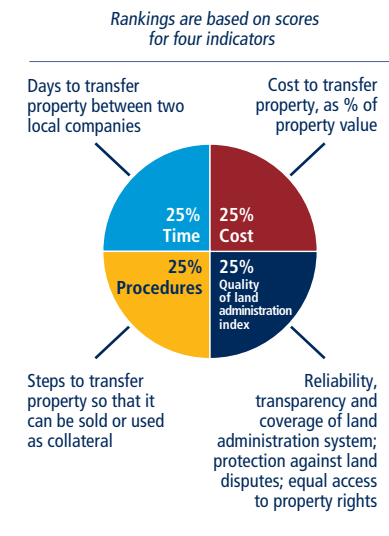
- Are limited liability companies (or their legal equivalent).
- Are located in the periurban (that is, on the outskirts of the city but still within its official limits) area of the selected city.
- Are 100% domestically and privately owned.
- Perform general commercial activities.

Assumptions about the property

The property:

- Has a value of 50 times income per capita, which equals the sale price.
- 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 (that is, on the outskirts of the city but still within its official limits), and no rezoning is required.
- Consists of land and a building. The land area is 557.4 square meters (6,000 square feet). A two-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, has no heating

FIGURE 6.7 Registering property: efficiency and quality of land administration system



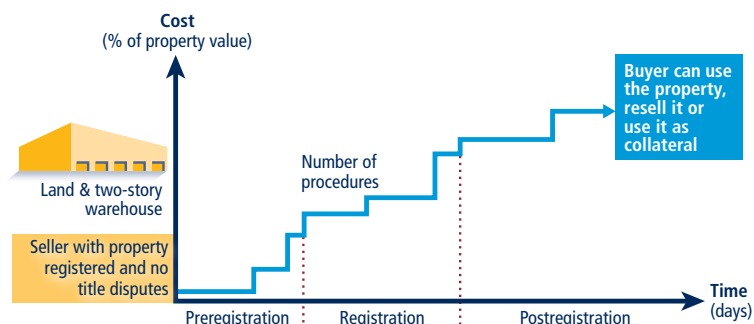
system and complies with all safety standards, building codes and other legal requirements. The property, consisting of land and a building, will be transferred in its entirety.

- Will not be subject to renovations or additional construction 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, the seller or their agents (if an agent is legally or in practice required) with external parties, including government agencies, inspectors, public notaries, architects, surveyors, among others. Interactions between company officers and employees are not considered. All procedures that are legally or in practice required for registering property are recorded, even if they may be avoided in

FIGURE 6.8 What are the time, cost and number of procedures required to transfer property between two local companies?



exceptional cases (table 6.5). Each electronic procedure is counted as a separate procedure. Payment of capital gains tax can be counted as a separate procedure but is excluded from the cost measure. If a procedure can be accelerated legally for an additional cost, the fastest procedure is chosen if that option is more beneficial to the location's score and if it is 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 one day, except for procedures that can be fully completed online, for which the minimum time required is recorded as half a day. Although procedures may take place simultaneously, they cannot start on the same day (again except for procedures that can be fully completed online). For online cases, each simultaneous procedure starts half a day after the previous one. It is assumed that the buyer does not waste time and commits to completing each remaining procedure without delay. It is assumed that the parties involved are aware of all requirements and their sequence from the beginning. The time spent preparing information to fill in forms is not measured.

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 (VAT), are excluded from the cost measure. However, in locations where transfer tax can be substituted by VAT, transfer tax will be recorded instead. Both costs borne by the buyer and the seller are included. If cost estimates differ among sources, the median reported value is used.

QUALITY OF LAND ADMINISTRATION

The quality of land administration index is composed of five other indices: the reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution and equal access to property rights (table 6.6). Data are collected for each of the selected cities.

Reliability of infrastructure index

The reliability of infrastructure index has six components:

- In what format past and newly-issued land records are kept at the immovable property registry of the selected city. A score of 2 is assigned if the land title certificates are fully digital; 1 if scanned; 0 if kept in paper format.
- Whether there is a comprehensive and functional electronic database for checking all encumbrances, charges or privileges affecting a registered property's encumbrances. A score of 1 is assigned if yes; 0 if no.
- In what format past and newly-issued cadastral plans are kept at the mapping agency of the selected city. A score of 2 is assigned if the cadastral plans are fully digital; 1 if scanned; 0 if kept in paper format.
- Whether there is a geographic information system (a fully digital geographic representation of the land plot)—an electronic database for recording boundaries, checking plans and providing cadastral information. A score of 1 is assigned if yes; 0 if no.
- Whether the land ownership registry and mapping agency are linked. A

TABLE 6.5 What do the indicators on the efficiency of transferring property 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 selected 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—though 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

TABLE 6.6 What do the indicators on the quality of land administration measure?

Reliability of infrastructure index (0–8)
Type of system for archiving information on land ownership
Availability of electronic database to check for encumbrances
Type of system for archiving maps
Availability of geographic information system
Link between property ownership registry and mapping system
Transparency of information index (0–6)
Accessibility of information on land ownership
Accessibility of maps of land plots
Publication of fee schedules, lists of registration documents, service standards
Availability of a specific and separate mechanism for complaints
Publication of statistics about the number of property transactions
Geographic coverage index (0–8)
Coverage of land registry at the level of the selected location and the economy
Coverage of mapping agency at the level of the selected location and the economy
Land dispute resolution index (0–8)
Legal framework for immovable property registration
Mechanisms to prevent and resolve land disputes
Equal access to property rights index (-2–0)
Unequal ownership rights to property between unmarried men and women
Unequal ownership rights to property between married men and women
Quality of land administration index (0–30)
Sum of the reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution and equal access to property rights indices

score of 1 is assigned if information about land ownership and maps is kept in a single database or in linked databases; 0 if there is no connection between different databases.

- Whether both the immovable property registry and the mapping agency use the same identification number for properties. A score of 1 is assigned if yes; or 0 if no.

The index ranges from 0 to 8, with higher values indicating a higher quality of infrastructure for ensuring the reliability of information on property titles and boundaries. In Turkey, for example, the land registry offices in Istanbul maintain titles in a fully digital format (a score of 2) and have a fully electronic database to check for encumbrances (a score of 1). The Cadastral Directorate offices in Istanbul have fully digital maps (a score of 2), and the Geographical Information

Directorate has a public portal allowing users to check the plans and cadastral information on parcels along with satellite images (a score of 1). Databases about land ownership and maps are linked to each other through the TAKBIS system, an integrated information system for the land registry offices and cadastral offices (a score of 1). Finally, there is a unique identifying number for properties (a score of 1). Adding these numbers gives Turkey a score of 8 on the reliability of infrastructure index.

Transparency of information index

The transparency of information index has 10 components:

- Whether information on land ownership is made publicly available. A score of 1 is assigned if information on land ownership is accessible by anyone; 0 if access is restricted.

- Whether the list of documents required for completing all types of property transactions is made publicly available. A score of 0.5 is assigned if the list of documents is accessible online or on a public board; 0 if it is not made available to the public or if it can be obtained only in person.
- Whether the fee schedule for completing all types of property transactions is made easily available to the public. A score of 0.5 is assigned if the fee schedule is easily accessible online or on a public board free of charge; 0 if it is not made available to the public or if it can be obtained only in person.
- Whether the immovable property agency formally specifies the time frame to deliver a legally binding document proving property ownership. A score of 0.5 is assigned if such service standard is accessible online or on a public board; 0 if it is not made available to the public or if it can be obtained only in person.
- Whether there is a specific and independent mechanism for filing complaints about a problem that occurred at the agency in charge of immovable property registration. A score of 1 is assigned if there is a specific and independent mechanism for filing a complaint; 0 if there is only a general mechanism or no mechanism.
- Whether there are publicly available official statistics tracking the number of transactions at the immovable property registration agency in the selected city. A score of 0.5 is assigned if statistics are published about property transfers in the selected city in the past calendar year at the latest on May 1st of the following year; 0 if no such statistics are made publicly available.
- Whether cadastral plans are made publicly available. A score of 0.5 is assigned if cadastral plans are accessible by anyone; a score of 0 is assigned if access is restricted.
- Whether the fee schedule for accessing cadastral plan is made easily available to the public. A score of 0.5 is assigned if the fee schedule is easily

accessible online or on a public board free of charge; 0 if it is not made available to the public or if it can be obtained only in person.

- Whether the mapping agency formally specifies the time frame to deliver an updated cadastral plan. A score of 0.5 is assigned if the service standard is accessible online or on a public board; 0 if it is not made available to the public or if it can be obtained only in person.
- Whether there is a specific and independent mechanism for filing complaints about a problem that occurred at the mapping agency. A score of 0.5 is assigned if there is a specific and independent mechanism for filing a complaint; 0 if there is only a general mechanism or no mechanism.

The index ranges from 0 to 6, with higher values indicating greater transparency in the land administration system. In the Netherlands, for example, anyone who pays a fee can consult the land ownership database (a score of 1). Information can be obtained at the office, by mail, or online using the Kadaster website (<http://www.kadaster.nl>). Anyone can also easily access the information online about the list of documents to submit for property registration (a score of 0.5), the fee schedule for registration (a score of 0.5), and the service standards (a score of 0.5). And anyone facing a problem at the land registry can file a complaint or report an error by filling out a specific form online (a score of 1). In addition, the Kadaster makes statistics about land transactions available to the public, reporting a total of 34,908 property transfers in Amsterdam in 2019 (a score of 0.5). Moreover, anyone who pays a fee can consult online cadastral maps (a score of 0.5). It is also possible to get public access to the fee schedule for map consultation (a score of 0.5), the service standards for delivery of an updated plan (a score of 0.5), and a specific mechanism for filing a complaint about a map (a score of 0.5). Adding these numbers gives the Netherlands a score of 6 on the transparency of information index.

Geographic coverage index

The geographic coverage index has four components:

- How complete the coverage of the land registry is at the level of the selected city. A score of 2 is assigned if all privately held land plots in the city are formally registered at the land registry; 0 if not.
- How complete the coverage of the land registry is at the level of the economy. A score of 2 is assigned if all privately held land plots in the economy are formally registered at the land registry; 0 if not.
- How complete the coverage of the mapping agency is at the level of the selected city. A score of 2 is assigned if all privately held land plots in the city are mapped; 0 if not.
- How complete the coverage of the mapping agency is at the level of the economy. A score of 2 is assigned if all privately held land plots in the economy are mapped; 0 if not.

The index ranges from 0 to 8, with higher values indicating greater geographic coverage in land ownership registration and cadastral mapping. In Japan, for example, all privately held land plots are formally registered at the land registry in Tokyo and Osaka (a score of 2) and the economy as a whole (a score of 2). Also, all privately held land plots are mapped in both cities (a score of 2) and the economy as a whole (a score of 2). Adding these numbers gives Japan a score of 8 on the geographic coverage index.

Land dispute resolution index

The land dispute resolution index assesses the legal framework for immovable property registration and the accessibility of dispute resolution mechanisms. The index has eight components:

- Whether the law requires that all property sale transactions be registered at the immovable property registry to make them opposable to third parties. A score of 1.5 is assigned if yes; 0 if no.
- Whether the formal system of immovable property registration is

subject to a guarantee. A score of 0.5 is assigned if either a state or private guarantee over immovable property registration is required by law; 0 if no such guarantee is required.

- Whether there is a specific, out-of-court compensation mechanism to cover for losses incurred by parties who engaged in good faith in a property transaction based on erroneous information certified by the immovable property registry. A score of 0.5 is assigned if yes; 0 if no.
- Whether the legal system requires verification of the legal validity of the documents (such as the sales, transfer or conveyance deed) necessary for a property transaction. A score of 0.5 is assigned if there is a review of legal validity, either by the registrar or by a professional (such as a notary or a lawyer); 0 if there is no review.
- Whether the legal system requires verification of the identity of the parties to a property transaction. A score of 0.5 is assigned if there is verification of identity, either by the registrar or by a professional (such as a notary or a lawyer); 0 if there is no verification.
- Whether there is a national database to verify the accuracy of government-issued identity documents. A score of 1 is assigned if such a national database is available; 0 if not.
- How much time it takes to obtain a decision from a court of first instance (without an appeal) in a standard land dispute between two local businesses over tenure rights worth 50 times income per capita and located in the selected city. A score of 3 is assigned if it takes less than one year; 2 if it takes between one and two years; 1 if it takes between two and three years; 0 if it takes more than three years.
- Whether there are publicly available statistics on the number of land disputes in the local first instance court. A score of 0.5 is assigned if statistics are published about land disputes in the past calendar year; 0 if no such statistics are made publicly available.

The index ranges from 0 to 8, with higher values indicating greater protection against land disputes. In the United Kingdom, for example, according to the Land Registration Act 2002 property transactions must be registered at the land registry to make them opposable to third parties (a score of 1.5). The property transfer system is guaranteed by the state (a score of 0.5) and has a compensation mechanism to cover losses incurred by parties who engaged in good faith in a property transaction based on an error by the registry (a score of 0.5). In accordance with the Proceeds of Crime Act 2002 and the Money Laundering Regulations 2007, a lawyer verifies the legal validity of the documents in a property transaction (a score of 0.5) and the identity of the parties (a score of 0.5). The United Kingdom has a national database to verify the accuracy of identity documents (a score of 1). In a land dispute between two British companies over the tenure rights of a property, the Land Registration division of the Property Chamber (First-tier Tribunal) gives a decision in less than one year (a score of 3). Finally, statistics about land disputes are collected and published; there were a total of 1,013 land disputes in the country in 2019 (a score of 0.5). Adding these numbers gives the United Kingdom a score of 8 on the land dispute resolution index.

Equal access to property rights index

The equal access to property rights index has two components:

- Whether unmarried men and unmarried women have equal ownership rights to property. A score of -1 is assigned if there are unequal ownership rights to property; 0 if there is equality.
- Whether married men and married women have equal ownership rights to property. A score of -1 is assigned if there are unequal ownership rights to property; 0 if there is equality.

Ownership rights cover the ability to manage, control, administer, access, encumber, receive, dispose of and

transfer property. Each restriction is considered if there is a differential treatment for men and women in the law considering the default marital property regime. For customary land systems, equality is assumed unless there is a general legal provision stating a differential treatment.

The index ranges from -2 to 0, with higher values indicating greater inclusiveness of property rights. In Mali, for example, unmarried men and unmarried women have equal ownership rights to property (a score of 0). The same applies to married men and women who can use their property in the same way (a score of 0). Adding these numbers gives Mali a score of 0 on the equal access to property rights index—which indicates equal property rights between men and women. By contrast, in Tonga unmarried men and unmarried women do not have equal ownership rights to property according to the Land Act [Cap 132], Sections 7, 45 and 82 (a score of -1). The same applies to married men and women who are not permitted to use their property in the same way according to the Land Act [Cap 132], Sections 7, 45 and 82 (a score of -1). Adding these numbers gives Tonga a score of -2 on the equal access to property rights index—which indicates unequal property rights between men and women.

Quality of land administration index

The quality of land administration index is the sum of the scores on the reliability of infrastructure, transparency of information, geographic coverage, land dispute resolution and equal access to property indices. The index ranges from 0 to 30 with higher values indicating better quality of the land administration system.

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

ENFORCING CONTRACTS

Doing Business measures the time and cost for resolving a commercial dispute through a local first-instance court (table 6.7) and the quality of judicial processes index, evaluating whether each location has adopted a series of good practices that promote quality and efficiency in the court system. 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 judges. The ranking of locations on the ease of enforcing contracts is determined by sorting their scores for enforcing contracts. These scores are the simple average of the scores for each of the component indicators (figure 6.9).

EFFICIENCY OF RESOLVING A COMMERCIAL DISPUTE

The data on time and cost are built by following the step-by-step evolution of a commercial sale dispute (figure 6.10). The data are collected for a specific court for each city covered, under the assumptions about the case described below. The “competent court” is the one with jurisdiction over disputes worth 200% of income per capita or \$5,000, whichever is greater. Whenever more than one court has original jurisdiction over a case comparable to the standardized case

TABLE 6.7 What do the indicators on the efficiency of resolving a commercial dispute measure?

Time required to enforce a contract through the courts (calendar days)

Time to file and serve the case

Time for trial and to obtain the judgment

Time to enforce the judgment

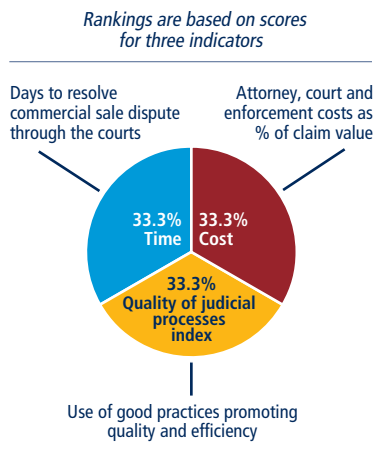
Cost required to enforce a contract through the courts (% of claim)

Average attorney fees

Court costs

Enforcement costs

FIGURE 6.9 Enforcing contracts: efficiency and quality of commercial dispute resolution



study, the data are collected based on the court that would be used by litigants in the majority of cases. The name of the relevant court in each economy is published on the *Doing Business* website at <http://www.doingbusiness.org/data/exploretopics/enforcing-contracts>.

Assumptions about the case

- The value of the claim is equal to 200% of the economy's income per capita or \$5,000, whichever is greater.
- The dispute concerns a lawful transaction between two businesses (Seller and Buyer), both located in the selected city. Pursuant to a contract between the businesses, Seller sells

some custom-made furniture to Buyer worth 200% of the economy's income per capita or \$5,000, whichever is greater. After Seller delivers the goods to Buyer, Buyer refuses to pay the contract price, alleging that the goods are not of adequate quality. Because they were custom-made, Seller is unable to sell them to anyone else.

- Seller (the plaintiff) sues Buyer (the defendant) to recover the amount under the sales agreement. The dispute is brought before the court located in the selected city with jurisdiction over commercial cases worth 200% of income per capita or \$5,000, whichever is greater.
- At the outset of the dispute, Seller decides to attach Buyer's movable assets (for example, office equipment and vehicles) because Seller fears that Buyer may hide its assets or otherwise become insolvent.
- The claim is disputed on the merits because of Buyer's allegation that the quality of the goods was not adequate. Because the court cannot decide the case on the basis of documentary evidence or legal title alone, an expert opinion is given on the quality of the 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

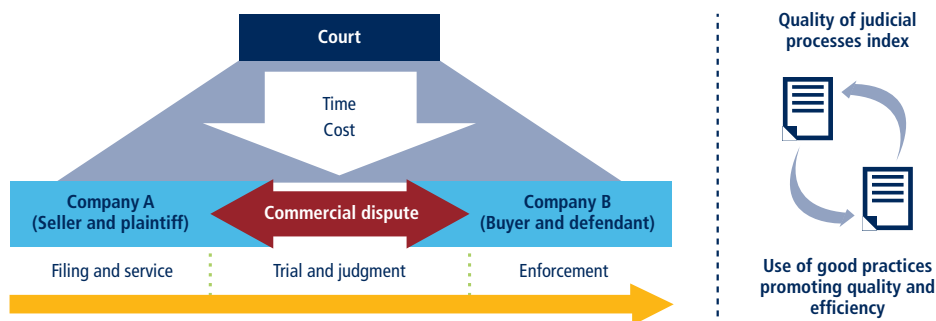
so. In this case the judge does not allow opposing expert testimony.

- Following the expert opinion, the judge decides that the goods delivered by Seller were of adequate quality and that Buyer must pay the contract price. The judge thus renders a final judgment that is 100% in favor of Seller.
- Buyer does not appeal the judgment. Seller decides to start enforcing the judgment as soon as the time allocated by law for appeal lapses.
- 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). It is assumed that Buyer does not have any money on her/his bank account, making it impossible for the judgment to be enforced through a seizure of the Buyer's accounts.

Time

Time is recorded in calendar days, counted from the moment Seller decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods in between. The average duration of the following three different stages of dispute resolution is recorded: (i) filing and service; (ii) trial and judgment; and (iii) enforcement. Time is recorded considering the case study assumptions detailed above and

FIGURE 6.10 What are the time and cost to resolve a commercial dispute through the courts?



only as applicable to the competent court. Time is recorded in practice, regardless of time limits set by law if such time limits are not respected in the majority of cases.

The filing and service phase includes:

- The time for Seller to try and obtain payment out of court through a non-litigious demand letter, including the time to prepare the letter and the deadline that would be provided to Buyer to comply.
- The time necessary for a local lawyer to write the initial complaint and gather all supporting documents needed for filing, including authenticating or notarizing them, if required.
- The time necessary to file the complaint at the court.
- The time necessary for Buyer to be served, including the processing time at the court and the waiting periods between unsuccessful attempts if more than one attempt is usually required.

The trial and judgment phase includes:

- The time between the moment the case is served on Buyer and the moment a pre-trial conference is held, if such pre-trial conference is part of the case management techniques used by the competent court.
- The time between the pre-trial conference and the first hearing, if a pre-trial conference is part of the case management techniques used by the competent court. If not, the time between the moment the case is served on Buyer and the moment the first hearing is held.
- The time to conduct all trial activities, including exchanges of briefs and evidence, multiple hearings, waiting times in between hearings and obtaining an expert opinion.
- The time necessary for the judge to issue a written final judgment once the evidence period has closed.
- The time limit for appeal.

The enforcement phase includes:

- The time it takes to obtain an enforceable copy of the judgment and contact the relevant enforcement office.

- The time it takes to locate, identify, seize and transport the losing party's movable assets (including the time necessary to obtain an order from the court to attach and seize the assets, if applicable).
- The time it takes to advertise, organize and hold the auction. If more than one auction would usually be required to fully recover the value of claim in a case comparable to the standardized case study, then the time between multiple auction attempts is recorded.
- The time it takes for the winning party to fully recover the value of the claim once the auction is successfully completed.

Cost

Cost is recorded as a percentage of the claim value, assumed to be equivalent to 200% of income per capita or \$5,000, whichever is greater. Three types of costs are recorded: average attorney fees, court costs and enforcement costs.

Average attorney fees are the fees that Seller (plaintiff) must advance to a local attorney to represent Seller in the standardized case, regardless of final reimbursement. Court costs include all costs that Seller (plaintiff) must advance to the court, regardless of the final cost borne by Seller. Court costs include the fees that the parties must pay to obtain an expert opinion, regardless of whether they are paid to the court or to the expert directly. 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 borne by Seller. Bribes are not taken into account.

QUALITY OF JUDICIAL PROCESSES

The quality of judicial processes index measures whether each location has adopted a series of good practices in its court system in four areas: court structure and proceedings, case management, court automation and alternative dispute resolution (table 6.8).

TABLE 6.8 What do the indicators on the quality of judicial processes measure?

Court structure and proceedings index (-1-5)
Availability of specialized commercial court, division or section (0-1.5)
Availability of small claims court or simplified procedure for small claims (0-1.5)
Availability of pretrial attachment (0-1)
Criteria used to assign cases to judges (0-1)
Evidentiary weight of a woman's testimony (-1-0)
Case management index (0-6)
Regulations setting time standards for key court events (0-1)
Regulations on adjournments or continuances (0-1)
Availability of performance measurement mechanisms (0-1)
Availability of pretrial conference (0-1)
Availability of electronic case management system for judges (0-1)
Availability of electronic case management system for lawyers (0-1)
Court automation index (0-4)
Ability to file initial complaint electronically (0-1)
Ability to serve initial complaint electronically (0-1)
Ability to pay court fees electronically (0-1)
Publication of judgments (0-1)
Alternative dispute resolution index (0-3)
Arbitration (0-1.5)
Voluntary mediation or conciliation (0-1.5)
Quality of judicial processes index (0-18)
Sum of the court structure and proceedings, case management, court automation and alternative dispute resolution indices

Court structure and proceedings index

The court structure and proceedings index has five components:

- Whether a specialized commercial court, section or division dedicated solely to hearing commercial cases is in place. A score of 1.5 is assigned if yes; 0 if no.
- Whether a small claims court and/or a fast-track procedure for small claims is in place. A score of 1 is assigned if such a court or procedure is in place, it is applicable to all civil cases and the law sets a cap on the value of cases that can be handled through this court or procedure. The point is assigned only if this court applies a simplified

procedure or if the procedure for small claims is simplified. An additional score of 0.5 is assigned if parties can represent themselves before this court or during this procedure. If no small claims court or fast-track procedure is in place, a score of 0 is assigned.

- Whether plaintiffs can obtain pretrial attachment of the defendant's movable assets if they fear the assets may be moved out of the jurisdiction or otherwise dissipated. A score of 1 is assigned if yes; 0 if no.
- Whether cases are assigned randomly and automatically to judges throughout the competent court. A score of 1 is assigned if the assignment of cases is random and automated; 0.5 if it is random but not automated; 0 if it is neither random nor automated.
- Whether a woman's testimony carries the same evidentiary weight in court as a man's. A score of -1 is assigned if the law differentiates between the evidentiary value of a woman's testimony and that of a man in any type of civil case, including family cases; 0 if it does not.

The index ranges from 0 to 5, with higher values indicating a more sophisticated and streamlined court structure. In Bosnia and Herzegovina, for example, a specialized commercial court is in place (a score of 1.5), and small claims can be resolved through a dedicated division in which self-representation is allowed (a score of 1.5). Plaintiffs can obtain pretrial attachment of the defendant's movable assets if they fear dissipation during trial (a score of 1). Cases are assigned randomly through an electronic case management system (a score of 1). A woman's testimony carries the same evidentiary weight in court as a man's (a score of 0). Adding these numbers gives Bosnia and Herzegovina a score of 5 on the court structure and proceedings index.

Case management index

The case management index has six components:

- Whether any of the applicable laws or regulations on civil procedure contain

time standards for at least three of the following key court events: (i) service of process; (ii) first hearing; (iii) filing of the statement of defense; (iv) completion of the evidence period; (v) filing of testimony by expert; and (vi) submission of the final judgment. A score of 1 is assigned if such time standards are available and respected in more than 50% of cases; 0.5 if they are available but not respected in more than 50% of cases; 0 if there are time standards for less than three of these key court events or for none.

- Whether there are any laws regulating the maximum number of adjournments or continuances that can be granted, whether adjournments are limited by law to unforeseen and exceptional circumstances and whether these rules are respected in more than 50% of cases. A score of 1 is assigned if all three conditions are met; 0.5 if only two of the three conditions are met; 0 if only one of the conditions is met or if none are.
- Whether there are any publicly available performance measurement reports about the competent court to monitor the court's performance, to track the progress of cases through the court and to ensure compliance with established time standards. A score of 1 is assigned if at least two of the following four reports are made publicly available: (i) time to disposition report (measuring the time the court takes to dispose/adjudicate its cases); (ii) clearance rate report (measuring the number of cases resolved versus the number of incoming cases); (iii) age of pending cases report (providing a snapshot of all pending cases according to case type, case age, last action held and next action scheduled); and (iv) single case progress report (providing a snapshot of the status of one single case). A score of 0 is assigned if only one of these reports is available or if none are.
- Whether a pretrial conference is among the case management techniques used in practice before the

competent court and at least three of the following issues are discussed during the pretrial conference: (i) scheduling (including the time frame for filing motions and other documents with the court); (ii) case complexity and projected length of trial; (iii) possibility of settlement or alternative dispute resolution; (iv) exchange of witness lists; (v) evidence; (vi) jurisdiction and other procedural issues; and (vii) narrowing down of contentious issues. A score of 1 is assigned if a pretrial conference in which at least three of these events are discussed is held within the competent court; 0 if not.

- Whether judges within the competent court can use an electronic case management system for at least four of the following purposes: (i) to access laws, regulations and case law; (ii) to automatically generate a hearing schedule for all cases on their docket; (iii) to send notifications (for example, e-mails) to lawyers; (iv) to track the status of a case on their docket; (v) to view and manage case documents (briefs, motions); (vi) to assist in writing judgments; (vii) to semi-automatically generate court orders; and (viii) to view court orders and judgments in a particular case. A score of 1 is assigned if an electronic case management system is available that judges can use for at least four of these purposes; 0 if not.
- Whether lawyers can use an electronic case management system for at least four of the following purposes: (i) to access laws, regulations and case law; (ii) to access forms to be submitted to the court; (iii) to receive notifications (for example, e-mails); (iv) to track the status of a case; (v) to view and manage case documents (briefs, motions); (vi) to file briefs and documents with the court; and (vii) to view court orders and decisions in a particular case. A score of 1 is assigned if an electronic case management system that lawyers can use for at least four of these purposes is available; 0 if not.

The index ranges from 0 to 6, with higher values indicating a more qualitative and efficient case management system. In Australia, for example, time standards for at least three key court events are established in applicable civil procedure instruments and are respected in more than 50% of cases (a score of 1). The law stipulates that adjournments can be granted only for unforeseen and exceptional circumstances and this rule is respected in more than 50% of cases (a score of 0.5). A time to disposition report, a clearance rate report and an age of pending cases report can be generated about the competent court (a score of 1). A pretrial conference is among the case management techniques used before the District Court of New South Wales (a score of 1). An electronic case management system satisfying the criteria outlined above is available to judges (a score of 1) and to lawyers (a score of 1). Adding these numbers gives Australia a score of 5.5 on the case management index, the highest score attained by any economy on this index.

Court automation index

The court automation index has four components:

- Whether the initial complaint can be filed electronically through a dedicated platform (not e-mail or fax) within the competent court. A score of 1 is assigned if such a platform is available and litigants are not required to follow up with a hard copy of the complaint; 0 if not. Electronic filing is acknowledged regardless of the percentage of users, as long as no additional in-person interactions are required, and local experts have used it enough to be able to confirm that it is fully functional.
- Whether the initial complaint can be served on the defendant electronically, through a dedicated system or by e-mail, fax or short message service (SMS), for cases filed before the competent court. A score of 1 is assigned if electronic service is available and no further service of process

is required; 0 if not. Electronic service is acknowledged regardless of the percentage of users, as long as no additional in-person interactions are required, and local experts have used it enough to be able to confirm that it is fully functional.

- Whether court fees can be paid electronically for cases filed before the competent court, either through a dedicated platform or through online banking. A score of 1 is assigned if fees can be paid electronically and litigants are not required to follow-up with a hard copy of the receipt or produce a stamped copy of the receipt; 0 if not. Electronic payment is acknowledged regardless of the percentage of users, as long as no additional in-person interactions are required, and local experts have used it enough to be able to confirm that it is fully functional.
- Whether judgments rendered by local courts are made available to the general public through publication in official gazettes, in newspapers or on the internet. A score of 1 is assigned if judgments rendered in commercial cases at all levels are made available to the general public; 0.5 if only judgments rendered at the appeal and supreme court level are made available to the general public; 0 in all other instances. No points are awarded if judgments need to be individually requested from the court, or if the case number or parties' details are required in order to obtain a copy of a judgment.

The index ranges from 0 to 4, with higher values indicating a more automated, efficient and transparent court system. In Estonia, for example, the initial summons can be filed online (a score of 1), it can be served on the defendant electronically (a score of 1), and court fees can be paid electronically as well (a score of 1). In addition, judgments in commercial cases at all levels are made publicly available through the internet (a score of 1). Adding these numbers gives Estonia a score of 4 on the court automation index.

Alternative dispute resolution index

The alternative dispute resolution index has six components:

- Whether domestic commercial arbitration is governed by a consolidated law or consolidated chapter or section of the applicable code of civil procedure encompassing substantially all its aspects. A score of 0.5 is assigned if yes; 0 if no.
- Whether commercial disputes of all kinds—aside from those dealing with public order, public policy, bankruptcy, consumer rights, employment issues or intellectual property—can be submitted to arbitration. A score of 0.5 is assigned if yes; 0 if no.
- Whether valid arbitration clauses or agreements are enforced by local courts in more than 50% of cases. A score of 0.5 is assigned if yes; 0 if no.
- Whether voluntary mediation, conciliation or both are a recognized way of resolving commercial disputes. A score of 0.5 is assigned if yes; 0 if no.
- Whether voluntary mediation, conciliation or both are governed by a consolidated law or consolidated chapter or section of the applicable code of civil procedure encompassing substantially all their aspects. A score of 0.5 is assigned if yes; 0 if no.
- Whether there are any financial incentives for parties to attempt mediation or conciliation (for example, if mediation or conciliation is successful, a refund of court filing fees, an income tax credit or the like). A score of 0.5 is assigned if yes; 0 if no.

The index ranges from 0 to 3, with higher values associated with greater availability of alternative dispute resolution mechanisms. In Israel, for example, arbitration is regulated through a dedicated statute (a score of 0.5), all relevant commercial disputes can be submitted to arbitration (a score of 0.5), and valid arbitration clauses are usually enforced by the courts (a score of 0.5). Voluntary mediation is a recognized way of resolving commercial disputes (a score of 0.5), it

is regulated through a dedicated statute (a score of 0.5), and part of the filing fees is reimbursed if the process is successful (a score of 0.5). Adding these numbers gives Israel a score of 3 on the alternative dispute resolution index.

Quality of judicial processes index

The quality of judicial processes index is the sum of the scores on the court structure and proceedings, case management, court automation and alternative dispute resolution indices. The index ranges from 0 to 18, with higher values indicating better and more efficient judicial processes.

The data details on enforcing contracts can be found for each economy at <http://www.doingbusiness.org>. This methodology was initially developed by Simeon Djankov, Rafael La Porta, Florencio López-de-Silanes and Andrei Shleifer ("Courts," Quarterly Journal of Economics 118, no. 2 [2003]: 453-517) and is adopted here with several changes. The quality of judicial processes index was introduced in Doing Business 2016. The good practices tested in this index were developed on the basis of internationally recognized good practices promoting judicial efficiency.