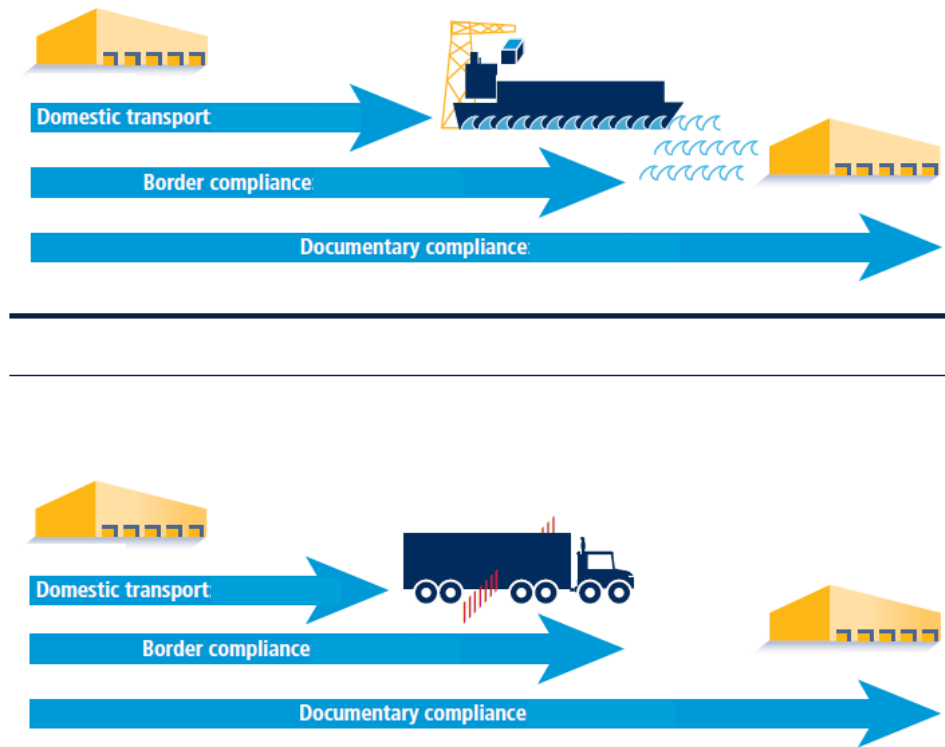


Trading Across Borders Methodology



Doing Business records the time and cost associated with the logistical process of exporting and importing goods. *Doing Business* measures the time and cost (excluding tariffs) associated with three sets of procedures—documentary compliance, border compliance and domestic transport—within the overall process of exporting or importing a shipment of goods. Figure 1, using the example of Brazil (as exporter) and China (as importer), shows the process of exporting a shipment from a warehouse in the origin economy to a warehouse in an overseas trading partner through a port. Figure 2, using the example of Kenya (as exporter) and Uganda (as importer), shows the process of exporting a shipment from a warehouse in the origin economy to a warehouse in a regional trading partner through a land border. The ranking of economies on the ease of trading across borders is determined by sorting their scores for trading across borders. These scores are the simple average of the scores for the time and cost for documentary compliance and border compliance to export and import

Although *Doing Business* collects and publishes data on the time and cost for domestic transport, it does not use these data in calculating the score for trading across borders or the ranking on the ease of trading across borders. The main reason for this is that the time and cost for domestic transport are affected by many external factors—such as the geography and topography of the transit territory, road capacity and general infrastructure, proximity to the nearest port or border, and the location of warehouses where the traded goods are stored—and so are not directly influenced by an economy’s trade policies and reforms.

The data on trading across borders are gathered through a questionnaire administered to local freight forwarders, customs brokers, port authorities and traders.

If an economy has no formal, large-scale, private sector cross-border trade taking place as a result of government restrictions, armed conflict or a natural disaster, it is considered a “no practice” economy. A “no practice” economy receives a score of 0 for all the trading across borders indicators.

Assumptions of the case study

To make the data comparable across economies, several assumptions are made about the traded goods and the transactions:

- For each of the 190 economies covered by *Doing Business*, it is assumed that a shipment is located in a warehouse in the largest business city of the exporting economy and travels to a warehouse in the largest business city of the importing economy. For 11 economies the data are also collected, under the same case study assumptions, for the second largest business city.
- The import and export case studies assume different traded products. It is assumed that each economy imports a standardized shipment of 15 metric tons of containerized auto parts (HS 8708) from its natural import partner—the economy from which it imports the largest value (price times quantity) of auto parts. It is assumed that each economy exports the product of its comparative advantage (defined by the largest export value) to its natural export partner—the economy that is the largest purchaser of this product. Precious metal

and gems, mineral fuels, oil products, live animals, residues and waste of foods and products as well as pharmaceuticals are excluded from the list of possible export products, however, and in these cases the second largest product category is considered as needed. (1)

- A shipment is a unit of trade. Export shipments do not necessarily need to be containerized, while import shipments of auto parts are assumed to be containerized.
- If fees are determined by the value of the shipment, the value is assumed to be \$50,000.
- The product is new, not secondhand or used merchandise.
- The exporting/importing firm hires and pays for a freight forwarder or customs broker (or both) and pays for all costs related to domestic transport, clearance and mandatory inspections by customs and other agencies, port or border handling, documentary compliance fees and the like.
- The mode of transport is the one most widely used for the chosen export or import product and the trading partner, as is the seaport or land border crossing.
- All electronic submissions of information requested by any government agency in connection with the shipment are considered to be documents obtained, prepared and submitted during the export or import process.
- A port or border is defined as a place (seaport or land border crossing) where merchandise can enter or leave an economy.
- Government agencies considered relevant are agencies such as customs, port authorities, road police, border guards, standardization agencies, ministries or departments of agriculture or industry, national security agencies, central banks and any other government authorities.

Time

Time is measured in hours, and 1 day is 24 hours (for example, 22 days are recorded as $22 \times 24 = 528$ hours). If customs clearance takes 7.5 hours, the data are recorded as is.

Alternatively, suppose that documents are submitted to a customs agency at 8:00 a.m., are processed overnight and can be picked up at 8:00 a.m. the next day. In this case the time for customs clearance would be recorded as 24 hours because the actual procedure took 24 hours.

Cost

Insurance cost and informal payments for which no receipt is issued are excluded from the costs recorded. Costs are reported in U.S. dollars. Contributors are asked to convert local currency into U.S. dollars based on the exchange rate prevailing on the day they answer the questionnaire. Contributors are private sector experts in international trade logistics and are informed about exchange rates and their movements.

Documentary compliance

Documentary compliance captures the time and cost associated with compliance with the documentary requirements of all government agencies of the origin economy, the destination economy and any transit economies (table 1). The aim is to measure the total burden of preparing the bundle of documents that will enable completion of the international trade for the product and partner pair assumed in the case study. As a shipment moves from Mumbai to New York City, for example, the freight forwarder must prepare and submit documents to the customs agency in India, to the port authorities in Mumbai and to the customs agency in the United States.

The time and cost for documentary compliance include the time and cost for obtaining documents (such as time spent to get the document issued and stamped); preparing documents (such as time spent gathering information to complete the customs declaration or certificate of origin); processing documents (such as time spent waiting for the relevant authority to issue a phytosanitary certificate); presenting documents (such as time spent showing a port terminal receipt to port authorities); and submitting documents (such as time spent submitting a customs declaration to the customs agency in person or electronically).

All electronic or paper submissions of information requested by any government agency in connection with the shipment are considered to be documents obtained, prepared and submitted during the export or import process. All documents prepared by the freight forwarder or customs broker for the product and partner pair assumed in the case study are included regardless of whether they are required by law or in practice. Any documents prepared and submitted so as to get access to preferential treatment—for example, a certificate of origin—are included in the calculation of the time and cost for documentary compliance. Any documents prepared and submitted because of a perception that they ease the passage of the shipment are also included (for example, freight forwarders may prepare a packing list because in their experience this reduces the probability of physical or other intrusive inspections).

In addition, any documents that are mandatory for exporting or importing are included in the calculation of time and cost. Documents that need to be obtained only once are not counted, however. And *Doing Business* does not include documents needed to produce and sell in the domestic market—such as certificates of third-party safety standards testing that may be required to sell toys domestically—unless a government agency needs to see these documents during the export process.

Documentary compliance
Obtaining, preparing and submitting documents during transport, clearance, inspections and port or border handling in origin economy
Obtaining, preparing and submitting documents required by destination economy and any transit economies
Covers all documents required by law and in practice, including electronic submissions of information as well as non-shipment-specific documents necessary to complete the trade
Border compliance
Customs clearance and inspections by customs
Inspections by other agencies (if applied to more than 20% of shipments)
Port or border handling at most widely used port or border of economy
Domestic transport
Loading and unloading of shipment at warehouse, dry port or border
Transport by most widely used mode between warehouse and terminal or dry port
Transport by most widely used mode between terminal or dry port and most widely used border or port
Traffic delays and road police checks while shipment is en route

Table 1 - What do the indicators on the time and cost to export and import cover?

Border compliance

Border compliance captures the time and cost associated with compliance with the economy's customs regulations and with regulations relating to other inspections that are mandatory in order for the shipment to cross the economy's border, as well as the time and cost for handling that takes place at its port or border. The time and cost for this segment include time and cost for customs clearance and inspection procedures conducted by other agencies. For example, the time and cost for conducting a phytosanitary inspection would be included here.

The computation of border compliance time and cost depends on where the border compliance procedures take place, who requires and conducts the procedures and what is the probability that inspections will be conducted. If all customs clearance and other inspections take place at the port or border at the same time, the time estimate for border compliance takes this simultaneity into account. It is entirely possible that the border compliance time and cost could be negligible or zero, as in the case of trade between members of the European Union or other customs unions.

If some or all customs or other inspections take place at other locations, the time and cost for these procedures are added to the time and cost for those that take place at the port or border. In Kazakhstan, for example, all customs clearance and inspections take place at a customs post in Almaty that is not at the land border between Kazakhstan and China. In this case border compliance time is the sum of the time spent at the terminal in Almaty and the handling time at the border.

Doing Business asks contributors to estimate the time and cost for clearance and inspections by customs agencies— defined as documentary and physical inspections for the purpose of calculating duties by verifying product classification, confirming quantity, determining origin and checking the veracity of other information on the customs declaration. (This category includes all inspections aimed at preventing smuggling.) These are clearance and inspection procedures that take place in the majority of cases and thus are considered the “standard” case. The time and cost estimates capture the efficiency of the customs agency of the economy.

Doing Business also asks contributors to estimate the total time and cost for clearance and inspections by customs and all other agencies for the specified product. These estimates account for inspections related to health, safety, phytosanitary standards, conformity and the like, and thus capture the efficiency of agencies that require and conduct these additional inspections.

If inspections by agencies other than customs are conducted in 20% or fewer cases, the border compliance time and cost measures take into account only clearance and inspections by customs (the standard case). If inspections by other agencies take place in more than 20% of cases, the time and cost measures account for clearance and inspections by all agencies. Different types of inspections may take place with different probabilities—for example, scanning may take place in 100% of cases while physical inspection occurs in 5% of cases. In situations like this, *Doing Business* would count the time only for scanning because it happens in more than 20% of cases while physical inspection does not. The border compliance time and cost for an economy do not include the time and cost for compliance with the regulations of any other economy.

Domestic transport

Domestic transport captures the time and cost associated with transporting the shipment from a warehouse in the largest business city of the economy to the most widely used seaport or land border of the economy. For 11 economies the data are also collected for the second largest business city. This set of procedures captures the time for (and cost of) the actual transport; any traffic delays and road police checks; as well as time spent on loading or unloading at the warehouse or border. For a coastal economy with an overseas trading partner, domestic transport captures the time and cost from the loading of the shipment at the warehouse until the shipment reaches the economy's port (figure 1). For an economy trading through a land border, domestic transport captures the time and cost from the loading of the shipment at the warehouse until the shipment reaches the economy's land border (figure 2).

The time and cost estimates are based on the most widely used mode of transport (truck, train) and the most widely used route (road, border posts) as reported by contributors. The time and cost estimates are based on the mode and route chosen by the majority of contributors. For the 11 economies for which data are collected for both the largest and the second largest business city, *Doing Business* allows the most widely used route and the most widely used mode of transport to be different for the two cities. For example, shipments from Delhi are transported by train to Mundra port for export, while shipments from Mumbai travel by truck to Nhava Sheva port to be exported.

In the export case study, as noted, *Doing Business* does not assume a containerized shipment, and time and cost estimates may be based on the transport of 15 tons of noncontainerized products. In the import case study auto parts are assumed to be containerized. In the cases where cargo is containerized, the time and cost for transport and other procedures are based on a shipment consisting of homogeneous cargo belonging to a single Harmonized System (HS) classification code. This assumption is particularly important for inspections, because shipments of homogeneous products are often subject to fewer and shorter inspections than shipments of products belonging to various HS codes.

In some cases the shipment travels from the warehouse to a customs post or terminal for clearance or inspections and then travels onward to the port or border. In these cases the domestic transport time is the sum of the time for both transport segments. The time and cost for clearance or inspections are included in the measures for border compliance, however, not in those for domestic transport.

Reforms

The trading across borders indicator set records the time and cost associated with the logistical process of exporting and importing goods every year. Depending on the impact on the data, certain changes are classified as reforms and listed in the summaries of *Doing Business* reforms in 2017/18 section of the report in order to acknowledge the implementation of significant changes. Reforms are divided into two types: those that make it easier to do business and those changes that make it more difficult to do business. The trading across borders indicator set uses a standard criterion to recognize a reform.

The aggregate gap on the overall score of the indicator set is used to assess the impact of data changes. Any data update that leads to a change of 2% or more on the score gap is classified as a reform, except when the change is the result of automatic official fee indexation to a price or wage index (for more details, see the chapter on the ease of doing business score and ease of doing business ranking). For example, if the implementation of a single window system reduces time or cost in a way that the overall gap decreases by 2% or more, such change is classified as a reform. Minor fee updates or other small changes on the indicators that have an aggregate impact of less than 2% on the gap are not classified as a reform, yet, but their impact is still reflected on the most updated indicators for this indicator set.

This methodology was initially developed by Djankov and others (2008) and was revised in 2015.

1. To identify the trading partners and export product for each economy, *Doing Business* collected data on trade flows for the most recent four-year period from international databases such as the United Nations Commodity Trade Statistics Database (UN Comtrade). For economies for which trade flow data were not available, data from ancillary government sources (various ministries and departments) and World Bank Group country offices were used to identify the export product and natural trading partners.