
***Methodology and
example calculations
for each Paying Taxes
sub-indicator***

Paying Taxes records the taxes and mandatory contributions that a medium-size company must pay in a given year as well as measuring the administrative burden of Paying Taxes and contributions. The project was developed and implemented as part of the *Doing Business* project by the World Bank and IFC in cooperation with PwC. Taxes and contributions measured include the profit or corporate income tax, social contributions and labour taxes paid by the employer, property taxes, property transfer taxes, dividend tax, capital gains tax, financial transactions tax, waste collection taxes, vehicle and road taxes, and any other small taxes or fees.

Paying Taxes measures all taxes and contributions that are government mandated (at any level—federal, state or local) and that apply to the standardised business and have an impact in its financial statements. In doing so, Paying Taxes goes beyond the traditional definition of a tax. As defined for the purposes of government national accounts, taxes include only compulsory, unrequited payments to general government. Paying Taxes departs from this definition because it measures imposed charges that affect business accounts, not government accounts, the main difference relates to labour contributions. The Paying Taxes measure includes government-mandated contributions paid by the employer to a required private pension fund or workers' insurance fund. The indicator includes, for example, Australia's compulsory superannuation guarantee and workers' compensation insurance. For the purpose of calculating the Total Tax Rate (defined below), only taxes borne are included. For example, value added taxes are generally excluded (provided they are not irrecoverable) because they do not affect the accounting profits of the business—that is, they are not reflected in the income statement.

They are, however, included for the purpose of the compliance measures (time and payments), as they add to the burden of complying with the tax system.

The Paying Taxes study uses the *Doing Business* case study scenario to measure the taxes and contributions paid by a standardised business and the complexity of an economy's tax compliance system. This case study scenario uses a set of financial statements and assumptions about transactions made over the course of the year. In each economy tax experts from a number of different firms (including PwC) compute the taxes and mandatory contributions due in their jurisdiction based on the standardised case study facts. Information is also compiled on the frequency of filing and payments, as well as time taken to comply with tax laws in an economy. To make the data comparable across economies, several assumptions about the business and the taxes and contributions are used.

The World Bank and IFC overall ranking for the ease of Paying Taxes is the simple average of the percentile rankings for each of the sub indicators, but this year with a threshold being applied to the Total Tax Rate. The threshold is defined as the highest Total Tax Rate among the top 15% of economies in the ranking on the Total Tax Rate. It is calculated and adjusted on a yearly basis. This year's threshold is 25.7%. All economies with a Total Tax Rate below this threshold receive the same score as the economy at the threshold. The threshold is not based on any economic theory of an "optimal tax rate" that minimises distortions or maximises efficiency in the tax system of an economy overall. Instead, it is mainly empirical in nature, set at the lower end of the distribution of tax rates levied on medium-size enterprises in the manufacturing sector as observed through the Paying Taxes indicators. This reduces the bias in the indicators toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardised case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology).

Assumptions about the business

The business:

- Is a limited liability, taxable company. If there is more than one type of limited liability company in the economy, the limited liability form most common among domestic firms is chosen. The most common form is reported by incorporation lawyers or the statistical office.
- Started operations on 1 January 2010. At that time the company purchased all the assets shown in its balance sheet and hired all its workers.
- Operates in the economy's largest business city.
- Is 100% domestically owned and has five owners, all of whom are natural persons.
- At the end of 2010, has a start-up capital of 102 times income per capita.
- Performs general industrial or commercial activities. Specifically, it produces ceramic flowerpots and sells them at retail. It does not participate in foreign trade (no import or export) and does not handle products subject to a special tax regime, for example, liquor or tobacco.
- At the beginning of 2011, owns two plots of land, one building, machinery, office equipment, computers and one truck and leases one truck.
- Does not qualify for investment incentives or any benefits apart from those related to the age or size of the company.
- Has 60 employees—four managers, eight assistants and 48 workers. All are nationals, and one manager is also an owner. The company pays for additional medical insurance for employees (not mandated by any law) as an additional benefit. In addition, in some economies reimbursable business travel and client entertainment expenses are considered fringe benefits. When applicable, it is assumed that the company pays the fringe benefit tax on this expense or that the benefit becomes taxable income for the employee. The case study assumes no additional salary additions for meals, transportation, education or others. Therefore, even when such benefits are frequent, they are not added to or removed from the taxable gross salaries to arrive at the labour tax or contribution calculation.
- Has a turnover of 1,050 times income per capita.
- Makes a loss in the first year of operation.
- Has a gross margin (pretax) of 20% (that is, sales are 120% of the cost of goods sold).
- Distributes 50% of its net profits as dividends to the owners at the end of the second year.
- Sells one of its plots of land at a profit at the beginning of the second year.
- Has annual fuel costs for its trucks equal to twice income per capita.
- Is subject to a series of detailed assumptions on expenses and transactions to further standardise the case. All financial statement variables are proportional to 2005 income per capita. For example, the owner who is also a manager spends 10% of income per capita on travelling for the company (20% of this owner's expenses are purely private, 20% are for entertaining customers and 60% for business travel).

Assumptions about the taxes and contributions

- All the taxes and contributions recorded are those paid in the second year of operation (calendar year 2011). A tax or contribution is considered distinct if it has a different name or is collected by a different agency. Taxes and contributions with the same name and agency, but charged at different rates depending on the business, are counted as the same tax or contribution.
- The number of times the company pays taxes and contributions in a year is the number of different taxes or contributions multiplied by the frequency of payment (or withholding) for each tax. The frequency of payment includes advance payments (or withholding) as well as regular payments (or withholding).

The Paying Taxes indicators **Tax payments**

The tax payments indicator reflects the total number of taxes and contributions paid, the method of payment, the frequency of payment, the frequency of filing and the number of agencies involved for this standardised case study company during the second year of operation. It includes taxes withheld by the company, such as sales tax, value added tax and employee-borne labour taxes. These taxes are traditionally collected by the company from the consumer or employee on behalf of the tax agencies. Although they do not affect the income statements of the company, they add to the administrative burden of complying with the tax system and so are included in the tax payments measure.

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

Turkey: Number of payments

Tax type	World Bank indicator	Actual payments	Notes
Corporate income tax	1	5	Online filing
Stamp duty on property sale	1	1	
Transaction tax on cheques	1	1	
Property tax	2	2	
Environment tax	2	2	
Property transfer fee	1	1	
Value added tax (VAT)	1	12	Online filing
Advertising tax	2	2	
Vehicle tax	1	1	
Stamp duty on contracts	1	1	
Employer paid - Social security contributions	1	12	Online filing
Employer paid - Unemployment insurance contributions	0	12	Paid jointly
Fuel tax	1	1	Embedded in payments to third parties
Employee paid - Social security contributions	0	12	Paid jointly
Employee paid - Payroll tax	0	12	Paid jointly
Employee paid - Unemployment insurance contributions	0	12	Paid jointly
Total	15	89	

Time

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

Panama: Time to comply

	Corporate income tax	Labour taxes	Consumption tax	Total
Compliance process				
Preparation				
Data gathering from internal sources (for example accounting records) if held	36	24	48	
Additional analysis of accounting information to highlight tax sensitive items	16	24	56	
Actual calculation of tax liability including data inputting into software/spreadsheets or hard copy records	24	36	24	
Time spent maintaining/updating accounting systems for changes in tax rates and rules	0	12	2	
Preparation and maintenance of mandatory tax records if required	0	0	12	
Total	76	96	142	314
Filing				
Completion of tax return forms	6	24	12	
Time spent submitting forms to tax authority, which may include time for electronic filing, waiting time at tax authority office etc	1	12	12	
Total	7	36	24	67
Payment				
Calculations of tax payments required including if necessary extraction of data from accounting records	0	0	0	
Analysis of forecast data and associated calculations if advance payments are required	1	12	12	
Time to make the necessary tax payments, either online or at the tax authority office (include time for waiting in line and travel if necessary)	1	12	12	
Total	2	24	24	50
Grand Total	85	156	190	431

Total Tax Rate

The Total Tax Rate measures the amount of taxes and mandatory contributions borne by the business in the second year of operation, expressed as a share of commercial profit. Paying Taxes 2013 reports the Total Tax Rate for calendar year 2011. The total amount of taxes borne is the sum of all the different taxes and contributions payable after accounting for allowable deductions and exemptions. The taxes withheld (such as personal income tax) or collected by the company and remitted to the tax authorities (such as value added tax, sales tax or goods and service tax) but not borne by the company are excluded.

The taxes included can be divided into five categories: profit or corporate income tax, social contributions and labour taxes paid by the employer (in respect of which all mandatory contributions are included, even if paid to a private entity such as a required pension fund), property taxes, turnover taxes and other taxes (such as municipal fees and vehicle and fuel taxes).

The Total Tax Rate is designed to provide a comprehensive measure of the cost of all the taxes a business bears. It differs from the statutory tax rate, which merely provides the factor to be applied to the tax base. In computing the Total Tax Rate, the actual tax payable is divided by commercial profit.

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

The Total Tax Rate calculation for Chile

	CLP '000	CLP '000
Profit before tax (PBT)		198,749
<i>Addback above the line taxes borne:</i>		
Unemployment insurance	5,844	
Work accident insurance	2,313	
Property taxes	3,800	
Municipal taxes	1,799	
Fuel tax	1,152	
Vehicle tax	95	
		15,003
Profit before all taxes borne/commercial profit		213,752
Corporate income tax on PBT after necessary adjustments	(45,131)	
Above the line taxes borne	(15,003)	
Total taxes borne		(60,134)
Profit after tax		153,618
Total Tax Rate = Total taxes borne/commercial profit		28.1%

Commercial profit is computed as sales minus cost of goods sold, minus gross salaries, minus administrative expenses, minus other expenses, minus provisions, plus capital gains (from the property sale) minus interest expense, plus interest income and minus commercial depreciation. To compute the commercial depreciation, a straight-line depreciation method is applied, with the following rates: 0% for the land, 5% for the building, 10% for the machinery, 33% for the computers, 20% for the office equipment, 20% for the truck and 10% for business development expenses. Commercial profit amounts to 59.4 times income per capita.

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

World Bank and IFC's distance to frontier measure

The ease of paying taxes ranking measures the performance of economies on the payments, time and Total Tax Rate indicators relative to the performance of others. It does not provide information on the absolute improvement over time. Nor does it provide information on how large the gaps are between economies at a single point in time.

The distance to frontier measure is designed to address these issues, complementing the ease of paying taxes ranking. This measure illustrates the distance of an economy to the “frontier,” and the change in the measure over time shows the extent to which the economy has closed this gap. The frontier is a score derived from the most efficient practice or highest score achieved on each of the component indicators (payments, time and Total Tax Rate) by any economy since 2004. For example, in this time period the lowest number of payments recorded is 3, achieved by Hong Kong SAR, China, Maldives, Qatar and Saudi Arabia. On time, historically the lowest number of hours recorded is for the Maldives which until 2011 recorded 0 hours because it did not levy any profit, consumption or labour taxes on which the time indicator is based. For the Total Tax Rate, consistent with the calculation of the rankings, the frontier is defined as the Total Tax Rate corresponding to the 15th percentile based on the overall distribution of Total Tax Rates for all years (equivalent to 27.5% of profits). If an economy has a Total Tax Rate below this level, it is considered to be at the frontier for this component.

Calculating the distance to frontier for each economy involves two main steps. First, individual indicator scores are normalised to a common unit: except for the Total Tax Rate, the other two component indicators y is rescaled to $(\max - y) / (\max - \min)$, with the minimum value (\min) representing the frontier—the highest performance on that indicator across all economies since 2005. Second, for each economy the scores obtained are aggregated through simple averaging into one distance to frontier score. An economy's distance to frontier for paying taxes is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier.

The difference between an economy's distance to frontier score in 2004 and its score in 2011 illustrates the extent to which the economy has closed the gap to the frontier over time. And in any given year the score measures how far an economy is from the highest performance at that time.

The maximum (\max) and minimum (\min) observed values are computed for the 174 economies included in the *Doing Business* sample since 2004 and for all years (from 2004 to 2011). The year 2004 was chosen as the baseline for the economy sample because it was the first year that Paying Taxes indicators were available. To mitigate the effects of extreme outliers in the distributions of the rescaled data (very few economies need 2,600 hours to comply with tax obligations, but many need 200 hours), the maximum (\max) is defined as the 95th percentile of the pooled data for all economies and all years for each indicator. Take the Czech Republic, which has a score of 65 on the distance to frontier measure for 2011. This score indicates that the economy is 35 percentage points away from the frontier constructed from the highest performances across all economies and all years. Czech Republic was further from the frontier in 2004, with a score of 41. The difference between the scores shows an improvement over time.

The distance to frontier scores for each economy and each year is available on the *Doing Business* website (<http://www.doingbusiness.org/data/distance-to-frontier>).

