

method: weighting all topics equally and, within each topic, giving equal weight to each of the topic components<sup>7</sup>.

An economy's distance to frontier score is indicated on a scale from 0 to 100, where 0 represents the worst performance and 100 the frontier. All distance to frontier calculations are based on a maximum of 5 decimals. However, indicator ranking calculations and the ease of doing business ranking calculations are based on 2 decimals. The difference between an economy's distance to frontier score in any previous year and its score in 2014 illustrates the extent to which the economy has closed the gap to the regulatory frontier over time. And in any given year the score measures how far an economy is from the best performance at that time.

#### Treatment of the total tax rate

This year, for the first time, the total tax rate component of the paying taxes indicator set enters the distance to frontier calculation in a different way than any other indicator. The distance to frontier score obtained for the total tax rate is transformed in a nonlinear fashion before it enters the distance to frontier score for paying taxes. As a result of the nonlinear transformation, an increase in the total tax rate has a smaller impact on the distance to frontier score for the total tax rate—and therefore on the distance to frontier score for paying taxes—for economies with a below-average total tax rate than it would have in the calculation done in previous years (line B is smaller than line A in figure 15.2 of the *Doing Business 2015* report). And for economies with an extreme total tax rate (a rate that is very high relative to the average), an increase has a greater impact on both these distance to frontier scores than before (line D is bigger than line C in figure 15.2 of the *Doing Business 2015* report).

The nonlinear transformation is not based on any economic theory of an "optimal tax rate" that minimizes distortions or maximizes efficiency in an economy's

that from the simple average method because both these methods assign roughly equal weights to the topics, since the pairwise correlations among indicators do not differ much. An alternative to the simple average method is to give different weights to the topics, depending on which are considered of more or less importance in the context of a specific economy.

<sup>7</sup> For getting credit, indicators are weighted proportionally, according to their contribution to the total score, with a weight of 60% assigned to the strength of legal rights index and 40% to the depth of credit information index. Indicators for all other topics are assigned equal weights

overall tax system. Instead, it is mainly empirical in nature. The nonlinear transformation along with the threshold reduces the bias in the indicator toward economies that do not need to levy significant taxes on companies like the *Doing Business* standardized case study company because they raise public revenue in other ways—for example, through taxes on foreign companies, through taxes on sectors other than manufacturing or from natural resources (all of which are outside the scope of the methodology). In addition, it acknowledges the need of economies to collect taxes from firms.

#### Calculation of scores for economies with 2 cities covered

For each of the 11 economies for which a second city was added in this year's report, the distance to frontier score is calculated as the population-weighted average of the distance to frontier scores for the 2 cities covered (table 12.1). This is done for the aggregate score, the scores for each topic and the scores for all the component indicators for each topic.

Table 12.1 Weights used in calculating the distance to frontier scores for economies with 2 cities covered

Economy	City	Weight (%)
Bangladesh	Dhaka	78
	Chittagong	22
Brazil	São Paulo	61
	Rio de Janeiro	39
China	Shanghai	55
	Beijing	45
India	Mumbai	47
	Delhi	53
Indonesia	Jakarta	78
	Surabaya	22
Japan	Tokyo	65
	Osaka	35
Mexico	Mexico City	83
	Monterrey	17
Nigeria	Lagos	77
	Kano	23
Pakistan	Karachi	65
	Lahore	35
Russian Federation	Moscow	70
	St. Petersburg	30
United States	New York	60
	Los Angeles	40

Source: United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects, 2014 Revision. <http://esa.un.org/unpd/wup/CD-ROM/Default.aspx>.

### Economies that improved the most across 3 or more *Doing Business* topics in 2013/14

*Doing Business 2015* uses a simple method to calculate which economies improved the ease of doing business the most. First, it selects the economies that in 2013/14 implemented regulatory reforms making it easier to do business in 3 or more of the 10 topics included in this year's aggregate distance to frontier score. Twenty-one economies meet this criterion: Azerbaijan; Benin; the Democratic Republic of Congo; Côte d'Ivoire; the Czech Republic; Greece; India; Ireland; Kazakhstan; Lithuania; the former Yugoslav Republic of Macedonia; Poland; Senegal; the Seychelles; Spain; Switzerland; Taiwan, China; Tajikistan; Togo; Trinidad and Tobago; and the United Arab Emirates. Second, *Doing Business* sorts these economies on the increase in their distance to frontier score from the previous year using comparable data.

Selecting the economies that implemented regulatory reforms in at least 3 topics and had the biggest improvements in their distance to frontier scores is intended to highlight economies with ongoing, broad-based reform programs. The improvement in the distance to frontier score is used to identify the top improvers because this allows a focus on the absolute improvement—in contrast with the relative improvement shown by a change in rankings—that economies have made in their regulatory environment for business.

### Ease of *Doing Business* ranking

The ease of doing business ranking ranges from 1 to 189. The ranking of economies is determined by sorting the aggregate distance to frontier scores, rounded to 2 decimals.