Doing Business: External Panel Review

Final Report

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Summary of recommendations

1. **The Doing Business project is a unique source of comparable global data, relevant for researchers, businesses, and policymakers, and potentially of great value to inform decisions by governments and firms. However, to unleash that potential the current methodology should be significantly modified, implying a major overhaul of the project.** With that goal, this review makes a number of recommendations that seek to improve the methodology behind the data, fill important gaps in its substantive coverage, clarify what can and cannot be said on the basis of the data, and protect the integrity of the data collection process. Importantly, our recommendations should be considered as a package in order to ensure a meaningful continuation of the Doing Business project. A piecemeal approach would not produce the desired outcome.

2. **Measure the *de facto* reality, not just *de jure* rules, facing a representative cross-section of firms.** A long-standing concern with Doing Business shared by many stakeholders is that the focus on *de jure* regulation fails to capture the *de facto* reality of many businesses. The exclusive use of hypothetical case studies also fails to capture the diversity of firms and sectors within countries, and obscures critical cross-country differences. We recommend a substantial methodological shift in favor of more data collection from representative samples of actual business owners and operators on their *de facto* experiences of doing business.

3. **Include indicators measuring the positive functions of government in promoting a good business environment.** In addition to regulating business activity, governments provide essential public goods to the private sector: transport and communications infrastructure, a skilled workforce, law and order, etc. Doing Business ignores most of these functions. We recommend remedying this omission.

4. **Expand coverage of international business issues.** Currently, most indicators that are part of Doing Business focus exclusively on a hypothetical domestically-owned enterprise, very partially engaged in international trade. This omits an essential dimension of private investment decisions, making the Doing Business out of sync with what many readers seek from it. We recommend various ways to expand the international coverage of the indicators.

5. **Remove the aggregate index and country rankings.** Doing Business covers a diverse array of indicators that often have little meaning when aggregated with arbitrary weights. Furthermore, the underlying survey of experts measures laws and policies; it does not evaluate them. For some indicators, less is clearly better (e.g., delays in registering a business), while for others, optimal policy is far less clear (e.g., the optimal corporate tax rate). Publishing the indicators to enable further analysis elevates the level of global policy dialog; aggregating them and ranking countries lowers it, and invites the type of external interference and conflicts of interest witnessed in recent years.

6. **Retain and improve the measurement of "Paying Taxes," including the “Total Tax Contribution Rate (TTCR)”, but do not rank countries on their tax rates.** The tax indicator, and in particular the “Total Tax Contribution Rate” has come under heavy criticism. From a societal standpoint, collecting taxes is necessary, and thus lower tax rates are not necessarily better. Nevertheless, taxes impose costs on firms and are a central concern of any business. Therefore, we believe it's valuable for Doing Business to collect and report comparable data on tax systems, including tax rates. To improve this indicator, a comprehensive set of taxes should be considered, and the information should be presented in a transparent way without ad hoc adjustments or manipulation to reflect goals and preferences. However, it is equally important to capture better the benefits of taxation through expanded measures of public services that enable an efficient business environment (recommendation 3).

7. **Eliminate the indicators "Protecting Minority Shareholders" and "Resolving Insolvency."** According to the assumptions of the corresponding case study, Protecting Minority Shareholders is based on the experience of listed companies, which are not representative of SMEs, especially in emerging and developing countries. Legal framework and practices of bankruptcy are sufficiently different across countries to merit a separate report every five years or so on practices across the world.

8. **Make the "Contracting with Government" indicator more relevant.** Public procurement constitutes a large share of aggregate demand in many sectors, and shapes the competitive environment faced by many firms. While the indicator is conceptually different from much of the rest of Doing Business, it has potential value as a data source, but is a lower priority than some other potential methodological revisions. In addition, the case study used appears unrealistic for many countries and firms and in need of revision.

9. **Clarify the conceptual framework behind the Digital Business Indicators.** No doubt it is appropriate for Doing Business to pay more attention to e-commerce and the digital needs of business across many sectors, so we support its inclusion. However, some aspects of the proposed new indicator appear unrelated to the digital focus, though, and fall into the same tendency to measure *de jure* rules rather than *de facto* realities. We suggest some adjustments that capture the accessibility, reliability, and cost dimension of digital services.

10. **Restore and improve the "Employing Workers" indicator as part of Doing Business indicators, but do not rank countries based on this information.** Our recommendation here is similar to the case of "Paying Taxes." Labor costs are a central concern of most businesses, and labor regulation is a vital tool to protect workers, which should be measured as part of the Doing Business project assuming country rankings are removed. The underlying data in the "Employing Workers" indicator are a useful resource for

research and policy analysis, but it loses relevance when aggregated with other indicators. Efforts begun in 2016 to expand coverage of dispute resolution mechanisms, availability of on-the-job training, and equal treatment of men and women should be revived.

11. **Improve the transparency and oversight of Doing Business.** The integrity of Doing Business has come under threat from internal and external pressure. We recommend a number of steps to rebuild the project's credibility: ensure anonymity of respondents to minimize government interference, increase the number of contributors and make their selection more impartial, publish anonymized data at the level of individual respondents to ensure full replicability of all analysis, reduce conflicts of interest with the Bank's lending and advisory roles, and consider an external advisory committee to operationalize the adoption of the suggested changes and to peer-review the report prior to its publication.

Section 1. Introduction

1.1. Overview and purpose of Doing Business

Former World Bank chief economist Kaushik Basu has described the Doing Business report as the Bank's "most cited" and "most contentious" publication.[1] It routinely garners high-profile coverage on the front pages of the Financial Times and Wall Street Journal, features in national electoral campaigns, and has been cited internally by the World Bank as the basis for $15.5 billion in lending[2] In recent years, the Doing Business program has also become embroiled in controversy, culminating with the revelation in 2020 that some scores had been manipulated by members of the Doing Business team.[3]

Stepping back, the basic goal of the Doing Business project is to quantify business regulations in a comparable way across eleven dimensions and 191 countries, focusing on domestic, small and medium enterprises. Despite a previous recommendation to stop the use of aggregate rankings and focus on cardinal scores for individual indicators[4], the annual Doing Business report continues to aggregate all these indicators – with less regulation originally coded as better, albeit with a growing list of qualifiers to allow some room for minimal taxation, safety regulations, investor protections, and so on – and ranks countries from best to worst, with special attention on "top reformers."

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[1] Kaushik Basu (2018), "The ease of doing business comes with trade-offs". Brookings Institution, March 12, 2018. https://www.brookings.edu/opinions/the-ease-of-doing-business-comes-with-trade-offs/

[2] Draft IEG report, "Doing Business and Country Reforms," as presented to the External Review Panel in August 2021. The total figure of $15.5 billion in lending spans 681 projects that "(a) use Doing Business in their Board documents to justify the project, or (b) have one or more DB indicators in either their objectives, or (c) monitoring indicators, or (d) are intended specifically to inform DB indicators."

[3] World Bank Group Internal Audit (2020), "Data integrity in the production process of the Doing Business report" https://documents1.worldbank.org/curated/en/134831608154762985/pdf/Data-Integrity-in-Production-Process-of-the-Doing-Business-Report-Assurance-Review.pdf

[4] Independent Panel Review of the Doing Business Report (2013) https://thedocs.worldbank.org/en/doc/237121516384849082-0050022018/original/doingbusinessreviewpanelreportJune2013.pdf

A stated goal of the Doing Business program is to stimulate policy reform. Countries pay keen attention to these rankings, though with mixed effects -- some may pursue constructive regulatory reforms to raise their scores, while others resist sound technical advice from World Bank experts because it is contradicted by the index's emphasis on deregulation.[5] Other countries reportedly engage in efforts to game the index by tweaking minor technical issues that may affect their rankings at low cost, or in extreme cases, exert pressure on World Bank staff or external Doing Business contributors to manipulate their scores.

The original index was built for the Bank's 2002 World Development Report, *Building Institutions for Markets*, and covered five topic areas: starting a business, enforcing contracts, resolving insolvency, employing workers, and getting credit. The first stand-alone Doing Business report was published in 2004, with coverage expanding gradually over several years to the eleven indicators covered in 2020.

Across all indicators, some common methodological features distinguish the Doing Business approach to measurement: it is based on <u>*expert judgment*</u> (and, where relevant, legal documents) about the regulatory burden a <u>*hypothetical firm*</u> would face if it scrupulously adhered to the letter of all <u>*de jure regulations*</u>, even where these regulations are frequently ignored in practice, and the questionnaires are focused on the <u>*private burdens rather than the social benefits*</u> of regulation. Reliance on a small group of experts, as opposed to interviewing business owners directly, is justified on the grounds of cost and practicality, as well as familiarity with regulatory details. The focus on a hypothetical firm with a given size and other characteristics is motivated by a desire for international comparability, with the obvious trade-off that it neglects the actual diversity of firms within and across countries. The concern with the costs rather than benefits of regulation reflects the original Doing Business team's concern with "the experience of centrally planned economies" in the former Soviet bloc and "the waste of entrepreneurial

[5] The latter issue was flagged to the panel, in particular with respect to the "Paying Taxes" indicator, in meetings with World Bank executive directors and the IMF fiscal affairs department.

talent and resources as a result of overregulation."[6] The focus on *de jure* rather than *de facto* costs of regulation remains an open area of debate, which we address in this report.[7]

Notably, almost all Doing Business indicators have an exclusively domestic focus. Regulations affecting foreign direct investment are explicitly excluded. Nevertheless, media reports suggest that many audiences interpret Doing Business as a measure of a country's attractiveness to foreign investors. The World Bank maintains this is a "misuse" of the Doing Business rankings, as the case-study assumptions are specifically developed for a domestic small- or medium enterprise.

Ideally, reforms captured by the Doing Business indicators should predict improvements in domestic SME growth or other key development outcomes. Evidence here is limited. The Doing Business website provides peer-reviewed academic papers establishing the empirical justification for 9 of the 11 indicators in the 2020 Doing Business report.[8] In each case, the empirical evidence is generally of the form, "better performance on indicator X was positively correlated with development outcome Y in a cross-section of countries at time T." For instance:

i. Better scores on the original "Starting a business" indicator, prior to various revisions over the years, was correlated with lower levels of corruption and a smaller informal sector in a sample of 85 countries observed in 1999 (Djankov et al. 2002);[9]

[6] Simeon Djankov (2016), "The Doing Business Project: How It Started." Journal of Economic Perspectives, 30(1), pp. 247-8. https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.30.1.247

[7] To avoid confusion, we should note that the Doing Business team currently classifies many sub-indicators of the index as "de facto" measures. We reject this use of "de facto", as it refers to expert judgement about what would happen if a hypothetical firm complied fully with the law. We propose to reserve the term "de facto" for actual compliance costs by a representative sample of actual firms. See chapter 2 for more details.

[8] No publications are listed for the "Dealing with construction permits" or "Registering property" indicators. The information for the "Employing workers" indicator has subsequently been removed from the Doing Business website, but the Botero et al. (2004) reference is mentioned by Djankov (2015) as the basis for the original indicator.

[9] A review of the impacts of "a decade of reforms aimed at making it easier and cheaper for [microenterprises] to formalize" by World Bank economists Miriam Bruhn and David McKenzie (2014) concluded that "Most of these policies result in only a modest increase in the number of formal firms, if there is any increase at all."

ii. The “Enforcing Contracts” indicator was correlated with lower perceived corruption and higher fairness in judicial proceedings (Djankov et al. 2003);
iii. “Resolving insolvency” with measures of debt market development (Djankov et al. 2008);
iv. “Employing workers” with higher labor force participation and lower unemployment (Botero et al. 2004);
v. “Getting credit” with higher ratios of private credit to GDP (Djankov, McLiesh, and Shleifer 2007);
vi. “Trading across borders” with higher trade volumes (Djankov, Freund, and Pham 2010);
vii. “Getting electricity” indicator with lower incidence of bribe payments and higher quality electricity supply (Geginat and Ramalho 2018);
viii. “Protecting minority investors” with “a variety of stock market outcomes” (Djankov et al. 2008); and
ix. “Paying taxes” with higher aggregate investment, FDI, and entrepreneurial activity, inter alia (Djankov et al. 2010).

In most cases, however, the research makes no causal claims that Doing Business reforms will lead to better development outcomes – a point emphasized by the 2013 Independent Panel Review of Doing Business.[10] Just one of the cited papers looks for a relationship between *changes* in Doing Business indicators (i.e., reforms) and improvements in the outcome of interest (Djankov et al. 2007, for the credit indicator). Furthermore, the definition of the index has changed considerably since most of the original research base was written.

[10] Exceptions include Djankov, Freund, and Pham (2010), who invoke causal language after instrumenting trade delays with export times in neighboring countries, and Botero et al. (2004) and Djankov et al. (2003), who instrument two separate endogenous variables -- labor regulations and legal formalism, respectively -- with the same set of instrumental variables: legal origin dummies.

1.2. Past reviews and changes to the Doing Business index

The Doing Business index has undergone significant revisions over 17 editions, some in response to past reviews: six new indicators have been added, one has been dropped ("Employing workers"), and all indicators have seen the addition, subtraction, or modification of sub-components (e.g., the "Paying taxes" indicator has undergone nine methodological revisions at six different points in time).

A core question behind many of these changes is whether Doing Business should exclusively measure the private cost of regulation to an individual firm, in money or time, or also capture broader social costs and benefits. Here it is useful to distinguish three categories of Doing Business metrics:

a) Measures of pure transaction costs, where regulation imposes private costs on firms with no direct social benefit. Examples include the days taken to register a business, or the (in)ability to complete tax registration paperwork online.
b) Measures of the quality and efficiency of government services to support the business environment. For instance, in addition to measuring the time and cost of acquiring permits, the "Dealing with Construction Permits" indicator also includes a 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."[11]
c) Measures that present a direct trade-off between the interests of an individual firm and some other social goal, or some other social group. Two prominent examples are the "Employing Workers" indicator (EWI) which includes, e.g., measures of minimum wages and employment protections for workers, and the "Total Tax Contribution Rate" (TTCR) within the "Paying Taxes" indicator.

[11] Notably the "Getting Credit" indicator has, since the inception of Doing Business, recognized a positive function for government regulation, e.g., by rewarding countries for a functioning credit registry.

Over time, Doing Business has moved from a narrow measure of private costs to a somewhat hybrid measure of private and social considerations by changing the mix of these three types of indicators. Doing Business has retained its original transaction-cost measures under (a), added new sub-components across multiple indicators to capture the intended goals of regulation per part (b), and eliminated or modified sub-components that present irreconcilable trade-offs in category (c). Symbolically, the phrase "cost of doing business" has gradually disappeared from the report. Relevant specific changes include the following:

- The "Employing workers" indicator, which measured the cost of labor regulation, was excluded from the aggregate rankings in 2010 because it failed to account for the "offsetting benefits of job protection" and was deemed consistent with the letter but not the "spirit" of relevant ILO conventions.[12]
- A floor was placed on the "Total tax contribution rate" to avoid rewarding the very lowest corporate tax rates globally.
- In addition to the quality control index in the "Dealing with construction permits" indicator, added in 2015 to blunt the accusation that Doing Business undermines public safety, similar quality indexes were introduced to the "Registering Property," "Getting Electricity," and "Enforcing Contracts" indicators the same year, and to the "Resolving Insolvency" index in 2014.
- In 2016, gender dimensions were added to "Starting a Business," "Registering Property," and "Enforcing Contracts."
- The "Protecting minority investors" indicator was introduced in 2005, and data collection began for a proposed new indicator on public procurement in 2020, both of which depart from the template of strictly measuring cost and hassle imposed on a hypothetical firm.

[12] World Bank, Independent Evaluation Group, 2008, "Doing Business: An Independent Evaluation" https://ieg.worldbankgroup.org/sites/default/files/Data/reports/db_evaluation.pdf

The net result is an index that sometimes rewards policies that benefit business at the expense of broader social objectives, and sometimes tries to balance the two – an issue we take up in Chapter 2.

Past reviews of the Doing Business index have also recommended changes to the process for constructing the index. The 2008 report by the World Bank's Independent Evaluation Group (IEG) recommended that Doing Business: a) make clear that Doing Business measures regulatory costs and burdens, rather than benefits; b) work with country offices to measure the impact of Doing Business reforms at the country level; c) pilot methodological changes before including new indicators in rankings; d) increase the number of respondents; and e) improve transparency about the respondents, changes in methodology, and the limitations of the data. All of these recommendations were accepted in principle by World Bank management at the time.

For its part, the 2013 Independent Panel Review stressed the potential for Doing Business to be misinterpreted, giving the indicators a causal interpretation and prescribing a one-size-fits-all approach to regulation. The panel underscored the need for greater transparency, oversight, and a deeper and broader set of contributors, points which were accepted by World Bank management.

Two key recommendations from these past reviews have been rejected by management, however.

The first was the 2013 Independent Panel Review's recommendation to *drop the aggregate country rankings*. The 2008 IEG report noted three faults with aggregate rankings, but found value in them nevertheless: the assumption that less regulation is better, low confidence level in the aggregate ranking due to the small set of contributors, and the tendency for small changes to trigger significant jumps in country rankings. The 2013 Independent Panel Review reached similar conclusions, and recommended the removal of the aggregate rankings. In rejecting this recommendation, World Bank management argued, that the aggregate ranking generates interest and provides an opening for more nuanced policy dialog. However, according to information provided by the Doing Business Team, the DB 2021 Report will de-emphasize the use of rankings.

The second recommendation, echoed by both past reviews and rejected by World Bank management, has been to *drop the "Total Tax Contribution Rate" (TTCR)*. The argument here is that the focus of Doing Business is or should be on inefficiencies in regulation, rather than tax policies. World Bank management has consistently resisted this move on the grounds that, inter alia, tax burdens are a frequent concern of business owners in the Bank's separate Enterprise Surveys. The question of dropping the TTCR from the tax indicator has surfaced again as a key motivation for this new review.

1.3. The need for a new review

Given the prominence of the Doing Business report in policy discussions and the time elapsed since the last comprehensive review from the Independent Panel in 2013, World Bank management decided a new external review of the Doing Business methodology was needed. Three additional factors make this an opportune time for an external review.

Internal proposals or new indicators. Since the last external review of Doing Business, the team has developed two new indicators slated to become part of the annual report. The first, known as "Contracting with the Government," scores countries' public procurement policies. The second set of additions, tentatively known as the "Digital Business Indicators," aim to measure the regulatory environment and challenges faced by companies and service providers pursuing business in the digital marketplace. In addition, as part of the consultation process, the possibility arose of reviving the "Employing Workers" indicator, which was previously removed from Doing Business – though World Bank President David Malpass publicly signaled in a December 2019 letter that this proposal has been withdrawn.[13]

[13] Letter from David Malpass to U.S. Treasury Secretary Mnuchin, December 16, 2019. https://financialservices.house.gov/uploadedfiles/malpass_ltr_mnuchin_12162019_dblr.pdf

External demand to review the "Paying Taxes" indicator and drop the "total tax and contribution rate" component. In a March 20, 2020 letter to the U.S. Treasury Secretary, the World Bank's President committed to the creation of the current review panel:

> "By December 31, 2020, we will commission an independent, external review of the 'total tax contribution rate' sub-component of the Paying Taxes indicator of the annual 'Doing Business' report with a view to aligning this indicator with the development objectives of the World Bank, including its commitment on domestic resource mobilization, and provide a public report to the Board on its findings."[14]

An April 6, 2020 press release from the U.S. House Committee on Financial Services made clear that this announcement came as part of an agreement surrounding U.S. support for a capital increase for the World Bank's International Finance Corporation.[15]

Governance failures within the World Bank leading to manipulation of Doing Business data. It is fundamental to distinguish two separate issues here, with somewhat different implications for Doing Business methodology.

First, in 2018 the World Bank chief economist publicly questioned the validity of the Doing Business report noting that the frequent methodological changes to the index created spurious changes in the rankings and communication failures, misleading the public.[16] A second, separate set of allegations of data manipulation, this time acknowledged by World Bank management, emerged in 2020. Following a whistleblower's report that staff had altered the Doing Business 2018 and 2020 reports, management requested the World Bank Group Internal Audit (GIA) to

[14] Letter from David Malpass to U.S. Treasury Secretary Mnuchin, March 20, 2020. https://financialservices.house.gov/uploadedfiles/malpass_ltr_mnuchin_3202020.pdf
[15] https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=406486
[16] Zumbrun and Talley (2018). *World Bank unfairly influenced its own competitiveness rankings.* Wall Street Journal. https://www.wsj.com/articles/world-bank-unfairly-influenced-its-own-competitiveness-rankings-1515797620

assess the data integrity of the report and review data irregularities from the Doing Business reports between 2016 and 2020.[17] We discuss this report in more detail in Chapter 6 on governance of the index.

In response to the audit findings, the World Bank announced the suspension of the Doing Business report in August 2020. The Bank will resume publication of the report in 2021, which has not occurred prior to the release of this panel's findings.

[17] Group Internal Audit (2020). *Data Integrity in the Production Process of the Doing Business Report*. https://documents1.worldbank.org/curated/en/134831608154762985/pdf/Data-Integrity-in-Production-Process-of-the-Doing-Business-Report-Assurance-Review.pdf

Section 2. Data Collection Methodology

2.1. Expanding the case study method to acknowledge firm heterogeneity

At the core of the Doing Business project lies a hypothetical firm. The survey questionnaires describe the legal form of this notional business, its size, its location, and the nature of its operations. Since the firm is hypothetical, meaning it does not exist in reality, it can be exactly the same in all countries. This helps ensure that respondents' answers to questions like "how long would it take to register the business and get a tax identification number [assuming all proper procedures are followed]?" depend exclusively on differences in official regulations, rather than other differences in the economic context.

The hypothetical case study approach is key for cross-country comparability. But this comes at a potential cost in terms of accuracy and realism. If regulations vary by firm size, sector, age, ownership, location within the country, etc., this information is missed in a single case study. Compounding the problem, if the distribution of actual firms varies across countries along these same dimensions, then the information Doing Business collects will be more (or less) relevant in some countries than others.

To illustrate this concern, Figures 1 and 2 show the cross-country distribution of (i) the average age of firms, (ii) the proportion of private, domestically owned firms, and (iii) the proportion of firms whose legal status is listed as a sole proprietorship in either the manufacturing or services industry from the World Bank's Enterprise Surveys. These figures are informative in evaluating the realism of Doing Business's reliance on a hypothetical 100% domestically owned and limited liability firm. A main takeaway is that the variables exhibit enormous cross-country dispersion, so that the archetypal firm in each country should differ significantly. The typical firm in one country may be an outlier in another, or simply not exist.

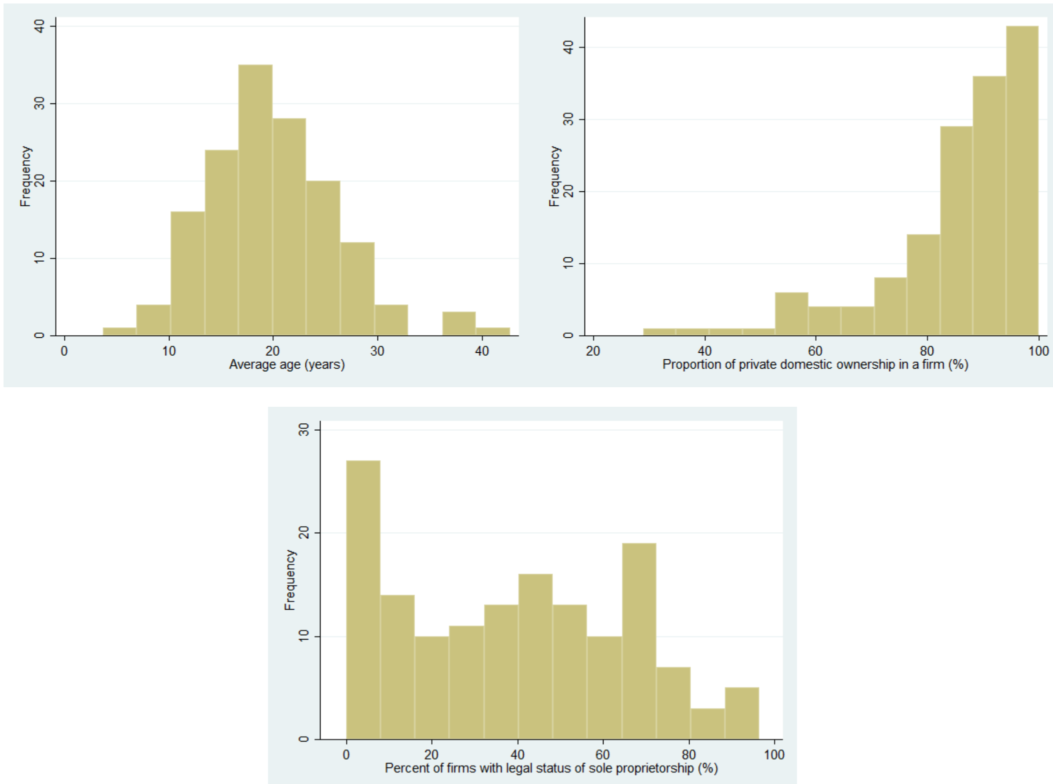

Figure 1 Cross-country distributions from Enterprise Survey (manufacturing)

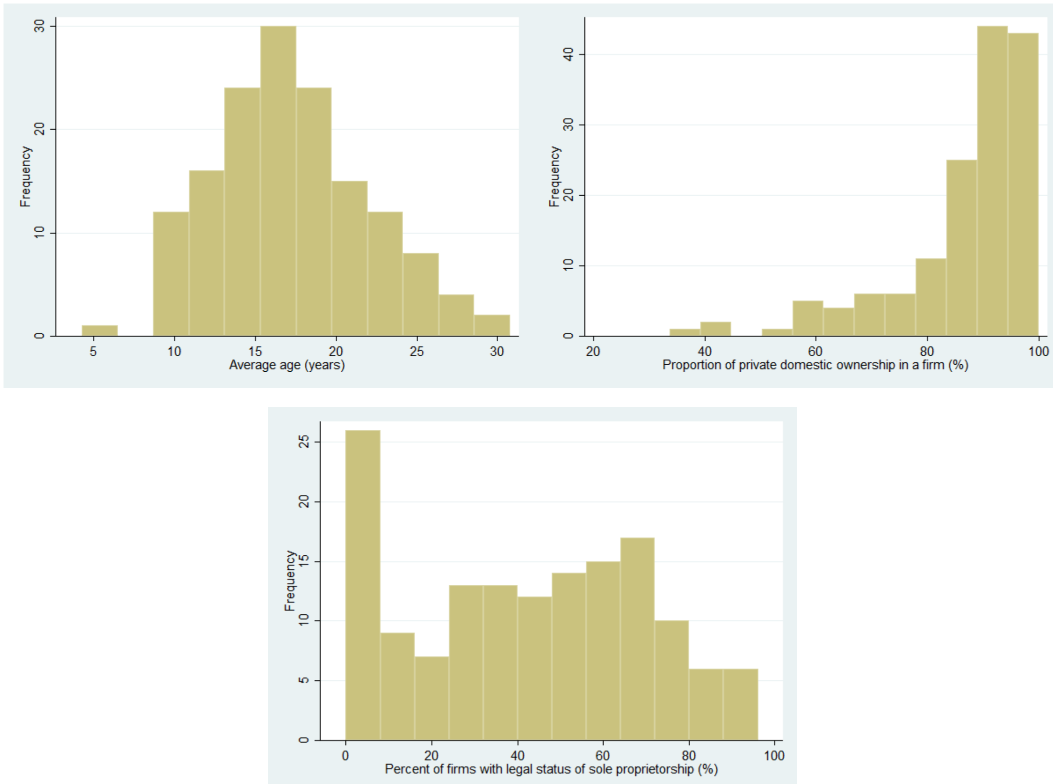

Figure 2 Cross-country distributions from Enterprise Survey (services)

Confusingly, the hypothetical business used in Doing Business varies across indicators. For most of the indicators, the firm is a domestically owned, limited liability company that operates in the largest business city. However, other features vary across indicators, as described in Table 1. For example, the firm for the "Resolving Insolvency" indicator runs a hotel, while the firm for "Paying Taxes" sells ceramic flower pots, and the firms for most other indicators operate in a general industry. The number of workers the firm employs also varies across different indices, while in other cases it is not specified as it is assumed to be irrelevant to the regulation in question. Lastly, there are specific assumptions for each case. For example, the firm for "Starting a Business" has a capital of 10 times of income per capita and the firm for "Paying Taxes" is in its second-year operation. This variation makes it all the more difficult to argue that Doing Business measures the experience of a 'typical' or 'representative' firm; if that were true, the firm shouldn't change depending on the regulation in question.

Table 1. Firm type by index

Characteristics of Case Study assumptions	Legal type	Location	Sector	Ownership	Number of Employees	International Trade
Starting a business	LLC	The largest business city	**Manufacturing and Service** "production or sale to the public of goods or services"	100% domestic	10 to 50 employees after one month after the commencement of operation	No
Dealing with construction permits	LLC	The largest business city	**Manufacturing** (obtaining a construction permit)	100% domestic	60 builders and other employees with the technical expertise necessary to obtain construction permits	No
Getting electricity	-	The largest business city	**Manufacturin**g (owning warehouse, possibility of wholesale commerce company)	-	-	-
Registering property	LLC	The largest business city (located in the periurban)	**Manufacturing** (owning warehouse, possibility of wholesale commerce company)	100% domestic	-	-
Getting credit - Legal rights	LLC	The largest business city	-	100% domestic	up to 50 employees	-
Getting credit - Credit information	LLC	The largest business city	-	100% domestic	-	-
Protecting minority investors (extent of conflict of interest regulation index)	Listed	-	**Manufacturing** "The Business (Buyer) is a manufacturing company with its own distribution network."	Has a majority shareholder who owns 60% of the company	-	-
Protecting minority investors (shareholder governance index)	Listed	-	-	-	-	-
Paying taxes	LLC	The largest business city	**Manufacturing** (ceramic flower pots)	100% domestic	60 employees (4 managers, 8 assistants, 48 workers)	No
Paying taxes (postfiling index)	LLC	The largest business city	**Manufacturing**	100% domestic	-	-
Trading across borders	-	The largest business city	**Manufacturing** "imports a standardized shipment of 15 metric tons of containerized auto parts (Harmonized System 8708) from its natural import partner. Each economy exports its most exported product to its natural export partner"	-	-	Yes
Enforcing contracts	-	The largest business city	**Manufacturing** 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.	-	-	-
Resolving insolvency	LLC	The largest business city	**Availability of service** (hotel business) 10-year loan agreement with a domestic bank secured by the hotel's real estate property; has a going-concern market value of max(100 times income per capita, $200,000); market value of the company's assets is 70% of the market value of the business	100% domestic	201 employees and 50 suppliers, each of which is owed money for the last delivery	-
Employing Workers	LLC	The largest business city	**Availability of service** (supermarket or grocery store)	-	60 employees (subject to collective bargaining agreements if such agreements cover more than 50% of the food retail sector)	-

Many of the features of the hypothetical firms used in Doing Business seem to assume the business is in the manufacturing sector. There are some exceptions, but as shown in Table 1, many indicators appeared geared toward the manufacturing sector.[18] For example, the "Paying Taxes" case study assumes that the business produces a light manufacturing good and sells its product at retail.[19] The "Registering Property" case study assumes that the property in question is a piece of land containing a two-story warehouse in a periurban commercial zone, fully owned by the seller for the past 10 years with no mortgages attached. The "Getting Electricity" case study focuses on a warehouse that is "used for storage of goods" and has a permanent electricity connection.

Manufacturing and service firms face different regulatory hurdles and require a different mix of public services, with different weights attached. The typical manufacturing firm owns land and buildings, and needs to get electricity lines connected. However, a service or retail sector firm would lease or rent space with pre-existing utility connections. Such service and retail firms are prevalent and constitute a larger share of firms and of total employment in most economies, making their exclusion from the case studies a major omission. Therefore, a hypothetical service sector firm should be explicitly considered in the DB methodology.[20]

One simple fix would be to include a "typical" service sector firm as an additional case study. Candidates might include a restaurant, a retail shop, a bakery, a mobile phone store, or a children's daycare center, to name a few.

[18] One of the exceptions to include services, along with manufacturing, is Starting Business indicator: the business 'performs general industrial or commercial activities such as the production or sale to the public of goods or services.'
[19] On the DB methodology website and DB 2020 'Data notes', it says 'Specifically, it produces ceramic flowerpots and sells them at retail.' (https://www.doingbusiness.org/en/methodology/paying-taxes) The DB case study assumptions shared by WB team (Feb 2) indicated 'light manufacturing good'.
[20] There may be a concern that adding the service sector cases would increases the burden and costs of the Doing Business project. However, resources could be made available by reducing the number of indicators included in the report, such as "Protecting Minority Investor" and "Resolving Insolvency."

More fundamentally, the variation in actual firm characteristics within countries raises questions about the meaning of Doing Business scores in any single country. And the variation in the distribution of firm characteristics *across* countries also raises questions about the meaning of cross-country comparisons using a uniform hypothetical firm.

A deeper solution to this problem would require moving away from the case study approach toward collecting data on a representative sample of firms, as done by the World Bank's Enterprise Surveys. That would also imply other changes in the type of questions Doing Business asks, which brings the related topic of whether the report should focus on *de jure* regulation in a hypothetical scenario or *de facto* reality on the ground.

2.2. Moving from *de jure* to *de facto* measurement of regulation

As noted above, in addition to the Doing Business surveys focused on expert judgment about a hypothetical firm, the World Bank also collects Enterprise Surveys around the world, which interview business owners and managers about their actual experiences running a representative sample of firms. Roughly speaking, Doing Business measures *de jure* regulation and the Enterprise Surveys measure (among other things) the *de facto* experience of regulation. In a few cases, these two surveys cover similar (albeit not identical) topics. For example, both surveys estimate roughly "the time required to start a business." Doing Business asks experts the median days to complete all required steps, imposing a minimum of one-day per step unless done online. The Enterprise Surveys asks whether a firm applied for an operating license in the last two years, and if so, how long it took to get.

It is important to be precise about the distinction between "de jure" and "de facto". The Doing Business team often refers to some current sub-indicators as "de facto". We do not feel this label is justified, as these sub-indicators involve expert opinions about, e.g., the number of days it would take a hypothetical firm to register a property if it were to adhere to all formal rules and complete each bureaucratic procedure on consecutive days. There is no empirical basis for these answers. Thus, we propose the following terminology which we use in this report:

- "De jure" refers to legal rules on paper, as is clearly understood in the Doing Business reports.[21]
- "De facto" should refer, we argue, to the actual experience of an actual firm or firms. For example, costs of regulation (in dollars or time) captured by managers –as in the case of the Enterprise Surveys-- are "de facto". At present, Doing Business contains no de facto measures by this definition, and we believe more such measures should be added.

Clearly de jure and de facto measures may both be entirely accurate and yet different -- and indeed they are. Hallward-Driemeier and Pritchett (2015) compare the results across the two sources, and document a surprisingly high level of disagreement between the Doing Business data and the Enterprise Surveys data. The correlation between the two measures of the time required to start a business across countries is nearly zero.

What might explain this enormous gap between *de jure* (and regulatory practice) and *de facto* measures?

Section 2.1 focused on the type of firm Doing Business asks about -- a uniform hypothetical case study, as opposed to the Enterprise Survey's representative sample of real firms. Other key differences include what they ask (time required to follow the letter of the regulation versus actual practice) and who they ask (experts versus business owners).

[21] "Regulatory practice" could be used to refer to expert judgments of the hypothetical cost of compliance with all de jure rules – even where those rules are not enforced. Such measures are common in the Doing Business index at present. See Bosio et al. (2020).

The Doing Business questionnaires are distributed to more than 15,000 local contributors, selected based on expertise and relevance. The contributors are identified by desk research and referral and verified by testing their experiences and knowledge.[22] They come from both the private (e.g., lawyers, architects and accountants) and public (e.g., registrars and custom officials) sectors, but many of them work for law firms. Table 2 summarizes the type of contributors for each indicator.

Indicator	**Type of Contributors**
Starting a Business	incorporation lawyers; notaries; business registries
Dealing with Construction Permits	architects; construction contractors and lawyers; municipalities
Getting Electricity	electrical contractors and engineers; electricity distribution companies
Registering Property	property lawyers; notaries; land registries; cadasters and surveys
Getting Credit	financial lawyers; in-house counsel of banks; collateral registries; credit bureaus and registries
Protecting Minority Investors	corporate and securities lawyers; stock exchange boards/commissions
Paying Taxes	accountants; tax attorneys; tax authorities; social security agencies
Trading across Borders	freight forwarders; logistic companies; customs brokers; port authorities; customs authorities
Enforcing Contracts	civil and commercial litigation lawyers; judges; registrars

[22] Sources for desk research include professional associations, Chamber of commerce, and authors of articles in journals and news.

Resolving Insolvency	insolvency lawyers; judges; registrars; liquidators

Table 2: The type of contributors (source: Doing Business Contributors, March 2, 2021)

Table 3 shows the number of contributors for each indicator and how it varies across countries. The average number of contributors per indicator and economy is more than seven, but the number of contributors varies substantially across indicators. For example, the “Starting a Business” indicator reports around 2,500 respondents while the “Employing Workers” indicator reaches only 1,200 respondents. In addition, there is variation in the number of contributors across countries. For the “Starting a Business” indicator, around 70% of economies have more than five contributors while 30% report fewer than five.

Indicator	**Respondents**	**Economies with a given number of respondents (%)**		
		1–2	**3–5**	**5+**
Starting a Business	2,463	9	19	72
Dealing with Construction Permits	1,468	13	37	50
Getting Electricity	1,540	18	31	51
Registering Property	1,719	13	31	56
Getting Credit	2,021	8	22	65
Protecting Minority	1,380	22	30	48

Investors				
Paying Taxes	1,867	8	27	65
Trading across Borders	1,626	17	32	51
Enforcing Contracts	1,738	12	33	50
Resolving Insolvency	1,472	12	39	48
Employing Workers	1,199	19	36	45
Total	**18,493**	**14**	**31**	**56**

Table 3: The number of contributors (source: DB 2020 Data Notes)

This variance in the number and type of respondents across indicators and countries suggests a haphazard approach to their selection. The process by which contributors are selected is not clearly documented, and there is no public list or sampling frame from which they are drawn. As a result, it is hard to rule out various forms of bias that might affect the pool of contributors.

While it would be a radical departure from Doing Business's current practice, we believe it may be helpful to replace or complement the current expert contributors with a sample of actual business owners and managers, and to attempt to incorporate more *de facto* measures of business regulation.[23]

As an example, the World Bank might consider combining fieldwork for Doing Business and (a light-touch version of) the Enterprise Surveys. This would not be appropriate for all indicators. For instance, questions specifically related to the status of laws might be best addressed to lawyers. But a wide range of Doing Business questions -- about the time and cost of complying with regulations, and the quality of various public services that businesses rely on -- could usefully

[23] De Mel et al. (2013) and Besley (2015) also underscore the importance of using additional de facto measures in the Doing Business.

be redirected to business owners. Positing these questions to a representative sample of businesses would directly address the concerns in the previous subsection about the limitations of a uniform hypothetical case study, as well as the concerns raised here about the disconnect between Doing Business's *de jure* metrics and the Enterprise Survey's *de facto* alternative.

2.3. Measuring an efficient business environment

There is more to doing business than the absence of government interference. To grow, businesses rely on a broad system of public services and social infrastructure: airports, seaports, highways, and railroads; access to reliable, reasonably-priced, high-speed broadband connectivity; an efficient public transportation system; public safety; availability of goods shipment and delivery; and internet banking, to mention a few. Surprisingly, for years the World Bank ranked countries on the "ease of doing business," without considering any of these dimensions.[24] Even after some additions to the index, Doing Business continues to place disproportionate emphasis on the negative function of the state, and specifically on restrictions to starting and closing a business -- steps required for registration, getting construction permits, an initial electricity connection, and eventually resolving disputes and insolvency -- while largely ignoring positive functions for government that determine the quality of the business environment necessary for running and growing the business. A more balanced approach should include the availability of public goods that are essential for the efficiency of businesses. One good example is safety and security.

The index would benefit from more indicators and higher weights in the area of economic and social infrastructure. Utilities—electricity, water, sewage—and infrastructure—port, highway, and rail access as well as high-speed broadband access—are the obvious examples. Reliability and costs of access to utilities and infrastructure are vital factors for running and growing businesses. In order for the business to operate more efficiently, losses incurred due to outages,

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[24] One could obviously go further: businesses benefit from a high-quality education system to produce a skilled workforce, and they depend on the health of their employees, which in turn requires clean water, clean air, and access to good, reasonably priced medical services.

water shortages and other infrastructure services' failures should be measured.[25] A similar logic applies to crime and corruption.

An obvious and valid objection here is that these metrics are poorly suited to the Doing Business hypothetical case-study methodology. Some improvements could be made on the margin. For example, case studies could measure the availability, reliability, and cost of high-speed broadband connectivity.[26] Measures should deduct points if there is history of service interruption, water cutoffs, or high crime (e.g., burglary). A similar approach can be applied to air quality (another public good), deducting points for the number of days when air pollution reaches an unhealthy level. Expert judgment may be imperfect here, but it would be a start. The fact that new measures would not rely on expert surveys should not stand in the way of adopting them.

As noted above, the most promising route to measure access to social and economic infrastructure may be through some form of collaboration between Doing Business and the Enterprise Surveys. Measurement of the diverse, real-life experiences of business will be particularly relevant for these proposed topics: blackouts or interruptions in water supply happen *de facto*, not *de jure*, so a survey of a representative sample of firms may be the best way to capture these dimensions.[27]

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[25] The system average interruption duration index (SAIDI) and the system average interruption frequency index (SAIFI) are included in the DB to capture the reliability of electricity. A similar scoring should be applied to other utilities.

[26] The "Digital Business indicators" of Doing Business measure universal access to broadband (scores should differentiate 5G, 4G, optical cable, etc.), efficient spectrum management, and accessible and safe domain name registration. This can be extended towards measuring the overall infrastructure.

[27] The Enterprise Survey (ES) covers infrastructure indicators such as delays in obtaining electrical connection, frequency in electric outages, proportion of electricity from generators, insufficient water supply, delay in obtaining mainline telephone connection. It evaluates the efficiency of infrastructure services by quantifying delays in obtaining electricity, water and telephone connections. Service delays impose additional costs on firms and therefore may act as barriers to entry and investment. Moreover, the ES considers 'the biggest obstacle' indicator including access to land, corruption, crime and political instability among others. These are indicators that measures the business environment friendliness for running/growing and business and should be therefore considered for Doing Business.

2.4. Indicators of limited relevance to SMEs

While potentially valid in their own right, some current Doing Business indicators appear less relevant to SMEs and are tailored instead to larger firms which may rely on distinct legal processes. Examples include the “Resolving Insolvency” indicator and the “Protecting Minority Investors” indicator. The panel recommends removing them from the report but producing a separate report every five years or so on the status of the legislation and practices in this front.

The “Resolving Insolvency” indicator studies the time, cost and outcome of insolvency proceedings involving domestic entities as well as the strength of the legal framework applicable to judicial liquidation and reorganization proceedings. The current case study revolves around a hotel business which is experiencing liquidity problems.[28]

To consider an acceptable solution to the liquidity/insolvency problem requires details of a legal system, the banking system and the relationship between the bank and the company. If it is a simple liquidity problem (lack of cash flow with positive net assets), banks tend to agree to a rescheduling of the loan or to extend additional loans. If the company is insolvent (negative net assets) then the SME must decide whether it files for bankruptcy but aims at rehabilitation (Chapter 11 or Chapter 13, and Chapter 17 for many SME in the US) or starts a liquidation (Chapter 7 bankruptcy in the US). Developing an internationally comparable scoring is almost impossible given the differences in letter of law and legal practices, not to mention that resolving insolvency will be rare, and of course may not happen at all. This sub-indicator can be eliminated without affecting the overall quality of “Doing Business” and could save resources better spent on other areas of the report.

[28] The business has a 10-year loan agreement with a domestic bank secured by a mortgage over the hotel’s real estate property. The business is experiencing liquidity problems. There is no cash to pay the bank interest or principal in full. The business will therefore default on its loan. The amount outstanding under the loan agreement […] represents 74% of the company’s total debt. The other 26% of its debt is held by unsecured creditors. The company has too many creditors to negotiate an informal out-of-court workout.

Protecting minority shareholders is important in corporate governance among typically large, listed companies. The corresponding indicator considers a publicly listed manufacturing company which becomes involved in a conflict of interest issue.[29] Most SMEs remain private (are not listed on any stock exchange) and the number of shareholders is rather limited. In these cases, the legal provisions captured by the "Protecting Minority Investors" indicator appear moot. The indicator around "Enforcing Contracts" appears more relevant to the kinds of contractual disputes SMEs will frequently encounter.

In addition, resolving disputes among shareholders of a private company involves a legal process that is substantially different from that of a public company. Also, ignoring minority shareholders may increasing the ease of doing business but at cost in terms of fairness. This poses another case where private benefits conflict with social goals, and the simplest solution may be to eliminate the indicator.

2.5. The tension between relevance of methodological changes vs. comparability across time

The World Bank has undertaken an impressive effort to continue to both improve and expand the Doing Business indicators. For the most part, each indicator was conceived as a *de jure* analysis of the regulatory environment based on an "ideal" or "hypothetical" case for SMEs. The original indicators tend to have an internal consistency, follow the same case methodology, and are backed by academic papers exploring both their logic and implications. This information,

[29] The business is a manufacturing company with its own distribution network. The business (buyer) is a publicly traded corporation that has equity securities <u>listed on the economy's most important stock exchange</u>. It […] has an unlimited number of shareholders. Mr. James owns 60% of Buyer […] and also owns 90% of Seller, a company that operates a chain of retail hardware stores. Seller recently closed a large number of its stores. Mr. James proposes that Buyer purchase Seller's unused fleet of trucks to expand Buyer's distribution of its food products, a proposal to which Buyer agrees. The transaction causes damages to Buyer. Shareholders sue Mr. James and the other executives and directors that approved the transaction. (Underline added by panel members)

along with others, is useful to policy makers (and academics) in the complex task of understanding the many variables that shape the business environment. There is value, or rather a need, in grounding the exercise in a concrete example both given the infinite number of hypothetical considerations and for cross-country-time comparisons.

Despite the original internal consistency within indicators, the consistency across them is not always clear. There does not seem to be an overall "framework" across indicators or one guiding the choices to include, modify, or exclude indicators. As interests (and petitions) have changed (or have been catered to), some of the individual indexes have lost some of their internal consistency (e.g., ad hoc floor to the tax measure).

Pros of changes—Evaluating the businesses' constraints and opportunities is inherently a dynamic issue that needs modifications and adjustment as economies evolve. Improvement is always necessary.

Concern regarding changes—Modification, adjustment of existing indicators, incorporation of new measures, and/or exclusions imply potential breaks in the series. These adjustments may involve score and ranking changes that are many times hard to convey. Modifications render the time series comparisons of scores challenging. Retroactively changing the series is sometimes problematic because the needed data may not have been collected.

Consistency across indicators, as well as over time, should also be a priority. This will become increasingly important if, as we recommend, Doing Business adds more genuinely *de facto* measures. The team may want to include for each indicator some measure of the *de jure* regulatory rules (actual laws and regulation), regulatory practice (implementation of such rules and regulation), and *de facto* outcome (cost and quality), which in many instances ignores the laws.[30]

One important advantage to advancing some form of framework to guide current and future methodological modifications is that it could also make evident the role of externalities and public goods related to different indicators and the main private obstacles and costs that matter for business. Of course, Doing Business cannot capture everything that matters for the business environment nor is it attempting to do so.[31] Firms, for example, care about flexibility, availability of workers, cognitive abilities and welfare of its employees, in addition to quality of the products and customer service, financing, a stable macro environment, among others. But using such methodology would allow a basic structure to frame the main variables that should be considered (while planning for future indicators).

2.6. Rethinking aggregation and ranking

In addition to measuring business regulations around the world, the Doing Business report also aggregates those measures and publishes country rankings. The report and the World Bank communications team place heavy emphasis on "top reformers" with the biggest rise in the rankings each year.

Ranking involves inherent value judgments, taking the Doing Business project from measurement into policy prescription. These value judgments are inescapable when deciding "which way is up" on each indicator, and how vital they are compared to each other. For instance, within the "Enforcing Contracts" indicator, if "plaintiffs can obtain pretrial attachment of the defendant's movable assets" is that a positive or negative? And how much weight should that feature receive

[30] As in Bosio et al. (2020) described below. De facto outcomes sometimes may completely ignore the regulation.
[31] One key point that needs to be reiterated in the Doing Business and other documents, is that the World Bank prepares other complementary indicators, research papers and documents to aid policymakers in the complex process of development.

compared to "whether a woman's testimony carries the same evidentiary weight in court as a man's"?

The precise methodology for aggregation and ranking is quite involved, but essentially involves three levels of aggregation:

1. As of 2020, Doing Business calculates scores on 41 sub-components, each of which may rely on multiple survey questions. For instance, the questions above about pre-trial attachment defendants' assets and gender bias in court testimony are both part of the same sub-component.
2. Raw scores, *y*, on these 41 sub-components are normalized as follows:
$$normalized\ score\ =\ 100 * (worst\ -\ y)/(worst\ -\ best)$$
so that normalized scores range from 0 to 100. The definition of "best" and "worst" varies across sub-components: in some cases it is the top or bottom country score in a given year (typically held constant over multiple Doing Business rounds, sometimes after dropping 'outliers').
3. The 41 normalized scores are aggregated by simple averaging into 10 indicators. Thus, each subcomponent within each indicator receives equal weight.
4. The 10 indicators are further averaged into a total score, again with equal weight, and countries are ranked on that basis.

As noted in the introduction, the 2013 Independent Panel report recommended abolishing the aggregate Doing Business scores and the country rankings, drawing on findings from the 2008 IEG report. Five key rationales were stated across the two reports:

- Doing Business lacks a research basis to prescribe policy, which the rankings do.
- The weighting of different indicators and sub-components is arbitrary.
- Small changes in actual regulation can produce large swings in rankings, given bunching of scores in the middle of the distribution.

- There is confusion about whether better scores imply less regulation or better regulation.
- Rankings are fragile to responses from just a handful of contributors, undermining confidence in the exercise.

Ultimately, World Bank management rejected these arguments, on at least two grounds. First, removing the rankings would, as the 2013 report acknowledged, “diminish the report’s influence on policy and public discussion in the short term.” Fostering competition to rise up in the rankings is seen by many as a key function of the Doing Business report. Without the rankings, press coverage would surely diminish. A second argument in favor of the rankings is that if the World Bank produced Doing Business scores but no rankings, someone else would do it instead.

Since the 2008 and 2013 reviews, the Doing Business rankings *per se* have been at the heart of the two data manipulation controversies surrounding the project.

- The 2018 complaints by the World Bank chief economist related to the volatility of the rankings, driven by methodological changes rather than reforms.
- And the 2020 audit report noted that in two instances staff manipulated Doing Business scores specifically to tilt the rankings, making Saudi Arabia the top reforming and dropping Azerbaijan out of the top ten reformers.

If the World Bank were to remove the aggregate index and country rankings, while continuing to publish the topic-specific indicators, it is quite possible that other groups would construct and publish their own rankings. On the one hand, this might increase the chance of errors in interpretation or analysis. On the other hand, such third-party rankings would likely receive less weight from the bank and its clients, which we view as a positive. A compromise might be to deemphasize the rankings and reduce the bank’s focus on movements in the rankings.

Nevertheless, from a technical perspective, there remains little analytical justification for the aggregation and ranking methodology used by Doing Business. The rankings potentially distract from more rigorous, fine-grained use of the Doing Business data. Nothing in the management’s response to earlier recommendations to drop the rankings appears to address these core concerns raised by earlier reviews. And the need to restore faith in the integrity of the Doing Business project after multiple cases of manipulation of the rankings reinforces the case for dropping the rankings now.

Section 3. The “Paying Taxes” indicator

3.1. Brief description of the “Paying Taxes” methodology

The Paying Taxes Indicator has four main components, which are scaled and equally weighted in constructing the overall index. These components are

1. Total Tax and Contribution Rate (TTCR): Firm tax liability as % of profits before all taxes.
2. Time: Number of hours per year to prepare, file returns, and pay taxes.
3. Payments: Number of tax payments per year.
4. Postfiling Index: Number of hours to comply with VAT refund, number of weeks to obtain VAT refund, number of hours to comply with a corporate income tax correction, and number of weeks to complete a corporate income tax correction.

Except for the TTCR, each component is calculated as a relative (to other countries) measure on a scale from 0 to 100, using the standard approach throughout the DB analysis of computing the index from the raw score, *y*, using the transformation, 100*(*worst* – *y*)/(*worst* – *best*), where the highest score represents the best regulatory performance on the indicator across all economies since 2005 or the third year in which data for the indicator was collected. For the TTCR, the raw tax rate is translated into the index using a threshold equal to the TTCR of the 15^{th} percentile of the overall distribution for all years included in the analysis (26.1%) and a nonlinear transformation (raising to the power of 0.8) above that. That is, the TTCR index based on the raw tax rate, *y*, equals $100*[(worst - max(y,y15))/(worst - y15)]^{0.8}$, where *y*15 is the 15^{th} percentile tax rate. This formulation has the effect of setting the index equal to 100 for all values of *y* below *y*15 and making the decline in the index for higher levels of *y* initially slower but eventually faster than linear, so that the index still ranges from 0 to 100.

Taxes and contributions include the profit or corporate income tax, social contributions and labor taxes paid by the employer, property taxes, property transfer taxes, dividend tax, capital gains tax, financial transactions tax, waste collection taxes, vehicle and road taxes, and any other small taxes or fees. Fuel taxes are no longer included in the total tax, but are counted in the number of payments. The denominator of the raw tax rate calculation, labeled commercial profit, equals a standard measure of profits before business income taxes plus the other taxes that are ultimately subtracted in calculating total taxes and contributions.

Tax payments covers not just those taxes included in the TTCR, but also taxes withheld by the company, such as sales tax, VAT and employee-assessed labor taxes.

The *time 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 labor taxes, including payroll taxes and social contributions. Preparation time includes the time to collect all information necessary to compute the tax payable and to calculate the amount payable. 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 in person. Where payment is in person, the time includes delays while waiting.

3.2. Dealing with the Race to the Bottom: Should the TTCR indicator be removed or modified?

The TTCR has been a highly controversial component of the DB analysis, representing perhaps the greatest illustration of the tension between private costs and the broader social benefits that such costs facilitate. Taxes clearly represent a cost of doing business. While user charges may have a direct connection to services that a business receives, the major taxes that governments levy on businesses have no such direct connection. Therefore, one cannot say that there is a direct benefit of tax payments to offset the burden that those payments represent to the company. On the other hand, governments cannot operate without revenues, and governments that are inadequately financed cannot provide the various public goods and services needed for businesses to operate successfully. Critics of the TTCR argue that its inclusion puts pressure on governments to engage in a race to the bottom, lowering taxes below a socially optimal level in order to compete for business activity, even though a country's residents (and perhaps even its businesses) may be worse off as a consequence. This criticism is the main reason why the two most recent external reviews recommended dropping the TTCR indicator from the aggregate ranking calculation.

The current approach to the TTCR represents an *ad hoc* compromise, weakening (or at least changing) the "signal" conveyed by the index, especially for countries with very low tax rates, without confronting the underlying tension between the private benefits and social costs of tax reductions. Particularly given its arbitrary construction and lack of justification, this modified approach is probably one that few find acceptable. This makes it ripe for reform. The challenge, though, is to find a better approach.

One proposal favored by many critics is simply to eliminate the TTCR, limiting the focus of the paying taxes indicator to its other components related to tax administration and compliance. While this approach would forcefully deal with concerns about encouraging a race to the bottom, it fails to acknowledge the real costs that taxes impose on businesses. It also does not account for the distinction between taxes on the businesses being considered and taxes more generally. For example, one country might rely heavily on individual income taxes, indirect taxes (most notably, the VAT), or taxes on large multinational companies' royalties on natural resources, none of which are included in the TTCR calculation, while another with a similar overall tax-GDP ratio might rely much more heavily on taxes that are included in the TTCR calculation. Should such differences be ignored, even if they influence the relative attractiveness of operating in the two countries?

A simple alternative is to reject the existing compromise, revert to the use of the measured tax rate itself in constructing the index for paying taxes, and emphasize in doing so that measuring the private costs of doing business is a different exercise than determining a country's optimal overall tax structure, or even its optimal structure of business taxation. Whatever the clarity of the logic supporting such an approach, it is not adequate, on its own, for it does nothing to address the conflict between private and social objectives that gave rise to the current compromise.

In principle, an expanded set of measures of the climate for doing business could help address this conflict. For example, including measures of the public goods and services provided to businesses would help balance the TTCR in the construction of the paying taxes indicator. Such an expansion would help reduce perverse incentives for governments to worsen the business climate simply to achieve a lower TTCR, but it would involve a significant expansion of the scope of analysis. Moreover, the expansion would still leave a considerable conflict between private and social objectives. Including a measure of the quality of roads or workforce skills would incorporate some of the private benefits, as well as the private costs, of financing government activities, but many of the uses to which business taxes are put provide no benefits, even indirectly, to the businesses in question. For example, ethical treatment of the poor, the infirm, and the elderly may be one of the marks of a just society, but (short of helping them avoid direct costs, such as labor disruptions), such policy provides no obvious benefit to business other than appreciation of the general well-being that such expenditures provide. Including a measure of tax fairness (understood as imposing taxes on those with the greatest ability to pay) to balance the scales in the Doing Business analysis would seem to represent a major shift in its intended goal and would be hard to measure and implement.

To summarize, there is no rationale for the ad hoc use of a percentile floor and a nonlinear transformation for the TTCR. A combination of dropping this ad hoc adjustment, expanding the set of measures of the benefits to businesses provided by the public sector, and clarifying the scope of the DB project would help reduce the controversy surrounding the TTCR.

3.3. Determining the scope of taxes to be considered

Which taxes are included in the TTCR is also worthy of further consideration. It is useful to distinguish two criteria for inclusion: (1) taxes levied on businesses; and (2) taxes collected and remitted by businesses, including both those levied on businesses and those levied on workers (e.g., personal income taxes) and purchasers (e.g., VAT) but collected and remitted on their behalf by businesses. Under the current methodology, the TTCR includes those in category (1), while other components of the overall paying taxes indicator, involving compliance and administration, include those in category (2). The latter decision makes sense, as it is costly for businesses to comply with taxes, whether or not these taxes' statutory liability falls on the businesses themselves. But the use of category (1) for the TTCR is less obviously correct. There are two problems here.

First, statutory incidence is not the same as economic incidence, and it is economic incidence that determines the cost borne by the businesses. For example, the current TTCR methodology includes payroll taxes assessed on businesses but excludes payroll taxes assessed on workers (but still collected by businesses on behalf of workers), even though theory and evidence indicate that, at least in some circumstances, these two types of taxes should have similar incidence. As another example, VATs, as taxes on consumers (but collected by businesses), are excluded from the TTCR, but turnover taxes imposed on businesses are included, even though both are likely borne at least partially by consumers. While empirical evidence on the incidence of different taxes in different contexts may be insufficient to guide precise incidence assumptions for many taxes, equating statutory liability with economic incidence, as is currently done, is hardly an innocuous assumption and can likely be improved upon. An internal review of the state of the literature on the incidence of major taxes would be a useful first step in the direction of determining appropriate incidence assumptions.

Second, the question of which taxes to include in the TTCR should also depend on what question the TTCR is intended to address. If the TTCR is to be used to compare tax burdens for a representative business in different potential countries of operation, one might wish to use the taxes in category (1) above, possibly adjusted by estimates of economic incidence. But if the TTCR is to be used to compare the cost of operating as a formal business within a given country, rather than operating in the informal sector, then any taxes that a formal business must remit, i.e., those in category (2), would seem appropriate, at least to the extent that these taxes are not collected from informal firms. Indeed, one possible expansion in the scope of the existing analysis would be the calculation of two TTCR measures, one applying to the first margin of comparison and the other to the second.

A related question is how to deal with the particular tax issues relevant to the fundamental activity of foreign direct investment (FDI), which could be a relevant way of comparing tax burdens for similar businesses in different countries. While the explicit aim of DB is to measure the climate for doing business for a domestic company, FDI is a considerable source of new business formation and growth in many developing economies. If the FDI channel is to be recognized (perhaps by the addition of another set of prototype firm assumptions), this would bring into consideration additional ranges of taxes and regulations relating to international supply chains and capital flows, and also the major tax provisions that target FDI, such as through Special Economic Zones.

In summary, it is crucial to clarify the objective of the DB analysis. (How the current methodology should be modified cannot be determined without doing so.) If it is to compare the cost of doing business in the formal vs. informal sectors, then widening the definition of the TTCR seems adequate. If it is to inform location decisions through FDI, then using a new and/or additional firm prototype seems in order. The status quo fails adequately to address either of these two questions.

3.4. Other Issues

Leaving aside questions about the TTCR, there are potential reforms to the other components of the paying taxes indicator. One measure that seems problematic is that based on the number of distinct tax payments. While the current methodology does recognize, in an ad hoc manner, the difference in technology when electronic payments are involved – where full electronic filing and payment are allowed and are used by most medium-size businesses, the tax is counted as paid once a year even if filings and payments are more frequent – there are circumstances in which having more tax payments would be helpful to the business, for example to allow more timely, responsive adjustments to estimated tax payments and better align payments with the firm's cash flows. Unlike the amount of time spent on compliance, there is no obvious cost that corresponds closely to the number of tax payments, leading to the logical conclusion that discarding this component from the indicator should be considered.

The questionable relevance of this particular component of the aggregate index naturally raises another issue, which is the weighting assigned to each of the four main components in the aggregate index. Simply scaling each component to lie between 0 and 100 is an inadequate justification for the current equal weighting. Some of the components may be economically much more meaningful than others, and a decision to include a component need not automatically entail giving that component a weight equal to others.

Finally, the particular manner in which the paying taxes measures are collected, in collaboration with a private entity (PwC) that has its own business interest in collecting and distributing such information, is worth review. While we are not aware of problems induced by this arrangement, there are potential conflicts of interest, such as how the data might be used to solicit business from governments and whether this furthers the aims of the DB project, that should be evaluated periodically.

Section 4. New and expanded topic areas: Proposals from the Doing Business team

Below we discuss two new indicators ("Digital Business Indicators" and "Contracting with the Government"). We also discuss "Employing Workers," which was part of the Doing Business ranking score function from 2004 to 2010 and excluded after 2011 from the main index (but included in the report). It was decided that from DB 2021 on, the indicator will not be included in the report at all.

We are aware that resources are finite. We suggest reallocating resources from indicators that are not at the core about "Doing Business" such as the "Contracting with the Government" indicator. Resources can be reallocated to priority indicators as suggested below. Finally, indicators should be chosen based on their relative importance towards understanding "doing business".

4.1. Contracting with the Government

This indicator benchmarks the efficiency of the entire public procurement life cycle, with a focus on the infrastructure sector. "Efficiency in public procurement ensures better use of taxpayer money."[32] Consistent with the original focus of the Doing Business indicator, the measure focuses on *de jure* considerations and regulations.

[32] World Bank Group. "Doing Business 2020" 2020 International Bank for Reconstruction and Development. Washington DC, USA. 2020. Chapter 6, page 67. Also available online: https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf

Four measures (the necessary procedures, the associated time, the features regulated by the applicable laws, and e-procurement) capture various aspects of each phase of the public procurement life cycle, from budgeting to payment. The number of procedures subindex measures interactions between the contractor and various public agencies (the procuring entity, any governmental office issuing permits, a court, etc.). The number of days describes the time length of those interactions. The legal index benchmarks the aspects of the procurement process regulated by law.[33, 34]

The Doing Business case involves a privately and domestically owned medium-size limited liability company (for details, see Box 4.1). The contract is for resurfacing 20 kilometers of a flat, two-lane road (not a highway and not under concession), connecting the main business city to another city within the same state, region, or province—if applicable—with an asphalt overlay, valued at $2.5 million, procured in an open, unrestricted, and competitive public call for tender.[35] The World Bank has put a tremendous amount of effort behind the construction of the indicator as described in their documents.

Box 4.1: Case—Procurement

Procuring entity

– Is the agency in charge of procuring construction works for the authority that owns most of the roads comparable to the one described in the contract section
– Is the sole funder of the works, has budget for the works, and is solvent

Bidding company

– Is one of the companies participating in the call for tender and meets all solvency, technical and administrative requirements to compete
– Is a privately and domestically owned medium-size limited liability company
– Operates in the economy's largest business city
– Is up to date with all regulations and is in good standing with all relevant authorities, including those related to taxes
– Has all licenses and permits needed to operate in this technical area

[33] The World Bank also collected the experts' opinions about outcomes, which were not included in the index due to such data being considered as "not sufficiently reliable" (but without a clear explanation as to why this was the case). Bosio et al. (2020), described below, exploit this information underscoring its usefulness. We suggest considering measures of outcomes, and not just the de jure regulatory practice.

[34] See Nogues Comas and Mendes dos Santos (2021) for a descriptive analysis of the indicators.

[35] The World Bank used a study of 1,800 road-related projects in 89 countries over two decades from the Road Cost Knowledge System (ROCK), Bosio et al. (2018).

– Has already responded to a public call for tender and is already registered with the procuring entity
– Submits all required documents free of errors and without delay

Contract

– Entails resurfacing 20 kilometers of a flat, two-lane road (not a highway and not under concession), connecting the main business city to another city within the same state, region, or province if applicable, with an asphalt overlay
– Is valued at $2.5 million
– Does not include any other work (such as site clearance, subsoil drainage, bridgework, or further routine maintenance)

Procurement process

– Is an open, unrestricted, and competitive public call for tender
– Is completed without complaints/challenges/protests from interested parties
– Ends with the awarding of the contract to BidCo, whose bid satisfied all technical and administrative criteria and offered the best value for money."

Source:https://www.doingbusiness.org/en/data/exploretopics/contracting-with-the-government#case-study

The work of Bosio et al. (2020) studies the implications of countries' procurement laws and practices using the procurement index data. Based on the experts' answers, the authors distinguish between *regulatory rules* (actual laws) and *regulatory practice* (discretion allowed to procuring entities in selecting and managing contractors) for transparency, competition, exclusion of bidders, and integrity of contracts. The authors find procurement laws and practice to be highly correlated, but not perfect, with low-income countries usually having more extensive regulation. The authors then exploit experts' answers related to their views of procurement outcomes and construct measures of the *integrity of the procurement process (*corruption, favoritism, collusion, and absence of competition) and *quality of the procurement product* (time delays, cost overruns, and low product quality). The authors find these two indexes highly correlated, particularly in higher income countries.[36] Moreover, they find the outcome variables to be highly correlated with the practice of procurement, but not correlated with the laws. They find heavier procurement regulation to correlate with better outcomes in countries with lower-quality public sectors and with worse outcomes in countries with higher-quality ones. The

[36] Bosio et al. (2020) show external indicators of road quality—World Economic Forum's (WEF) (2019) quality of roads measure and Google Maps' average night driving speeds between the north and south end of the three largest—to positively correlate with their measures and with (log) of GDP per capita.

authors highlight a puzzle: although law and practice are correlated and good practices correlated with good outcomes, law is not correlated with outcome. In order to explain it, they create a model in which regulating becomes effective in countries where public sector capacity is low, but detrimental where it is high because it inhibits the optimal discretion. The authors show that laws and enforcement may be substitutes rather than complements in some settings with countries with weak bureaucracies requiring stricter regulating laws.

This indicator does not directly pertain to the firm's business environment.[37] Per the World Bank documents' description[38], the indicator can indirectly relate to the efficient use of public resources, and indirectly reflect the firm's business environment by promoting competition and creating a level playing field for firms. The procurement index is about the regulation of the bureaucracy, the public sector. A key implication of Bosio et al. (2020) is that the factors that shape government regulation differ from those that shape private sector regulation. While measuring the "integrity" of the procurement process may proxy for lack of corruption, for example, this measure is indirect. Note that the case is for a contract—a maintenance contract for a small road—which differs from other cases. The amount is rather small.[39]

Many things matter for development and, not all should be included in the Doing Business indicators. Doing Business cannot and does not aim to cover everything. Thus the "Contracting with Government" is one of those indicators that perhaps should be covered in a different publication as to maintain focus of the Doing Business indicators on activities that are quantitatively relevant for a typical SME. The World Bank should reallocate the resources to ideas

[37] The typical SME business does not contract with the government. The logistic indicator covers the quality of roads and the indirect effects to business. Including this indicator may lead to double counting/overweighting the effects.
[38] World Bank Group. "Doing Business 2020". Chapter 6, page 67.
[39] In Makovšek, Bridge (2021), for example, anything smaller than 5 million is considered small for the US. Among other things, Bosio et al. (2020) conducted robustness checks and showed that the same rules would largely apply to contracts between $250,000 to $5,000,000 in most countries.

proposed. Despite the great effort and value in evaluating policy, we do not consider the inclusion of this indicator in the Doing Business to be a priority.

4.2. Digital Business Indicators

In terms of the "Digital Business Indicators," the COVID-19 pandemic has highlighted the importance of digital connectivity for societies: people, companies, and governments. Information and communication technologies (ICTs) have made it possible to reduce the negative impacts of the crisis. Economic and social activities have moved "online."[40] The current crisis, however, has also highlighted the persistent digital divide in many countries, in particular developing ones, with firms and individuals lacking low cost, fast and reliable infrastructure of broadband and mobile access (and the corresponding electricity to power them), but also access to services and applications, and a regulatory framework to guarantee privacy and security in the use of data. For this indicator, we also suggest complementing with existing *de facto* measures.[41]

The objective of the pilot for the Doing Business Digital indicators is to focus on regulatory aspects affecting business. The index focuses on connectivity such as access to internet, spectrum management and domain registration; data privacy and security, including rights and enforcement; logistics of a small parcel trade; the use of financial payment platforms, licensing, authorization and processing of payments; and consumer protection and digital market regulation (See Box 4.2 for more details).

Box 4.2: Digital Business Indicators

[40] ICT contemplates advantages include cost reductions, greater access to consumers and markets, better decision-making associated with the responsible use of data. Many of these benefits can also help in the fight against global climate change.

[41] The 2016 World Development Report included a Digital Adoption Index that measured "the depth and breadth of adoption of digital technologies". The index includes, as one subcomponent, business-related measures (the percentage of businesses with websites, the number of secure servers, download speed, and 3G coverage in the country). The Doing Business could track SMEs' digital strategies by complementing their current measures with information regarding businesses' use of websites and secure servers, for example.

Digital Business Indicator Project aims to develop indicators that measure the enabling environment and regulatory challenges faced by companies and service providers pursuing business in the digital marketplace.

- **Connectivity Indicator** is a measurement of the good regulatory practices that promote universal access to broadband, efficient spectrum management, and accessible and safe domain name registration.
- **Data Privacy and Security Indicator** is a measurement of both the good regulatory practices that promote the secure and ethical collection and dissemination of personal data, guaranteeing individual data subject rights, and the laws and regulations that promote the free movement of data across borders. (Individual rights, Cross Border Data Flows, and Data security and Enforcement; contracts, consent, information requests and privacy, data transfer allowance, data controllers, internal controls.)
- **Logistics Indicator** is a measurement of the costs associated with the small parcel trade, covering *de minimis* thresholds, customs duties, as well as value added taxes (VAT) and goods and services taxes (GST).
- **Payments Indicator** is a measurement of the online payment cycle, specifically observing the regulations that affect the online payments architecture, including the security of the system, the protection of consumers' rights and data, and the quality and speed of online payment services. (Licensing of Payment service Providers, Payment authorization process and Security; account regulations, e.g., separate accounts for PSP, load limits, transaction limits, identity of the payer, time to receive online payments, two factor authentication standards, Payment Card Industry Data Security Standard, Transport Layer Security, legal framework on chargebacks, fraudulent transactions, credit and service not processed, good not received, PDP maximum threshold for monthly chargeback rate.)
- **Digital Market Regulations Indicator** is a measurement of the laws and regulations that promote digital transactions, transparent rules for sellers and consumers, and the safety and security of the digital marketplace. This measurement covers the regulatory tools to ensure the transfer of ownership on the internet (i.e., electronic signature), online consumer protection, as well as the inclusion of a balanced intermediary liability approach."

Source: DigitalBusinessIndicatorsMethodologyNotes.pdf

The actual cases, as described in Box 4.3, focus on three sections: Connectivity case 1 involves a local internet platform selling electronic goods and requires reliable high-speed connection; Connectivity case 2 involves a digital platform selling electronic goods registering for the domain name, using country code top-level domain at the lowest cost for its website from a registered registrar; and Case 3 for the Logistic section, involves a customer aiming to purchase a $30 computer charger.

Box 4.3: Cases—Digital Economy

Connectivity CASE 1:

The time and cost data points rest on two assumptions:

▪ The company requesting broadband connection is an internet platform selling electronic goods from local and foreign merchants.

▪ The company requires a reliable high-speed wired internet connection of at least 10 Mbps download speed with unlimited usage from a licensed broadband provider and is looking for the lowest price for that speed.

Connectivity CASE 2:

For the time and cost data points, this indicator rests on two assumptions:

▪ The company registering for the domain name is a digital platform selling electronic goods from local and foreign merchants.

▪ The company uses a country code top-level domain at the lowest cost for its website from a registered registrar, and its domain name is not bundled with hosting.

Logistics CASE 3:

The cost data points rest on several assumptions:

▪ The customer is located in the largest business city of the importing economy.

▪ The customer wants to purchase a computer charger (H.S. Code: 8504.40) through Electronics Inc.

▪ Electronics Inc. is an internet platform selling goods from local and foreign merchants.

▪ The computer charger has a value of US$30 and is packaged in a small parcel (45×35×16 centimeters) and weighs 300 grams

Source: DigitalBusinessIndicatorsMethodologyNotes.pdf

Although payments and logistics areas may be crucial for SME digitalization, it is not clear they pertain to this indicator. The indicator focuses on importing a good online. That is, the logistical constraints captured by the index in Case 3 may reflect obstacles and costs of cross-border trading (which are part of a separate indicator in the Doing Business). We suggest excluding these indicators from this section to avoid penalizing countries twice. The focus should be on domestic transactions, both buying and selling a good (or service) domestically and the associated customer service provided. Some of the financial payments concerns, although key for the digital economy, may relate to other financial indicators (payment authorization and processing may also pertain to non-digital transactions).

The aggregation is complex and difficult to understand.[42] All five sub-indicators are important but not equal and the index seems to overweight security, consumer protection, and data privacy issues. As noted by Chen (2019), the economic implications of the digital economy are not trivial (involving network effects, scale effects, blurry distinction between marketplace and firm and access to tremendous amounts of data).[43]

The World Bank team has put great effort into the development of these indicators. A concern, however, is that the index may not resonate with SMEs main digitalization concerns and objectives (i.e., website creation and maintenance, telecommunications, software, hardware, in addition to internet speed, etc.). In the digital world, firms care about cost, quality/speed, reliability[44] (Does the system go down all the time? How long does it take to fix it?) and customer service, both to clients and from suppliers (how fast someone comes to fix if broken, parcels not delivered, not received, etc.). An additional suggestion is to reconsider the case to one more closely aligned with business operations.

The World Bank and other multilateral agencies collect other indicators. Some may better capture the effect on the business environment: a digital adoption index, the network readiness index and the overall ICT Development Index. We describe them briefly below (see Box 4.4). Note that some are "based primarily on the use of households and individuals, with little or no information on digital adoption by businesses and governments, while others may be

[42] Notice that this formula is relatively complex. Global Data Regulation Index Calculation: For each of the dimension *i* under the Enabler and Safeguard sub-indices, the score for country *j* is calculated as follows: $X_{ij}=100^*\ (GP_{ij}-GPmin_i)/(GPmax_i-GPmin_i)$ where *GP* is the number of the adopted regulatory good practices in country *j* under dimension *i*, *GPmin*, and *GPmax* are the minimum and maximum number of regulatory practices measured under dimension *i*.

[43] In addition, successful digital strategies require complementary high investments in infrastructure (fast, reliable broadband, fixed and mobile, reliable electricity), hardware (computers, mobile phones, etc.), software development broadly defined, etc. In some countries winners have emerged, which, despite having grown to large scale, continue to fear competition and innovate. In others, they have been chosen through explicit government policy at the expense of competition.

[44] The case seems to assume "reliability" and focuses on the cost of "reliable high-speed wired internet connection of at least 10 Mbps." It is unclear how "speed", "reliability" and "cost" were unbundled. The case also assumes the firm has the right type of workers to be able to run a digital strategy (which is not a trivial issue).

incomplete"[45] but may help construct indexes that reflect laws and regulation, the practice of regulation and the *de facto* outcomes as outlined in the introduction.

Box 4.4: Other Digital Business Indicators.

i. Digital Adoption Index (DAI) from World Bank. "The DAI is a worldwide index that measures countries' digital adoption across three dimensions of the economy: people, government, and business." using data on coverage and usage, often from the World Bank's internal databases.

Source: https://www.worldbank.org/en/publication/wdr2016/Digital-Adoption-Index and https://thedocs.worldbank.org/en/doc/587221475074960682-0050022016/original/WDR16BPDAImethodology.pdf

ii. **Network Readiness Index from World Bank**. "NRI measures the capacity of countries to leverage Information and Communication Technologies (ICTs) for increased competitiveness and well-being. It also considers innovation trends of recent years through the lens of the NRI."

Source: http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf

ii. ICT ITU Dev Index from United Nations. "Using data collected by The International Telecommunication Union (ITU), the United Nations specialized agency for information and communication technologies – ICTs, the index measures the level and evolution over time of ICT developments within countries and of their experience relative to other countries, as well as the digital divide between countries in terms of their levels of ICT development, and the development potential of ICTs and the extent to which countries can make use of them to enhance growth and development in the context of available capabilities and skills."

Source: https://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2017/methodology.aspx

iii. Digital Trends–ITU publications from United Nations. "This report provides an overview of trends and developments in ICT infrastructure, access and use in the Americas region, which includes 35 Member States and is home to a population of 1 billion people."

Source: https://www.itu.int/en/myitu/Publications/2021/04/26/09/33/Digital-trends-in-the-Americas-region-2021

iv. Measuring Digital Development: ICT Price Trends from United Nations. "ICT price trends 2020 presents, analyses and compares the retail price of ICT services for more than 200 economies, providing a unique insight into the state of ICT affordability around the world."

Source: https://www.itu.int/en/ITU-D/Statistics/Pages/ICTprices/default.aspx

We are not suggesting re-collecting indicators found elsewhere but to use them to complement the index. Given the importance of the topic, we see no issue in including in the Doing Business

[45] https://www.worldbank.org/en/publication/wdr2016/Digital-Adoption-Index

a complete indicator even if some of its components are produced outside the World Bank (which can actually be cost-efficient). The objective should not be to "produce new indicators" for the sake of producing new ones, but to produce an index that is complete and useful.

More broadly, a suggestion involves the Doing Business adopting a framework—and corresponding indicators—that consider the inputs required for business operation, broadly defined to include, logistics, for example, and the role of public goods in shaping the business environment.[46] The Doing Business can then think of indicators to directly measure such aspects, both *de jure* (laws and regulation and the practice of such laws and regulation) and the *de facto*, such as quality and cost of infrastructure and public services instead of indirect measures related to the process of procuring those public goods discussed in section 4.1 or the regulatory framework involved in the provision of public services.

[46] An overall framework for all the indicators may help discipline current and future modifications in terms of at least the variables to consider and the factors that compose the indicators, as well as limit the role of interest groups in choosing and modifying them. For example, consider a firm's production of output and corresponding price, and the use of inputs and their corresponding hiring cost summarized in a standard profit function π_{it},

$$\pi_{it} = \sum_{i}^{n} (1-\tau_t^{\pi})\big[(1-\tau_t^{f(.)})p_t A_t^{PG} A_{it} f(K_{it}, L_{it}, M_{it}) - (1-\tau_t^{k}) r_t K_{it} - (1-\tau_t^{L}) w_t L_{it} - (1-\tau_t^{M}) p_t M_{it} - Other_{it}\big],$$

where A_t^{PG}: incorporates the effects of public goods (e.g., quality of infrastructure, safety, environment, etc.) on business productivity; K_{it}= capital stock; L_{it}: labor broadly defined (blue- and white-collar workers as well as management); M_{it} = materials and inputs broadly defined to include also electricity, water, IT, logistics, insurance, etc. τ, can be decomposed into taxes *t* and regulation *r*. An examination of the qualitative and/or quantitative importance of each indicator over a firm's time cycle may help guide the choice of which to consider. Profit functions pick up the de *facto measures*. But the inclusion of regulation allows for the consideration of the role of *de jure* restrictions, which can be expanded with a description of processes involved in starting a business, hiring labor, acquiring and maintaining capital, procuring inputs, setting up digital operations, managing sales and clients, etc. A discussion of distortions in terms of prices and quantities may also help guide the choices and implications (See Chetty (2009) for further discussion on the role of distortions the expansion of traditional Harberger's triangles (1964, 1996) and the use of primitives and sufficient statistics.) One important advantage to advancing some form of framework is that it could also make evident the role of externalities and public goods and the main private obstacles and costs that matter for business. Of course, Doing Business cannot capture everything that matters for the business environment nor is it attempting to do so. But using such methodology would allow a basic structure to frame the main variables that should be considered (while planning for future indicators).

4.3. Revisiting the topic of “Employing Workers”

Workers are a fundamental part of the economy.[47] Labor regulation poses an inherent trade-off between the interests of workers and firms (unlike, say, delays in business registration, it is not the case that less is always better). Reflecting this tension, the World Bank decided to eliminate the Employing Workers indicator (EWI) from the Doing Business index and rankings. However, we consider that the decision to remove the EWI from the Doing Business report entirely, failed to acknowledge the undisputable role labor plays in the success and dynamism of private sector activity. There is no “business” without labor. And thus, one can argue that if labor is not considered in the main indicators, then the document cannot be called “Doing Business”. In terms of small and medium enterprises, although there is heterogeneity in the type of workers hired, labor is certainly a key, unique component worth studying.

4.3.1 Background: Doing Business; Labor indicators

In DB 2004, the original name of the Employing Workers Indicator (EWI) was “Hiring and Firing Workers.” It included flexibility of hiring and firing, as well as conditions of employment (in contrast with the 2020 EWI which included ease of hiring, flexibility of hours, ease of redundancy and redundancy cost). The indicators emphasized employment law protecting workers from arbitrary, unfair, or discriminatory actions by their employers, while acknowledging that “if regulation in other aspects of the employment relation is too rigid, it lowers labor force participation, increases unemployment, and forces workers into the informal economy.” [48]

In DB 2005, it was decided to include a new indicator on the cost of firing a redundant worker, and it was measured in weeks of wages. It included the non-salary cost of hiring a worker, consisting of all social security and payroll taxes paid by an employer on behalf of a worker.

[47] Koh, Santaeulalia-Llopis, Zheng (2020) find labor share to be on average 2/3 of the economy for 1929-2018 as it is in other major economies.

[48] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology

In DB 2007, the "Hiring costs" indicator was no longer included in the calculations.

In DB 2008, "Calculation of firing costs was modified so that 8 or fewer weeks of salary started to receive a score of 0 for purposes of calculating the rankings on the ease of employing workers. Restrictions on night work such as higher overtime premiums or limitations on scheduling work hours were no longer coded as rigidities."[49]

In DB 2010, the assumptions for the case study were modified to refer to a smaller sized company, with 60 instead of 201 employees. The question regarding night and weekly holiday work was reduced to manufacturing activities where continuous operation is necessary. "Legally mandated wage premiums for night and weekly holiday work up to a threshold were no longer considered a restriction. The calculation of the minimum wage ratio was modified to ensure that an economy would not benefit in the scoring from lowering the minimum wage to below $1.25 a day, adjusted for purchasing power parity. This level was consistent with recent adjustments to the absolute poverty line."[50] The redundancy cost calculation was corrected so that having severance payments or unemployment protections below a specified threshold would not improve the score for an economy.

In 2010, the Bank suspended the EWI and advised staff to stop referring to it when formulating policy advice or as a loans monitoring indicator. In DB 2011, the employing workers indicators were not included in the aggregate ranking on the ease of Doing Business. The reasons for removal included: complaints by ILO, ITUC, and country governments that indicators were one sided, only focusing on the costs to firms,[51] pressure from US congress in 2009, and the formation of a consultative committee.[52] World Bank President Robert B. Zoellick at the time decided to

[49] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
[50] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
[51] World Bank. Doing Business: An Independent Evaluation: Taking the Measure of the World Bank-IFC Doing Business Indicators. The World Bank, 2008.
[52] Kang, Suzan. "Labor and the Bank: Investigating the Politics of the World Bank's Employing Workers' Index." (2010).

exclude "Employing Workers" from the ranking and set up a plan to bring it back when the indicator was more balanced (covering both the costs to firms but also workers protection).[53] [54] [55] Instead, the World Bank aimed to develop a workers protection measure to balance the flexibility measure. However, it was never supported by Bank senior management (or the US congress).

In addition, to the exclusion from the main ranking, the calculation of the minimum wage ratio was changed. "The changes ensured that no economy could receive the highest score if it had no minimum wage at all [independently of the *de facto* wages paid], if the law provides a regulatory mechanism for the minimum wage that is not enforced in practice, if there is only a customary minimum wage, or if the minimum wage applies only to the public sector. In addition, […] A minimum threshold was set for paid annual leave and a ceiling for working days allowed per week to ensure that no economy benefits in the scoring from excessive flexibility in these areas." [56] "The calculation of the redundancy cost and of the annual leave period for the rigidity of hours index was changed to refer to the average value for a worker with 1 year of tenure, a worker with 5 years and a worker with 10 years rather than the value for a worker with 20 years of tenure."[57] No justification for the inclusion of the annual leave indicator or different tenure thresholds was included.[58]

In 2013, the World Bank wrote the World Development Report on *Jobs*, acknowledging the "critical concern across the globe" further stating, "the private sector is the key engine of job creation, accounting for 90 percent of all jobs in the developing world." The report aimed at

[53] Kang, Suzan. "Labor and the Bank: Investigating the Politics of the World Bank's Employing Workers' Index." (2010).
[54] Manuel, Trevor, et al. "Independent panel review of the doing business report." World Bank. Washington, Doing Business Report Panel (2013).
[55] Bakvis, Peter. "The World Bank's Doing Business Report: A Last Fling for the Washington Consensus?." Transfer: European Review of Labour and Research 15.3-4 (2009): 419-438.
[56] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
[57] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
[58] Having said that, the effects of the different regulations on the business environment are worth studying theoretically and empirically.

providing information to shed light on questions such as: should countries focus their policies on growth or on labor? Are there cases in which the focus should be on protecting the jobs themselves, rather than protecting the workers? Are creating jobs or building skills more relevant for development? Although these are difficult questions involving complex trade-offs, the fact that the World Bank decided to write the report itself on *Jobs* underscores the significance of the *Employment* indicator for *Doing Business.*

In DB 2015, "the name of the employing workers indicator set [was] changed to labor market regulation."[59] Behind the name change was a new focus on labor market regulations applied to the retail sector in contrast to the manufacturing sector-centric view of most indicators. In addition, the coverage now included regulations on labor disputes and worker benefits.

In DB 2016, "the scope of the labor market regulation indicator set [was] also expanded, to include more areas capturing aspects of job quality."[60] The scope was expanded to address previous criticism that the indicator was too focused on job flexibility—and did not consider job quality components, including workers' rights, equal treatment. The labor market regulation indicators continued to be excluded from the overall ranking on the Doing Business document.

In December 2019, the "Employing Workers" indicator was removed completely from the Doing Business indicators. Ironically, that same year the World Bank Development Report was on employment, this time focusing on "The Changing Nature of Work." The report studied the complementarities and effects of technical progress on firms and employment. The report noted the rapid transformation of economic activity, employment and skills required among other topics. In DB 2020, the Project was separated from Doing Business, and over the course of the year all data and references to the Employing Workers indicators were removed from the Doing

[59] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
[60] https://www.doingbusiness.org/en/methodology/changes-to-the-methodology

Business website. The data continued to be collected as a separate project, and a separate website was created.[61]

4.3.2. Doing Business and Employment Regulation

The "Employing Workers" indicators, in their original conception and variations, measure the flexibility of employment regulation. "The indicators follow the lifespan of a typical employment relationship—from hiring to work scheduling and eventually to redundancy in a manner consistent with international conventions."[62] [63]

As argued in the World Bank's World Development Report 2019: The Changing Nature of Work, *extending protection is the task of the government, not the firm*.[64] "Governments face the challenge of striking a balance between worker protection and labor market flexibility."[65] "Employment laws—introduced in response to market failures including worker exploitation, discrimination in hiring and working policies, and unfair dismissal practices—are vital to worker well-being (Djankov and Ramalho, 2009)."[66] For instance, minimum wages can be part of a social contract aimed at reducing poverty and various forms of inequality, but they can also have negative effects on employment when set at an unreasonably high level. Although it is not for the Doing Business to determine the right balance, appropriate acknowledgement of this tension is necessary.[67]

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[61] See www.worldbank.org/employing-workers.
[62] World Bank Group. "Doing Business 2020" 2020 International Bank for Reconstruction and Development. Washington DC, USA. 2020. Chapter 4.
[63] Five of the 189 International Labour Organization conventions cover areas measured by Doing Business: hours of work, weekend work, holidays with pay, night work, and employee termination.
[64] World Bank 2018.
[65] https://www.worldbank.org/en/research/employing-workers
[66] Doing Business 2020. Chapter 4.
[67] Manning (2021) notes that contemporary empirical work, starting with Card and Krueger's (1995) landmark study, has "cast doubt on the conventional wisdom that the minimum wage inevitably destroyed jobs."

On the other hand, when labor regulation is excessively rigid, private sector economic activity suffers exhibiting low dynamism and higher unemployment (Djankov and Ramalho, 2009). There is ample academic research, many exploiting the Doing Business indicators, documenting the effects. For example, Garicano et al. (2006) study the effect of regulations that increase labor costs when firms reach 50 workers and document their cost to be equivalent to that of a 2.3% variable tax on labor. Increased labor market flexibility in Sweden, by giving firms with fewer than 11 employees the freedom to exempt two workers from their priority list, led the labor productivity in small firms increased 2–3% more than it did at larger firms (Bjuggren 2018).[68] Work by Di Tella and MacCulloch (2005) shows that if France were to attain the same degree of labor market flexibility as the United States, its employment rate would rise by 1.6 percentage points, or 14% of the employment gap between the two countries.[69]

Flexible labor regulation provides firms the opportunity to run the enterprise in an efficient way and workers with the opportunity to choose their jobs and working hours more freely, which in turn increases labor force participation (Cournède, Denk, and Garda, 2016). Facing rigid employment protection laws, efficiency in business freedom is lost. Firms look for ways to meet their needs, often hiring informal workers. Firms and workers turn to the informal sector when faced with restrictive regulation and fewer formal job opportunities, (Djankov and Ramalho, 2009). Large informal sectors, especially in countries with developing economies, hinder development and reduce productivity, which increases taxes and unemployment, especially among the poorer classes.[70] Workers outside of formality not only do not enjoy health and social protection benefits, but they are less likely to move outside of the poverty line. Heckman and Pages (2000) suggest that if the average Latin American country, typically having a huge informal

[68] Doing Business 2020. Chapter 4.

[69] In a similar spirit, Bransletter et al. (2014) finds that a reform in Portugal that substantially lowered firm entry-cost increased firm formation and employment. Furthermore, Bertrand, Kramarz (2002) exploits a unique database from France to show that increasing efforts from the regional zoning boards to place stronger laws against entry leads to retailer concentration and a slowing down of employment growth.

[70] Botero et al. 2004; Djankov and Ramalho 2009; La Porta and Shleifer 2014.

sector, reduced its employment protection to the US level, total employment would rise by almost 6%. The World Bank's WDR (2019) notes that "Countries that more heavily regulate their businesses have larger unofficial economies (p.95)."

Reviewing the literature for the World Development Report in 2013, in the case of developing countries, Betcherman (2012) reveals that the majority of studies find negative effects, in particular for Latin America, although sometimes quantitatively modest. Many of the papers focus on the formal manufacturing jobs. For example, Bell (1997) in a "panel data on formal sector manufacturing firms" finds very negative effects in Colombia. Yet, she also writes that "in Mexico, in contrast, the disemployment impact of minimum wages is zero." The key difference relates to the level of the minimum wage relative to the distribution of wages "— the minimum wage is very far to the left in the Mexico distribution and much closer to the mean in the Colombia distribution." In this case, it is clear: if the minimum wage is not binding, it will not have effects. This also accounts for the difference in results in Brazil, with Lemos (2007) finding no effect in a period of decreasing real minimum wage during the high inflationary period and negative by Neumart et al. (2006) in the following period during 1996-2001. Furthermore, Betcherman (2012) concludes that "minimum wages, EPL, and unions/collective bargaining reduce wage inequality for covered workers. By disproportionately raising earnings of workers with less market power, these institutions narrow wage differentials based on skill, gender, and age. However, their ultimate effect on the overall distribution of income is less clear because the low-skilled, the young, and women are less likely to be covered by minimum wages, EPL, or collective bargaining. And, to the extent that these institutions affect the composition of employment, they tend to be against these groups and in favor of prime- age males and the better educated."

Strict labor regulation also affects the employee's freedom to choose working hours, reducing productivity. A firm's ability to adapt to shocks is damaged by rigid labor regulation (Almeida and Carneiro, 2009). Moreover, firms make lower investment in new product creation (Kleinknecht, van Schaik, and Zhou, 2014). Making it more expensive or restrictive to dismiss workers diverts the attention of managers from performing more productive tasks and investing time in research and innovation (Lisi and Malo, 2017). Such rules also produce smaller firm size and push the firms to relocate to areas with more flexible regulation, which in turn reduces the benefits of free trade (Almeida and Carneiro, 2009).

The empirical effects are far from settled. More research can help policymakers strike the right balance. For this, data, indicators and research are needed, and the Doing Business should lead the way.

4.3.3. The Employing Workers Indicator (EWI)

The Employing Workers project measures the "flexibility of regulation of employment, specifically as it relates to the areas of hiring, working hours, and redundancy rules and cost."[71] The indicator includes several areas: 1) Area of Hiring: measures duration of contracts, whether they can be fixed-term, the length of probation for permanent employees, minimum wage, and ratio of the minimum wage to the added value per worker; 2) Area of Working Hours: measures the maximum number of working days per week allowed, premium and restrictions for night work, work on a weekly rest day and overtime work, and paid annual leave for workers with tenure of 1, 5 and 10 years; 3) Area of Redundancy Rules: measures whether redundancy is allowed for terminating workers, the need to notify or get approval from a third party to terminate one or a group of nine redundant workers, whether law requires to reassign or retrain a worker before making him redundant, and whether priority rules apply for redundancies or reemployment; 4) Area of Redundancy Cost: measures requirements applicable to a worker with 1, 5 or 10 years, severance payments applicable to a worker with 1, 5, 10 years of experience,

[71] https://www.worldbank.org/en/research/employing-workers/methodology

and availability of unemployment protection for a worker with 1 year of employment. (See also Box 4.4).

Box 4.4. Employing Workers Indicator

Area of Hiring

- 1. Whether fixed-term contracts are prohibited for permanent tasks
- 2. The maximum cumulative duration of fixed-term contracts
- 3. The length of the maximum probationary period (in months) for permanent employees
- 4. The minimum wage for a cashier, age 19, with one year of work experience
- 5. The ratio of the minimum wage to the average value added per worker.

Area of Working Hours

- 1. Maximum number of working days allowed per week
- 2. Premium for night work (as a percentage of hourly pay)
- 3. Premium for work on a weekly rest day (as a percentage of hourly pay)
- 4. Premium for overtime work (as a percentage of hourly pay)
- 5. Whether there are restrictions on night work
- 6. Whether there are restrictions on work on a weekly rest day
- 7. Whether there are restrictions on overtime work
- 8. Paid annual leave for workers with 1 year of tenure, 5 years of tenure, and 10 years of tenure.

Area of Redundancy Rules

- 1. Whether redundancy is allowed as a basis for terminating workers
- 2. Whether the employer needs to notify a third party (such as a government agency) to terminate one redundant worker
- 3. Whether the employer needs to notify a third party to terminate a group of nine redundant workers
- 4. Whether the employer needs approval from a third party to terminate one redundant worker;
- 5. Whether the employer needs approval from a third party to terminate a group of nine redundant workers
- 6. Whether the law requires the employer to reassign or retrain a worker before making the worker redundant
- 7. Whether priority rules apply for redundancies
- 8.Whether priority rules apply for reemployment

Area of Redundancy Cost

- Notice requirements applicable to a worker with 1, 5, 10 years is experience
- Severance payments applicable to a worker with 1, 5, 10 years of experience.
- Availability of unemployment protection for a worker with 1 year of employment

The current case refers to a full-time cashier in a grocery store with one year of experience (see Box 4.5). The case is for a particular worker for whom a lot of regulation may be binding (given that at an age of 19, the worker is unlikely to have a full college degree, for example). One concern is whether the case reflects an “ideal case” (or rather, the case advanced does not seem to be what countries would consider “ideal”) or a representative one (as the Doing Business indicators omit the informal sector).

Box 4.5. Case—Labor Regulation

The actual case

“The worker:

- Is a cashier in a grocery store, age 19
- Is a full-time employee with 1 year of work experience
- Is not a member of a labor union, unless membership is mandatory

The business:

- Is a limited liability company with 60 employees (or the equivalent in the economy)
- Operates a supermarket or grocery store in the economy’s largest business city. For 11 economies the data are also collected for the second largest business city
- Is subject to collective bargaining agreements if (a) such agreements cover more than 50% of the food retail sector and (b) such agreements apply even to firms not party to them
- Abides by the law but does not grant workers more benefits than those mandated by law, regulation or collective bargaining agreements”

Source: https://www.worldbank.org/en/research/employing-workers

The study of how these regulations affect the business environment is imperative to workers —employed formally or in the informal sector and those unemployed—, businesses and policy makers, and thus, the effort must be sustained. It does not advantage policy makers if the World Bank leaves a vacuum in this key topic in the Doing Business indicators. The World Bank should bring back the indicator. In the short run, the indicator should be included as is published in the Doing Business 2020 and in the past; requests for modification were used as an excuse to exclude the indicator. The Doing Business team should consider differentiating between laws and regulation and the practice of such laws and regulation in addition to collecting information on outcomes. These distinctions can allow a discussion of the informal sector, ignored in the indicators.[72]

A key aspect of the labor market is the skills and abilities of all types of people. Training changes and enhances talents, creating a constantly evolving labor force talent pool. In the medium-term, the indicators should expand the scope to include indicators related to building skills as mentioned in the WD (2013) *Jobs* report. The Doing Business indicators may move to collect information about the availability of workers by skills and experience and retraining options (*de jure* and *de facto*). Labor should be defined in broad terms so as to include white- and blue-collar workers as well as management. As the work by Bloom et al. (2012), Bloom et al. (2013), and Sadun et al. (2017) document, competent management matters for business and productivity. Accordingly, an additional suggestion is to collect management characteristics similar to or in collaboration with, for example, the World Management Project.[73]

In addition, the cases should more broadly include firms in different sectors of the economy.[74] As with other indicators, it would be beneficial to allow room for some heterogeneity across the spectrum of employed workers. Countries differ in their labor intensity (to capital), even within the small size companies. One solution for this would be to generate two or three archetypes of companies and allow for a weighting factor to ponder for the relative value of each for a given country. A measure of the dispersion could also be an indicator of the country-level of

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[72] Another point to note is the role of trade agreement, as it touches topics like the role of international regulations, the enforcement of rules, and the informal sector. For example, the new agreement of the USMCA placed an important emphasis on labor regulation. Such problems can consider with a measurement of how far the *de facto* outcomes lie from the *de jure* rules and their application, even if it is not considered for the final score.

[73] See https://worldmanagementsurvey.org/academic-research/manufacturing-2/.

[74] Albeit advantages of an "hypothetical" case, the scenarios throughout the different indicators are not all about the same firm, covering different situations. It may be impossible to find one case that fits all countries. But in some circumstances, the cases may be beyond the reality of the country, or not representative or typical, and thus not clear what the "experts" may be considering when filling the questionnaires. The team may also consider expanding the number of "cases" to allow for different circumstances across countries (at the very least one in the agricultural sector, one in manufacturing, and one in services).

heterogeneity. If extending the analysis to different sectors, cases in agriculture, manufacturing and services, the measure could be country-sector-level.

Section 5. The role of international transactions

As the Doing Business report reiterates, it is a misuse of the rankings to portray them as a measure of an economy's attractiveness to Foreign Direct Investment (FDI). Perhaps the report should bear a more visible disclaimer to that effect if the contents remain the same. Instead, we propose to include more sub-indicators on international trade and finance. Our logic is that if some, or maybe many, countries are widely misusing the Doing Business report, the report should be fixed to fit the expected purpose and the catch-all title, "Doing Business". We acknowledge that there are pros and cons to including new indicators related to FDI and other international transactions, however, which we discuss below.

The international dimension is somewhat neglected in the Doing Business survey. There are some indicators on the regulation of international trade and associated costs, but they are limited to very specific cases of imports and exports by domestic firms. Moreover, tariffs, non-tariff barriers, and other trade measures are explicitly excluded from the assessment of Doing Business. In addition, there are no indicators showing how open or closed the country is to foreign firms. Measures on the ability to enter a market, to compete without discrimination, and to repatriate profits are absent. In this sense, the current indicator does not represent the attractiveness of the country to foreign capital as a complement to domestic savings. This is a relevant omission as FDI often comes with technology that domestic workers and firms could learn, not to mention benefits to workers and consumers from greater competition. In a sense, conditions to attract FDI should be included in measuring the ease of Doing Business. In addition to new indicators for FDI, international transactions, such as payments and borrowing, may be relevant to Doing Business. Thus, we propose to develop some indicators under the broad heading of international finance.

5.1. Widening the scope of “Trading across Borders”: include tariffs and other costs and regulations

DB already includes indicators on the logistical aspects of international trade, but these are narrow in scope. The Trading across Borders indicator assumes that each economy ‘imports a standardized shipment of 15 metric tons of containerized auto parts (HS 8708) from its natural import partner’ and ‘exports the product of its comparative advantage (defined by the largest export value) to its natural export partner’. More specifically, Doing Business states that ‘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.’ This is a significant omission.

The trade logistics are focused on three broad areas: Border compliance, documentary compliance and domestic transport. Border compliance includes customs procedures (customs clearance and inspections, customs brokers’ charges and administrative fees), non-customs procedures (phytosanitary and technical inspection) and port/border procedures (time to queue and handling at the border). Documentary compliance refers to the time and cost of obtaining, preparing and submitting documents required (including electronic submission). Finally, domestic transport includes the time and cost associated with loading at the warehouse; traffic delays, tolls and road police check. Although the DB indicator takes into account trade logistics, they are narrow in scope. First, tariffs are not considered at all despite the fact that they increase costs for firms that sell in domestic or foreign markets. Tariffs are published and easy to obtain and, in contrast to the domestic tax burden, pose a lesser tension between the private and social optimum. However, in practice, adhering to a case study for tariffs may present a difficulty. Tariffs vary from product to product and from a trading partner to a trading partner. Tariffs on imports from one country with a free-trade agreement (FTA) may be zero but from another country may be high. DB does recognize Customs Union as a good practice, then it should include cases/assumptions on FTA (or Customs Union).[75] Whether the country is part of a free-trade agreement with countries of destination of goods may matter in hours/costs of documentation and tariffs. Of course, having an FTA does not necessarily mean no documentation costs (hours and dollars), since qualification for zero tariff often requires proof of domestic content. Also, many developing and emerging countries have special arrangements for tariff-free exports to advanced countries.

Tariffs on an automobile may be high but tariffs on auto parts may be low in order to nurture the auto industry, narrowly defined as having auto assembly lines. Specifying the case/assumptions may inadvertently encourage one industrial policy or another. Alternatively, it may be much simpler to adopt the average (weighted) tariff rates for the country as a part of indicators for international trade.

The World Bank's Logistic Performance Index (LPI) can be used by the DB as a benchmark for measuring trade logistics.[76] In contrast to Doing Business, the LPI does not follow case study assumptions. The LPI survey has two parts measuring international LPI and domestic LPI. For the international LPI, respondents need to rate the overall logistics 'friendliness' of eight countries in which they operate along six indicators of logistics performance. In terms of domestic LPI, logistics professionals assess the logistics environment in their own countries by four major determinants: infrastructure, services, border compliance, and supply chain reliability[77]. Infrastructure comprises the quality of information and communications technology (IT) which is not considered for the DB indicator. Border compliance for LPI takes into account the experience with red tape which leads to lack of border coordination, resulting in a burden on private logistics operators. The LPI 2018 report notes that Doing Business indicators place great weight on trade

[75] DB does mention customs union as a good practice to follow. Please see 'Deepening regional cooperation': https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/good-practices

[76] A comparison between DB and LPI is available here: https://blogs.worldbank.org/opendata/doing-business-trading-across-borders-and-logistics-performance-index-similar-yet-different

[77] Arvis et al. (2018*). Connecting to compete 2018, Trade Logistics in the Global Economy. The Logistics Performance Index and its Indicators.* World Bank. https://openknowledge.worldbank.org/bitstream/handle/10986/29971/LPI2018.pdf

simplification, however, ‘steps in other aspects of border management and […] soft and hard trade-related infrastructure are also needed.’ Moreover, the LPI measures possible causes of delay which are exogenous to a country’s supply chain: informal (corrupt) payments (not considered in the DB given its de jure emphasis), compulsory warehousing and pre-shipment inspection.

We also propose to include insurance costs, costs to obtain Letter of Credit, tariffs and other duties (even though “no receipt is issued”) that are explicitly not considered in the indicator criteria.[78]

5.2. International Financial Transactions

Ease and costs of receipt and payment in foreign exchange should be included. Although ease of moving goods across borders—i.e., imports and exports—are included, transaction costs associated with international payments are not considered in the current DB. As an example, DB is affected if obtaining foreign exchange is subject to approval or if there are significant costs in converting domestic currency into foreign exchange.[79] For imports, it is almost necessary to obtain a letter of credit. Having an internationally active bank in the country is crucial for import-export businesses. Restriction on borrowing from foreign banks or a trading partner may restrict business development. Some countries restrict holding foreign currency denominated deposits and force them to be converted into the local currency. Also, some countries have multiple exchange rates and may force businesses to use the least favorable one.[80]

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[78] The “Terms of payments and costs” in the questionnaire mention that: ‘Insurance cost, tariffs, duties and all informal payments for which no receipt is issued are excluded.’

[79] The DB website indicates for costs that ‘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.’ See under ‘costs’: https://www.doingbusiness.org/en/methodology/trading-across-borders. However, this assumption is not included in the case study assumptions on the website or DB report.

[80] For example, Iran has multiple exchange rates with the US Dollar (Summary of Feedback from Public Consultation on Doing Business 2020)

In general, capital controls, or measures that restrict capital flows, may be considered negatively in the ease of businesses that engage in international trade or borrowing from abroad. Sometimes capital flow management and macroprudential measures are necessary to reduce the vulnerability of the banking and corporate sector to external shocks. This could be an issue of private (business) gain vs. the public interest. The transaction costs of foreign exchange, often measured in the bid-ask spread, can be measured easily. Some indicators of international financial transactions should be included.

5.3. Incorporating FDI

Inward foreign direct investment (FDI) is not included in the DB indicators. However, the ease of business for a foreign-owned firm is crucially significant in assessing the attractiveness of the country. Currently, there is no case study related to a foreign owned firm in the DB indicators.

There are three strong arguments in favor of including such a case in the DB. First, many users—governments and researchers—think that the DB ranking is correlated with the attractiveness of the country for foreign investment. Second, restrictions on inward FDI can hamper the business environment: closing off to FDI means less competition, which leads to less innovation for domestically-owned businesses. Third, inward FDI is often a growth engine, especially for a country with low domestic savings. It also has technological spillovers on subcontracted domestically-owned SMEs.

Our recommendation is to create a new "case" for inward FDI and include indicators for a foreign owned firm from an entry stage to a mature stage.[81] Factors that influence where to invest should be included: For example, how many days to get a permit for establishing a 100 % foreign owned

[81] We examined "Investing Across Borders" (IFC, MIGA, World Bank (2010)). It would be good to revive this. We wonder why the publication was discontinued after one report.

business (in some typical industry)[82]; a foreign owned business may face restrictions in owning land or leasing buildings; borrowing from banks; and hiring employees.[83] It may face a different legal status, regulations and court decision from domestic firms.[84] In some cases, foreign businesses are often targeted by foreign exchange controls.

[82] This is covered by the "Starting a Foreign Business" and "Investing Across Sectors" indicators from the Investing Across Borders 2010 report. The "Starting a Foreign Business" indicators measure the time, procedures and regulations involved in establishing a local subsidiary of a foreign company. The "Investing Across Sectors" indicators measure the restrictions on foreign equity ownership in new investment projects (greenfield FDI) and on the acquisition of shares in existing companies (mergers and acquisitions). We recommend integrating both indicators and their case study assumptions to Doing Business.

[83] The "Accessing Industrial Land" indicators from the IAB indicators cover the legal options for foreign companies seeking to lease or buy land in a host economy. We recommend including this indicator to Doing Business.

[84] IAB's "Arbitrating Commercial Disputes" indicators measure the legal, institutional, and administrative regimes for commercial arbitration in 87 countries. The indicators focus on domestic and international commercial arbitration between two companies, or contractual disputes between a company and a state entity. The indicators compare national regimes for domestic and international arbitration for local and foreign companies. We believe that the indicators do not fully cover our case suggestion on inward FDI as commercial disputes differ case by case and cannot be compared by simply investigating the different national regimes and laws. These indicators would therefore need some modification and further specification.

Section 6. Governance of Doing Business

In recent years, the integrity of the Doing Business index has been compromised, with multiple cases of data manipulation leading to the departure of senior World Bank officials and the suspension of the index for the year 2020. While investigating these specific cases is outside our purview, the underlying governance failures highlight aspects of the Doing Business methodology which need to be improved. This section reviews these governance challenges and proposes several remedial measures.

At the outset, we should note that in April 2021 the World Bank issued an internal document, the *Doing Business Manual and Guide*, which has been made available to the External Review Panel. The document clarifies various steps in the data production process, and outlines protocols for avoiding interference and manipulation. Where possible, we highlight where we think these newly documented procedures are or are not sufficient to address recent failings.

6.1 Three types of threats to the integrity of Doing Business

a. Interference by World Bank management. In December, 2020, the World Bank Group Internal Audit (GIA) reported that bank management had pressured staff to manipulate data in the 2018 and 2020 issues of the Doing Business index. Nine of the fifteen DB staff said they had been pressured to manipulate data, of whom eight complied. The manipulation directly affected one country negatively, dropping Azerbaijan from the top-10 rankings, and directly benefited three other countries: lifting Saudi Arabia to the “most reformed” spot globally and winning it public accolades from the World Bank, while also buoying the rankings of the United Arab Emirates and China.

Although these events fall outside the scope of the terms of reference for this External Review Panel, we believe they pose decisive questions for the panel's work for two reasons.

First, understanding how to avoid future lapses requires, at a minimum, a full accounting of what went wrong. While the Bank has published a detailed response outlining its plan to put a stop to the pattern of data manipulation, key elements remain undisclosed. Specifically, who requested that the rankings be altered and why? The GIA audit report notes that "[t]he controls over data changes in the DB Report production life cycle are not sufficient to preserve data integrity." The new April 2021 *Doing Business Manual and Guide* documents and formalizes many of these controls, which is a welcome step. But without knowing more about how and why the system failed, it is difficult to judge whether new protocols will be sufficient to restore data integrity, and lead us to conclude that more external oversight may be required.

Second, the GIA audit report emphasizes that the potential for manipulation arose not just from a managerial failure, but from the lack of documented procedures and guidance. "Standards and processes to document the inherent judgments involved in the production of the DB Report and to safeguard data integrity are not sufficiently defined to enable consistency. As a result, decisions related to the production of the DB report are sometimes open to judgement rather than being guided by documented procedures and guidance." In our meetings with the Doing Business team, staff emphasized that scores do not reflect a simple aggregation of expert opinion, but rather a dialog between staff and external contributors, with input from national governments and bank management. Our recommendations below aim to reduce this subjectivity in the DB scoring methodology.

b. Interference by national governments. We have been informed of multiple cases where national governments have attempted to manipulate the DB scores by exerting pressure on individual contributors. Contributors are typically lawyers, accountants, or other relevant professionals practicing in the countries they score. They have the option of anonymity, but in some cases they waive this right and are explicitly identified in the DB report. World Bank staff mentioned several countries where they believe government officials have instructed contributors how to respond. And even in the absence of explicit government pressure, of course, the perceived threat of retaliation may influence the scores contributors report.

To our knowledge, none of these cases of government interference are publicly documented. We have little information about the extent of this problem, across space or over time, other than that it has been detected in several countries. Furthermore, it is unclear if all such instances relate to contributors who voluntarily waived their right to anonymity. In any case, this type of interference suggests that Doing Business should take further steps to ensure independence from national governments during the scoring process. The new *Manual and Guide* continues to provide a central role for government in the nomination of Doing Business respondents. While this may be appropriate and necessary in some instances, we note that the recommendations above regarding greater reliance on private sector firm surveys would reduce this need and the risks associated with participation by government officials.

c. Conflicts of interest in Reimbursable Advisory Services. In some middle- and high-income countries, the World Bank offers paid consulting services known as Reimbursable Advisory Services (RAS). In recent years, the Bank has established RAS arrangements related to improving Doing Business scores in a number of countries, including some of those implicated in the data manipulation investigation, such as China and Saudi Arabia.

These RAS arrangements constitute an apparent conflict of interest. The World Bank should not simultaneously engage in scoring countries' business environment while accepting payment to coach countries on how to improve their scores.

6.2. Remedial actions

In addition to the actions already proposed by World Bank management in response to the GIA audit report, several reforms to the Doing Business program could help ensure its methodological integrity. Note again that these recommendations around anonymity and selection of contributors are closely bound up with our recommendations about methodological changes to the index overall, favoring firm surveys of *de facto* reality (with larger, more representative samples) over expert surveys based on hypothetical scenarios.

1. **Ensure anonymity for all contributors**. Currently, DB offers contributors the option of maintaining anonymity or waiving it. While sensible in theory, this system has proved problematic in practice. Given the pattern of government efforts to interfere with their scoring, however, there is a case for insisting on anonymity for all contributors. The DB project should avoid the involvement of governments in the selection of contributors or rely on government sources wherever possible, given the inherently subjective nature of the exercise. Furthermore, DB should forgo data collection in any country where it cannot guarantee anonymity (or where contributors cannot or will not consent to it).
2. **Significantly increase the number of contributors, with a more systematic and impartial selection process.** Currently, DB often relies on just 1 or 2 experts per country on a specific topic (the average number is around 7; see Section 2). Many of the challenges that stakeholders raised with regard to the reliability of Doing Business data collection -- subjectivity, bias, difficulty ensuring anonymity, etc. -- could be ameliorated by significantly increasing the number of contributors. For instance, Doing Business could define a minimum set of qualifications required to act as a contributor, and select a sample of individuals from that pre-defined eligible pool at random. Random sampling would reduce the risk of bias. A larger sample would help protect anonymity, and reduce the idiosyncrasies of subjective judgments.
3. **Publish anonymized raw data, questionnaires, and code to ensure replicability.** The Doing Business project should do everything possible to reestablish its credibility. Data

transparency would be a good start. Given the high profile of the report, it is notable that unlike other World Bank analytical products (e.g., the Enterprise Surveys or the Living Standards Measurement Surveys), the underlying data and even questionnaires from the Doing Business survey are never released. Furthermore, the aggregation or reconciliation of multiple (potentially conflicting) expert responses is not documented. The Doing Business team should follow standard practice within empirical economics research and publish raw, anonymized data: each response from each expert in each country, alongside code that aggregates these responses into the indicators published in the Doing Business report.

4. **Prohibit reimbursable advisory services related to the Doing Business index, and create a firewall between operations and the Doing Business team.** Conflicts of interest will arise whenever and wherever the Bank takes payment for consulting countries about regulatory reforms while claiming to impartially judge those same reforms. Prohibiting RAS arrangements explicitly focused on raising Doing Business scores might prevent the most glaring conflicts of interest, but questions will still arise when World Bank operational considerations intersect with its analytical work. To further minimize conflicts, the Bank should ensure a strict separation of staff, managers, and consultants between operations and Doing Business, including removing any role for country managers or directors or IFC personnel in the oversight or approval of the report.
5. **Convene a permanent, external review board for the Doing Business program.** Rules and protocols are only as good as their implementation. To enhance credibility, and enforce the World Bank's commitment to an objective, unbiased Doing Business index, an ongoing external review board is advisable. An independent group of experts may help the Bank to regain trust and ensure the implementation of the above recommendations. This board could review the selection of contributors, and be tasked with replicating the full findings of the Doing Business report prior to publication on an annual basis.

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Annexes

A. Summary of past reviews: recommendations and subsequent World Bank actions

a. 2008 IEG report
b. 2013 Independent Panel Review
c. 2020 World Bank Group Internal Audit on data integrity
d. Terms of reference for the 2021 ERP

B. Summary of meetings and submissions to the panel

a. World Bank tax team and IMF fiscal affairs department
b. World Bank country directors and chief economists council
c. Member states via World Bank executive directors
d. Independent Evaluation Group (IEG)
e. Advisory team and IFC
f. Doing Business team
g. Enterprise Surveys team
h. Public submissions

C. Doing Business 2020: Methodology notes and other site references:

a. Contracting with the Government: https://www.doingbusiness.org/en/data/exploretopics/contracting-with-the-government#case-study
b. Employing Workers: https://www.worldbank.org/en/research/employing-workers
c. Digital adoption Index: https://www.worldbank.org/en/publication/wdr2016/Digital-Adoption-Index https://thedocs.worldbank.org/en/doc/587221475074960682-0050022016/original/WDR16BPDAImethodology.pdf

d. Digital Business Indicators Methodology Notes: https://thedocs.worldbank.org/en/doc/581091563808671795-0050022019/original/DigitalBusinessIndicatorsMethodologyNotes.pdf
e. Changes to the methodology: https://www.doingbusiness.org/en/methodology/changes-to-the-methodology
f. Paying taxes: https://www.doingbusiness.org/en/methodology/paying-taxes
g. Trading across Borders Good Practices: https://www.doingbusiness.org/en/data/exploretopics/trading-across-borders/good-practices
h. Trading across Borders: https://www.doingbusiness.org/en/methodology/trading-across-borders
i. Trading across borders, a comparison between DB and LPI: https://blogs.worldbank.org/opendata/doing-business-trading-across-borders-and-logistics-performance-index-similar-yet-different