Taking the Measure of Law: The Case of the *Doing Business* Project

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WORLD BANK. 2004. *Doing Business in 2004: Understanding Regulation.*
   Washington, DC: World Bank. Pp. xxi + 216. $35.00 paper.
WORLD BANK. 2005. *Doing Business in 2005: Removing Obstacles to Growth.*
   Washington, DC: World Bank. Pp. 160. $35.00 paper.
WORLD BANK. 2006. *Doing Business in 2006: Creating Jobs.* Washington, DC:
   World Bank. Pp. 228. $35.00 paper.
WORLD BANK. 2007. *Doing Business in 2007: How to Reform.* Washington, DC:
   World Bank. Pp. 185. $35.00 paper.

This article analyzes a number of yearly reports from the World Bank's
Doing Business *project, an ambitious international effort to measure various
aspects of law and development, analyze their interrelationship, develop
benchmarks for assessment of legal systems, and suggest legal reforms. After
describing the methodology used, we analyze the strengths and limitations
of the project, both as a scholarly enterprise and as a set of proposals for
legal reform. Our analysis highlights the challenges associated with measuring
legal variables in the face of legal complexity and uncertainty, measuring
development when the concept of development is contested, tracing causal
connections between law and development, and using scholarly research
as a basis for legal reform.*

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INTRODUCTION

One of the remarkable ironies of contemporary legal scholarship is that some of the most ambitious and influential research on the relationship between law, on the one hand, and economic outcomes, on the other, is being produced outside the legal academy. A surge of interest in the role of "institutions" in determining economic outcomes has prompted economists and political scientists, both in the academy and at development agencies such as the World Bank, to devote intensive effort to studying law in the developing world. This new scholarship aims not only to describe and explain various features of legal systems but also to explore how they work in practice rather than in theory, to compare the legal systems of different countries, to draw inferences about how the characteristics of legal systems are related to various social and economic outcomes, and, last but not least, to propose legal reforms.

This article critically examines the most sophisticated and comprehensive example of the new mode of scholarship, a World Bank research project known as the *Doing Business* (hereafter, DB) project. The aim of the project is to investigate "the scope and manner of regulations that enhance business activity and those that constrain it" (World Bank 2004a, viii). The project compiles detailed data on ten different areas of business law from one hundred seventy-five countries. As an indicator of its influence, in their latest report the creators of the project claim to have "inspired or informed" forty-eight legal reforms around the world (World Bank 2006b, 4–5).

The intellectual heritage of the DB project can be traced back to the law and development movement of the 1960s, another effort that aspired to combine research on the relationship between law and development with an agenda for legal reform. There are, however, a number of salient differences between that earlier movement and the initiatives exemplified by the DB project. For instance, the scale of reform activity associated with recent initiatives is significantly greater than with their predecessors, and while the law and development movement focused on relatively few developing countries, the DB project and the more general trend toward legal benchmarking and competition is global in scope; not even developed countries like France are immune (Association Henri Capitant 2006). The contemporary movement also has different intellectual underpinnings from earlier law and development initiatives. The new wave of scholarship and reform activity has been heavily influenced by developments such as the fall of the Soviet Union, the emergence of the global human rights movement, and the formulation of the New Institutional Economics, and it emphasizes legal institutions that support democracy, certain sorts of civil and political rights, and market-based economies. Finally, the contemporary scene is populated by a different set of characters. The legal academics and charitable foundations who dominated the original law and development movement have been displaced to a large extent by development banks, aid agencies, and economists.

These changes in the aims and aspirations of legal scholarship have been chronicled elsewhere (see, e.g., Trubek and Santos 2006; Davis and Trebilcock 2006). Our focus in this article is on another innovative feature of the new legal scholarship—its methodology. The recent wave of scholarship, of which the DB project is the most sophisticated example, has a much more empirical and quantitative flavor than its predecessors. Because of its attention to empirical realities and relative objectivity, some might view this development as a sign of progress. Others might dismiss it as merely reflecting the professional and institutional biases of its sponsors, citing economists' tendencies toward intellectual imperialism (Association Henri Capitant 2006) and the undue appeal of quantitative approaches to bureaucratic organizations such as the World Bank and other development agencies whose mandate is to engage in large-scale social engineering (Scott 1998; Taylor 2006).[1]

In this article we explore the possibility that the DB project represents an example of methodological progress. To that end, we critically analyze the project to identify both the inherent limits of the methods it uses to examine the relationship between law and economic development and the special challenges for scholars that arise when their work is used as a basis for legal reform. We begin by describing the DB project's aims, methodology, and main findings. We then offer a critical assessment of the project, focusing on the extent to which the authors have succeeded in grappling with the complexity and uncertainty of law, the contested nature of the concept of development, the opacity of the causal connection between these phenomena, and the problems associated with combining a research agenda with an agenda for reform.

AN OVERVIEW OF THE *DOING BUSINESS* PROJECT

Aims

The DB project is a series of annual reports aimed at identifying the effects of various sorts of regulations on business activities around the world. The first of these reports (World Bank 2004a) explains the methods and objectives of the study and presents data from 133 countries regarding various socioeconomic quantities and five types of business activity: (1) starting a business, (2) hiring and firing workers, (3) enforcing a contract, (4) getting credit, and (5) closing a business. The subsequent reports focus on describing changes from year to year, suggesting directions for reform, and presenting

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1. Based on information posted on their Web site, the current members of the DB project team have a range of academic backgrounds (World Bank 2007c). However, the academic articles in which the DB project's methodology was originally developed were authored by economists and published in leading economics journals.

the latest raw data. The second installment (World Bank 2005) updates the 2004 report with data from 145 countries on the activities described in DB 2004, and it also considers two additional types of activity: (6) registering property, and (7) protecting investors. The next installment (World Bank 2006a) gathers data from 155 countries and examines three other types of business activity: (8) paying taxes, (9) trading across borders, and (10) dealing with licenses. The latest available report (World Bank 2006b) does not expand the list of activities examined but does increase the number of countries to 175.

The DB project is presented as part of the World Bank's general efforts to use private sector development to reduce poverty worldwide. The authors claim that the project is intended to support these efforts in four specific ways:

1. *Country Benchmarking*. By providing a database of economic and regulatory quantities that allow for meaningful comparisons among different regulatory environments, the DB data provide standards that can lead to public demands for reforms.
2. *Reform Design*. Analysis of the relationships between specific aspects of regulation and variables related to economic development (e.g., productivity, investment, informality, corruption, unemployment, and poverty) will show what kinds of reforms are associated with good outcomes.
3. *Aid Monitoring*. The DB data can be used by donors to assess the effects of performance-based aid programs, such as the United States' Millennium Challenge Account.
4. *Informing Theory*. The database provides an empirical basis for testing theoretical models of the relationship between regulation and development (World Bank 2004a, ix–x).

We presume that users of the DB database will principally be interested in benchmarking, reforming, or monitoring features of the regulatory environment that are believed to have a significant relationship to development. Therefore, we view the last aim listed above—creating a database to be used to shed light upon the relationship between regulation and development— as the most fundamental aim of the project. Our principal interest here is in examining the extent to which the project achieves this aim. However, we also believe that the extent to which the DB project achieves its intellectual aspirations is directly relevant to the evaluation of its more practical objectives.

Methodology

The DB project is one of many efforts to assess business conditions around the world (World Bank 2004a, 7–15; Perry-Kessaris 2003; Davis 2004; Taylor 2006). As the authors of DB 2004 argue, however, the methods adopted in these other efforts are ill-suited to the aims of the DB project. They point

to three basic shortcomings in these other efforts. First, many are based on polls of experts who may have no direct experience with the business conditions they are evaluating; while such assessments may be appropriate for foreign investors (who have the option of withdrawing from high-risk countries), they are not likely to reflect the concerns of local investors (World Bank 2004a, 8–10). Second, some of these assessments of business conditions rely on the perceptions of business managers; while this is potentially a valuable source of information, their results are often undermined by biases in the survey design or scaling of responses, ignorance, the lack of a shared reference point for responses, or unrepresentative samples (ibid., 12–14). Third, even if these other approaches were free of these general problems of bias and inaccuracy, their approaches to quantifying business conditions are simply inappropriate for the DB project's purpose of informing the theory of, and thus guiding, regulatory reform:

> New methods are being applied to aggregate indicators, to produce useful gauges of general economic and policy conditions. Surprisingly, *none assess the specific laws and regulations that enhance or hinder business activity. Nor do they evaluate the public institutions—courts, credit registries, the company register—that support it.* Reformers are left in the dark. (Ibid., 1, emphasis added)

The methods of data collection and refinement used in the DB project are designed to overcome all three of these limitations and to yield reliable data capable of supporting inferences about the economic effects of particular regulatory and legal reforms. While the details of the process vary with the type of business activity being considered, in general the process has six steps (ibid., 3).

1. The DB team and academic advisors analyze the content of laws and regulations governing a particular business activity.
2. A questionnaire is developed for local experts (e.g., attorneys, consultants, or judges) to answer regarding the content of the laws and regulations and the cost and time involved in invoking or complying with them.
3. A hypothetical set of circumstances is specified for the local expert to assume when responding to the questionnaire.
4. The team and local experts discuss the results of the questionnaire.
5. The team and academic advisors review the preliminary results and, if needed, refine the questionnaire and collect further data.
6. When possible, the data's robustness is tested by varying the hypothetical and collecting more data.

The information gathered at Step 1 represents the formal component of a country's regulatory environment, that is, the rules that official sources suggest are administered by state officials. The questionnaire (Steps 2–5) supplements this information by drawing on local experts' knowledge of those

norms as well as their experience with how those formal norms are applied and enforced, other informal constraints on business practice, and the costs and time required to invoke or comply with those norms and constraints.[2] The design and distribution of this questionnaire (Steps 2 and 3) in particular give the DB database its distinctive qualities. First, they allow the database to capture information from local experts on specific laws and regulations as applied to local businesses. Second, asking the same questions of local experts under the same hypothetical circumstances helps to make meaningful comparisons between the effects of different regulatory schemes across countries possible.

The result of this exercise is an impressive and growing collection of data on both *legal norms* (the rules administered by state officials that purport to guide behavior) and associated *legal practices* (by which we mean the behavior in which businesses must engage in order to invoke or comply with the specified legal norms). Some of the data pertain to legal norms designed to facilitate business activities ("facilitative legal norms"). For instance, for every country in the database it is now possible to say how many steps must be taken to open and legally operate a commercial or industrial business as well as, in practice, how long it will take to perform those steps and how much it will cost to do so. Similar information is available on the steps that must be taken to enforce a contract by filing a lawsuit after the debtor's bank has refused payment, to resolve the insolvency of a business that is worth more as a going concern than in liquidation but has too many creditors to negotiate a successful resolution out of court, to purchase land and a building for commercial purposes, and so forth.

The database also includes data relating to legal norms that, rather than merely facilitating business activity, serve to impose mandatory duties on business actors ("mandatory legal norms"). For example, the data on hiring and firing workers include information on whether or not various types of restrictions are placed on the content of employment agreements, including maximum hours, minimum wages, prohibitions on dismissal without grounds, etc. As of 2006, the database has included information on the amount of corporate income tax, value-added tax or sales tax, and labor taxes that must be paid by a representative business as well as the amount of time it takes to prepare, file, and pay those taxes. In many cases the data are aggregated

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2. The authors of the DB reports frequently suggest that taking into account the enforcement or application of laws is likely to affect the results of analyses of the effects of regulation. See, e.g., World Bank 2004a at 65 (the effect of creditor rights on depth of credit markets is stronger after controlling for enforcement); at 71 (bankruptcy laws in Angola, Bangladesh, Burundi, Mozambique, and Togo are almost never used); at 79 (assessments of otherwise high-quality bankruptcy laws in Côte d'Ivoire, Georgia, and the Philippines may be distorted by their inefficient judiciaries); World Bank 2005, 6 (noting effect of discretion in enforcement even when laws and regulations remain constant); and at 55 (citing Kyrgyz Republic, Moldova, and Nigeria as countries with strong securities laws but in which no case of small investor abuse has been resolved in court).

into indices such as the "procedural complexity index" (an indicator of the complexity of the procedures required to enforce a contract) or the "difficulty of firing index" (an indicator of the restrictions placed on dismissal of employees).

The DB database purports to describe features of the regulatory environment that apply in carefully described hypothetical scenarios. Those hypothetical scenarios involve detailed assumptions about matters such as the size of the business in question (e.g., fewer than fifty employees), its location (generally the country's most populous city), the industry in which it is or is not involved, its capital structure and financial position, the legal form in which it operates, and so forth. There are also important assumptions about the characteristics of other parties involved in the relevant business activity, such as workers or creditors, and the nature of any property that forms the subject matter of the transaction, e.g., the amount of money at stake in the contract enforcement case or the type of land being purchased in the registering property case. Finally, certain assumptions are made about how various actors behave in response to regulatory norms. For instance, in the contract enforcement case it is assumed that the debtor opposes the creditor's lawsuit and even calls a witness at trial.

The DB methodology is an updated version of an approach pioneered by Hernando de Soto, a prominent Peruvian economist who became famous for carefully and precisely measuring the red tape that was strangling Peruvian entrepreneurs and then energetically promoting reforms designed to cut that red tape (de Soto 1989). The specific principles used to compile and analyze the DB database were developed in a series of articles written principally for academic audiences, each of which focused on one of the business procedures dealt with by the DB project (e.g. Botero et al. 2004; Djankov Hart, Nenova, and Shleifer 2003; Djankov, La Porta, Lopez-di-Silanes, and Shleifer 2002; Djankov, La Porta, Lopez-di-Silanes, and Shleifer 2003; Djankov, McLiesh, and Shleifer 2003, La Porta et al. 1998). However, the implementation of those methodological principles has changed in some significant ways over time. For instance, significant changes were made in the types of data collected about most business practices between DB 2004 and DB 2005, reflecting in part the exploratory nature of the DB project and its sponsors' interest in continuous improvement of their methodology.[3]

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3. For example, the amount of money assumed to be at issue for the Enforcing Contracts study was increased fourfold after the release of World Bank 2004a—from 50 percent to 200 percent of GNI/capita—when it became clear that the smaller debts were unlikely to go to court. Other adjustments made for World Bank 2005 in light of new information include using the actual percent of the mandated minimum capital that must be paid up-front (which may be as little as 25 percent of the minimum capital for startup used in World Bank 2004a) rather than the minimum capital figure itself. The changes over time in the DB methodology are described in World Bank 2007e.

Main Findings

The core of the DB project is a database describing the forms of regulation practiced in various countries. The dataset is available online at the World Bank Web site (World Bank 2007b). A large portion of each published report is devoted to presenting the data and summarizing general patterns. As far as patterns are concerned, the most general initial conclusions were that:

> Regulation in poor countries is more cumbersome in all aspects of business activity. (World Bank 2004a, xiii)

> Another important variable in explaining different levels of regulatory intervention is legal origin. Together, income and legal origin account for more than 60 percent of the variation in regulation. . . . Common law countries regulate the least. Countries in the French civil law tradition the most. (World Bank 2004a, xiv)

> Regulatory reform has been continuous in most developed countries, improving the environment for doing business. . . . But there has been much less reform in developing countries, with the result that businesses are sometimes burdened by outdated regulation. (World Bank 2004a, xvii–xviii; see also World Bank 2005, 3; World Bank 2006a, 4)

The authors were, however, careful to point out examples of countries whose regulatory practices contradicted these general propositions, and the latest report devotes a great deal of attention to reforms recently undertaken in poor countries, particularly those located in Africa (World Bank 2006b, 1–4).

The DB reports also attempt to use the DB database to analyze the connection between different forms of regulation, on the one hand, and social and economic outcomes, on the other hand. The most prominent general theme, which runs throughout the reports, is that "Heavier regulation of business activities generally brings bad outcomes, while clearly defined and well-protected property rights enhance prosperity" (World Bank 2004a, 83). In a similar vein, another report states "Payoffs from reform appear large" (World Bank 2005, 4). Another striking conclusion is "Many times what works in developed countries works well in developing countries too, defying the often-used saying, 'one size doesn't fit all'" (World Bank 2004a, xvi). This last claim—which is eventually qualified in two respects[4]—is bound

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4. The authors of the DB reports suggest that when it comes to bankruptcy reforms, developing countries should simplify the models used in developed countries. In addition, in their discussion of enforcement of contracts, they claim that "specialized commercial courts work best in countries with more resources and administrative capacity," and other countries should opt for lower degrees of institutional specialization (World Bank 2004a, xvii).

to be controversial as it seems to fly in the face of arguments and evidence that the performance of any given legal norm depends upon the surrounding social context and that simply transplanting norms from one society tends to lead to poor outcomes (Cooter 1997; Berkowitz, Pistor, and Richard 2003).

With the exception of the first report (World Bank 2004a), the DB reports devote a great deal of space to anecdotes about various reform initiatives and conclusions about the specific reforms that are associated with good outcomes. They also offer comments about why various types of reforms are undertaken. For instance, DB 2005 suggests that reforms in 2003 were prompted by competition in the recently enlarged European Union as well as incentives created by performance targets set by the International Development Association (a part of the World Bank) and the United States' Millennium Challenge Account (World Bank 2005, 1–2). The latest report points to a number of reforms that have been inspired by the DB project itself (World Bank 2006b, 3–4).

Limitations of Reporting of Findings

One of the clear virtues of the DB reports is the variety of studies that they canvass, from reports on perceptions about obstacles to business in Algeria (Batra et al. 2003) to the relationship between rigid labor regulation and long-term unemployment in Zimbabwe (Fallon and Lucas 1991). While the range of analyses and results provide the reader with a useful summary of recent work and a valuable overview of the relevant literature, the reports naturally sacrifice depth for this breadth of coverage. For instance, in addition to descriptions of findings from other studies, the reports also include material based upon dozens of unpublished analyses of the DB database. The authors of the reports generally focus on describing results rather than the analyses used to support them. As a result, the reader interested in the details of the arguments supporting particular claims will have to consult the cited studies.

For results extracted from the scholarly literature, the lack of details in the reports is merely an inconvenience requiring only reference to the original studies. More serious is the lack of details about the original analyses appearing for the first time in the DB reports, particularly analyses designed to support inferences about the relationship between various types of regulation and social and economic outcomes. These analyses feature prominently in the annual DB reports but without the details of how they were performed it is difficult (if not impossible) to evaluate them.[5]

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5. For instance, many of the inferences drawn using the DB database are the result of trend analysis over countries ranked according to their scores on various indices and grouped into quartiles, quintiles, or deciles. Exactly what statistical methods were used and the assumptions required for those methods to be reliable are not, however, detailed in the reports.

DISCUSSION

The most pressing question surrounding the DB project concerns the extent to which the data collected and the techniques used to draw inferences from those data shed light on relationships between regulation and development and serve as useful guides to reform. To answer this question we break the DB project down into its four basic components: measures of regulatory environments, measures of social and economic outcomes, inferences about the relationship between the regulatory environment and social and economic outcomes, and recommendations for reform. We discuss each in turn.

Measures of Regulatory Environments

We are very sympathetic to the concerns about the state of the art that motivated the creators of the DB project to develop a new set of cross-country measures of the regulatory environment, which we take in this context to be synonymous with "law." In fact, one of us has argued elsewhere that the DB project's measures represent a clear improvement upon preexisting measures, such as those purporting to measure the rule of law or property rights, which conflate legal and nonlegal phenomena, are not clearly linked to specific features of the legal system, and do not necessarily focus on elements of the legal system that are amenable to reform (Davis 2004). The difficulty is, we believe, that for at least three reasons, law is inherently difficult to measure in quantitative terms.

In the first place, as scholars of comparative law have long recognized, law is often complex, in the sense that many different components of a legal system interact to influence particular social or economic outcomes. Second, law can be perceived with more or less certainty. Third, some of the most important components of the legal system are rarely invoked and as a consequence are difficult to measure reliably. We are not persuaded that the creators of the DB project have overcome these difficulties. As a result we have concerns about whether all of the right legal norms and practices–namely those likely to be relevant in attaining development outcomes—have been measured and whether the norms and practices that have been measured have been measured particularly well.

To elaborate, our first concern is that the DB database may not capture the full range of legal norms that influence business activities.[6] In saying

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6. Perry-Kessaris (2003, 666–67) and Alvaro Santos (forthcoming) raise similar concerns. A separate issue is whether the study properly takes into account the influence of nonlegal factors, such as morality or social structures, which determine the consequences of failing to invoke or comply with legal norms. We address this issue below in the course of discussing whether any variables have been omitted in the process of drawing inferences about the relationship between regulatory environments and various outcomes.

this, we begin from the premise that the main reason to be interested in measuring the content of legal norms is to understand their relationship to development. Legal norms presumably affect development outcomes primarily because they exert a causal effect on actual business activity that in turn influences social and economic outcomes. This in turn implies that an effort should be made to study all legal norms that, either alone or in combination, might have significant effects on important forms of business activity.

However, the process by which legal norms are selected for inclusion in the DB database is opaque, and as a result it is not clear whether all relevant legal norms have been captured. For example, legal norms governing the enforcement of debt contracts presumably affect development-related outcomes (such as the cost of credit) because of their influence on debtors' repayment behavior and, by extension, the behavior of prospective creditors. But it may be the case that, in at least some jurisdictions, a more important determinant of how quickly a debtor repays a debt after a suit has been filed is not the potential cost or duration of civil proceedings, but rather whether there is any prospect of criminal prosecution (Winn 1994). This sort of information is not captured in the DB database but clearly ought to be if the database is to serve its stated purpose. Similarly, a strong argument can be made that the DB data on regulations that govern starting a business are potentially misleading because they include only information on legal norms that apply to all businesses (World Bank 2004a, 4), even though industry-specific regulation may be of tremendous significance in some countries.

The most obvious way to address this concern would be to solicit information from local practitioners about the range of legal norms that they believe to be significant influences upon the relevant business practices. For example, one might ask local attorneys, "What laws and regulations do you believe are most important in determining the speed with which debts are repaid?" Answers to these sorts of questions would have to be treated with caution because the respondents may have little or no experience with alternative regulatory regimes and may not have reflected upon the significance of all of the various components of their own regime. But making a formal effort to incorporate the views of local experts on how law influences social and economic outcomes seems preferable to making presumptions based primarily on the knowledge or beliefs of the creators of the database. The creators of the DB database report that they refine their data collection process in collaboration with local experts (World Bank 2004a, 3; World Bank 2005, 12–13), but it is not clear that they systematically invite experts in each country to reflect on the range of legal norms worth studying.

Our second concern about the DB project's measures of legal norms and related legal practices is that, for the most part, they do not include any measures of the degree of certainty with which information about those norms or practices is held. Uncertainty about the regulatory environment can take the form either of individual members of society being uncertain

about the characteristics of legal norms and practices, or different members of society having different beliefs, or both. The possibility of both forms of uncertainty is acknowledged at various points by the authors of the DB project. For instance, in the contract enforcement study, lawyers were asked the minimum, maximum, and average times likely to be required to resolve the dispute (World Bank 2004a, 45–46). Meanwhile, in the entry regulation study, the authors imply that respondents sometimes disagreed about matters such as the cost or delay associated with a particular procedure by indicating that in cases of disagreement they used the median response (ibid., 4, 107).

However, with the exception of the effort to measure the range of estimates of time required to resolve the contractual dispute, no attempt appears to have been made to measure these forms of uncertainty. This is unfortunate because there are solid theoretical reasons to believe that the type and degree of regulatory uncertainty will be an important determinant of social and economic outcomes. For example, uncertain legal rights might be less valuable than more certain ones to risk-averse actors. Alternatively, divergence of beliefs about the content of legal norms might reduce the likelihood that disputes are settled before trial (Priest and Klein 1984). Accordingly, we believe that, ideally, future versions of the DB database would include information on regulatory uncertainty.[7]

Our third concern about the DB database's measures of regulatory environment reflects doubts about whether it is possible to measure reliably legal norms that are only rarely invoked or legal practices that only occur infrequently. To understand the basis of our concerns, recall that the DB database is designed to capture only information about legal practices that involve faithful compliance with applicable laws. The database is not designed to capture information about practices that involve only partial reliance upon (in the case of facilitative norms) or partial compliance with (in the case of more mandatory norms) applicable legal norms. For these and other reasons, there may be significant differences between the stylized legal practices whose cost and time are measured by the DB database and actual practices.

How significant might these differences be? Consider, for example, the data on the requirements for starting a business; they do not take into account the possibility of the entrepreneur paying a bribe or retaining an accountant or lawyer to assist with the procedures, even if this is customary. Similarly, the data on enforcing contracts do not take into account the possibility that

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7. Quantitative measures of one form of uncertainty can be obtained by eliciting expert judgments about the probabilities of different regulatory outcomes and to use those judgments to model those outcomes probabilistically. For a discussion of this use of expert judgment, see Cooke (1991) and Bedford and Cooke (2001). Obtaining quantitative measures of the other form of uncertainty discussed in the text, namely variations across members of society in their beliefs about the regulatory environment, will likely involve surveying a representative sample of local experts in each country.

the debtor will concede the dispute (and permit default judgment to be entered) or offer to settle the dispute at some point before it is necessary to resort to formal enforcement of a judgment. Meanwhile, in the United States over 90 percent of civil cases in state courts are (for reasons that are poorly understood, the precise figure seems to vary significantly across U.S. states and over time within states) typically disposed of by some means other than a full-blown trial (Ostrom et al. 2004, 771). As a final illustration, the data on closing a business include a variable for whether absolute priority of claims is preserved in insolvency. This variable measures whether secured creditors' are paid before employees, shareholders, and the government (on account of tax claims). However, it does not take into account the extent to which secured creditors consent to deviations from absolute priority and permit other claims to be satisfied before their claims are paid in full.

Our fear is that if there is considerable divergence between the stylized legal practices assumed in the DB project's scenario and actual legal practice, then the experts consulted by the DB project might have little experience upon which to base their responses to questions about the norms and practices that apply in the hypothetical scenario. For example, the DB project's contract enforcement scenario assumes that the plaintiff has fully complied with all provisions of the contract; in other words, the plaintiff is 100 percent in the right. The dispute arises because the bank has dishonored the debtor's check. Critical assumptions are that the debtor opposes the plaintiff's claim but ultimately the full amount of the debt is collected. This combination of events might be rare. In fact, we suspect that typically when the plaintiff is 100 percent in the right, the debtor does not oppose a judgment, either because the debtor is insolvent or, if solvent, sees no point in wasting money. If these conjectures are accurate, then the cases involving solvent debtors that are litigated to trial will typically be ones in which the merits are somewhat less clear.

We are concerned about the reliability of responses to questions about relatively uncommon hypothetical scenarios. For instance, an attorney responding to DB questions such as "What procedural rules will be applied at trial?" or "How long will these proceedings take?" may or may not advert to the atypical features of the hypothetical contract enforcement scenario. If she does not recognize that the hypothetical deals with an unusually clear-cut case, an attorney responding to the questionnaire may provide misleading responses based on the less clear-cut cases that are typically litigated all the way to trial. Meanwhile, if she does advert to the distinctive features of the hypothetical scenario, another concern arises: the attorney is likely to have only limited experience with these unusual types of cases. This may also limit her ability to respond accurately to questions about how such cases will be treated by the courts. Either way, one would expect data obtained in this way to be relatively unreliable compared to data obtained by asking the attorneys about scenarios that more closely resemble actual legal practices,

such as "Assuming that the debtor is capable of making payment in full, explain what steps will likely be required to obtain such a payment, how much those steps will cost, and how long they will take."[8]

This brings us to a suggestion for supplementing the measures of regulatory environment collected in the DB database: We believe that it would be useful for the authors of the study to supplement their data on stylized legal practices with data we refer to as actual legal practices, namely data on the extent to which facilitative legal norms are actually invoked and mandatory legal norms are actually complied with. We do not deny the importance of collecting data on stylized legal practices, even if those practices actually turn out to be rare. The costs (and benefits) and time associated with invoking or complying with legal norms will typically be taken into account by those actors when making decisions about how to behave, even if they ultimately choose to ignore some of those norms. Nevertheless, it would be useful to collect data on actual legal practices as well and to examine the divergence between the stylized legal practices currently described by the DB database and actual legal practices. Collecting these data should provide at least some insight into the reliability of data about the stylized legal practices. In addition, as we suggest below, in some cases the best way to begin to understand the complex relationship between legal norms and social and economic outcomes that are directly related to development may be to examine the relationship between legal norms and intermediate outcomes, such as actual legal practices.

Measures of Social and Economic Outcomes

Using statistical analysis to understand the effects of a country's regulatory environment on its economic development requires finding dependent variables that meet two conditions. First, they must reflect some aspect of development in each country, a task that is complicated considerably by the range of conditions found in developing countries and the number of different conceptions of development. Second, the dependent variables must be capable of being estimated reliably from data available for the wide variety

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8. The authors of the World Bank 2004a report attempt to address this particular concern by showing that their data on the time required to enforce a contract in five Latin American countries are consistently close to, but slightly more optimistic than, the median time obtained by studying court records. They say that this pattern is consistent with the claim that their data are accurate, given that their hypothetical involved a good-case scenario (World Bank 2004a, 6). However, this test is not determinative because the authors do not know how close the true time required to resolve their hypothetical case should have been to the time required for the median case. Perhaps the time required to resolve their hypothetical case should have been significantly lower than the time required to resolve the median case. Or perhaps it should have been the same rather than lower.

of countries in the database. It is not obvious that all of the dependent variables considered in the DB reports satisfy both of these conditions.

Relevance to Development

Some of the measures of social and economic outcomes contained in the DB reports are clearly amenable to measurement, yet not clearly or uniformly connected to any particular conception of development. For instance, the likely cost or duration of a civil trial does not obviously have anything to do with development. Another notable example is the variable that measures compliance with international product quality standards. In principle, this seems like a useful indicator of the social benefits that might be associated with regulation. In practice, however, the usefulness of this indicator is limited by the fact that it is measured by reference to the number of ISO 9000 certifications issued in a country per one thousand inhabitants (World Bank 2004a, 22; Djankov, La Porta, Lopez-di-Silanes, and Shleifer 2002, 16). ISO 9000 certification is a measure of the quality of processes rather than products (International Organization for Standardization 2006). It also seems reasonable to presume that firms can produce high-quality products without obtaining ISO 9000 certification (and that firms can obtain certification while producing low quality products). Consequently, without further information we see no justification for believing that this variable is relevant to development.[9]

To be fair, however, attending to the relationship between regulatory environments and outcomes that are only indirectly related to development is what we should expect from good empirical studies of what is clearly a complex relationship. Discovering the patterns and regularities that actually underlie complex phenomena often requires exactly the bottom-up, inductive process exemplified in the DB reports. This bottom-up process involves uncovering relationships between regulations and particular kinds of low- and mid-level outcomes that are unquestionably valuable for theorists, businesspersons, and policymakers alike. If particular reforms to a country's regulatory regime will decrease youth unemployment, reduce job-related accidents, or increase the amount of private credit available to businesses, learning that is surely valuable even if no more sweeping generalizations about the connections between regulation and prosperity are possible.

While a few of the outcomes measured in the DB report may be irrelevant to the DB reports' aims, most have at least some connection to development,

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9. Other outcomes tracked by the DB project that are neither intrinsically valuable nor obviously relevant to achieving intrinsically valuable ends include the size of the informal sector (as measured by the estimated amount of economic activity not reported in official statistics (Botero et al. 2004, 1351; Schneider and Este 2000) and the number of corporate bankruptcy cases.

if only because "development" is such a broad concept. In some cases, though, the relevance of a particular outcome to development varies depending on other conditions. For instance, public confidence in the fairness or efficacy of courts will be most relevant in systems where the courts are the only way to deal with disputes and less relevant in systems where effective methods of alternative dispute resolution are available. In the same way, while it is natural to assume that increasing the depth of credit markets will be positively correlated with economic growth, this relationship might be weakened if there are significant costs imposed upon unsophisticated creditors. The depth of credit markets may also be an inappropriate measure of development in cases where credit booms are likely to be associated with speculative bubbles that eventually lead to costly financial crises.

It is also worth noting that the relevance of any given measure may be a matter of perspective. For example, one of the most commonly used measures of development is Gross National Income (GNI) per capita. There is an open question as to whether conversion of income earned in local currency into a common currency should be based on exchange rates or instead upon the relative purchasing power of the different currencies. If the objective here is to provide a measure of relative economic welfare for a consumer who gauges their income by their ability to purchase goods locally, then conversion using the Purchasing Power Parity (PPP) method would seem to be appropriate. But the exchange rate method is appropriate for people who are more concerned about exchanging their local currency for another.

The challenges inherent in trying to find universally valid measures of development may explain why the analyses contained in the DB project use a relatively wide range of different measures. However, we believe that those considerations also weigh in favor of adopting a somewhat more participatory approach to the process of selecting measures of development than the DB project appears to have adopted. For instance, it would be interesting to see the results of an effort to contact individuals who represent a range of different perspectives on development—including the perspectives of constituencies such as workers and consumers in addition to various sorts of entrepreneurs— in as many countries as possible and asking them what social and economic outcomes they believe are most relevant in the design of regulation.[10]

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10. We suspect that the answers would include at least a few outcomes that have not been included in the DB database. For example, some people might argue that the main purpose of restrictions on firing workers is to protect the dignity of employees and to guarantee job security for older workers. They may also claim that the primary reasons for creating delays in the enforcement of judgments are to ensure respect for due process and to avoid violence in the course of repossession. Others might argue that restrictions on sharing of credit information are designed to allow debtors to make a fresh start. Still others might argue that subordination of secured creditors' claims to those of employees and the government actually should be a desired outcome of bankruptcy proceedings, because secured creditors are in the best position to bear the risk of nonpayment.

Reliability

Even if we put to one side the question of whether the social and economic outcomes measured by the DB project are relevant to any conception of development, there is still the question of whether those outcomes have been measured reliably over the range of countries considered in the study.

Measurement problems are virtually inevitable in this kind of cross-country data collection exercise. To begin with, it is almost always difficult to obtain measures of development that cover the status of marginalized members of society.[11] Moreover, all cross-country financial data (e.g., rates of economic and productivity growth or the size of debt and credit markets) raise the issue of how to find an appropriate method of converting local currency into a common currency.[12] In addition, subjective qualitative data such as indicators of how well creditor data are used (Jentzch 2003), the level of corruption in government (World Bank 2004a, 47; World Bank 2005, 39; Kaufmann et al. 2003), the quality of the courts, or confidence in minority shareholder rights raise a host of problems, such as biases in the survey design or scaling of responses, ignorance on the part of respondents, the lack of a shared reference point for responses, or unrepresentative samples.[13] The

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11. According to the DB database, the size of the informal economy (as a percentage of GNI) in the countries surveyed ranges from 8.8 percent (Switzerland) to 67.3 percent (Georgia) (World Bank 2007b). For a listing of estimates of the sizes of informal economies, go to http://www.doingbusiness.org/CustomQuery/ and select "Economy Characteristics" under the "Select topics" heading and "2005" under the year heading.

12. For over a third of the countries in the DB database, GNI is calculated by converting from the local currency into U.S. dollars using exchange rates estimated from past exchange rate data. The data used to make these estimates varies by country without explanation, both in terms of the number of years from which the data were drawn and in terms of how current those data are. At one extreme, the estimate for Bangladesh was made with forty-two years of data (1960–2002); at the other, only a single year (1993) was used to estimate the rate for Niger (World Bank 2004, 354–59). Of course these difficulties with exchange rates could be avoided by using the PPP method. But the PPP method has its own limitations, including the need for an inherently subjective definition of a "market basket" of goods to make comparisons and the often questionable assumption that the same kinds of goods in two different countries are of comparable quality (Goldberg and Knetter 1997).

13. Consider, for example, how the absence of a shared reference point might affect assessments of the quality of the courts. It is plausible that a procedure that would be highly rated by someone accustomed to an objectively poor system would be rated much lower by someone accustomed to a system that is, objectively speaking, excellent. It might also be that experience with an objectively consistent system would make one far less tolerant of even minor lapses in quality than one would be given experience with a less consistent set of institutions (Oliver 1993; Cadotte et al. 1987). This obviously poses a difficulty for comparisons between countries. If perceptions of quality in fact are negatively correlated with historical objective quality (because better service raises expectations), then differences in average responses across countries may not accurately reflect objective differences in quality. While this effect is not likely to affect comparisons within a given country (unless expectations differ with respect to types of businesses), it would systematically underestimate differences in objective quality between countries in which expectations of quality are dramatically different. (Of course, this is only problematic if an objective rather than a subjective measure of judicial quality is desired.)

authors of the DB reports are clearly aware of these problems because they list them as grounds for avoiding subjective measures of regulation (World Bank 2004a, 13), yet they neglect to highlight the fact that these concerns are equally applicable to their subjective measures of social and economic outcomes.

Inferences

We now turn to the question of whether the authors of the DB reports have drawn appropriate inferences about causal relationships between the regulatory environment and development-related outcomes. There are a number of challenges associated with this sort of exercise, many of which stem from the complexity and uncertainty of law, the broad range of social and economic outcomes that might be relevant to development, and the myriad of ways in which legal and nonlegal factors interact to exert causal influences upon development-related outcomes. These considerations, either singly or in combination, serve to limit the validity, practical utility, and robustness of some of the analyses contained in the DB reports.

To begin with, the complexity of many of the regulatory environments under consideration has forced the authors of the report to combine measures of the regulatory environment into indices such as "number of procedures required to register a business," "flexibility of hiring," "number of procedures required to enforce a contract," or "creditor rights." Analyses based on these indices are of limited practical utility because they tell us little about the relative importance of the different formal regulatory norms captured by the index—knowing that contract enforcement should generally involve as few steps as possible does not tell reformers which procedures to discard.

Another concern that may stem from the inherent complexity of law is that, as we have already noted, several potentially important types of legal norms, such as criminal laws in the contract enforcement scenario and industry-specific requirements in the starting a business scenario, are omitted from the database. The omission of these potentially important explanatory variables naturally tends to undermine the validity of some of the analyses contained in the reports. For example, it may be the case that the complexity of civil procedure has little influence on the depth of credit markets once the characteristics of criminal laws are taken into account. Alternatively, once criminal law is taken into account civil procedure may only be relevant in a subset of countries—e.g., developed countries—thus undermining the contention that one-size-fits-all. Similarly, the DB database generally does not include measures of regulatory uncertainty, but taking uncertainty into account might lead to different conclusions on questions such as the relationship between procedural norms and the efficiency of the civil justice system.

The multifaceted nature of the causal relationship between law and certain development outcomes also seems to pose problems for the DB project. One striking feature of the DB reports is the fact that a few undesirable social and economic outcomes are linked to several different forms of regulation. For example, a large informal sector is linked to heavy regulation of both entry and employment (World Bank 2004a, 23, 38). Corruption is linked both to entry regulation and procedural complexity in contract enforcement (ibid., 24, 47). Finally, unemployment is linked both to rigid employment regulation and procedural complexity in contract enforcement (ibid., 37, 87). It would obviously have been helpful for the authors to have explained whether each of these potential regulatory influences on informality, corruption, and employment proves to be significant when all possible influences are taken into account. It would also be helpful for the reader to be given some sense of the relative importance of each form of regulation.

The fact that nonlegal factors frequently interact with legal factors to influence social and economic outcomes also presents a challenge for the DB project. For example, the DB reports draw inferences about the relationship between current regulatory burdens and worker safety using the average number of deaths by accidental poisoning over the period from 1981–1994 as an indicator of worker safety. However, it is possible that the number of *deaths* by accidental poisoning (rather than incidence of poisonings, fatal or otherwise) is related more to the quality of available healthcare facilities than the legal or regulatory regime.[14] Or, to take another example, it may be the case that the social benefits of procedural formalities, such as notarization requirements, depend upon prevailing levels of dishonesty. A concept like dishonesty is likely to be difficult to measure, but failure to take it into account in a cross-country analysis of the effects of procedural formalities might lead to erroneous inferences.[15]

A similar but somewhat broader point is that many of the DB reports' analyses necessarily ignore the history of regulation in any given country. This omission will be significant whenever the long-term effects of a particular regulatory initiative are different from the short-term effects or depend upon what sort of regime members of a society are already familiar with. The best way to address these sorts of concerns would be to examine data on the effects of varying procedural formalities within a single country (assuming that other factors remain constant). This highlights the importance of

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14. We also note that relating outcome data from the years 1981–1994 to characteristics of a country's current regulatory system violates a basic principle of study design, namely, that measurements of the explanatory variables should be made during a period in which they could plausibly affect the outcome variable.

15. Evidence that similar regulatory environments (in the sense measured by the existing DB database) induce very different actual legal practices at different times or in different countries would provide a clear indication that these sorts of nonlegal factors are at work.

continuing the DB project for a sufficiently long period of time to permit analysis of variations (within countries) over time, a strategy that is generally desirable in empirical analysis (Kennedy 2003, 302).

Finally, the complexity of law combined with the range of potentially important social and economic outcomes combine to limit the robustness of the inferences that can be drawn by analyzing the DB database. Given the often sweeping conclusions drawn by the DB authors, it is clear that they want to draw inferences about the relationship of regulation to development that go well beyond the limited set of regulations and social and economic outcomes they have studied. However, it may be difficult for the authors to find principled ways of extrapolating from their analyses. For example, there is no apparent reason to think the relationship between poisoning deaths and regulation indicates anything about job-related accidents in general, since accidental poisoning is at most a special form of job-related accident. Similarly, it may be difficult to extrapolate from findings on how a legal system deals with cases that involve one party who is obviously and completely in the right and with no out-of-court settlement to cases in which there is considerable uncertainty about questions of either fact or law, and the parties have the option of settling. Some lawyers might argue that the benefits of complex procedures only become apparent in relatively complex cases where settlement is feasible. Of course, finding a principled way to extrapolate from the hypothetical scenarios used in the DB project's surveys is particularly important if those scenarios describe relatively uncommon or unrepresentative kinds of disputes or actions.

The DB Project's Suggestions for Reform and Benchmarks

The suggestions for reform in the DB reports are presented in unequivocal and direct terms, pithily summarized in italicized headings such as: "Simplify and deregulate in competitive markets," or "Reduce court involvement in business matters" (World Bank 2004a, 93–94). Moreover, the authors of the DB report explicitly invite donors of foreign aid, high-level government officials, investors, the media, and the general public to use their indicators as benchmarks to assess the performance of various countries and demand reform (ibid., ix–x).

Lawmakers presented with these recommendations and benchmarks have three options: to ignore them, to use them as the basis for legal reforms, or to use both the recommendations and the underlying empirical studies as a basis for further investigation. Our impression is that many of the recommendations in the DB reports are too important to be ignored. In many countries sufficiently grave concerns have been raised about the operation of various aspects of the legal system that it would be unethical for lawmakers to ignore recommendations for reform that could plausibly

improve the situation. At the same time, our strong sense is that the short-comings detailed above, in both the analyses and the underlying data, render the empirical foundations of the DB project too unsound for its findings to be used as the basis for widespread legal reforms. By default, therefore, we believe that the conclusions reached to date by the DB project are best viewed by policymakers as a basis for further investigation.

Of course, one way to investigate the merits of the DB project's recommendations for reform is to implement them on some sort of trial basis. Conducting legal experiments of this sort raises difficult ethical issues because many reforms have the potential to backfire in ways that cause significant harm; when law fails, people risk losing their jobs, their life savings and, perhaps worst of all, faith in society and hope for the future. Moreover, since the objective of many experiments will be to ascertain the effects of imposing mandatory as opposed to voluntary legal obligations, typically it will be impossible to obtain the informed consent of the subjects of the experiments. There is also a risk that members of relatively vulnerable groups will be compelled to participate in experiments whose benefits, if any, will be reaped mainly by members of other groups. Under these circumstances, great care has to be taken to ensure that the expected benefits of a legal experiment for the participants outweigh the expected harms (Federal Judicial Center, 1981). However, the World Bank is in an excellent position to coordinate legal experimentation by: providing advice on and certification of the design and implementation of experiments (including their ethical implications); creating international standards for both legal reforms and reporting of social outcomes so as to facilitate international comparison of experimental results; facilitating the identification of international comparison groups (in cases where subjects cannot be assigned to groups at random and comparisons within countries are not feasible); and disseminating the results of experiments.

Unfortunately, the DB project's recommendations and benchmarks are not being used merely as a basis for further investigation. Lawmakers in many countries, and in particular in developing and transition economies, face considerable pressure from multiple sources to implement the DB project's recommendations and improve their performance as measured by the DB project's benchmarks. To begin with, the World Bank has chosen to treat the DB project's findings as a suitable basis for legal reforms and has begun to promote reform by documenting examples of reforms consistent with their recommendations and providing annual awards for the most outstanding reformers (World Bank 2007d). In addition, several donors have taken up the invitation to use the DB project's indicators as benchmarks. For example, several of the DB indicators are used in preparing the World Bank's "Country Policy and Institutional Assessment," a diagnostic tool, which includes numerical scores that the World Bank and other multilateral development banks use to allocate concessional funding (World Bank 2007a). Similarly,

the "Cost of Starting a Business" and "Days to Start a Business" indicators are used in part to determine eligibility for grants from the United States' Millennium Challenge Account (Millennium Challenge Corporation 2007).[16]

In light of the World Bank's inherent intellectual credibility, the size of the audience for its ideas created by its "legal technical assistance" operations, and the material incentives that donors have given lawmakers in developing countries to improve their performance as measured by the DB project's indicators, it should not be surprising that the authors of the DB reports claim to have had considerable success in inducing countries around the world to institute reforms consistent with their recommendations: "Since its start in October 2003, the *Doing Business* project has inspired or informed 48 reforms around the world" (World Bank 2006b, 4–5).

Given the limited empirical support for the claim that reforms recommended by the DB project will have positive effects on development outcomes, it is far from clear to us that widespread implementation of those reforms is an accomplishment worth boasting about. We believe that it is an open question whether the energy and resources invested in legal reforms would have been better put to other uses, including medical research, vaccines, distribution of mosquito nets, and sanitation projects.

We also believe there is some tension between the DB project's reform agenda and its intellectual aspiration of helping to understand the relationship between law and development.[17] Once it becomes clear that donors and investors are using the DB indicators to allocate material benefits across countries, governments will have an incentive to manipulate the indicators, particularly if, as we suggest above, the DB indicators do not measure all of the legal norms that meaningfully affect the business environment. For example, a government may reduce the number of days required to start a business but increase the amount of red tape associated with operating the business on a day-to-day basis (Sautet, Hooks, and Rothschild 2005). This sort of manipulation threatens to undermine the validity of the DB indicators, both as measures of suitability for aid or investment and as measures that can be used to explore the connection between law and development—a manifestation of a phenomenon that economists refer to as Goodhart's Law or the Lucas Critique (Chrystal and Mizen 2003).[18]

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16. The "Cost of Registering Property" and "Days to Register Property" indicators are used for supplemental purposes (Millennium Challenge Corporation 2007).

17. We put to one side the fact that if the reform branch of the project is too effective, there will be a significant reduction in the amount of regulatory diversity around the world, which may in turn reduce our ability to use cross-country variations to investigate the relationship between law and development.

18. Goodhart's Law states that "any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes" (Chrystal and Mizen 2003).

CONCLUSION

Assessed solely as a research project, the DB project is extremely impressive in terms of the creativity of its design, scale, and rigor. The criticisms set out above are not meant in any way to detract from our overall appreciation of the data-collection exercise that the participants in the project have undertaken and its contribution to the enterprise of understanding the relationship between law and development. Our sense is that the limitations of the project reflect challenges inherent in achieving its ambitious objectives.

Even if it is viewed solely as a research project, we believe that there are at least two features of the DB project that could be improved upon in its future iterations. First, the authors of the DB project could strive for greater transparency in describing some of the analyses used to generate their conclusions. Second, they should strive to be open to a broader range of theoretical perspectives on the features of the regulatory environment and social or economic outcomes that ought to be included in their database. A more pluralistic approach to the theoretical underpinnings of the project seems indispensable in light of the tremendous variety of theoretical claims that have been made about the relationship between law and development.

We are more critical of the practical as opposed to intellectual components of the DB project—that is to say, the efforts to use the data and theoretical findings to guide legal reforms and establish benchmarks. The inherent limitations of both the data and analytical tools used in the DB project mean that their recommendations for reform have too weak an empirical foundation to be trusted by either lawmakers or those in a position to influence them. Similarly, given the limited basis for believing that they are positively related to development outcomes, especially after lawmakers have been given incentives to manipulate them, the indicators created by the DB project seem inappropriate for use as benchmarks. The methodological advances embodied in the DB project—and, overall, we do consider them to be advances—should not blind us to the dangers associated with treating any social scientific research, no matter how sophisticated, as an infallible guide to legal reform.

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