

Two more areas, improving access to finance for entrepreneurs and easing enterprise in rural areas, will become mainstream business environment issues. The former is now barely present in measurement: Doing Business has a section on getting credit and the Enterprise surveys have a financing chapter. The remaining sources of analysis treat finance as a stability issue or an issue of freedom from government intervention. The ease of doing business in rural areas is not subject of any measurement. This is about to change.

The research linking the ease of enterprise with creating jobs, reducing informality, encouraging entrepreneurship, enhancing productivity, eliminating corruption and providing opportunities for women is growing. To-date, there are one thousand academic articles using the various measures of ease of enterprise to study its effects.³ In the coming year we will see papers using panel data on the effects of specific reforms; as well as the first papers using randomized experiments. These will provide a more robust link between reforms and reform outcomes.

The link between aid and reforms will strengthen. Four modalities are emerging. The first, providing just advice (no money), is centered on the Doing Business reform team and its partners. The second, providing grant money with limited advice, is the Millennium Challenge Corporation model, also suited for large donor agencies like the British, French and German ones. The third focuses on single reforms that require both money and technical expertise. An example is Norway's support of property registration reforms or the International Finance Corporation's advisory on credit information reforms. The fourth modality focuses on large packages of reforms. Instead of reforming, say, customs, a government may wish to reform customs, tax administration, and the courts. Such a package of reforms requires a lot of money and expertise. The World Bank and USAID are most qualified to do this, as is DFID.

These are exciting times for development researchers and practitioners in the field of private enterprise.

How to use the existing measures

To be useful for analysis, indicators need to be simple, easy to replicate, based on local knowledge, and linked to specific policy changes. Only then will they motivate reform and measure its effect on investors. The indicators that have fallen into disuse fail on these counts. For example, the International Country Risk Guide is constructed by "experts" in East Syracuse, upper-state New York.⁴ The result is little movement in the indicators on, say, Nepal. Unless the *New York Times* has an article on it.

The indicators that meet these criteria can be used in combination. To assess the ease of enterprise in a country, follow a three-step process. First, see how the current business environment fits a long-term trend towards economic freedom. The indicators produced

³ Seventy percent of these articles use Doing Business data. For a list, see http://www.doingbusiness.org/documents/Citations_of_Doing_Business_research_papers.pdf.

⁴ See http://www.prggroup.com/ICRG_Methodology.aspx.

by the Fraser Institute and the Heritage Foundation provide this opportunity.⁵ Both exist for more than a decade, and both cover issues like government ownership in the economy, monetary and fiscal policy, and trade policy. Fraser covers 141 countries, Heritage – 157. The Fraser and Heritage indicators are constructed by research teams on the basis of many sources.⁶

Next, consult the World Bank's enterprise surveys.⁷ These cover 71,000 businesses in 104 countries. The surveys contain both hard data—for example, on how long it takes to obtain a water connection—and perceptions on the main obstacles to do business. One could see whether the same issues that arise in the expert assessments (Fraser's and Heritage's) come out here as well. If not, differences can be for two reasons. First, there are some topics like crime or quality of infrastructure that appear in the enterprise surveys but are not covered by the experts. Second, the expert surveys mostly take the view of a foreign investor. Yet many regulations affect those investors differently. In short, the enterprise surveys provide a reality check.

The World Bank enterprise surveys are also an important source of productivity analysis in developing countries. They contain both “input” and “outcome” data: inputs like hard data and perceptions on regulatory efficiency; outcomes like the number of jobs created, increases in sales per worker, and a measure of total factor productivity. In some countries, one can further enhance this productivity analysis by linking the survey with the industrial census, as has been done in Bulgaria and Chile. A weakness of the Enterprise surveys is that each country is surveyed once every 3 years.

Finally, go to the Doing Business website and learn how a country regulates domestic businesses. Doing Business covers 178 countries and studies business laws, regulations and their enforcement.⁸

Doing Business offers several advantages. It is transparent, using factual information about what laws and regulations say and allowing multiple interactions with over 5,000 local respondents to clarify answers. Having representative samples of respondents is not an issue, as the texts of the relevant laws and regulations are collected and answers checked for accuracy.⁹ Because standard assumptions are used in the data collection, comparisons across countries can be made. And the data not only highlight the obstacles to doing business; they also identify their source and point to the needed reform. They are also the most up-to-date of any indicators: the data come out every September and are only 3-months old (benchmark date of June 1st).

However, the Doing Business methodology has 5 limitations. First, the analysis refers to businesses in the country's most populous city (for example, New York in the United

⁵ The regulatory quality indicator produced by Kaufmann, Kraay and Mastruzzi (2007) is also used in analyses and by the Millennium Challenge Corporation. However, it has a shorter time-series.

⁶ See <http://www.freetheworld.com/2007/4EFW2007app1.pdf> for Fraser's methodology; and http://www.heritage.org/research/features/index/chapters/htm/index2007_chap3.cfm for Heritage's.

⁷ Available free at www.enterprisesurveys.org.

⁸ See www.doingbusiness.org.

⁹ You can find them at <http://www.doingbusiness.org/LawLibrary/>.

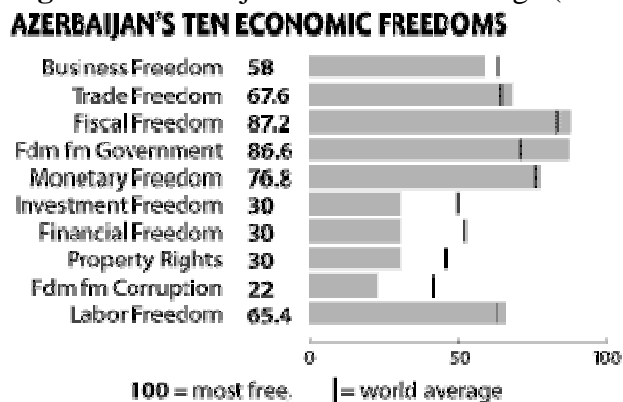
States) and may not be representative of regulations in other parts of the country.¹⁰ Second, the project studies a specific business form—a limited liability company of a certain size. Third, the measures of time involve an element of judgment by the expert respondents. Fourth, the methodology assumes that the entrepreneur has full information and knows exactly where to go and what to do when. Also, the bureaucrats are efficient and honest, and do not unnecessarily delay the process. Finally, the Doing Business project does not account for a country’s proximity to large markets, the quality of its infrastructure services (other than services related to trading across borders), the security of property from theft and looting, macroeconomic conditions or the extend of corruption.¹¹

With this package of information the analyst will get a good picture of how difficult it is to do business in a country. One can start the research from step two or three: reformers and most investors already know the general picture and may be looking for details. So would a development researcher.

Analyzing Azerbaijan: an Example

Suppose you are a new-comer to Azerbaijan’s economy and want to get an idea of how difficult is it to do business there.

Figure 2: Azerbaijan’s scores in Heritage (2007)



Start with the Heritage Foundation’s analysis: readily available on the web.¹² What do the Heritage experts say? Azerbaijan's economy is the world's 107th freest economy (of 141 in the sample). The country’s level of monetary freedom is high. Corporate tax rates enhance Azerbaijan's score. Most of the state-owned businesses have been privatized. That and limited government spending give Azerbaijan a high “freedom from government” score. Financial freedom, investment freedom, property rights, and corruption remain problematic, as is an underdeveloped judicial system (figure 2).

¹⁰ The Doing Business sub-national team has done a dozen studies comparing cities and states within large countries. Examples are Brazil, Colombia, Egypt, India, Mexico, Morocco, Pakistan, Russia, Ukraine and the United States. You can find these at <http://www.doingbusiness.org/Subnational/>.

¹¹ See Channel (2007) for a discussion on how to use the Doing Business indicators.

¹² At <http://www.heritage.org/research/features/index/country.cfm?id=Azerbaijan>. Fraser has an equally useful analysis but it is not available on a by-country basis. The data are at <http://www.freetheworld.com/2007/3EFW2007ch3.pdf> (page 48).

Business Freedom

Starting a business takes an average of 53 days, compared to the world average of 48 days (data from the Doing Business project). Obtaining a business license can be very difficult, but closing a business is relatively easy. The lack of transparent and effective regulations to establish clear rules and foster competition are serious impediments to investment. The overall freedom to start, operate, and close a business is limited.

Trade Freedom

Azerbaijan's weighted average tariff rate is a relatively moderate 6.2 percent. Non-tariff barriers include a weak legal regime, arbitrary customs administration, conflicts of interest in regulatory matters, subsidies, and corruption.

Investment Freedom

The Ministry of Justice serves as a screening process, acting in a non-transparent, arbitrary manner. The government prohibits investments in national security and defense sectors and restricts investment in government-controlled sectors like energy, mobile telephony, and oil and gas. The Azerbaijan National Bank regulates most foreign exchange transactions and foreign exchange accounts. Direct investment abroad by residents, including real estate transactions, requires central bank approval.

Financial Freedom

Azerbaijan's financial system is underdeveloped. The banking sector is weak and burdened by non-performing loans. The central bank has overseen a process of closures, consolidation, and privatization under which the number of banks has fallen from 210 in 1994 to 44 in 2006. The two state-owned banks together account for about 60 percent of banking sector assets and provide financing for most government departments and many of the state-owned enterprises, often at below-market rates. The central bank raised minimum capital requirements, but many commercial banks are undercapitalized. Foreign banks have a minimal presence. The government has imposed increased regulatory requirements and supervision on the insurance sector, which consisted of about 60 companies in 2005, including two state companies and eight foreign companies. The stock exchange is very small.

Property Rights

The judiciary is the least developed branch of the government and suffers from corruption. Problems in the quality, reliability, and transparency of governance, as well as abuse of the regulatory system and poor contract enforcement, significantly impede the ability of many companies to do business. Politically connected business interests benefit from their control of lucrative sectors of the economy.

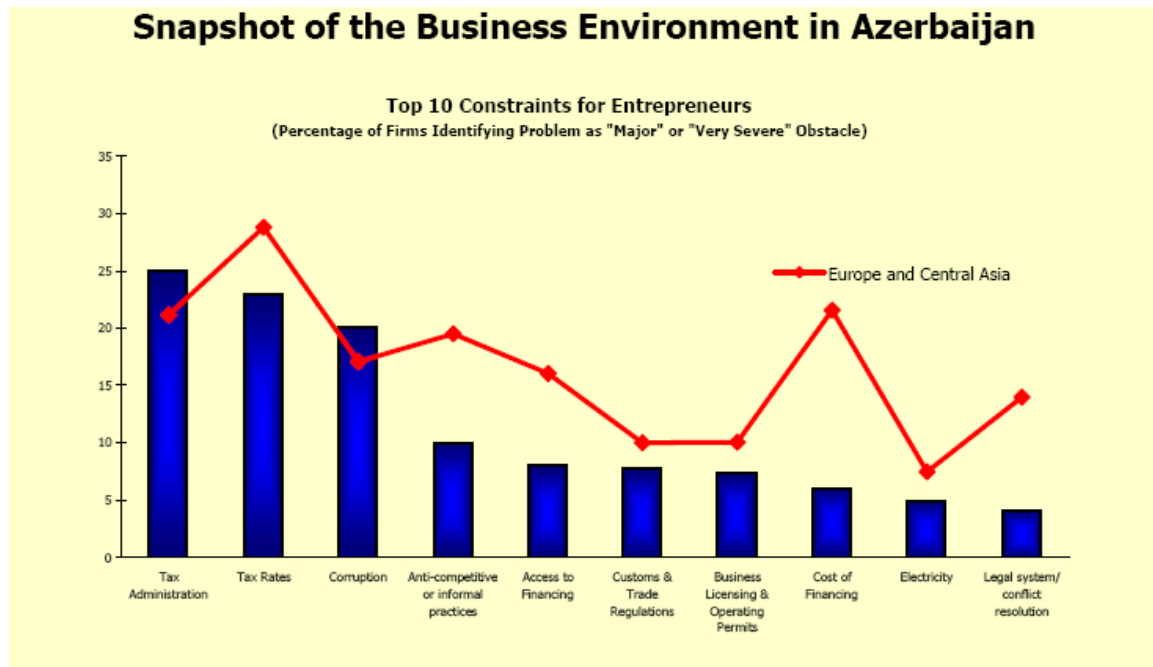
Freedom from Corruption

Corruption is perceived as widespread. Azerbaijan ranks 137th out of 158 countries in Transparency International's Corruption Perceptions Index for 2005.

Step Two

Consult the World Bank enterprise survey. The data for Azerbaijan are collected in 2005 (the next survey starts in February 2008).¹³ The analysis is summarized in a country profile.¹⁴ Businesses rate tax administration and tax rates as the main obstacle to growth, followed by corruption, and competition from informal businesses (figure 3). Courts are a problem: only 10.3 percent of surveyed businesses resolve their disputes in the courts. The average for the region is 37 percent.

Figure 3: Top obstacles to doing business in Azerbaijan



Infrastructure is not considered a constraint: in fact, Azerbaijan scores significantly better than the regional average on quality of infrastructure. Access to finance is not identified as a big problem; nor are labor skills and labor regulations.

Perceptions of corruption are high. Twenty percent of businesses say they pay bribes to obtain various licenses. And the amount of bribes as a share of sales is nearly three times higher, at 2.8%, than the regional average (1%).

Costs of security against crime are high, at 3.93% of sales. This compares to a regional average of less than one percent. Montenegro is the only transition economy that records higher security costs, at 5.3% of sales.¹⁵

¹³ At <http://www.enterprisesurveys.org/ExploreEconomies/?economyid=14&year=2005>.

¹⁴ Available at <http://www.enterprisesurveys.org/documents/EnterpriseSurveys/Reports/Azerbaijan-2005.pdf>.

¹⁵ The Enterprise surveys website makes it easy to make such comparisons. Go to www.enterprisesurveys.org, then select Crime from the dropdown menu in the upper right corner, then go

Step Three

Finally, look at the Doing Business data on Azerbaijan.¹⁶ It says that Azerbaijan ranks 96 of 178 economies (table 1), with the main obstacles to business being in trading across borders (rank 173), dealing with licenses (rank 159) and paying taxes (rank 141). On the positive side, Azerbaijan is an easy place to get credit and resolve commercial disputes.

Table 1: Azerbaijan in *Doing Business 2008*

Topic	2008 rank
Ease of doing business	96
Starting a Business	64
Dealing with Licenses	159
Employing Workers	80
Registering Property	56
Getting Credit	26
Protecting Investors	107
Paying Taxes	141
Trading Across Borders	173
Enforcing Contracts	30
Closing a Business	75

Doing Business also has a country profile for each country, available free.¹⁷ In addition to comparing Azerbaijan with other countries on the various indicators, the profile lists the reforms that took place in the last year.¹⁸ It also gives a procedure by procedure account of what the business has to go through in order to register, obtain industry licenses, hire workers, pay taxes, go to court, export and several other transactions that entrepreneurs face in the ordinary course of business. These can be used by reformers to identify specific reforms.

Summary

After studying these sources, what did you learn? First, corruption is a big issue—appearing in each set of indicators. Second, dealing with licenses is problematic. Third, tax administration is inefficient. Fourth, the customs service stands improvement.

Infrastructure is not a constraint. Neither are the central bank's monetary policies or the government's fiscal regime. The courts are fast but sometimes issue arbitrary decisions.

How will measurement evolve

There are three trends in measuring the ease of doing business. First, the indicators on the extent and cost of corruption will improve and new indicators will be added. Together, these will result in moving away from perception measures in this area. Second,

to Sales Costs and click on the title of the column. The entries are listed in ascending order; you can also compare with the regional averages shown on top.

¹⁶ Available at <http://www.doingbusiness.org/ExploreEconomies/?economyid=14>.

¹⁷ You can find the one for Azerbaijan at

<http://www.doingbusiness.org/Documents/CountryProfiles/AZE.pdf>.

¹⁸ This information is also available at <http://www.doingbusiness.org/Reformers/>.

measuring access to finance will become as common as measuring regulation. Currently, the focus is on a few indicators that may not reflect true access. For example, the value of collateral to get a business loan is often considered a good measure of access to credit. It isn't. On average, bankers in Germany require 126% of the loan value to be matched by collateral; this is similar in Lesotho (117%), Benin (119%) and Guatemala (125%).¹⁹

Finally, indicators will be built on doing business in rural areas. These will look at how easy it is to run small farms and agro-processing enterprises. No one currently does this. The common assumption has been that people move to where the jobs are, and as the business environment improves in the cities more people will leave the villages. This is indeed happening but not at sufficient pace to reduce poverty. And migration can bring with it social problems, as men usually leave while women and children stay behind, at least temporarily. It is not a good way to live.

Measuring corruption

The main indicators on corruption are now provided by Transparency International and the World Bank Institute. These are based on common sources – an aggregation of experts' opinions and business surveys. The former is simpler to understand by non-researchers, the latter uses more robust methodology. Both use perceptions' data and because of this are lagging, not leading indicators of the need for reform. One example: Georgia reformed its border crossings in late-2006, merging several different agencies (border policy, customs, phyto-sanitary inspections, tax inspections) into one public servant who meets importers. This reduced corruption opportunities. Yet expert polls and even enterprise surveys were slow to pick up this change. This is because international experts (of the type Transparency International uses) do not know every country equally well; and businesses may be slow in adjusting to reforms. Neither experts nor enterprise managers have experience working in many countries, so their answers may lack comparability from one country to the next.

The Enterprise surveys are easy to fix. They address the “laggard” and “non-comparability” issues in two ways. First, part of the questionnaire is now designed around specific reforms, with questions added to gauge the knowledge of respondents on new developments in business regulation. More knowledgeable respondents get a bigger weight. Second, to enhance comparability, short scenarios that benchmark the perceptions of respondents are added. These allow adjustments for whether in some countries businesses are too used to paying bribes and do not consider corruption a constraint. Here is one example from a recent survey in Nigeria:

“Musyoka needs to renew a small business license from a local government office each year. Bribes are welcomed. Musyoka usually includes an additional bribe with his applications. When Musyoka had not included bribes, his application was sometimes lost or there were long delays such that the firm had to re-file. Does corruption represent an obstacle to the operation and growth for Musyoka's business?”

¹⁹ See the collateral data for 104 countries at <http://www.enterprisesurveys.org/ExploreTopics/?topicid=7&direction=Asc&sort=4>.

No Obstacle	0
Minor Obstacle	1
Moderate Obstacle	2
Major Obstacle	3
Very Severe Obstacle	4.”

If a respondent picks No Obstacle, his answer is discounted. Once such adjustments are made, the enterprise surveys will become a better source of perceptions data on corruption. This will also increase the quality of the World Bank Institute’s indicators, which use the enterprise surveys as a source.

The other innovation in this area will be the introduction of a set of transparency indicators in Doing Business. This indicator will measure the regulations on financial assets and conflict-of-interest disclosure for parliamentarians and cabinet members, and their enforcement. Doing Business analyzes the scope and content of disclosure, the application of the law to family members, the public availability of these disclosures, the enforcement mechanism of these laws, and alternative regimes such as the prohibition on owning certain assets.

The Doing Business transparency indicator is narrower in focus than the ones by Transparency International and the World Bank Institute. But it is linked to specific laws and regulations, which can be used to identify reforms. This can make it as successful as the business start-up indicators have been for the Millennium Challenge Corporation. Indeed, many of the current country programs have anti-corruption components that can be informed by such an indicator.

The Investment Climate Facility for Africa is developing similar anti-corruption programs that can benefit from links to specific indicators.

Measuring access to finance

Every business complains it doesn’t have enough money. It is no surprise then that access to finance is always among the top constraints to business in perceptions surveys. These, however, rarely distinguish among good and bad investment projects; and among businesses that tried to obtain finance and failed as compared to businesses that never tried but think they will fail.

The recently revised Enterprise surveys make the latter distinction.²⁰ The result is curious: many businesses that answer “access to finance is a big constraint” also answer that “we have not needed to get a bank loan.” With the new data, one can make the necessary adjustment so that access is recorded as difficult only in cases where there was an attempt to get external financing.

The second innovation in measuring access to finance is the World Bank’s *Getting Finance* project, co-funded by DFID. It has constructed indicators on access to credit and payments services for entrepreneurs in 54 of the poorest countries in the world. In 2008,

²⁰ The Enterprise survey is available at http://www.enterprisesurveys.org/documents/Core_Enterprise_Survey_coded.pdf.

the survey will be expanded to 110 countries. If successful at identifying reform opportunities, *Getting Finance* will become an annually-updated report in 2009, covering all poor and middle-income countries.

Ease of rural enterprise

Little is known about the ease of enterprise in rural areas. These are not covered by any of the existing indicators. Yet in poor countries about 60% of people live in rural areas. Some household surveys ask villagers questions on the economic activities of family members, how they spend their day and what income they generate.²¹ But even these do not go on to study the constraints to doing business.

There are two main types of businesses in rural areas: small farms and agro-processing enterprises. The latter may have similar constraints to their operations as do businesses in the cities. With one caveat: road and railways infrastructure is likely to be of bigger importance. Access to finance may also be subject to different constraints, as rural land collateral is largely worthless to bankers and income flows are subject to seasonal variations and the caprice of weather. Farms are quite different. Farmers worry about buying the right inputs (seeds, fertilizer), having property rights to the land, access to water and roads, and the presence of nearby markets.

The measurement gap will be closed in two ways: by implementing enterprise surveys that are specifically-designed for rural enterprises; and by constructing a set of indicators on constraints to rural enterprise with a methodology similar to that in *Doing Business*. This work is just starting.

Research on the effects of reform

There are about 1,000 academic articles that use ease of enterprise indicators in their analysis: 700 use the Doing Business data, 175 use Fraser's data,²² 100 use Heritage's, while the Enterprise surveys have 70.²³ However, nearly all the work is cross-sectional, or uses panel analysis with an aggregate measure of economic freedom that may exaggerate the effects of reform. And researchers generally lack good microeconomic outcome indicators—like new business start-ups, number of newly registered properties, job created, increases in productivity—so much of the work makes implausible attempts to link specific regulatory reforms to overall investment, employment rate and growth.

What exists

“The Regulation of Entry” (2002) was the first paper to attract the attention of researchers and development experts to the field of measuring the ease of enterprise. It recorded the number of procedures, time and cost to start a business in 85 countries. The main finding:

²¹ The best reference here is Banerjee and Duflo (2007), available at <http://econ-www.mit.edu/files/805>.

²² For a full list, see <http://www.freetheworld.com/papers.html>.

²³ The data from the *Global competitiveness report* are rarely used for research. The reasons are summarized in Lall (2001): “The study assesses the best-known index, The Global Competitiveness Report of the World Economic Forum, and finds deficiencies at several levels. Its definitions are too broad, the approach biased and the methodology flawed. Many qualitative measures are vague, redundant or wrong. These weak theoretical and empirical foundations reduce the value of the indices for analytical or policy purposes.” The one topic where these data are used is the study of corruption.

“heavier regulation of entry is generally associated with greater corruption and a larger unofficial economy, but not with better quality of private or public goods. Entry is regulated more heavily by less democratic governments, and such regulation does not yield visible social benefits. The principal beneficiaries appear to be the politicians and bureaucrats themselves.”²⁴

Two other papers followed, using similar methodology: “Courts” (2003) and “The Regulation of Labor” (2004).²⁵ The first studies legal procedure in the courts of 109 countries and finds that “formalism of legal proceedings is systematically greater in civil than in common law countries, and is associated with higher expected duration of judicial proceedings, less consistency, less honesty, less fairness in judicial decisions, and more corruption.” The second looks at the same 85 countries as in “The Regulation of Entry” and finds that “Heavier regulation of labor is associated with lower labor force participation and higher unemployment, especially of the young.” These three academic studies are the origin of the Doing Business project and have been cited in over 500 academic articles.²⁶

Several other papers have been produced by the same research team, led by Professor Andrei Shleifer at Harvard.²⁷ The latest one – on business taxes and entrepreneurship – collects and studies data on both regulations (in this case tax law) and their effect on new businesses (business entry rates and number of businesses per 1,000 adults). The main result: “in a cross-section of 85 countries, our estimates of the effective corporate tax rate have a large adverse impact on aggregate investment, foreign direct investment, and entrepreneurial activity. They are also negatively correlated with growth, and positively correlated with the size of the informal economy. The results are robust to the inclusion of a variety of controls for other tax rates, quality of tax administration, security of property rights, level of economic development, regulation, inflation, and openness to trade.”²⁸

The research around Doing Business has started a large literature on the effects of regulation. Most papers are written on the original entry data: for example Alesina and others (2005), Perotti and Volpin (2005), Klapper, Laeven and Rajan (2006), Fisman and Sarria-Allende (2004), Antunes and Cavalcanti (2007), Masatlioglu and Rigolini (2006), Barseghyan (forthcoming), Freund and Bolaky (forthcoming) and Helpman and others (forthcoming). Researchers have taken it a step further and done country-specific studies that use more detailed data on entry regulations and their effect: for example, Bruhn (2007) and Kaplan and others (2007) on Mexico, Chari (2007) on India, Monteiro and Assuncao (2006) on Brazil.

²⁴ Djankov and others (2002), p. 35.

²⁵ Djankov and others (2003) and Botero and others (2004).

²⁶ For a citation list as of June 10, 2007, see

http://www.doingbusiness.org/documents/Citations_of_Doing_Business_research_papers.pdf.

²⁷ These are available at <http://www.doingbusiness.org/MethodologySurveys/>.

²⁸ Djankov and others (2008).

The next most-widely cited data are the ones on court efficiency. Sonin (2003), La Porta and others (2004), Cooley and others (2004), Akerlof and Kranton (2005), Acemoglu and Johnson (2005), Bianco and others (2005), Tabellini (2005), Chemin (2007), Lerner and Schoar (2006), Laeven and Woodruff (2007), Visaria (2006), Djankov, McLiesh, and Shleifer (2007), Safavian and Sharma (2007) and Rosenthal and Voeten (2007) all use these data to test the importance of contract enforcement on economic activity. The main finding is that absent efficient and uncorrupt courts, the number and value of business transactions is smaller, especially for small businesses that do not have alternative mechanisms to enforce their claims (like hiring enforcement agencies or knee-breakers).

The third most popular dataset is on labor regulations. These data have been used especially in the context of India and Latin America to show that rigid regulations retard job creation, especially for young workers and women. Besley and Burgess (2004), Aghion, Burgess and Redding (2005), Ahmad and Pages (2007) and Amin (2007) find this result for India. For example, Amin's study on 2,000 retail stores in large Indian cities concludes: "Stricter labor regulation has a strong negative effect on employment. Labor reforms are likely to increase employment by 22 percent of the current level for an average store."²⁹

Heckman and Pages (2004) is a collection of studies of the effect of labor regulation on employment and growth in Latin America. Almeida and Carneiro (2007, 2008) do an in-depth analysis on Brazil. Caballero and others (2004), Pierre and Scarpetta (2004) and Micco and Pages (2006) do the same using global datasets. The effect of rigid labor regulation is analyzed directly, via its impact on the labor market. In contrast, Chang and others (2005), Lopez de Cordova (2007), Cunat and Melitz (2007) and Helpman and Itskhoki (2007) study the indirect effect: when economies open up their product markets to international competition. In the absence of flexible labor regulation, economies do not benefit fully from such openness and forego large employment opportunities.

The data collected by the Fraser Institute is, in contrast, used primarily in panel analyses on economic growth. In these, the aggregate index is used as a proxy for institutional quality or simply economic freedom. Examples are Easton and others (1997), La Porta and others (1999), Mahoney (2001) and Gwartney and others (2006). The latter finds that "using data for 94 countries from 1980 to 2000, a one-unit increase in institutional quality, i.e., on the index of economic freedom, increases the long-term economic growth by about 1.5 percentage points when both direct and indirect effects are included, compared to 1.0 percentage point when only the direct affect of institutions are included." This finding is typical of the literature: Doucouliagos and Ulubasolgu (2006) review 45 research papers using these data and conclude "regardless of the sample of countries, the measure of economic freedom and the level of aggregation, there is a solid finding of a direct positive association between economic freedom and growth."

The data from the Heritage Foundation is used in a similar manner, in cross-country regressions on investment and economic growth. Examples include Edwards (1997), Wu

²⁹ These results corroborate a parallel literature on the effect of rigid labor regulation in rich countries. Examples are Blanchard and Portugal (2001) and Fiori and others (2007).

and Davis (1999), de Haan and Sturm (2000), Feld and Voigt (2003) and Gwartney and Lawson (2003). In addition, the Heritage data have been used to measure the effect of trade policies, for example in Rodríguez and Rodrik (2000), Santos-Paulino (2002), Santos-Paulino and Thirlwall (2004), and Rose (2004).

The Enterprise surveys have been little used for research. This is because they are relatively new, and a country is surveyed once every three years. So to do panel analysis, a researcher still has only a dozen countries to work with. However, in 2006 a new research unit was established at the World Bank to analyze the data and make it available over the web for public use. The number of countries with panel data will quadruple in 2008. Research has already picked up.³⁰ A typical paper is Aterido and others (2007), which finds “important effects of access to finance, business regulations, corruption, and to a lesser extent, infrastructure bottlenecks in explaining patterns of job creation at the firm level in 107 countries.” Yakovlev and Zuravskaya (2007) use a large panel survey for Russia to show that business entry increases significantly after regulatory reforms. Gamboa-Cavazos and Schneider (2007) use a panel of Mexican firms to study the effects of bankruptcy reform.

As the Enterprise surveys collect data on financing, innovation, and job patterns, a number of studies investigate these areas. Sharma (2007), for example, finds that “using data from a cross-section of 57 countries, R&D spending by small firms is more likely and sizable in countries at higher levels of financial development. The estimates imply that among firms doing R&D in a country like Romania, which is at the 20th percentile of financial development, a 1 standard deviation decrease in firm size is associated with a decrease of 0.7 standard deviations in R&D spending.” Other studies look at the causes of informality: Safavian and Wimpey (2007) and Gonzalez and others (2007).

What’s coming

Two big developments in the research on reforms are taking place. The first is analysis using panel data – meaning data across both countries and years – on how specific reforms affect economic outcomes. Currently only four such studies exist: Djankov, McLiesh and Shleifer (2007), Safavian and Sharma (2007), Balas and others (2007) and Eifert (2008). The first study looks at the reforms in creditor rights laws and credit information availability, using data for 129 countries and 25 years. The second study uses the 2002 and 2005 data from the Enterprise surveys for transition economies to measure the effect of court efficiency on access to bank credit. The third extends the court procedures data from Djankov and others (2003) to a 50-years period (1950-2000) and finds that civil law countries adopted increasingly cumbersome legal procedures. The fourth uses the 2003-2007 data from Doing Business to measure the impact of several types of reform on investment and unemployment. It finds that reforms have not yet resulted in improvements in macro indicators, except for labor reforms in rich countries.

Studies using panel data are better at distinguishing the effects of reform from the effects of other changes in the country. In contrast, a researcher can attempt to control for other changes in a cross-section analysis and still miss some important covariates.

³⁰ For the papers produced in 2007, see <http://www.enterprisesurveys.org/ResearchPapers/>.

Even panels are not immune to mis-measurement, however. This is because it is difficult to separate the effect of different reforms when a country reforms on several fronts: there are no obvious controls. Come randomized experiments. These use carefully constructed data combining both before/after reform features (as would a panel) with control groups that eliminate alternative explanations. Because they are designed to isolate the effect of a particular reform, you may also get a significant result where a cross-section or a panel study found none.

One example: a recent study – Bertrand and others (2007) – documents the effect of corruption on getting a driving license in Delhi, India. A traditional survey found that few bribes exchanged hands: less than 2% of the applicants reported offering bribes to officials at the license office. Yet once a randomized experiment survey was done, it found that nearly 82% of successful applications involved side payments. But instead of going directly to licensing officials, these informal payments were done through agents. Those agents offered numerous services to driving license applicants, including getting their license without passing a driving test. Part of the fee that agents got found its way into the officials’ pockets.

The driving license study controls for the possibility that successful applicants drive better, had prior driving experience, were smarter or otherwise better prepared for the driving test.³¹ A follow-up study looks at corrupt practices in obtaining land titles and business licenses in Delhi.³² A similar methodology is used in studying corruption at the ports of Durban and Maputo. A randomized experiment approach can also be used for documenting the effect of credit information reform on access to credit for small businesses; in quantifying the effect of establishing one-stop shops on business start-up; or for studying the impact of customs reform on particular types of exporters (for example, agricultural producers). The latter can be done by reforming some border crossings first, then reforming another group, and so on, until every border crossing has reformed.

Panel analysis and randomized experiments yield more precision in estimating reform impact. The former requires longer times-series of data – which are now accumulating; the latter requires knowing when reform is to happen. That way the researcher can design the randomization.

What else should come

How does growth come about? Answer this question you will have a sequence of measures that are needed to establish the link between specific reforms and economic growth. And if these measures do not currently exist, they are essential to obtain for better knowledge of the impact of reforms.

³¹ See <http://www.economics.harvard.edu/faculty/mullainathan/files/driving.pdf> for details.

³² Bertrand and others (2008).

First, we know that growth increases when the productivity of existing businesses rises. Now we have productivity growth estimates for most rich countries, and the Enterprise surveys provide such data for developing countries.

Second, we know that growth increases as people move from less productive to more productive jobs, for example when they leave agriculture and get jobs in manufacturing firms or when they leave the informal sector. Statistics on the size of the informal sector do not exist across countries. The closest measures are estimates in Schneider and Torgler (2007). Data on job creation are also not available for most developing countries, in part because so many jobs are in the informal sector.

Third, entrepreneurship increases growth. The more new businesses are established, the greater the chance of innovation and new technologies. Even these basic data do not exist. Djankov and others (2008) made the first effort to collect such data for 80 countries, for 2000-2004. Simultaneously, the International Finance Corporation has started collecting data on business entry on an annual basis.

Fourth, new capital creation boosts growth. A good proxy is the volume of technology imports (data that exist in international trade statistics) as well as investment in construction. The latter is usually collected by national statistical offices but not yet compiled in one dataset across countries.

Finally, every country that has recorded significant growth has done so through exporting. It is hence useful to have data on rising export volumes as well as the increase in the number of exporting businesses. The former exist, the latter can be put together from industrial census data (which do not exist in most poor countries) or proxied with data from the Enterprise surveys.

Whoever puts together this set of data for a large sample of countries will advance the research on the effects of reform enormously.

Towards an Input/Output Table for Reforms

Reformers would be greatly helped if they could plug their ideas for reform into a spreadsheet and get an estimate of the number of new business being created as a result; or the number of new jobs. The concept exists: in the form of input/output tables for production. Wassily Leontief got the idea and won a Nobel prize for it. It goes like this: every sector of the economy depends on labor, as well as inputs from other sectors (including the financial sector). So if you know what the input/output relationships are, you would be able to forecast changes in production based on changes in the production of other sectors and the availability of labor.

Another analogy is the use of computable general equilibrium models in studying the effects of trade reform on economic welfare. These models played a significant role in the World Trade Organization's negotiations during the Tokyo and Uruguay rounds and now play a role in the discussions on agricultural preferences and subsidies in the Doha round.

Say you want to increase entrepreneurship. We know—from Bruhn (2007) and Kaplan and others (2007)—that new business creation this depends on easing business start-up requirements. We also know—from Djankov and others (2008)—that it depends on business taxes and the flexibility of labor regulation. Access to finance has probably important, but so far untested, effect on business creation.

But how much does each “input” matter? A researcher can look at the results of these studies and come up with input/output coefficients. For example, Djankov and others (2008) find that “a 10 percentage point increase in the effective corporate tax rate reduces the business entry rate by 1.4 percentage points (mean is 8 %).” Using the same analysis, the paper finds that “An extra procedure for business entry reduces the entry rate by 0.32 percentage points, so going from barely regulated to most regulated countries would reduce the entry rate by as much as 5 percentage points per year.”

The same simulation can be done for other desirable outcomes, for example higher export growth. Djankov, Freund and Pham (2007) show that each extra day of delays at the border reduces export volumes by about one percentage point. Beck and others (2000a, b) find that credit market development predicts economic growth.

Table 2: The input/output table for reforms

	Starting a Business	Registering Property	Getting Credit	Protecting Investors	Paying Taxes	Trading Across Borders	Not Paying Bribes	Using Infrastructure	...	New Businesses Started	New Jobs created	Percent Productivity Increase	Percent Informality Reduced	...	Aid
Starting a Business															
Registering Property															
Getting Credit															
Protecting Investors															
Paying Taxes															
Trading Across Borders															
Not Paying Bribes															
Using Infrastructure															
...															
New Businesses Started															
New Jobs created															
Productivity Increased															
Informality Reduced															
...															
Aid															

Source: Constructed by the author.

Reforms in one area may increase the likelihood of reforms elsewhere. Once more businesses are in operation, they demand a more efficient process of obtaining industry licenses. So lobbying for licensing reform becomes an input into a reform output: simpler licensing.

You end up with an input/output table, where the “sectors” are the regulatory reform areas as defined by Doing Business, starting a business, dealing with licenses, employing workers, getting credit, etc; as well as outcomes such as more business entry, more jobs, higher productivity (table 2). The latter are included because they change the desire and ambition of governments to reform. “Labor” in the Leontieff tables is substituted by aid (money or advice).

Imagine how much easier it would be for reformers to show up in parliament as say: with this reform, so many new jobs will be created, productivity of current enterprises will increase by so much; and so many firms will begin exporting.

Linking Aid to Measurement

Aid on the ease of enterprise has been increasingly linked with progress on indicators. This has come about with the evolution of the Doing Business project: constructing indicators that are annually updated, easy to replicate, up-to-date, and based on specific laws and regulations.

Other microeconomics or governance areas do not currently have such indicators: either the data lag by a few years (as is the case with poverty, education, and health indicators); or the data are not linked to specific reforms (as with existing anti-corruption indicators). In contrast, the development of the system of national accounts in the 1940s created a strong link between aid and progress on macroeconomic indicators such as reduced inflation rates, fiscal deficits, or current account deficits. The work of the International Monetary Fund is entirely linked to these measurements.

In the contest of aid for improving the ease of enterprises, four modalities are emerging.

The MCA way

Each year, the Millennium Challenge Corporation publishes a list of criteria of what constitutes economic freedom (table 3).³³ And puts a large reward - in the hundreds of millions of dollars - for countries that rise above the world’s average. For example, Morocco just received \$700 million.

Table 3: MCA’s Economic Freedom Indicators

<i>Inflation</i> The most recent 12-month change in consumer prices as reported in the IMF’s International Financial Statistics or in another public forum by the relevant national monetary authorities. <i>Source: The International Monetary Fund’s World Economic Outlook (WEO) database</i>
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³³ The list has two other categories: investing in people and ruling justly. The latest list, from September 2007, is at <http://www.mcc.gov/documents/mcc-report-fy08-criteria%20and%20methodology.pdf>.

Fiscal Policy The overall budget deficit divided by GDP, averaged over a three-year period. The data for this measure is provided directly by the recipient government and cross-checked with other sources and made publicly available to try to ensure consistency across countries. *Source: National Governments and the International Monetary Fund's World Economic Outlook (WEO) database*

Business Start-Up An index that rates countries on: the time and cost of complying with all procedures officially required for an entrepreneur to start up and formally operate an industrial or commercial business. *Source: International Finance Corporation*

Trade Policy A measure of a country's openness to international trade based on weighted average tariff rates and non-tariff barriers to trade. *Source: The Heritage Foundation's Index of Economic Freedom*

Regulatory Quality An index of surveys that rates each country on: the burden of regulations on business; price controls; the government's role in the economy; foreign investment regulation; and many other areas. *Source: World Bank Institute*

Land Rights and Access An index that rates countries on: the extent to which the institutional, legal, and market framework provide secure land tenure and equitable access to land in rural areas and the time and cost of property registration in urban and peri-urban areas. *Sources: The International Fund for Agricultural Development and the International Finance Corporation.*

To qualify for the money, two-dozen countries have sped up business entry and reduced its cost. A recent *New York Times* article highlighted Burkina Faso's reforms.³⁴ The Millennium Challenge Corporation also publishes country scorecards for all eligible countries.³⁵ In red are the indicators where the country is encouraged to make more progress. This gives incentive for governments to reform.

However, of the current six indicators governments can affect only 3 in a reasonable period of time: inflation, business start-ups, and land registration. Another two: fiscal policy and trade policy require long-term changes. The final one, regulatory quality, is based on an aggregation methodology that makes it difficult to affect.³⁶

The money is used on what the government's priorities are: mostly infrastructure. Morocco, for example, is spending it on rehabilitating olive and fig trees, upgrading small-scale fisheries, stimulating the crafts sector, and training young workers.³⁷ Benin's \$307 million program is the only one closely associated with the ease of doing business:

³⁴ Celia Dugger, US Agency's Slow Pace Endangers Foreign Aid, December 7, available at http://www.nytimes.com/2007/12/07/world/africa/07millennium.html?_r=1&oref=slogin.

³⁵ For example, the one for Azerbaijan is available at <http://www.mcc.gov/documents/score-fy08-azerbaijan.pdf>.

³⁶ The regulatory quality indicator is produced by Kaufmann, Kraay and Mastruzzi (2007), based on about 20 perception-based surveys from different organizations. The Millennium Challenge Corporation could instead use an alternative indicator based on combining the Getting Licenses, Paying taxes, and Getting Credit indicators from Doing Business. More reforms would take place.

³⁷ See details at <http://www.mcc.gov/countries/morocco/index.php>. As other examples, Armenia's \$234 million will be spent on rural road upgrading and farm irrigation; Ghana's \$547 million on agricultural development and building transport infrastructure for agricultural products; Nicaragua's \$175 million on building rural roads, upgrading a 58-kilometer stretch of the Pacific Corridor highway, and registering land titles. Benin's \$307 million program is most closely associated with the ease of doing business: improve the efficiency of land registration, speed up the resolution of business disputes, reduce delays in exporting and importing.

improve the efficiency of land registration, speed up the resolution of business disputes, reduce delays in exporting and importing.

The Millennium Challenge Corporation is the pioneer in linking its grants to a set of indicators on the ease of doing business. Other large bilateral development agencies may adopt a similar approach. The UK donor agency DFID is most likely to do so, as it supports large reform programs using grants. And once the money is committed, DFID has a similar philosophy of “budget support,” where resources go towards priority areas of the reformist government. The French and German aid agencies may follow.

The Doing Business way

A different way to encourage reforms is to link advisory services to measurement, as is done by the Doing Business reform team.³⁸ The top-selling publication of the World Bank Group, the Doing Business report attracts the attention of many governments. This is because the report names the top reformers, as well as the laggards. Profiles comparing the business environment with that in the region and in the world are available for every country.³⁹

Doing Business hosts an annual reformers’ club event, where the top reformers meet and share their experience.⁴⁰ *Celebrating Reform*, a book with case studies of successful reforms and how they were done, is also released.⁴¹ These case studies help would-be reformers avoid the mistakes from the past and see what worked.⁴² Regional reformers’ clubs are now starting.

The Doing Business team is frequently asked to provide reform ideas and case studies of successful reforms elsewhere. Once a request comes, a reform memo is put together and sent to the government. A team, often from across the World Bank Group, meets with the reformers and discusses feasible reforms. A *Next Steps in Reforms* memo follows, with detailed examples of how similar reforms have been done in other countries, and what these reforms achieved. Once the government decides what reforms to pursue, the Doing Business reform team works with the IFC, World Bank and USAID programs on the business environment to support it. This support is not backed by loans, just advisory services. To date, over 150 reforms have been informed or inspired by Doing Business (figure 4).

³⁸ The reform unit was established in October 2007 and is a joint venture between the Doing Business project and FIAS, a multi-donor advisory services outfit in the World Bank Group. In a number of countries, the reform unit works closely with USAID, which provides co-financing.

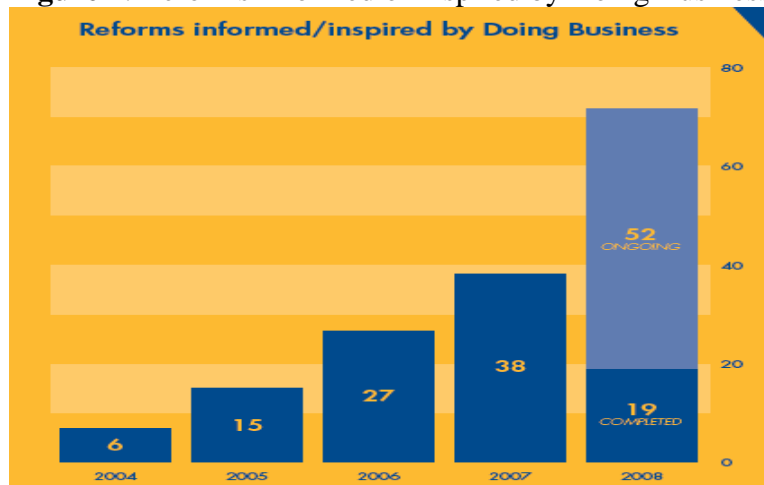
³⁹ Go to <http://www.doingbusiness.org/Downloads/>, and select your country of interest from the dropdown menu in Economy profiles.

⁴⁰ The 2007 event was co-hosted with USAID. Available at www.reformersclub.org.

⁴¹ World Bank (2007).

⁴² Available at <http://www.reformersclub.org/CaseStudies.aspx>.

Figure 4: Reforms informed or inspired by Doing Business



Support for specific reforms

Some reforms require not only ideas and learning from other countries but also investment in setting up new agencies or upgrading old ones, buying new technologies, and paying higher salaries for specialized experts. An example is the setting up of specialized commercial courts. This reform takes 2-5 years and costs from \$5 to \$25 million, depending on whether new buildings have to be bought. The logic behind such courts is clear: specialization increases the expertise of judges and lawyers, and allows the use of simplified civil procedures. *Doing Business 2007* reports on the success of such courts in Ghana and Rwanda.⁴³ Azerbaijan, Georgia and Egypt are setting up such courts too.

There are several other such reforms: setting up one-stop shops for business entry and licenses, establishing credit information bureaus, upgrading property registries, reforming customs and tax authorities. These require expertise as well as some investment (table 4).

Table 4: How much does a reform cost?

Topic	\$ million
Ease of doing business	59-165
Starting a Business	2-5
Dealing with Licenses	5-10
Employing Workers	5-10
Registering Property	5-20
Getting Credit	2-5
Protecting Investors	5-10
Paying Taxes	10-25
Trading Across Borders	10-40
Enforcing Contracts	10-30
Closing a Business	5-10

Source: Author's estimates. The cost includes drafting of legal texts and public dialogue.

⁴³ See Enforcing Contracts (page 50), at http://www.doingbusiness.org/documents/DoingBusiness2007_FullReport.pdf.

European donor agencies are the most successful supporters of such specific reforms. The Swiss have supported successful court and customs reform projects, the Norwegians successful property registries, the British excel at reforming tax authorities, the Swedish at business registries, the Icelanders reforms in small states. Choosing which type of reforms to support frequently depends on what the donor is good at: Norway has the world's best property registry, Switzerland is known for efficient customs.

The support of a specific reform is also done by larger donors. For example, the threshold program of the Millennium Challenge Corporation – which is administered by USAID – frequently focuses on improving business registration, property registration or customs efficiency. Both are among the criteria for economic freedom. The threshold programs in Albania, Paraguay, Sao Tome and Principe, and Zambia aim at reducing delays and costs in business start-ups.⁴⁴ The Zambia program supports speeding up property registrations and exporting. Yemen's program supports customs reform, as does Paraguay's.

These programs have detailed goals that are easy to track. For example, Sao Tome's states:

- Reduce the time to start a business to 32 days or less; and
- Reduce the cost of starting a business to 18 percent of income per capita.

Zambia's program aims to:

- Reduce the number of days to register property at the Ministry of Lands from 70 to 35.
- Decrease the percentage of businesses reporting payment of a bribe to the Customs Division of the Zambia Revenue Authority from 14 to 7.
- Increase the percentage of businesses reporting quality service regarding business registration from 41 to 60.
- Reduce the number of days to export products from 60 to 30.
- Reduce the number of days to import products from 62 to 30.

These goals can be measured using Doing Business and the Enterprise survey. This helps design them, as well as evaluate their success.

The Big-Three way

Ambitious governments in developing countries may want to do several reforms at once. Macedonia is an example: the government is reforming in nearly every area. This can either be done by several European donors being matched with specific reform needs; or a large donor offering support for a package of reforms. Only DFID, USAID and the World Bank have the resources to do the latter. Such projects would cost \$50 to \$150 million.

These projects also take longer time: 3 to 7 years. To know whether they are going on track, the donor agency can introduce a set of indicators to track progress. The Doing Business indicators are best fit for doing this. These can be complemented by enterprise

⁴⁴ See <http://www.mcc.gov/countries/albania/index.php>,
<http://www.mcc.gov/countries/paraguay/index.php>,
<http://www.mcc.gov/countries/saotomeandprincipe/index.php>,
<http://www.mcc.gov/countries/zambia/index.php>.

surveys that focus on the specific areas of reform – as is currently done with business licenses in Georgia. The latter show whether the results of the reform are felt by businesses.

Measurement as aid

In 2007, the World Bank provided \$24 billion in development assistance worldwide. The development bank of Brazil provided \$36 billion, or 50% more than the World Bank, for projects in poor regions of the country. Altogether, development aid from all donors combined accounted for about \$70 billion, or about 8% of total financial inflows into developing countries. In money terms, the international development agencies are no longer significant players in most developing countries.

Yet, there is now significant expertise in measuring the factors that determine economic growth and reduce poverty. This expertise can be leveraged to provide aid that depends on reform ideas. The example of what the Doing Business project has done shows this is possible. Politicians in any country will support reforms if they see their benefits.

The pessimists would argue that if aid is linked to measurement, governments would target only reforms that increase their rankings, and disregard other necessary but unmeasured reforms. The response is that one should shy away from over-reliance on any one indicator: a good example is the economic freedom package of indicators used by the Millennium Challenge Corporation. And that on-going research in measuring the ease of enterprise will cover all areas of reform that help new businesses start operations and new jobs being created.

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