Business Bribery Risk Assessment

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Preface

In this report, we introduce the global problem of business bribery, discuss international efforts to combat it, report firms' views of the challenges and opportunities, and explain the new risk metrics we have developed and modeled to create a new business bribery risk assessment tool. The specific problem that our research addresses is that bribery of foreign government officials is prohibited by the U.S. Foreign Corrupt Practices Act (FCPA) and other international anti-corruption laws, but businesses have limited measures to assess risk on a country-specific basis. Guidance published by the U.S. Department of Justice and the Securities and Exchange Commission, Organisation for Economic Co-operation and Development, and the United Kingdom's Ministry of Justice demonstrates the importance of creating individual country risk assessments and developing targeted compliance programs, especially as businesses become increasingly global. The results of our work will be of direct use to the business community, but our approach and results are also relevant to the research community that studies corruption and governance.

Our research to create the TRACE Matrix was sponsored by TRACE International, the leading global anti-bribery business association that works with multinational companies to raise compliance standards worldwide. This research builds on RAND's extensive work in the area of corporate ethics, law, and governance, as well as RAND's 2012 symposium for global companies, *Anti-Corruption Regulations in Emerging and Expeditionary Markets: New Markets, New Challenge*s.

RAND Center for Corporate Ethics and Governance

The RAND Center for Corporate Ethics and Governance is committed to improving public understanding of corporate ethics, law, and governance and to identifying specific ways in which businesses can operate ethically, legally, and profitably. The center's work is supported by contributions from private-sector organizations and individuals with interests in research on these topics.

The center is part of the RAND Institute for Civil Justice, which is dedicated to improving the civil justice system by supplying policymakers and the public with rigorous, nonpartisan research. Its studies identify trends in litigation and inform policy choices concerning liability, compensation, regulation, risk management, and insurance.

Questions or comments about this report should be sent to the project leaders, Elvira N. Loredo, at Elvira_Loredo@rand.org, or Karlyn D. Stanley, at Karlyn_Stanley@rand.org. For more information on the RAND Center for Corporate Ethics and Governance, see http://www.rand.org/jie/centers/corporate-ethics.html or contact the director (cceg@rand.org).

TRACE International

TRACE International is a non-profit business association that pools resources to provide practical and cost-effective anti-bribery compliance solutions for multinational companies and their commercial intermediaries. TRACE members include hundreds of multinational companies, as well as thousands of small and medium-sized enterprises throughout the world. TRACE is committed to advancing commercial transparency worldwide by providing members with pragmatic alternatives to increasingly time-consuming and expensive corporate compliance.

For more information, visit www.TRACEinternational.org. Questions or comments about the TRACE Matrix should be sent to info@traceinternational.org.

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Summary

Corruption is a major problem that can inhibit global business investment, especially in emerging markets, but assessing risk is challenging. Moreover, multinational companies often rely on tools for judging business bribery risk that are not well suited to their specific needs. As a result, their compliance practices may not be sufficient, increasing the potential risk of violating various anti-corruption laws, or may be overly aggressive and costly. We have created a new index, the TRACE Matrix, for business bribery risk that we believe has important advantages over existing alternatives. The TRACE Matrix provides a quick and useful guide to global businesses, drawing on data relevant to business activity that is organized around a conceptual framework of bribery risk factors. The objective of our research has been to help firms assess the propensity for public-sector bribery and its associated business risk and to provide data to inform compliance processes. We have developed a business bribery risk methodology using existing, publicly available cross-country data about risk factors that uses a clear, transparent methodology to aggregate data from multiple sources. In addition to an overall risk score, the tool provides companies with country-specific information for 14 dimensions of business bribery risk, allowing firms to better customize and target their risk assessment and compliance processes.

Our research has been accomplished in several steps. First, we reviewed the literature on foreign business corruption, bribery of government officials, and governance and corruption measurement. Next, we interviewed U.S. regulators, multinational companies, international consulting firms, international non-profit organizations, and global law firms to understand the processes corporations—particularly their in-house and external counsel—engage in to assess and address business bribery and corruption risk. Concurrently with our interviews, we evaluated a wide range of data sources that provide indicators of bribery and corruption risk. We then selected indicators for our index, balancing the need for high-quality data that covers a large number of countries with the conceptual framework we developed and our explicit focus on bribery risk to firms. Finally, we developed a model to create an index that, in addition to ranking countries, permits the user to review subsets of data that created the ranking.

Our interviews with business leaders and other stakeholders, combined with our review of the literature, identified specific information needed to provide a balanced and objective view of business bribery risk: (1) difficulty of doing business; (2) need for interactions with government; (3) the relevant anti-bribery laws and regulations; (4) information concerning enforcement of domestic and international anti-bribery laws and regulations; (5) a measure of government transparency and quality, including budgetary transparency; (6) information about a government's civil service quality and management; and (7) civil society oversight, including the role of the press and media. Because we want our approach to be parsimonious and easy to use,

we identified "domains" that capture these different business bribery risk factors. We identified data that could be used to measure each risk domain and then developed a modeling approach to aggregate multiple data sources.

We calculate a composite score for each country, much like a health index score that combines the key factors important to health (e.g., blood pressure, heart rate). Although the resulting index can be used to rank countries by their composite scores, it is also possible to view the results for specific risk factors included in the composite score and identify what drives the overall score. This allows firms to identify not only where a country falls in terms of overall bribery risk but to use the domain and subdomain scores to tailor their compliance practices more effectively.

Acknowledgments

Abbreviations

CPI	Corruption Perceptions Index
DOJ	U.S. Department of Justice
FCPA	Foreign Corrupt Practices Act
OECD	Organisation for Economic Co-operation and Development
SEC	U.S. Securities and Exchange Commission
TI	Transparency International
WGI	Worldwide Governance Indicators

1. Introduction

Corruption is a significant challenge to global businesses, especially in emerging markets. In the past ten years, there has been an upsurge in prosecutions under the Foreign Corrupt Practices Act (FCPA or the Act) brought by the U.S. Department of Justice (DOJ) and the Securities and Exchange Commission (SEC), an increase in findings of individual liability for senior corporate officials, and large increases in the amounts of fines and penalties levied on corporations. The cost and scope of FCPA corporate compliance programs have also increased. Yet multinational companies often have inadequate tools for judging business bribery risk; they frequently rely on aggregate, general corruption indices that may not provide sound information on which to base decisions. The lack of good information on bribery risk can lead to less-than-adequate compliance programs, exposing firms to the potential risk of violating anti-corruption laws, or to an overly aggressive and costly approach. We have developed a new index, the TRACE Matrix, for business bribery risk that we believe has many advantages over existing alternatives. It is designed to provide a quick and useful guide to businesses operating overseas, while providing easy access to detailed information that will allow firms to make more nuanced decisions. In this chapter, we introduce the problem of business bribery, discuss international efforts to combat it, report businesses' views and the new indicators we have developed, and lay out the plan for the rest of the report.

A. Defining the Business Bribery Risk Addressed in This Report

As a regulator pointed out in one of our interviews, there are many types of corruption. Forms of corruption concerning government officials include bribery, self-dealing, embezzlement, kickbacks, extortion, fraud, money laundering, cronyism, nepotism, and patronage.[1] For example, if an official owns shares in a company and directs contracts to the company because of his interest in it, he is self-dealing.[2] If he directs contracts to the company after inflating his company's prices, he probably is self-dealing and embezzling.[3] If he encourages government contractors to buy from his company, he is negotiating a bribe and, if he threatens those who refuse to buy from his company, he is guilty of extortion.[4] Our research is

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[1] Alexandra Addison Wrage, *Bribery and Extortion: Undermining Business, Governments and Security*, Westport, Conn.: Praeger Security International, 2007, pp. 11–18.

[2] Wrage, 2007, p. 12.

[3] Wrage, 2007, p. 12.

[4] Wrage, 2007, p. 12.

directed at assisting multinational companies in assessing the business risk of bribery and in creating compliance programs that are targeted to the business bribery risks in a given country.

The type of corruption that creates business risk for U.S. companies under the FCPA, as explained in *A Resource Guide to the U.S. Foreign Corrupt Practices Act*, pertains to "offering to pay, paying, promising to pay, or authorizing the payment of money or anything of value to a foreign official in order to influence any act or decision of the foreign official in his or her official capacity or to secure any other improper advantage in order to obtain or retain business."[5] Bribery has many faces—for example, a payment to a school official to obtain a child's entrance into a school or a payment to a policeman to ignore a routine traffic violation— but these are not the types of bribery addressed by the FCPA. The danger for U.S. businesses stems from bribes paid to "a foreign official in his or her official capacity" with the intent to "obtain or retain business."[6] DOJ and SEC guidelines refer to this as the "business purpose test."[7] Alexandra Wrage explained in her book, *Bribery and Extortion: Undermining Business, Governments and Security*, that a bribe need not be cash.[8] She provided examples of enforcement actions pursuant to the FCPA that included purchases of office furniture,[9] upgrades to first class travel,[10] jewelry,[11] speed boats,[12] snow mobiles,[13] expensive wine,[14] political contributions,[15] and contributions to an official's favorite charity,[16] as evidence of alleged FCPA violations.[17]

The FCPA's anti-bribery provisions apply broadly to three categories of persons and entities: (1) "issuers" and their officers, directors, employees, agents, and shareholders;[18] (2) "domestic concerns" and their officers, directors, employees, agents, and shareholders; and (3) "certain persons and entities, other than issuers and domestic concerns, acting while in the territory of the

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[5] United States Code, Title 15, Sections 78dd-1 et seq., The Foreign Corrupt Practices Act of 1977, December 19, 1977; see also U.S. Department of Justice and U.S. Securities and Exchange Commission, *A Resource Guide to the U.S. Foreign Corrupt Practices Act*, Washington, D.C., November 14, 2012, p. 10, Appendix, pp. 92–102.

[6] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 10.

[7] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 12.

[8] Wrage, 2007, p.20.

[9] *SEC v. Syncor International Corp.*, Case No.1: 02-CV-02421 (D.D.C. 2002).

[10] *U.S. v. Metcalf & Eddy*, No. 99-cv-12566 (D. Mass. 1999).

[11] *U.S. v. Kozeny*, No. 05-cr-518 (S.D.N.Y. 2005).

[12] *U.S. v. Giffen*, 326 F. Supp. 497 (S.D.N.Y. 2004).

[13] *U.S. v. Mercator Corp.*, S3 03-cr 404 (S.D.N.Y. 2010).

[14] *SEC v. Syncor International Corp.*, Case No.1: 02CV02421 (D.D.C. 2002).

[15] *U.S. v. Titan Corp.,* No. 05-0411 (S.D. Cal. 2005).

[16] *SEC v. Schering-Plough Corp.,* No. 04-0945 (D.D.C. 2004).

[17] Wrage, 2007, p. 20.

[18] "A company is an 'issuer' under the FCPA if it has a class of securities registered under Section 12 of the Exchange Act or is required to file periodic and other reports with the SEC under Section 15(d) of the Exchange Act," U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 11.

United States."[19] Basically, if a company is listed on a U.S. stock exchange or if a company is incorporated within the United States, or if company representatives have contributed to acts of business bribery while visiting the United States, a company could be subject to prosecution under the FCPA.[20] Our research addresses the risk of business bribery that would violate the FCPA.

B. Businesses Have Inadequate Measures to Assess the Business Risk of Bribery of Foreign Officials

The problem that our research addresses is that bribery of foreign government officials is prohibited by the FCPA and other international anti-corruption laws, but businesses have inadequate measures to assess this risk on a country-specific basis. The U.S. Congress enacted the FCPA in 1977 in response to revelations of widespread bribery of foreign officials by U.S. companies. The Act was intended to halt those corrupt practices, create a level playing field for honest businesses, and restore public confidence in the integrity of the marketplace.[21] The U.S. Senate stated in 1977:

> Corporate bribery is bad business. In our free market system it is basic that the sale of products should take place on the basis of price, quality, and service. Corporate bribery is fundamentally destructive of this basic tenet. Corporate bribery of foreign officials takes place primarily to assist corporations in gaining business. Thus foreign corporate bribery affects the very stability of overseas business. Foreign corporate bribes also affect our domestic competitive climate when domestic firms engage in such practices as a substitute for healthy competition for foreign business.[22]

To aid companies that seek to understand and comply with the FCPA, DOJ and the SEC published *A Resource Guide to the U.S. Foreign Corrupt Practices Act* (the Guide) in 2012.[23] The Guide points out that compliance programs that do not focus on areas of greatest risk—for example, expending great effort policing modest business gifts while not focusing attention on major, multi-million dollar financial transactions—have missed the mark. Specifically, the Guide states, "assessment of risk is fundamental to developing a strong compliance program, and is another factor DOJ and SEC evaluate when assessing a company's compliance program."[24] The

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[19] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 11.

[20] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 11.

[21] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p.2; see also U.S. Senate, 95th Congress, 1st Session, *Foreign Corrupt Practices and Domestic and Foreign Investment Improved Disclosure Acts of 1977*, Senate Report No. 95-114, May 2, 1977, p. 4

[22] U.S. Senate, 1977, p. 4. See also U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p.1.

[23] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012.

[24] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 58.

Guide further explains that "one-size-fits-all" type of compliance programs, which treat all countries equally, are not effective.[25] The Guide identifies numerous risk factors that companies should consider, such as

> the country and industry sector, the business opportunity, potential business partners, level of involvement with governments, amount of government regulation and oversight, and exposure to customs and immigration in conducting business affairs. When assessing a company's compliance program, DOJ and SEC take into account whether and to what degree a company analyzes and addresses the particular risks it faces.[26]

In addition to the FCPA, the Organisation for Economic Co-operation and Development (OECD) Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (1997)[27] and the United Kingdom's Bribery Act of 2010[28] address both the supply and demand side of the corruption equation. The OECD Anti-Bribery Convention establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions and provides for a host of related measures that make this effective.[29] The OECD's 2009 Anti-Bribery Recommendation and its Annex II, Good Practice Guidance on Internal Controls, Ethics, and Compliance, published in February 2010, were drafted based on consultations with the private sector and civil society and set forth specific good practices for ensuring effective compliance programs and measures for preventing and detecting foreign bribery.[30]

The UK Ministry of Justice has published a guide on compliance with the UK Bribery Act, including six principles of adequate procedures to prevent bribery.[31] Principle 3, Risk Assessment, describes "country risk" as "evidenced by perceived high levels of corruption, an absence of effectively implemented anti-bribery legislation and a failure of the foreign

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[25] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 58.

[26] U.S. Department of Justice and U.S. Securities and Exchange Commission, 2012, p. 59.

[27] OECD, *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions*, OECD Publishing, 2011.

[28] Bribery Act 2010, United Kingdom, April 8, 2010.

[29] OECD, 2011.

[30] OECD, 2011.

[31] The six principles are: (1) proportionate procedures – the procedures adopted should be proportionate to the risk faced; (2) top-level commitment – the company should adopt a culture of zero tolerance through a commitment by senior management; (3) risk assessment – the company should identify its bribery risks and prioritize its actions in high-risk areas; (4) due diligence – the company should take appropriate care when entering into relationships or markets with a risk of bribery; (5) communication – the company's policy should be clearly communicated to all relevant parties, supported by appropriate training; and (6) monitoring and review – the procedures put in place should be reviewed and updated as the company's risks change over time. *The Bribery Act 2010 Guidance,* London: Ministry of Justice, March 2011, pp. 20–31.

government, media, local business community and civil society effectively to promote transparent procurement and investment policies."[32]

DOJ, OECD, and UK Ministry of Justice guidance demonstrates the importance of creating individual country risk assessments and developing targeted compliance programs, especially as businesses become increasingly global.

C. As Global Business Expands, So Do Risks and Costs Related to Non-Compliance

U.S. business has become increasingly global since the passage of the FCPA in 1977. U.S. corporate profits from foreign earnings have increased from a little over 10 percent in 1977 to over 35 percent in 2009.[33] Thus, both the scope of U.S. companies' foreign operations and the importance of their foreign earnings have increased markedly since the FCPA became law.

The importance of FCPA compliance to the business community has increased with the growth of U.S. business overseas. In the past ten years, there has been an upsurge in prosecutions under the FCPA brought by DOJ and the SEC, an increase in findings of individual liability for senior corporate officials, and a large increase in the amount of fines and penalties levied on U.S. corporations. For example, in 2004, there were only five corporate FCPA enforcement actions; this increased to 13 in 2007 and 20 in 2010.[34] Four FCPA cases were brought against individuals in 2004 and twice as many individuals were charged in 2013. There also has been a steep increase in FCPA corporate penalties over the past ten years. In 2004, the government collected $28.2 million in FCPA penalties, compared with over $720 million in financial penalties in 2013.[35]

These statistics do not capture all the dimensions of cost that anti-bribery compliance places on U.S. companies that do business overseas. In order to comply with the FCPA, U.S. companies that engage in foreign markets create compliance programs that include training for company employees who are present in foreign countries, audit programs of the company's foreign operations, and programs to investigate the business credentials of vendors the company uses in foreign countries. If a company needs to undertake an internal investigation or respond to an investigation by the SEC or DOJ, the cost will be significant, likely in the millions of dollars for

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[32] *The Bribery Act 2010 Guidance,* 2011, p. 26.

[33] Andrew W. Hodge, *Comparing NIPA Profits with S&P 500 Profits*, Bureau of Economic Analysis Briefing, March 2011, p. 23, Chart 1. Corporate profit measures from the Bureau of Economic Analysis national income and product accounts (NIPAs) show that "national profits have been growing more rapidly than domestic profits because of rapid foreign earnings growth, which has grown elevenfold since 1980."

[34] Shearman & Sterling LLP, *FCPA Digest: Recent Trends and Patterns in the Enforcement of the Foreign Corrupt Practices Act*, Memorandum, January 2014, pp. 2–4.

[35] Shearman & Sterling LLP, 2014, pp.2-4.

external legal counsel.[36] In a RAND 2012 symposium, *Anti-Corruption Regulations in Emerging and Expeditionary Markets: New Markets, New Challenges,* representatives of multinational corporations described the heavy cost of FCPA compliance in terms of both company time and money.[37] Risk was another theme that emerged in the symposium discussion. Symposium participants described multiple ways in which risks and uncertainty can undermine firms seeking to assess the true cost of doing business in emerging and expeditionary markets. FCPA compliance costs, threats to employee safety and corporate reputation, and related forms of competitive disadvantage were all cited as examples of uncertainty and risk.[38]

As part of our research, we conducted interviews with global companies, international consulting firms, international non-profit organizations, regulators, and global law firms to understand the process corporations—particularly their in-house and external counsel—engage in to assess and address business bribery risk.[39]Some companies we interviewed operate on a case-by-case basis for business risk assessment, while others develop some type of risk score for each new country in which they may invest. One compliance counsel told us that for third parties, her company has a risk score that is assigned based on two numbers: first, country risk using the Corruption Perceptions Index (CPI) produced by Transparency International (TI)[40] and, second, a number representing the risk present in the use of third parties or in working with government officials. We learned from our interviews that companies use the CPI because it is easily accessible and easy to use. Some companies rely only on the CPI and others use it as a starting point. A partner in an international consulting firm told us that many of his clients "take [the CPI] and incorporate a bunch of internal information," which he described as, "product, sales, and so forth, easier things to rank from their perspective." He continued, "they plug in a number for a country to give a high, medium, or low ranking. They might not assign a number but just need to know how severe the risk is." All of the individuals we interviewed commented on the need for a more precise method to assess business bribery risk.

TI's CPI ranks countries and territories based on how corrupt their public sector is perceived to be. A country's or territory's score indicates the perceived level of public-sector corruption on a scale of 0 to 100, where 0 means that a country is perceived as highly corrupt and 100 means it is perceived as very clean. A country's rank indicates its position relative to the other countries and territories included in the index.[41] There is no information available on a country basis

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[36] Elvira N. Loredo, Karlyn D. Stanley, and Michael D. Greenberg, *Anti-Corruption Regulations in Emerging and Expeditionary Markets: New Markets, New Challenges*, Santa Monica, Calif.: RAND Corporation, CF-304-CCEG, 2012, pp. 5, 10.

[37] Loredo, Stanley, and Greenberg, 2012, pp. 5 -6.

[38] Loredo, Stanley, and Greenberg, 2012, p. viii.

[39] Further details of the interviews are included in Appendix A.

[40] Transparency International, *Corruption Perceptions Index*, online database, undated.

[41] Transparency International, undated.

concerning bribery of government officials other than the country's score. This was a source of frustration for the business representatives that we interviewed.[42]

We asked both regulatory and business interviewees to identify information that would assist their assessment of business bribery risk. One regulator noted that an indicator that addressed both the supply and demand side of bribery would be a major improvement. The official noted that it would be useful to know if there are official reporting requirements and if government salaries are published. Another regulator stated that bribery is not monolithic—that there are different forms, such as educational bribery (to attend a school or obtain grades) or law enforcement bribery (to report a crime or deal with an accident or infraction), and these types of bribery, which may create a common perception of "corruption" among many members of society, are different from business corruption. Hence, the regulator questioned how accurate the CPI was for measuring business corruption and risk. The official emphasized that indicators that address the number of "touches" a company needed to have with government officials would be very useful.

The majority of business individuals that we interviewed concurred that the number of "touches" with the government was probably the most important indicator for bribery risk. In addition, several individuals identified "rule of law" and also the level and sector focus of enforcement of anti-bribery laws as key indicators.[43] A partner in an international consulting firm stated that "the biggest missing piece from CPI is the level of corruption regulation and enforcement." A partner in an international consulting firm summarized the ideas of most of our interviewees when he was asked what features he would most like to see in a new business bribery index. He stated, "Something that is more targeted, more precise than CPI—however, the more complicated it gets, the less likely people will be to use it." A senior compliance counsel concurred, stating, "Unfortunately, the reality is that when companies assess risk across thousands of intermediaries, I don't know that you have the time or resources to look at all the specifics." A general counsel stated, "We are trying to control the behavior of thousands of employees around the world. Someone is going to panic and pay a bribe. It should not happen but it does, even with good employees and good companies." He explained that a new index "becomes valuable when it describes how or when that might happen." Another general counsel observed that a new index should inform a company's audit procedure and be useful in counseling or training employees, particularly logistics staff. For example, he said, "I would use it in counseling and training businesses to look out for problems in certain areas." He added, "It

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[42] Further details of the interviews are included in Appendix A.

[43] The World Justice Project defines "rule of law" as having four key aspects: (1) the government and its officials and agents, as well as individuals and private entities, are accountable under the law; (2) the laws are clear, publicized, stable, and just; are applied evenly; and protect fundamental rights, including the security of persons and property; (3) the process by which the laws are enacted, administered, and enforced, is accessible, fair and efficient; and (4) justice is delivered timely by competent, ethical, and independent representatives and neutrals who are of sufficient number, have adequate resources, and reflect the makeup of the communities they serve. See The World Justice Project, *WJP Rule of Law Index 2014*, online database, 2014.

would inform the audit procedure—if a country has a lot of customs issues, we could target our training efforts and awareness there."

Our interviews highlighted concerns about the data and resources that global companies find at their disposal to make business bribery risk assessments and whether they are effective. The interviews also described the indicators of business bribery risk that regulators and business representatives thought were the most important.

Based on responses from our interviews, we identified a series of risk factors that provide insight about business bribery risk for firms: (1) difficulty of doing business; (2) need for interactions with government; (3) a measure of anti-bribery laws and regulations; (4) information concerning enforcement of domestic and international anti-bribery laws and regulations; (5) a measure of government transparency and quality, including budgetary transparency; (6) information about the quality of a government's civil service; and (7) civil society oversight, including the role of the press and media. We were unable to find reliable, comprehensive data for some of the risk factors that were identified in our interviews, such as whether government salaries are published, measurement of the level of state ownership in businesses, the level of enforcement of anti-bribery laws and the industry sectors that are the subject of enforcement, and a government requirement for foreign businesses to have a local partner or agent. One of the challenges we faced in our research was finding reliable, published, and publically available data for coverage of all 197 countries in the TRACE Matrix.[44] We believe that these risk factors merit further research and could be used to refine and amplify the TRACE Matrix.

D. Development of the New Indicators and TRACE Matrix

Our research has been accomplished in several steps. First, we performed a review of the literature concerning foreign business corruption, bribery of government officials, and governance and corruption measurements. Next, we interviewed U.S. regulators, global companies, international consulting firms, international non-profit organizations, and global law firms to understand the process corporations—particularly their in-house and external counsel— engage in to assess and address business bribery risk.[45] Concurrently with our interviews, we evaluated a wide variety of different data sources that could provide indicators of an environment that is conducive to bribery of government officials for a business purpose.[46] Next, we developed a model to create an index that, in addition to ranking countries, permits the user to review subsets of data that created the ranking. Finally, we conducted statistical testing of the influence

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[44] The data sources should also have clear methodologies that describe how those data were collected or compiled; the methodologies should also be publicly available.

[45] For details of the interviews, see Appendix A.

[46] For details concerning the data sources, see Appendix E.

of the different domains and obtained insights about the weighting of the domains from the expertise and experience of TRACE International.

The goal of the model is to combine the data into a single index representing business bribery risk for every country. The model consists of four domains, each of which has multiple subdomains. These domains are: (1) business interactions with government; (2) anti-bribery laws and enforcement; (3) government and civil service transparency; and (4) capacity for civil society oversight. For example, the first domain, business interactions with government, includes the subdomains of "contact with government," "expectation of paying bribes," and "regulatory burden." These indicators capture aspects of the "touches with government" that our regulatory and business interviews identified as very important indicators for business bribery. The second domain identifies both the anti-corruption laws enacted by a country and information about enforcement of those laws. One of the business representatives we interviewed identified this domain as the "biggest piece missing from the CPI."[47] The third domain, which addresses government and civil service transparency, includes indicators concerning whether government budgets are publicly available and whether there are regulations addressing conflicts of interest for civil servants. The fourth domain captures information concerning the extent of state-owned media and access to media, both of which serve as indicators of a robust civil society that can provide government oversight.

E. Guide to the Report

Chapter Two describes each dimension of the model and explains its importance in measuring bribery risk. Chapter Three presents the results of the measurement model and Chapter Four provides the report's conclusions. Appendix A provides more detail on the interviews; Appendix B provides an outline of the domains, subdomains, and data sources of the measurement model; Appendix C provides methodological details of the measurement model; Appendix D provides the research results; and Appendix E provides a list of the data sources that we reviewed. Finally, Appendix F provides a complete list of countries ranked by their TRACE Matrix score.

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[47] For details of the interviews, see Appendix A.

2. Development of the Business Bribery Risk Index

This chapter explains RAND's work to develop a bribery risk index specific to the needs of the business community. We first discuss the challenges of measuring corruption risk that motivate the approach we took to developing the business bribery risk index. We then outline the conceptual model that underpins the TRACE Matrix and the domains and subdomains of risk that support the conceptual framework. We then turn to data: our approach to selecting indicators to support our conceptual framework and the analytic methods we use to aggregate information into an index. Although the TRACE Matrix is not the first index to measure corruption and bribery risk, we believe the conceptual approach and careful data selection allow it to improve on the existing metrics, especially those most commonly used by global companies.

A. Measuring Corruption and Governance

Our research is motivated in large part by the need—reported by multinational firms—for reliable sources of information that can inform risk assessment and compliance management. We reviewed dozens of corruption and governance indices and analyzed their strengths and limitations.[48] As part of that review we drew on more comprehensive reviews of governance data, and we direct the reader to a few such reviews for a more detailed treatment that is outside the scope of this report.[49] We interviewed stakeholders who represented different perspectives about development of an anti-bribery index that focuses on business risk. These stakeholders included U.S. regulators, global non-profit institutions, general counsel of global companies, partners at international consulting firms, and partners in global law firms who represent clients in FCPA investigations and compliance matters. We used a structured interview approach, with a list of questions to guide the interviews. The interviews were conducted by telephone and in face-to-face meetings between December 6, 2013, and February 27, 2014.[50]

Most firms we spoke with reported that the primary metric they used to assess bribery risk is Transparency International's Corruption Perceptions Index, a measure of cross-country corruption perceptions that was first launched in 1995. The CPI ranks countries and territories

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[48]For a list of the data sources reviewed, see Appendix E.

[49] See Paul Graham, Stefan Gilbert, and Karin Alexander, Idasa, *The Development and Use of Governance Indicators in Africa: A Comparative Study*, Idasa and United Nations Development Programme, December 2010; Stephen Knack, "Measuring Corruption: A Critique of Indicators in Eastern Europe and Central Asia," *Journal of Public Policy*, Vol. 27, No. 3, 2007, pp. 255–291; Jakob Svensson, "Eight Questions About Corruption," *Journal of Economic Perspectives*, Vol. 19, No. 3, Summer 2005, pp. 19–42.

[50] For additional details of the interviews, see Appendix A.

based on how corrupt their public sector is perceived to be, drawing on 13 data sources in the 2013 version to rank 177 countries.[51]

TI has played a pivotal role in framing the debate around corruption, and the CPI has brought a much-needed quantitative approach to the process of assessing corruption. At the same time, the CPI has limitations, especially when used in the context of business bribery risk assessment. The CPI draws primarily on perceptions-based data, with little emphasis on actual bribery experiences. And while the CPI provides a solid, all-purpose metric of generalized corruption across countries, the types of corruption it measures are not focused on the business community and may capture types of corruption risk that are more relevant to other groups, such as households. Not all of the data sources TI uses are publicly available, making it impossible for most users to explore or replicate the CPI. Finally, the CPI provides only a topline score that, while useful for broad cross-country comparisons, provides little information on a country-by-country basis to help users identify what drives the overall score and what specific types of corruption risk are most relevant to their needs. Appendix A provides details about how representative companies currently assess corruption risk.

Other indices improve upon TI's limitations, although none we found meet the specific needs of the international business community that we are trying to address. For example, the World Bank's Worldwide Governance Indicators (WGI) uses a sophisticated data aggregation approach to combine nearly every known data source on corruption and governance, but the WGI is not designed specifically for business bribery risk assessment. Like TI, it provides a more general measure of corruption risk. A review of the WGI by the Governance and Social Development Resource Centre states that "the main use of the indicators by international organization [sic] and donors is to incentivize developing nations to improve their governance and to improve the allocation of aid."[52]

Despite the fact that the emphasis of the CPI and WGI are different from the TRACE Matrix, there are positive correlations between both the CPI and the WGI and the TRACE Matrix. The correlation between the CPI country scores and the TRACE Matrix country scores is 0.83. This correlation shows a relationship that is much stronger than random, but less than perfect. Similarly, the correlation between the TRACE Matrix scores and the WGI Control of Corruption scores is 0.81, a correlation that is much stronger than random, but less than perfect. However, there are notable differences between the CPI and the TRACE Matrix for many countries that are particularly important for foreign companies that invest or do business in those countries.

For example, the TRACE Matrix scores the some countries very differently from CPI: Some countries receive a score indicating a significantly higher risk of business bribery and some receive a score showing a lower risk of business bribery. For many of these countries, a high

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[51] Transparency International, undated.

[52] Sumedh Rao, "Critique of Government Assessment Applications," *Helpdesk Research Report*, Governance and Social Development Resource Centre, July 30, 2010, p. 1.

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score in Domain 1, business interactions with government, is responsible for the higher risk attributed by the TRACE Matrix. For some countries, a high score on Domain 3, government and civil service transparency, or a high score in Domain 4, capacity for civil society oversight, is responsible for the greater risk attributed by the TRACE Matrix. In other countries, moderate scores across all domains provide a lower risk profile for business bribery than indicated by the CPI. Differences between the CPI and the TRACE Matrix may be attributed to the different focus of each index. The CPI focuses on perceptions of many aspects of corruption throughout a country and a population, while the TRACE Matrix focuses on specific indicators related to business bribery risk.[53] The following countries receive very different scores on the TRACE Matrix compared to their scores on the CPI:

- **India:** CPI scores India as 64, and the TRACE Matrix scores India as 80, primarily because of a very high score (92) in Domain 1, business interactions with government.
- **Thailand:** CPI scores Thailand as 65 and the TRACE Matrix scores Thailand as 45. Thailand receives moderate scores across all four TRACE Matrix business-related domains.
- **Indonesia:** CPI scores Indonesia as 68 and the TRACE Matrix scores Indonesia as 51, given the low score (24) in Domain 3, government and civil service transparency, and the moderate scores in the other domains.
- **South Africa:** CPI scores South Africa as a 58 and the TRACE Matrix scores South Africa as 41, because of the moderate scores across all four domains.
- **Peru:** CPI scores Peru as 62 and the TRACE Matrix scores Peru as 44, given the moderate scores Peru receives in Domains 2, 3, and 4.
- **Panama:** CPI scores Panama as 65 and the TRACE Matrix scores Panama as 38, primarily because of the low score (23) in Domain 1, business interactions with the government, and moderate scores across the other domains.
- **Brazil:** CPI scores Brazil as a 58 and the TRACE Matrix scores Brazil as 69, primarily because of the high score (77) in Domain 1, business interactions with government.

Other governance and corruption indices, such as those produced by Global Integrity and the World Justice Project, capture some of the business bribery risk factors we have identified—and we draw on these sources in the TRACE Matrix—but they lack broad country coverage. For example, the Global Integrity Index assesses the existence, effectiveness, and citizen access to key anti-corruption mechanisms at the national level, and covers 86 countries. The index is designed to promote understanding of a country's anti-corruption and good-governance mechanisms that should ideally help to prevent, deter, or punish corruption.[54] Similarly, the World Justice Project Rule of Law Index measures how the rule of law is experienced in everyday life in 99 countries around the globe, based on over 100,000 household and 2,400

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[53] The CPI ranks countries on a scale of 0 to 100, while the TRACE Matrix rankings are from 1 to 100. The CPI rankings of 0–100 (where zero means highly corrupt, and 100 means very clean) have been reversed, so that they can be compared to TRACE Matrix rankings, where 1 indicates the lowest risk and 100 the highest risk.

[54] See *Global Integrity*, home page.

expert surveys worldwide.[55] We view sources like these as important parts of a broader set of indicators, providing measures that are conceptually relevant, albeit at the expense of broad geographic coverage.

Our review of existing corruption and governance indices, combined with our previous research on the subject, literature review, and stakeholder interviews, led us to identify a set of features to include in the TRACE Matrix:

1. The index should have a well-specified conceptual basis that focuses on the target audience and application: multinational firms managing business bribery risk.
2. The index should use publicly available data to allow users to examine the data that support the index.[56]
3. The analytic process used to aggregate the underlying indicators into the overall index should be methodologically appropriate but as simple as possible.
4. The data aggregation approach for the index should be publicly available, allowing users to replicate the results.
5. The overall index should cover as many countries as possible.

In the following sections we describe our approach to developing an index that meets the above five criteria, starting with the conceptual model of business bribery risk and moving on to the data sources and modeling approach.

B. A Conceptual Model of Business Bribery Risk

A conceptual model of business bribery risk is important to ground the rest of our analysis. Our model is not meant to fully describe the nuances of what leads to a bribe transaction, nor is it meant to delineate the incentives facing individual actors. Instead, we attempt to identify for each country the social, legal, and governmental factors that might contribute to a higher risk of business bribery. We then group these factors into logical groupings that we refer to as domains. We developed the domains from information provided by our interviews with business and anti-bribery enforcement experts, and drew on the literature and previous work the authors have done on this topic.[57] Then, we developed subdomains for each domain. Specifically, we researched the indicators that would represent specific measures of risk within each subdomain of each domain. We call our indicators "factors" of risk that feed up into the subdomains, and we also call domains "factors" of business bribery risk. For example, the number of meetings required with tax officials is one factor of Domain 1, business interactions with government. Domain 1 provides a factor of overall business bribery risk. We use the term "factors" to mean a subcomponent of business bribery risk, whether at the subdomain or domain level.

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[55] See The World Justice Project, 2014.

[56] The data sources should also have clear methodologies that describe how those data were collected or compiled; the methodologies should also be publicly available.

[57] See the bibliography for a list of reference material.

Each domain captures an important aspect of bribery risk. Information contained in subdomains adds greater explanatory power to the domain. In aggregate, the domains provide an overall assessment of business bribery risk for a country. The aggregate measure comprises four risk domains, each of which includes a small number of subdomains, which are the actual risk factors.[58] Table 2.1 illustrates how subdomains are nested under domains and then aggregated to produce an overall score.

Table 2.1. Domains and Their Respective Subdomains

Domain	Subdomains
1.0 Business Interactions with Government	1.1 Contact with Government
	1.2 Expectation of Paying Bribes
	1.3 Regulatory Burden
2.0 Anti-Bribery Laws and Enforcement	2.1 De Jure Anti-Bribery Laws
	2.2 De Facto Anti-Bribery Enforcement
3.0 Government and Civil Service Transparency	3.1 Transparency of Government Regulatory Functions
	3.2 Transparency and Health of the Civil Service Sector
4.0 Capacity for Civil Society Oversight	4.1 Quality and Freedom of Media
	4.2 Human Capital and Social Development

The four domains are meant to capture groups of similar risk factors that we believe drive the risk that a firm will encounter a bribe transaction. Although the domains are distinct, we recognize that risks across domains may be correlated. The point of having distinct domains (and subdomains) is that certain risks may be more important for certain firms, whether because of their line of business or their previous experience managing risk.

The first domain reflects the frequency and nature of how businesses interact with the government. This domain has three subdomains that measure risk associated with "touches" with the government, the likelihood of a bribe transaction arising through those interactions, and the overall regulatory burden. All other things equal, firms face higher risk when they have more

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[58] For a detailed discussion of the domains, subdomains, and their data sources, see Appendix B.

interactions with the government, a higher the risk of bribery per interaction, and a higher risk the greater the overall regulatory burden.

The second domain captures a country's legal infrastructure related to combatting bribery and corruption. Subdomain 2.1 is a de jure measure of anti-bribery laws, while 2.2 provides information about enforcement, recognizing that laws without enforcement mechanisms are unlikely to be effective.

Domain 3 recognizes that the quality of a country's government and civil service play an important role in mitigating bribery risk for firms. This domain includes two components. The first addresses the overall quality of government administration, relying in particular on measures of government budget transparency. The quality of a government's budgeting process and whether it is open to scrutiny is likely to be negatively correlated with corruption risk: the more transparent, the less opportunity there is to hide unscrupulous transactions. Subdomain 3.2 focuses on government employees. The rationale is that a high-quality workforce, with government workers who are held to high standards and subject to oversight, is likely to lead to fewer bribery transactions. A country may have factors putting downward pressure on risk (e.g., a high-quality civil service or strong non-governmental oversight), in which case it may not need an abundance of legal mechanisms to control corruption.

The fourth domain captures the role played by extra-governmental actors in monitoring and controlling corruption. Subdomain 4.1 focuses on the critical role of the media. A strong, independent media that is free from government influence can help check corrupt practices by scrutinizing public and private actors alike. We also include a subdomain that measures broad-based capacity of a country's population, recognizing recent research that shows that a healthy, economically stable, and more educated populace will put downward pressure on corruption.[59]

Together, these four domains and nine subdomains reflect what we believe are the core factors that drive or reflect bribery risk. The TRACE Matrix provides 14 dimensions of business bribery risk: an overall score, four domain scores, and nine subdomain scores.

We recognize that this list is subjective and there are reasonable arguments for alternative structures or risk factors. Our goal is to provide an improved resource for measuring business bribery risk, based on a structured approach that is focused on the business audience, drawing on data sources that are of high quality, which supports third-party review and critique.

The business bribery risk index is meant to provide a simple, top-line risk measure and allows users to view, assess, and use the underlying data to provide a more nuanced risk assessment suited to the user's specific needs. Users can evaluate both a country's composite score, somewhat like a health index score (e.g., heart rate, blood pressure), as well as assess the different domain and subdomain scores that contribute to the composite score. The domain and subdomain information will help explain why a country received a particular composite score

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[59] Juan Botero, Alejandro Ponce, and Andrei Shleifer, "Education, Complaints, and Accountability," *Journal of Law and Economics*, Vol. 56, No. 4, November 2013, pp. 959–996.

and identify what specific business bribery risk factors are more pronounced. For example, a firm whose line of business requires only minimal direct government interaction but is high profile and may be subject to scrutiny from the press may want to assess subdomain 4.1 carefully. Moreover, firms may want to use the domain- or subdomain-specific risk to guide the development of a country-specific compliance program.

C. Data Sources and Selection Methodology

To operationalize the conceptual framework for bribery risk, we identified data sources for each specific area of risk. We cast a wide net, drawing on the published literature, our interviews with stakeholders, and discussions with other experts in the area of governance and corruption. We chose 64 indicators so the TRACE Matrix was not disproportionately driven by any one data source (e.g., WGI, Enterprise Survey).[60] Additionally, where many data sources had gaps in country coverage, by selecting a range of indicators we were able to generate scores for a higher number of countries. While there are a multitude of corruption, governance, and risk data sources, we believe that not all of them are appropriate for inclusion in the TRACE Matrix, and we applied a series of criteria to determine whether a data source was suitable. This included assessing the robustness of the data: whether it is publicly available, has a published data collection methodology, and is free from known biases. We also considered country coverage for each data source, with a preference for sources that cover a large number of countries. In addition, we assessed how long the data have been collected and whether the data will continue to be available.

Of the numerous sources of data available that measure some aspect of the risk domains we identified, few indicators directly measure the particular types of risk we believe are relevant to business bribery. For example, often data sources capture some notion of "governance," which each source defines differently. To match data sources to risk factors, we investigated descriptions, definitions, and methodologies. In addition, we sought data sources that were particularly relevant to business risk. For example, there are multiple surveys that ask households about their experiences with corruption, but we instead drew on the best available surveys that pose questions to *firms*.[61]

There are also different types of sources available: observed data, which reflects directly measured outputs or outcomes, such as "how many licenses are required to…"; survey data, which collects responses from a segment of the target population (i.e., households, firms); and expert opinions, in which experts use their experience and judgment to develop a score or rank. In the sources we reviewed, some surveys poll representative samples of specific subgroups (e.g., World Bank Enterprise Surveys) while others use non-representative samples (e.g., the

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[60] See Appendix B for details concerning the 64 indicators.

[61] See, for example, the World Bank's Enterprise Surveys.

Global Competitiveness Report). Expert-opinion–based sources sometimes combine in-country experience of experts and direct outcome data (e.g., Global Integrity Report), and expert analysis often is conducted when the construct is not easily observed or surveyed (e.g., World Justice Project Rule of Law Index).

For some indicators, we employed a quantitative legal review approach, which was essentially a direct outcomes approach, but with an underlying construct. For example, we asked, "How many laws address the United Nations Convention Against Corruption, Chapter 2, Article 5?"

Another challenge was presented by composite or aggregated data, which combines elements of other indices to fully or partially construct scores (e.g., Economic Freedom, Fraser Institute). We avoided aggregated data that included information that we did not wish to use, or that was redundant.

D. Statistical Model Construction

Missing information was a challenge, because not all information was available for all countries, meaning the accuracy of some country ratings may be less than that of others. We therefore used a multiple imputation approach (described fully in Appendix C), which provides consistent and unbiased estimates when data are missing at random or missing completely at random.

We reviewed several approaches to creating the statistical model, including a latent variable approach, such as confirmatory factor analysis.[62] We developed a method that combines the information that is available and creates composite scores for the subdomains, domains, and index score. We weighted Domain 1, business interactions with the government, more heavily than the other three domains based on our statistical testing of the domains, interviews with international regulators and anti-bribery experts, and the experience of TRACE International, which has over 20 years of experience in assessing business bribery risk. We decreased the weight of Domain 2, anti-bribery laws and enforcement, based on the lack of reliable data concerning the enforcement of anti-bribery laws. International regulators advised us that there were no reliable sources for this information, and that the data concerning enforcement actions were often skewed by political factors (e.g., prosecutions following regime change in a country). We were also advised by international regulators that in some countries, enforcement actions are filed but are never prosecuted, making it difficult to assess the actual level of anti-corruption enforcement. The data that we have on the existence of anti-bribery laws for all countries is very good. However, data about the enforcement of those laws is currently incomplete, and is a subject for further research. We think that anti-bribery laws and enforcement of those laws are

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[62] Confirmatory factor analysis combines scores from variables that are considered to have a common cause, which is an underlying latent variable. Confirmatory factor analysis tests the assumption that these variables have a common cause and then estimates a value for the underlying latent variable.

important aspects of a conceptual framework about business bribery risk, and for that reason, we decided to include Domain 2 in the conceptual framework, but decreased its weight. Domains 3 and 4 are weighted equally.

The procedure for calculating a total risk score was as follows: First, we standardized every indicator and then calculated the average score for all items within a subdomain for each country to give subdomain scores. We then re-standardized subdomain scores (again to standard deviation 1 and mean 0) and found the average for all scores in all four domains. We then scaled the domain scores to minimum 1 and maximum 100 and calculated the weighted average of the domain scores, plus a variance penalty score, to obtain a total risk score.[63]

As described above, after the domain scores were calculated, we added a variance penalty. By variance penalty, we mean that countries are penalized for high scores in one or more domains. The average variance penalty for all countries is 0.67.[64]

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[63] The domain scores for each country are calculated as the mean of the rescaled subdomain scores. The total risk score is therefore calculated as:

$$\text{domain\_1} * 0.450 + \text{domain\_2} * 0.079 + \text{domain\_3} * 0.238 + \text{domain\_4} * 0.238.$$

[64] The equation used to calculate the overall TRACE score is: $\sum_{i=1}^{4}(w_i * x_i) + \left(\dfrac{\sqrt{\sum_{i=1}^{4}(w_i * \sigma_{x_i}^2)}}{n-1} \right)$

The first term represents the weighted average of the domains scores, where w_i is the weight and x_i is the domain score.

The second term represents the variance penalty, calculated as the sum of the weighted variance of each domain score that exceeds the unweighted average domain score. In this manner, countries are only penalized by the variance of their relatively high-scoring domains, and the magnitude of this penalty depends on how much higher these domain scores are, relative to the country's overall performance. Furthermore, since we use the same weighting scheme for the penalty, a country that scores (90, 10, 10, 10) for Domains 1–4 will be penalized more than a country that scores (10, 90, 10, 10) or (10, 10, 90, 10).

3. Results

When we combine our conceptual model, data sources, and data aggregation approach, we arrive at the final product: a series of country-specific business bribery risk scores.[65] Each score potentially ranges from 1 to 100, with 100 indicating higher business bribery risk. For each country, there are nine subdomain scores, four domain scores, and one total risk score. In this chapter, we will provide a discussion of the overall business bribery risk score and explain why it is important to also consult a country's domain and subdomain scores. We will present the results for the ten highest-risk countries and the ten lowest-risk countries. The chapter will also introduce the table that presents the full set of data for the TRACE Matrix, which is included in Appendix D, and provide an excerpt from the table for one country. Using this excerpt, we will discuss how the data should be interpreted.

A. Overall Risk Index Results

Although we believe much of the value of our index comes from the ability for users to draw on the underlying domain and subdomain scores, we first present a summary of the overall risk for the 197 countries in the TRACE Matrix. Figure 3.1 displays the top-line risk score in map format, showing countries with higher risk in darker shades of blue. The risk scores follow generally intuitive patterns, with the wealthier countries in Europe and North America scoring lower (lighter shades) and countries typically thought to be more corrupt—often but not always lower-income nations—scoring higher (darker shades). However, some countries' scores may not be consistent with the user's expectations, and where scores deviate from expectations we encourage the user to explore the underlying risk factors to see why a country receives its particular score.

As described in Chapter Two, the total business bribery risk score is the aggregation of the four domain scores: (1) business interactions with the government; (2) anti-bribery laws and enforcement; (3) government and civil service transparency; and (4) capacity for civil service oversight. Risk of business bribery is a multidimensional construct, and therefore a country that has a poor overall risk score may not score poorly on all domains and subdomains; similarly, a country with a good overall risk score may not score well on all domains and subdomains. We scaled the domain scores to minimum 1 and maximum 100, and we calculated the weighted

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[65] The underlying data are available upon request from the authors, as is the analytical code in *R,* so users can replicate the analysis.

average of the domain scores, plus a variance penalty score, to obtain a total business bribery risk score.[66]

Figure 3.1 illustrates the total business bribery risk scores for all countries by use of a global map. The numerical scores for each country are provided in Appendix D.

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[66] The raw standardized scores for the subdomains are included in Appendix D. See Chapter Two, Section D, footnote 65, for the details of the variance penalty score.

Figure 3.1. Map of Total Business Bribery Risk Scores for All Countries

Lowest risk — Highest risk

10 20 30 40 50 60 70 80 90 100
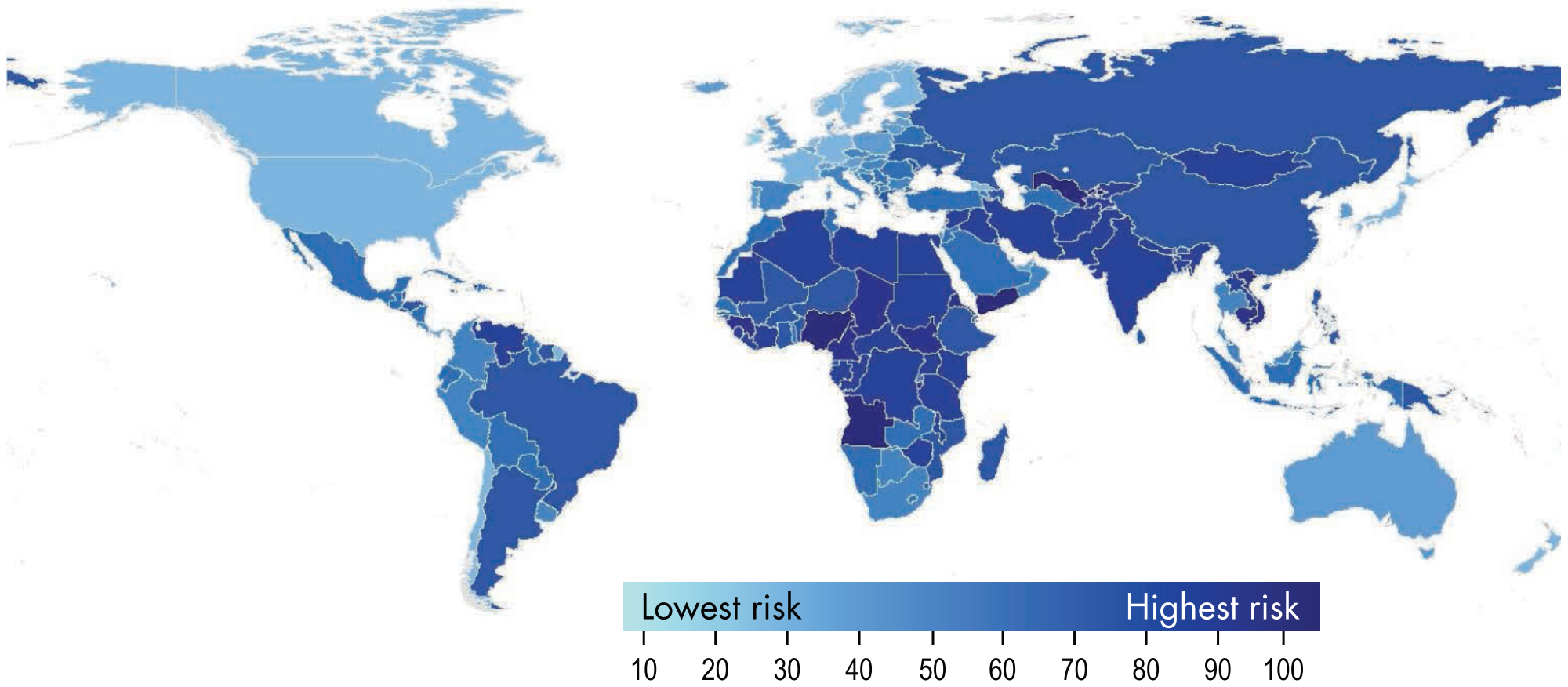
The following ten countries have the *lowest* business bribery risk score:

- Canada
- Finland
- Germany
- Hong Kong
- Ireland
- Japan
- New Zealand
- Singapore
- Sweden
- United States

The following ten countries have the *highest* business bribery risk score:

- Angola
- Burundi
- Cambodia
- Chad
- Guinea
- Nigeria
- South Sudan
- Uzbekistan
- Vietnam
- Yemen

B. Guide to the Country Risk Scores

Table D.1 in Appendix D presents the total bribery risk, domain, and subdomain scores for all countries.[67] Missing information was a problem, because not all information was available for all countries, meaning we have less certainty in our estimates in some country ratings than others. We used a statistical approach called multiple imputation to estimate the scores in the presence of missing data, and to quantify the uncertainty around individual country scores that is caused by missing information.[68]

To illustrate how to read the table and interpret the scores, we will review the scores for one country, India (see Table 3.1). The column at the far left of Table 3.1 shows that India's overall business bribery risk score is 80. This score is a composite of the four domain scores that are

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[67] The table also includes the variance penalty that was calculated for each country. For details about the variance penalty, see Chapter Two, Section D, footnote 65.

[68] Note that we refer to missing information rather than missing data. If a score on an item is unknown for a particular country, but the score can be calculated based on other information about that country, we have missing information, rather than missing data.

labeled Domain 1 (Dom 1), Domain 2 (Dom 2), Domain 3 (Dom 3), and Domain 4 (Dom 4). For domains and subdomains, scores range from 1, the lowest risk, to 100, the highest risk.

In Domain 1, business interactions with the government, India scores 92, which is very high. This domain reflects the frequency and nature of how businesses interact with the government. This domain has three subdomains that measure risk associated with "touches" with the government, the likelihood of a bribe transaction arising through those interactions, and the overall regulatory burden. All other things equal, firms face a higher risk when they have more interactions with the government, a higher risk of bribery per interaction, and a higher risk the greater the overall regulatory burden. The score in subdomain 1.1 (92) indicates that there is a great deal of interaction with the government. Subdomain 1.2 shows that there is a high expectation of bribes and subdomain 1.3 indicates a very significant regulatory burden.

Domain 2 captures a country's legal infrastructure related to combatting bribery and corruption. Subdomain 2.1 is a de jure measure of anti-bribery laws, while subdomain 2.2 recognizes that laws without enforcement mechanisms are unlikely to be effective. A high score on this subdomain, which indicates a larger number of enforcement actions, may indicate an underlying corruption problem, but might also reflect a lower risk environment because of rigorous enforcement. India has a domain score of 43, which is fairly low risk. India's score in subdomain 2.1 indicates a fairly good number and quality of anti-bribery laws. India's score of 51 in subdomain 2.2, de facto anti-bribery enforcement, indicates that there are a moderate number of enforcement actions.

Domain 3 recognizes that the quality of a country's government and civil service plays an important role in mitigating business bribery risk. This domain includes two components. The first addresses the overall quality of government administration, relying in particular on measures of government budget transparency. A quality of a government's budgeting process and whether it is open to scrutiny is likely to be negatively correlated with corruption risk: the more transparent, the less opportunity there is to hide unscrupulous transactions. Subdomain 3.2 focuses on government employees. The rationale is that a high-quality workforce, with government workers who are paid wages commensurate with the private sector and who are subject to oversight, is likely to lead to fewer bribery transactions. India's domain score of 37 indicates a low risk of bribery, given the existence of government and civil service transparency. Subdomain 3.1 reflects transparency of government functions, for which India receives a low risk score of 32 and subdomain 3.2, transparency and health of civil service, receives a moderate risk score of 48.

Domain 4 has two subdomains: 4.1, quality and freedom of media, and 4.2, human capital and social development. Subdomain 4.1 focuses on the critical role of the media. A strong, independent media that is free from government influence can help check corrupt practices by scrutinizing public and private actors alike. Subdomain 4.2 measures broad-based capacity of a country's population, with the view that a healthy, economically stable, and more educated populace will put downward pressure on bribery and corruption. For Domain 4, civil society

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oversight, India's score of 56 suggests a moderate risk. India has a fairly low risk score of 45 for subdomain 4.1, reflecting quality and freedom of the media, and has a fairly high risk score of 62 on subdomain 4.2, which reflects the lack of a healthy, economically stable, and more educated populace.

Table 3.1. India Excerpt from Country Results

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
India	80	92	92	67	79	43	35	51	37	32	48	56	45	62	13.6

4. Conclusion

In this report, we have introduced the problem of global business bribery, discussed international efforts to combat it, reported business views, and explained the new business bribery risk indicators we have developed and modeled to create a new business bribery risk assessment tool. The problem that our research has addressed is that bribery of foreign government officials is prohibited by the FCPA and other international anti-corruption laws, but businesses have inadequate measures to assess this risk on a country-specific basis. DOJ, SEC, OECD, and UK Ministry of Justice guidance demonstrates the importance of creating individual country risk assessments and developing targeted compliance programs, especially as companies become increasingly global. Firms need additional tools beyond those currently available to help them assess risk and develop effective compliance programs. Our work aims to help firms obtain the information they need.

We have illustrated how U.S. business has become increasingly global since the passage of the Foreign Corrupt Practices Act in 1977. Both the scope of U.S. companies' foreign operations and the importance of foreign earnings have increased markedly since the FCPA became law.

The importance of FCPA compliance to the business community has increased with the growth of U.S. business overseas. Since 2008, there has been an upsurge in prosecutions under the FCPA brought by DOJ and the SEC, an increase in findings of individual liability for senior corporate officials, and a large increase in the amount of fines and penalties levied on U.S. corporations. The U.S. government collected $720 million in financial penalties disgorgement pursuant to FCPA enforcement in 2013.[69] This statistic does not capture all the dimensions of cost of FCPA enforcement for companies. An SEC or DOJ investigation could mean loss of corporate reputation, an internal investigation costs the company significant time and money, and conviction carries the potential for debarment.

Our interviews with stakeholders highlighted concerns about the data and resources global companies find at their disposal to assess business bribery risk. The interviews also described the indicators of business bribery risk that regulators and business representatives thought were the most important. Business stakeholders and regulators explained during our interviews that different types of information were needed to provide a comprehensive and objective view of business bribery risk in a country. As a result of our interviews, prior relevant research, and our literature review, we developed a conceptual framework that separates risk factors into four separate domains: (1) business interactions with government; (2) anti-bribery laws and enforcement; (3) governmental and civil service transparency; and (4) capacity for non-

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[69] Shearman & Sterling LLP, 2014, pp. 2–4.

governmental oversight. Each domain includes multiple subdomains that capture specific risk factors and align with specific sources of data to measure risk.

We investigated the best sources of data for the information that business stakeholders and regulators identified. This included assessing the robustness of the data: whether it is publicly available, has a published data collection methodology, and is free from known biases. In addition, we assessed how long the data has been collected and whether the data will continue to be available. It was also important to identify data that covered a large number of countries.

We aggregated the data to provide a composite score for each country, much like a health index score that combines the key factors important to health (e.g., blood pressure, heart rate). Although countries are ranked by their composite scores, an important contribution of the TRACE Matrix is that users can view the results for different factors included in the composite score and identify what drives the score.

In summary, we have created a new index for business bribery risk assessment that we believe has important advantages over existing alternatives. It provides a quick and useful guide to businesses operating globally by drawing on data relevant to business activity that is organized around a conceptual framework of bribery risk factors. In addition to an overall risk score, the tool will provide companies with country-specific information along 14 dimensions of business bribery risk, allowing firms to better customize and target their risk assessment and compliance processes.

Appendix A: Stakeholder Interviews

A. Methodology

We interviewed 13 stakeholders who represented different perspectives about development of an anti-bribery index that focuses on business risk. These stakeholders included U.S. regulators, global non-profit institutions, general counsel of global companies, partners at international consulting firms, and partners in global law firms who represent clients in FCPA investigations and counsel clients on anti-corruption compliance.[70] We used a structured interview approach, with a list of questions to guide the interviews. The interviews were conducted by telephone and in face-to-face meetings between December 6, 2013, and February 27, 2014. Each interview lasted approximately one hour.

B. Analysis

The principal goal of the interviews was to elicit insights about the most important factors in evaluating business bribery risk, especially bribery of government officials. The interviews outlined nine dimensions that could contribute to bribery risk and requested feedback on whether their inclusion in an index would assist in evaluation of business risk. These dimensions of risk are discussed at length in Chapter Three. Among other questions, we asked:

1. What countries do you operate in? How long have you operated in these countries?
2. Describe the process your company uses to perform country risk assessments.

    a. What types of risks do you assess?
    b. How often and how do you monitor evolving risks (what sources of information are most reliable)?
    c. What do you consider the top indicators of bribery risk?
    d. Has your company's risk assessment process changed, and how?
    e. What type of information would help your company's ability to assess the risk of bribery?

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[70] There are benefits and detriments to deriving information from a limited series of interviews. Our interviews were with leading experts in the field, but were by no means exhaustive. We chose to use the format of a structured interview to allow each expert the opportunity to contribute his or her observations and suggestions about the most important indicators of business bribery risk. We were unable to conduct a large survey of global businesses or conduct more interviews due to constraints of both time and budget. The 13 interviews provided valuable insights and information, and often reinforced one another. However, the limited number of interviews prevented us from obtaining a larger sample of perspectives and the opportunity to analyze a greater number of responses. The authors suggest that further research, particularly in the area of enforcement of anti-bribery laws, could be undertaken and used to amplify the TRACE Matrix.

3. How do you incorporate existing bribery/corruption indices (if at all)?

    a. How would your company use an index such as the one we are creating?

    b. What features would you most like to see in a new index?

4. Are there any other additional issues that we should be aware of?

C. Key Factors

1. Process for Identifying Business Bribery and Corruption Risk

The general counsel of a company that operates in more than 100 countries stated that his company does not have a standardized process for bribery and corruption risk assessment and that "we analyze this risk on a case-by-case basis." He added that his company does not have a fixed process because the company has not entered many new countries in the past five years. He added, "We assume that developing countries all face broadly similar kinds of risks," such as licensing, obtaining work visas, going through customs, and so forth, which are all "normal high-risk areas." He explained that his company engages in a significant number of compliance audits every year, and this provides specific insights into risks in specific countries—for example, work visas in Nigeria. He commented that the availability of a tool with dimensions like the ones we described to him "would be great." At present, he said, "We just kind of assume it is all bad and take all the prophylactic measures we can."

A senior compliance counsel at a multinational company that operates in approximately 40 countries and sells into approximately 200 countries through third parties outlined the factors her company looked at in terms of bribery risk. She said that for third parties, her company has a risk score that is assigned based on two numbers: country risk using the Corruption Perceptions Index produced by Transparency International and political risk (risk present in the use of third parties, or in working with government officials, that her company assesses internally). The company assesses the way government officials are paid, whether by salary, commission, or some other fashion. The company also assesses the percentage of business it comprises for an agent and associates a higher risk with a higher percentage. She stated that after the initial assessment process, depending on the risk level, there would be a review every one or two years to see if the risks had changed.

The general counsel for another company that operates in more than 60 countries stated that his company took a "macro/micro approach" to bribery risk analysis. He stated that "the CPI is handy and ubiquitous, but I think it is lazy to stop there because it is completely inadequate." He provided details of how the CPI was not a good predictor of problems for his company in several countries, then added, "The point is, some objective data is a start, but there is no substitute for being on the ground, talking to people who know about the risks and problems."

A law firm partner in China described how her Chinese clients assess business bribery risk. She stated that they have a legal process, such as third-party contract policies, where the contract

is reviewed internally and sometimes by external counsel as well. She stated that she did not know if they had an objective tool that they use for due diligence, where they would also look at some objective metrics to help make decisions. She stated that she was interested in our research because "there is a need for a more widely applicable, comparable tool to help guide investment decisions."

The deputy general counsel at a global company that makes major investments all over the world stated, in terms of the risk assessment process used by his company, "We use the CPI as a starting point. Everybody knows where there are countries with higher risk." He commented that he saw two major aspects as lacking in the CPI. First, the "CPI doesn't really tell us much about what may happen regionally." He added that "not all government entities are the same." For example, he said, "What are the bribe profiles of courts, or the police, of customs agents, and so forth?" He concluded that "we always end up focusing on the specific area of the country and the individual business."

A partner of an international consulting firm stated that, among his clients, "many companies are only factoring in CPI." He explained that many companies "take [CPI] and incorporate a bunch of internal information—product, sales, and so forth—easier things to rank from their perspective." He continued, "They plug a number to a country to give a high, medium, or low ranking. They might not assign a number, but just need to know how severe the risk is."

2. Top Indicators of Business Bribery Risk

In response to the question, "What is the top indicator of bribery risk, in your experience?" both the regulatory and business interviewees confirmed that it was "touches with the government," meaning extensive government interaction. Three regulators commented that the requirement for a company to have many touch points with the government created a heightened risk for the company where bribery was concerned. One regulator cited the government requirement to have a local partner or agent as one of the highest risk factors. She also highlighted the use of local agents as a significant risk, especially for small and medium enterprises. One general counsel stated, "Touches with the government are a critical consideration."

When asked what would be his top indicators for risk, the deputy general counsel of a global company stated succinctly: (1) previous enforcement activities; (2) ease of doing business, including reputation; and (3) transparency of regulatory environment. He added that "a great misperception about companies is that people think we prefer a lax set of regulations, but in reality it is exactly the opposite." Rather, he said, "What we want is a well-defined, well-funded, well-developed, and clear regulatory process." He observed that "a lack of clarity allows corruption to be present." He added, "Sometimes customs regulations are so antiquated and they change so much, customs officials often don't know what the rules are." He concluded, "That is really where you see problems come along."

A general counsel stated, "Rule of law is the one factor that is predictive." He added, "The better the rule of law, the less corruption." Another general counsel described the top indicator of bribery risk as "lots of people in civil service or a poor infrastructure." "Risks are generally around licensing, tendering, contracts, and so forth," he said, adding that "it may vary by country, but the problems tend to be in the same areas." A law partner said, "In China, until the last years, everyone was talking about FCPA compliance. I have said, 'That's great, but what you should be worried about is commercial bribery risk.'" She continued, "That is what China conducts enforcement against, those cases then blow back to become FCPA issues." Another law partner in a global firm stated that the structure of the business was the major risk factor, including the customer base—specifically, whether it included government customers and commercial organizations that have government involvement. He also pointed to key factors such as management by expatriates or local management and whether there would be reliance on a distributor.

3. Information That Would Assist Business Bribery Risk Assessment

We asked both regulatory and business interviewees what information would assist their assessment of business bribery risk. One regulator noted that an indicator that addressed both the supply and demand side of bribery would be a major improvement. The official noted that it would be useful to know if there are official reporting requirements and if government salaries are published. Another regulator stated that bribery is not monolithic—that there are different forms, such as educational bribery (to attend a school, obtain grades) or law enforcement bribery (to report a crime or deal with an accident or infraction), and these types of bribery, which may create a common perception of "corruption" among many members of society, are different from business corruption. Hence, the regulator questioned how accurate the CPI was for strictly business corruption. The official emphasized that developing indicators that would address the number of "touches" a company needed to have with government officials would be very useful.

The general counsel of a major company stated that developing an indicator that would help measure the rule of law would be very important.[71] He stated that his concern was that, with the CPI, "once you get past the first 30–40 countries, all those lower countries start to look the same." He added, "If you are comparing Angola to Romania, the ranking isn't useful, but if you are able to give guidance as to what types of corruption you might see, that would be extremely helpful." He also observed that it would be good to know the level of enforcement of anti-bribery laws. He added that the sectors that are the subject of enforcement also would be important. He

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[71] The World Justice Project (2014) defines "rule of law" as having four key aspects: (1) the government and its officials and agents, as well as individuals and private entities, are accountable under the law; (2) the laws are clear, publicized, stable, and just; are applied evenly; and protect fundamental rights, including the security of persons and property; (3) the process by which the laws are enacted, administered, and enforced, is accessible, fair and efficient; (4) justice is delivered timely by competent, ethical, and independent representatives and neutrals who are of sufficient number, have adequate resources, and reflect the makeup of the communities they serve.

stated that "We have no idea of domestic enforcement rates, and the sectors affected." He added that "if you worry about FCPA, you include domestic corruption enforcement" in the calculation of business bribery risk.

A partner in an international consulting firm echoed these observations. He stated that "the biggest missing piece from CPI is the level of corruption regulation and enforcement." He added that including information about the complexity of the tax system and of doing business in general would be "really important." He added, "To the extent we can determine what percent [sic] of an economy is driven by a certain industry, that would be very helpful." He further suggested that we find a way to measure the level of state ownership in businesses.

Another general counsel commented, "We work in countries where corruption is not uniformly divided among government agencies. Sometimes it's the tax guys, sometimes police, medical, and so forth." He added, "Since corruption is not uniform, but we treat it uniformly, it would be nice to ask, 'What parts of the government, or other non-government sectors are corrupt?'" A partner in a law firm in China concurred, stating, "What I have found interesting is the extent to which people in distribution take their little slice of the pie." She added, "What has happened here is that there are so many layers of distribution; there is a new dynamic where people want a lot of layers so they can take a little markup or kickback." She continued, "This happens on almost everything bought in China. When you talk about how to assess risk here, that needs to be factored in." She stated, "China has laws on both commercial bribery (giving and receiving) and official bribes. But there is a big difference in enforcement." She added, "For official bribery, the government tends to go after the recipients. But in commercial bribery, they may go after either one." She observed that, "state-owned interactions are what can turn into FCPA cases."

Similarly, a partner in a global law firm added that the structure of the government was an important factor, and whether democratic processes that enhanced accountability were present. He added that information about corruption enforcement, the quality of the labor market, the level of education, and the education of the relevant workforce were all important factors in assessing business risk.

4. Important Features of a New Index

A partner in an international consulting firm summarized the ideas of most of our interviewees when he was asked what features he would most like to see in a new index. He stated, "Something that is more targeted, more precise than CPI; however, the more complicated it gets, the less likely people will be to use it." A senior compliance counsel concurred, stating, "Unfortunately, the reality is that when companies assess risk across thousands of intermediaries, I don't know that you have the time or resources to look at all the specifics." A general counsel stated, "We are trying to control the behavior of thousands of employees around the world. Someone is going to panic and pay a bribe. It should not happen but it does, even with good

employees and good companies." He explained that a new index "becomes valuable when it describes how or when that might happen." Another general counsel observed that a new index should inform a company's audit procedure and be useful in counseling or training employees, particularly logistics staff. For example, he said, "I would use it in counseling and training businesses to look out for problems in certain areas." He added, "It would inform the audit procedure—if a country has a lot of customs issues, we could target our training efforts and awareness there."

D. Conclusions

In summary, our interviews revealed the following factors. First, the processes that companies use for identifying business bribery and corruption risk vary widely. Many companies use the CPI, but none of the individuals we interviewed was satisfied with using only the CPI to measure business bribery and corruption risk. Second, the top indicator of business bribery risk was identified as "touches with the government," meaning government interactions. From the perspective of regulators, the requirement to have a local partner or agent was identified as a key risk indicator, especially for small and medium businesses. Other top risk indicators included the rule of law, previous enforcement activities, the ease of doing business, and transparency of the regulatory environment. Third, the information that was most frequently identified as assisting in business bribery risk assessment relates to the top indicators outlined previously: information about how many interactions with the government are required for processes such as visas, customs, licensing, and so forth; measures of the rule of law; identification of the level of enforcement of anti-bribery laws and the sectors of enforcement (including domestic corruption enforcement); and the complexity of the tax system and doing business in general. Fourth, the most important features of a new business bribery risk index were described as something more targeted and precise than the CPI, but something that is not too complicated and difficult to use.

Appendix B: Outline of Domains, Subdomains, and Data Sources

Table B.1. Outline of Domains, Subdomains, and Data Sources

TRACE Domain

TRACE Subdomain

Indicator	Organization	Data Source	Website	Year *
				(* indicates that the most recent year available was used if countries are not reported each year)

Domain 1: Business Interactions with Government

1.1 Contact with Government

Indicator	Organization	Data Source	Website	Year *
Number of visits or required meetings with tax officials	World Bank	Enterprise Surveys	http://www.enterprisesurveys.org/	2006–2014*
Procedures to build a warehouse (number) Procedures to enforce a contract (number) Procedures to register property (number) Start-up procedures to register a business (number)	World Bank	Ease of Doing Business	http://www.doingbusiness.org	2013
Labor Force Share of Government Employment*	International Labour Organization	ILOStat	www.ilo.org	2012

1.2 Expectation of Paying Bribes

Indicator	Organization	Data Source	Website	Year *
Bribery depth (% of public transactions where a gift or informal payment was requested) Bribery incidence (percent of firms experiencing at least one bribe payment request)	World Bank	Enterprise Surveys	http://www.enterprisesurveys.org/	2006–2014*
Irregular payments and bribes Favoritism in decisions of government officials Ethical behavior of firms	World Economic Forum	Executive Opinion Survey	https://wefsurvey.org	2013
Factor 2: Absence of Corruption	World Justice Project	Rule of Law Index	http://worldjusticeproject.org/rule-of-law-index	2012

1.3 Regulatory Burden

In practice, are tax laws enforced uniformly and without discrimination?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*
Documents to export (number) Documents to import (number)	World Bank	Ease of Doing Business	http://www.doingbusiness.org	2013
Senior management time spent dealing with the requirements of government regulation (%)	World Bank	Enterprise Surveys	http://www.enterprisesurveys.org/	2006–2014*
Burden of government regulation Burden of customs procedures	World Economic Forum	Executive Opinion Survey	https://wefsurvey.org	2013
Factor 6: Regulatory Enforcement	World Justice Project	Rule of Law Index	http://worldjusticeproject.org/rule-of-law-index	2012

Domain 2: Anti-bribery Laws and Enforcement

2.1 De Jure Anti-bribery Laws

Are employees protected from recrimination or other negative consequences when reporting corruption (i.e. whistle-blowing)? In law, bribing a foreign official is illegal. In law, companies guilty of major violations of procurement regulations (i.e. bribery) are prohibited from participating in future procurement bids. In law, is there a national customs and excise agency? In law, is there an agency (or group of agencies) with a legal mandate to address corruption? In law, is there an internal mechanism (i.e. phone hotline, e-mail address, local office) through which civil servants can report corruption? In law, offering a bribe (i.e. active corruption) is illegal. In law, receiving a bribe (i.e. passive corruption) is illegal. In law, senior members of the civil service are required to file an asset disclosure form. In law, there are regulations governing gifts and hospitality offered to civil servants. In law, there are requirements for civil servants to recuse themselves from policy decisions where their personal interests may be affected. Is there legislation criminalizing corruption?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*

United Nations Convention Against Corruption Article-Specific Laws	United Nations	Legal Library	http://www.track.unodc.org/Pages/home.aspx	2012

2.2 De facto Anti-bribery Enforcement

Are judges safe when adjudicating corruption cases? Can citizens access the anti-corruption agency? In practice, are judicial decisions enforced by the state? In practice, companies guilty of major violations of procurement regulations (i.e. bribery) are prohibited from participating in future procurement bids. Is the anti-corruption agency effective? Is the customs and excise agency effective? Is the law enforcement agency (i.e. the police) effective?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*

Domain 3: Governmental and Civil Service Transparency

3.1 Transparency of Government Functions

Can citizens access legislative processes and documents? Do citizens have a legal right to request information?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*
Open Budget Index	International Budget Partnership	Open Budget Index	http://internationalbudget.org	2012
Transparency of government policymaking	World Economic Forum	Executive Opinion Survey	https://wefsurvey.org	2013
Factor 5: Open Government	World Justice Project	Rule of Law Index	http://worldjusticeproject.org/rule-of-law-index	2012

3.2 Transparency and Health of Civil Service

Are there national regulations for the civil service encompassing, at least, the managerial and professional staff? Are there regulations addressing conflicts of interest for civil servants? Are there regulations governing conflicts of interest by the executive branch? Can citizens access the asset disclosure records of members of the national legislature? Can citizens access the asset disclosure records of senior civil servants?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*

Can citizens access the asset disclosure records of the heads of state and government?				
In law, citizens can access the asset disclosure records of senior civil servants.				
In practice, is the internal mechanism (i.e. phone hotline, e-mail address, local office) through which civil servants can report corruption effective?				
In practice, the regulations governing gifts and hospitality offered to civil servants are effective.				
In practice, the requirements for civil service recusal from policy decisions affecting personal interests are effective.				
Is the law governing the administration and civil service effective?				
Factor 8: Civil Justice	World Justice Project	Rule of Law Index	http://worldjusticeproject.org/rule-of-law-index	2012

Domain 4: Capacity for Civil Society Oversight

4.1 Quality and Freedom of Media

Freedom of the Press	Freedom House	Freedom of the Press	http://www.freedomhouse.org/report-types/freedom-press#.U4zfGRbIZuY	
Are citizens able to form broadcast (radio and TV) media entities? Are citizens able to form print media entities? Are journalists safe when investigating corruption? Are the media able to report on corruption? Are the media credible sources of information?	Global Integrity	Integrity Scorecards	https://www.globalintegrity.org	2007–2011*
Press Freedom Index	Reporters Without Borders	Press Freedom Index	http://en.rsf.org	2013

4.2 Human Capital / Social Development

Human Development Index	United Nations Development Programme	Human Development Index	http://hdr.undp.org/en/statistics/hdi	2012

Appendix C: Statistical Model Methodology

This appendix describes the process by which we aggregated individual bribery risk indicators into subdomain scores, domain scores, and the overall risk index. We applied the following method to the set of indicators we selected that best fit the conceptual framework outlined in Chapter Two.

We draw on a wide range of indicators that are related to risk of bribery from several sources (as described in Appendix B). However, not all sources of data are available in all countries, and not all data are available every year. We developed a method that aggregates the information that is available and creates composite scores for the subdomains and domains, and calculates a bribery risk index score for each country.

Our aggregation approach balances statistical accuracy with parsimony, reflecting a desire for an index that provides rigorous estimates that are based on a methodology that is straightforward to understand and replicate.

Scoring Method to Calculate Country-Level Risk

Data were aggregated from the indicator level to the subdomain level and then to the domain level, to provide four separate domain scores. Data sources vary in terms of their temporal coverage, collection frequency, and most recent year of data available. For each indicator and country, we carried forward only the most recent measurement. Missing information was a problem, because not all information was available for all countries, meaning we have less certainty in our estimates in some country ratings than others. We used a statistical approach called multiple imputation to estimate the scores in the presence of missing data, and to quantify the uncertainty around individual country scores that is caused by missing information.[72] We used the deviation between the multiple imputation processes to better understand the imputation dependency of the scores—i.e., the missing information.

The aggregation process is as follows. First, to ensure that the different variance of each item did not influence its relative importance in the total score, each item within a domain was standardized to have a mean of 0 and standard deviation of 1. Simple aggregation at this stage would risk the introduction of bias because data are not missing completely at random.[73] If one

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[72] Note that we refer to missing information rather than missing data. If a score on an item is unknown for a particular country, but the score can be calculated based on other information about that country, we have missing information, rather than missing data.

[73] Paul D. Allison, *Missing Data,* Thousand Oaks, Calif.: Sage, 2001; Craig K. Enders, *Applied Missing Data Analysis*, New York: Guilford, 2010; John W. Graham, "Missing Data Analysis: Making It Work in the Real World," *Annual Review of Psychology*, Vol. 60, 2008, pp. 549–576; Roderick J. A. Little and Donald B. Rubin, *Statistical Analysis with Missing Data,* New York: Wiley, 1987.

data source is available only for countries at lower risk of corruption (e.g., Europe) and a second survey is carried out only in countries at high risk of business bribery (e.g., Africa), when the scores are standardized, the average business bribery risk will be fixed to zero for both of these regions, and hence it will appear that business bribery risk is similar in both these regions and both measures will be biased. To obtain estimates that are unbiased, we used a data technique called multiple imputation, which can provide estimates that are unbiased in the presence of missing information.[74]

Multiple imputation[75] is a complex procedure,[76] but we summarize the procedure here. For a country that is missing a piece of information, the procedure attempts to find other countries that are similar to that country on the known information, and then attempts to determine an appropriate value for the missing information, based on the similar countries. There is, however, uncertainty in the true value. The uncertainty in the true value is handled by carrying out the imputation multiple times (in our case, we ran the imputation models 20 times). We then carried out the aggregation procedure described below. The uncertainty around the final score for each subdomain is reflected in the variation across imputations. We used the deviation between the multiple imputation processes to better understand the imputation dependency of the scores—i.e., the missing information.[77]

Following imputation, we standardized every indicator and then calculated the average score for all items within a subdomain for each country to give subdomain scores. We then re-standardized subdomain scores (again to standard deviation 1 and mean 0) and found the average

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[74] Multiple imputation is a technique designed to obtain unbiased parameter estimates in the presence of missing data, and to provide information about the level of uncertainty in those data. A simplified explanation follows: For each variable that has missing data, we estimate the values of all of the complete data in that variable using all of the other variables in the dataset to develop a prediction model. We use the prediction model to estimate the value of the missing data points in the variable of interest. There is uncertainty in the values of the missing data, and this uncertainty is reflected in a random parameter that is added to each predicted value. Multiple imputation is carried out multiple times, in this way variation in the level certainty of the missing values is reflected in the variation across datasets. The purpose of the imputation is not to obtain complete datasets that can be examined, but rather to obtain unbiased parameter estimates. We imputed 20 datasets.

Multiple imputation provides unbiased estimates in the presence of data that are missing completely at random, or missing at random. To understand these concepts, think of a process that is determining whether to delete a data point. If the process is entirely random, the data are missing completely at random. If higher scores on measure A determine that a score on measure B is likely to be deleted, the data are said to be missing at random. If either of these first two mechanisms hold, then multiple imputation will provide appropriate parameter estimates. However, if a high score on measure A means that that value of measure A is likely to be deleted (and no other measures in the data predict this) then the data are missing not at random and multiple imputation will be unable to obtain appropriate unbiased estimates.

[75] Patrick Royston, "Multiple Imputation of Missing Values," *Stata Journal*, Vol. 4, 2004, pp. 227–241; Joseph L. Schafer, "Multiple Imputation: A Primer," *Statistical Methods in Medical Research*, Vol. 8, 1999, pp. 3–15.

[76] The procedure on this dataset took approximately five hours to complete the computations.

[77] Note that we refer to missing information rather than missing data. If a score on an item is unknown, for a particular country, but the score can be calculated based on other information about that country, we have missing information, rather than missing data.

for all scores in all four domains. Finally, we use the percent of maximum possible calculation to scale the domain scores to minimum 1 and maximum 100, and we calculated the weighted average of the domain scores, plus the variance penalty score, to obtain a total risk score.

We weighted Domain 1, business interactions with the government, more heavily than the other three domains, based on our statistical testing, interviews with international regulators, anti-bribery experts, and the experience of TRACE International, whose experts have over 20 years of experience in assessing business bribery risk. We decreased the weight of domain 2, anti-bribery laws and enforcement, based on the lack of reliable data concerning the enforcement of anti-bribery laws.[78] Domains 3 and 4 are weighted equally. We rescaled the domain scores to a range from 1 to 100 (where 1 is the lowest score, and 100 is the highest score in the data).

The domain scores for each country are calculated as the mean of the rescaled subdomain scores. The total risk score is therefore calculated as:

$$\text{Domain\_1} * 0.450 + \text{Domain\_2} * 0.079 + \text{Domain\_3} * 0.238 + \text{Domain\_4} * 0.238.^{[79]}$$

After the domain scores were calculated, we added a variance penalty. By variance penalty, we mean that countries are penalized for high scores in one or more domains. The average variance penalty for all countries is 0.67.[80]

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[78] For a more detailed discussion of the rationale for the weighting of Domains 1 and 2, see Chapter Two, Section D.

[79] Our calculations were done in the R statistical computing language R Core Team (2014). R: A Language and Environment for Statistical Computing, version 3.11. Vienna, Austria: R Foundation for Statistical Computing. The R code for our computations is available from the authors upon request.

[80] The equation to calculate the overall TRACE score is $\sum_{i=1}^{4}(w_i * x_i) + \left(\dfrac{\sqrt{\sum_{i=1}^{4}(w_i * \sigma_{x_i}^2)}}{n-1} \right)$.

The first term represents the weighted average of the domains scores, where w_i is the weight and x_i is the domain score.

The second term represents the variance penalty, calculated as the sum of the weighted variance of each domain score that exceeds the unweighted average domain score.

In this manner, countries are only penalized by the variance of its relatively high-scoring domains, and the magnitude of this penalty depends on how much higher these domain scores are relative to the country's overall performance. Furthermore, since we use the same weighting scheme for the penalty, a country that scores (90, 10, 10, 10) for Domains 1–4 will be penalized more than a country that scores (10, 90, 10, 10) or (10, 10, 90, 10).

Appendix D: Results

Table D.1. Country Risk Scores for All Countries

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Afghanistan	73	73	53	71	70	49	48	50	59	54	63	75	54	89	4.7
Albania	60	67	59	73	50	32	39	26	35	47	32	43	46	32	8.8
Algeria	79	82	88	67	63	30	39	24	79	81	74	49	51	38	10.0
Andorra	47	51	46	42	56	52	56	48	48	48	52	24	27	18	3.3
Angola	94	93	59	91	89	61	54	65	99	98	92	73	65	69	6.6
Antigua and Barbuda	51	53	49	41	59	46	49	43	51	54	52	36	37	31	2.8
Argentina	65	79	76	67	66	12	11	15	26	56	11	22	21	23	17.1
Armenia	54	58	44	56	59	52	41	62	33	21	49	51	55	35	3.8
Aruba	55	53	54	47	48	49	54	43	60	60	62	46	45	39	2.3

| Country | Total Risk Score | Domain 1: Interactions with Government | | | | Domain 2: Anti-Bribery Laws and Enforcement | | | Domain 3: Governmental and Civil Service Transparency | | | Domain 4: Capacity for Civil Society Oversight | | | Variance Penalty |
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Australia	39	39	20	22	72	51	60	41	42	27	58	20	31	4	2.4
Austria	32	29	20	26	46	49	53	44	30	22	44	23	31	10	2.6
Azerbaijan	67	69	48	50	85	21	15	29	58	40	74	55	62	35	7.5
Bahamas	56	60	57	48	59	54	56	50	56	55	59	31	32	25	4.2
Bahrain	48	43	51	34	42	53	50	54	51	56	50	48	59	25	0.9
Bangladesh	76	80	50	96	65	32	9	54	66	54	76	58	43	68	8.4
Barbados	43	38	36	24	52	64	61	64	47	50	49	29	33	21	3.2
Belarus	52	42	3	40	78	12	19	8	60	51	67	50	61	26	5.9
Belgium	36	31	26	22	48	47	52	43	46	45	52	18	24	10	3.5
Belize	61	67	63	47	70	56	60	50	52	54	54	37	31	39	5.4
Benin	65	61	31	75	61	57	64	48	70	80	61	64	43	80	2.0
Bermuda	53	54	59	38	54	46	46	46	56	52	61	35	40	23	3.3

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Bhutan	61	59	58	33	70	55	62	46	62	73	54	62	51	64	1.0
Bolivia	55	56	69	60	29	16	10	24	46	72	30	51	49	44	6.0
Bosnia and Herzegovina	55	57	54	51	52	52	35	67	56	45	66	42	42	34	2.4
Botswana	49	49	48	28	63	54	53	55	48	46	53	46	38	50	0.8
Brazil	69	77	79	52	73	54	56	51	52	45	61	42	43	35	8.0
Brunei Darussalam	52	54	90	29	35	51	60	41	53	56	55	39	52	16	2.1
Bulgaria	42	48	43	53	42	17	11	26	24	41	19	25	22	27	7.6
Burkina Faso	69	56	28	56	69	34	49	19	83	71	89	60	28	94	7.0
Burundi	85	83	42	78	96	57	45	67	89	77	92	71	45	92	5.0
Cambodia	89	84	65	91	66	61	74	46	98	89	98	77	74	64	5.3
Cameroon	82	77	53	81	70	32	28	36	91	94	83	62	47	71	8.4
Canada	22	25	24	20	41	22	7	39	20	1	45	9	13	8	2.4

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Cape Verde	59	61	51	43	72	57	57	55	60	60	61	47	35	57	2.1
Central African Republic	80	83	61	60	95	51	67	35	68	74	62	70	45	93	5.8
Chad	84	86	62	84	79	55	61	47	76	96	59	76	52	95	5.1
Chile	30	33	44	17	41	30	29	32	20	20	30	25	26	22	2.4
China	66	55	62	42	51	21	17	26	62	60	64	76	89	40	6.8
Colombia	46	47	32	52	51	18	2	35	32	36	37	45	46	37	5.2
Comoros	70	70	52	61	74	46	56	36	65	61	68	66	46	81	3.5
Congo	75	80	65	67	78	47	47	47	61	66	57	56	42	65	7.4
Congo, Democratic Republic of	79	75	82	82	39	45	61	29	68	80	57	85	61	100	5.4
Costa Rica	47	50	38	39	63	17	7	28	44	28	61	26	22	29	6.7
Cote d'Ivoire	73	74	47	61	86	44	53	35	67	77	59	65	45	81	4.7
Croatia	49	48	29	48	60	52	52	51	53	54	55	37	43	24	1.7

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Cuba	60	61	64	50	53	51	53	46	55	66	49	56	69	28	2.0
Cyprus	46	48	42	44	51	54	57	49	47	44	53	32	39	17	1.8
Czech Republic	47	56	46	50	58	24	17	33	32	35	37	14	16	13	9.5
Denmark	32	24	13	14	52	52	56	48	39	36	47	20	27	9	3.3
Djibouti	64	48	53	44	42	50	55	44	65	76	56	76	63	79	4.8
Dominica	54	57	35	43	78	51	52	49	53	55	53	36	34	33	3.2
Dominican Republic	52	52	38	68	41	48	48	46	53	57	53	47	47	39	1.1
Ecuador	53	53	58	46	47	65	65	62	52	62	46	42	41	36	1.9
Egypt	75	71	70	49	70	19	15	25	82	96	68	59	61	46	8.5
El Salvador	62	60	50	57	59	47	49	46	69	74	64	44	40	43	4.4
Equatorial Guinea	69	64	78	48	51	53	55	49	73	84	62	70	66	62	2.6
Eritrea	81	78	79	39	87	53	56	49	66	74	59	89	72	93	5.5

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Estonia	33	20	16	20	37	58	60	54	39	36	47	26	31	18	3.7
Ethiopia	69	67	53	57	69	16	14	19	51	58	48	73	53	86	8.4
Faroe Islands	57	59	61	42	59	52	49	55	54	51	59	45	47	36	2.6
Fiji	59	59	43	40	78	51	53	49	61	69	55	48	49	39	2.4
Finland	24	11	18	1	32	52	50	53	26	8	49	23	30	11	3.9
France	29	32	26	26	49	38	26	50	27	13	46	14	17	10	2.3
French Polynesia	56	58	55	50	56	58	62	53	56	61	54	48	44	44	1.3
Gabon	74	81	100	53	61	45	64	28	57	64	53	49	48	42	8.9
Gambia	59	46	43	48	43	44	56	31	58	62	57	71	55	79	4.6
Georgia	27	17	2	28	35	24	23	26	19	32	19	39	40	33	4.0
Germany	27	28	24	16	51	31	36	28	33	18	52	1	1	6	3.5
Ghana	68	70	54	62	71	20	36	7	71	56	81	37	16	61	10.0

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Greece	63	69	64	59	62	44	50	37	57	61	57	31	40	15	7.5
Grenada	50	52	52	43	51	53	54	51	51	54	52	32	32	29	2.4
Guatemala	53	45	20	55	53	48	28	65	59	39	76	54	44	58	2.2
Guinea	86	93	78	97	67	50	62	36	64	70	60	69	44	92	9.3
Guinea-Bissau	69	65	65	63	50	55	59	50	63	66	61	75	53	91	2.9
Guyana	57	59	47	58	57	51	52	49	57	55	60	47	39	50	2.3
Haiti	71	71	43	64	81	56	56	55	71	92	53	62	43	77	2.9
Honduras	63	66	74	59	48	59	60	56	56	63	53	55	51	50	2.7
Hong Kong	23	4	4	17	16	51	48	53	27	16	44	30	43	8	3.8
Hungary	46	46	34	41	57	31	26	37	52	51	55	25	27	20	4.8
Iceland	35	23	21	20	38	52	57	47	47	42	54	22	31	8	4.0
India	80	92	92	67	79	43	35	51	37	32	48	56	45	62	13.6

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Indonesia	51	57	43	62	54	25	34	19	24	32	26	43	33	51	7.8
Iran	72	74	61	57	77	54	63	44	71	83	60	57	65	33	4.3
Iraq	76	78	52	74	79	66	27	100	72	84	61	66	63	57	2.9
Ireland	20	15	7	24	32	24	21	28	30	13	50	4	5	7	3.4
Israel	45	40	43	33	42	45	53	38	53	57	53	33	46	9	2.9
Italy	41	44	33	57	39	14	29	1	39	49	37	17	21	12	6.7
Jamaica	58	59	23	59	78	51	50	51	62	65	59	36	33	35	3.9
Japan	26	33	36	14	51	17	24	12	6	1	23	10	14	8	6.4
Jordan	55	46	52	31	51	28	46	12	59	40	75	59	64	40	4.4
Kazakhstan	68	72	50	61	80	22	23	23	55	59	53	53	61	32	8.5
Kenya	72	75	61	68	70	22	14	32	63	55	69	58	44	67	8.3
Kiribati	52	48	37	48	52	50	50	48	57	62	54	46	37	51	1.9

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Korea, Republic of	31	38	32	46	36	1	3	3	7	31	1	15	21	8	8.8
Kosovo	58	65	74	48	55	18	6	32	26	39	24	47	36	55	10.3
Kuwait	77	88	92	52	84	49	51	46	55	56	57	37	42	26	11.9
Kyrgyzstan	73	76	22	100	78	31	42	21	42	55	36	71	74	52	9.3
Laos	76	78	71	58	76	51	58	42	66	78	56	71	65	64	4.6
Latvia	35	41	23	41	56	18	7	30	12	31	8	26	27	22	6.5
Lebanon	66	68	55	75	54	56	58	52	70	82	58	42	43	33	4.7
Lesotho	59	52	38	48	60	48	48	48	60	71	53	63	44	76	2.4
Liberia	77	82	74	88	56	19	24	17	62	58	66	57	29	87	10.7
Libya	72	78	68	61	76	52	46	56	67	78	57	42	47	29	7.4
Liechtenstein	49	52	56	32	57	49	44	51	52	48	57	20	25	12	4.3
Lithuania	32	34	15	41	48	31	32	30	31	24	44	18	15	22	2.3

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Luxembourg	34	28	37	19	34	54	43	63	38	24	55	20	25	13	3.2
Macao	57	60	70	38	58	49	48	48	58	56	60	35	38	25	4.2
Macedonia	41	41	33	40	47	27	19	37	27	33	30	44	47	34	3.5
Madagascar	61	55	32	61	59	46	55	37	64	71	59	64	49	73	2.7
Malawi	75	78	64	56	84	10	1	21	48	49	51	68	48	83	11.5
Malaysia	50	17	21	32	15	26	16	36	70	67	71	63	77	29	9.0
Maldives	63	65	51	54	71	56	57	54	63	68	59	49	49	42	2.9
Mali	68	68	31	73	77	47	54	39	65	74	58	66	38	94	3.0
Malta	52	56	63	48	45	51	54	47	50	48	55	29	36	17	3.9
Marshall Islands	48	42	32	50	41	60	60	58	52	55	52	43	36	47	1.9
Mauritania	79	83	55	94	70	48	56	40	69	76	62	62	44	75	6.8
Mauritius	46	35	27	35	44	47	47	45	56	57	58	43	44	34	3.0

| Country | Total Risk Score | Domain 1: Interactions with Government | | | | Domain 2: Anti-Bribery Laws and Enforcement | | | Domain 3: Governmental and Civil Service Transparency | | | Domain 4: Capacity for Civil Society Oversight | | | Variance Penalty |
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Mexico	54	48	34	58	46	21	12	32	57	37	74	54	66	28	4.4
Micronesia	50	49	47	40	53	48	55	40	54	58	53	44	36	48	1.5
Moldova, Republic of	64	70	43	75	69	10	12	11	49	45	56	35	25	46	11.5
Monaco	50	53	53	29	65	51	47	54	54	46	63	25	32	15	3.7
Mongolia	72	80	37	71	100	29	16	43	48	73	32	45	41	44	11.4
Montenegro	52	53	49	50	50	56	48	62	53	40	66	40	46	26	1.5
Morocco	58	48	49	48	42	41	37	45	70	54	82	52	43	56	4.8
Mozambique	66	66	45	59	73	42	35	49	66	49	80	61	28	97	3.5
Namibia	57	57	46	41	69	19	18	21	59	59	60	37	21	54	7.0
Nepal	74	77	38	64	100	37	38	36	65	58	70	59	40	76	7.0
Netherlands	29	20	18	9	44	55	59	49	29	17	46	21	31	6	3.8
New Zealand	23	13	8	3	45	48	60	37	23	3	49	18	26	6	3.6

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Nicaragua	51	48	50	51	37	33	13	53	53	47	61	51	42	55	2.4
Niger	62	51	39	55	51	51	48	53	60	72	52	72	42	100	3.8
Nigeria	97	99	82	87	85	25	27	25	97	100	87	57	37	75	13.8
Norway	28	21	14	10	50	52	52	51	32	10	56	16	28	1	3.6
Oman	49	41	45	28	47	56	58	52	54	52	59	52	57	35	1.3
Pakistan	76	80	51	97	63	27	14	41	50	63	44	69	59	68	9.8
Palau	53	57	54	51	53	61	63	58	47	47	50	33	35	26	3.4
Panama	38	23	32	50	1	48	49	46	48	42	56	44	50	28	2.5
Papua New Guinea	61	63	52	56	63	50	51	49	55	52	59	56	35	75	2.7
Paraguay	57	58	36	79	46	44	52	36	51	55	50	56	57	44	2.5
Peru	44	49	29	58	52	27	10	44	26	44	19	30	25	34	6.2
Philippines	70	75	76	61	64	39	22	54	50	62	45	59	60	47	7.5

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Poland	39	41	29	37	53	30	27	33	43	38	53	16	13	21	4.4
Portugal	40	34	10	39	54	51	45	56	47	48	50	28	30	22	2.6
Puerto Rico	53	54	55	43	53	52	54	49	55	53	60	38	40	29	2.2
Qatar	46	36	65	15	32	51	54	46	57	49	64	41	51	19	3.1
Romania	53	61	38	64	63	17	16	20	33	53	24	24	21	27	10.6
Russian Federation	65	73	58	60	76	27	30	26	39	46	40	43	49	26	10.7
Rwanda	53	26	10	19	55	14	24	6	63	67	60	70	53	80	9.3
Saint Kitts and Nevis	52	53	54	37	58	54	54	52	55	58	55	38	38	33	1.9
Saint Lucia	60	65	45	52	78	55	55	53	55	61	52	36	33	36	4.8
Saint Vincent and the Grenadines	47	48	43	37	58	49	51	46	48	50	50	37	35	35	1.3
Samoa	54	54	50	57	45	56	58	53	58	63	55	41	38	39	1.9

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
San Marino	50	51	57	44	44	51	54	47	56	55	59	31	32	26	2.9
Sao Tome and Principe	57	58	49	56	55	53	52	52	57	63	54	54	38	66	1.1
Saudi Arabia	51	42	48	31	45	55	60	49	59	67	54	52	62	27	2.0
Senegal	59	54	45	59	48	44	51	38	61	68	55	60	42	75	2.3
Serbia	51	56	39	58	60	33	21	45	41	53	36	30	29	29	6.2
Seychelles	50	48	46	48	43	55	66	42	55	53	58	41	49	24	1.7
Sierra Leone	74	65	54	63	59	17	33	3	82	85	76	69	44	92	7.8
Singapore	26	1	10	3	17	54	52	56	37	27	51	35	49	10	4.0
Slovakia	48	52	18	58	68	44	39	48	48	42	56	27	32	18	3.9
Slovenia	38	35	8	38	58	50	55	44	41	34	51	28	38	11	2.0
Solomon Islands	62	64	61	64	50	47	49	45	60	64	58	52	35	66	3.4
South Africa	41	42	24	41	58	11	3	22	32	16	53	38	25	51	4.8

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
South Sudan	83	92	92	59	87	61	66	54	62	67	59	56	44	63	9.4
Spain	41	47	39	39	57	31	42	22	35	31	45	14	17	12	6.0
Sri Lanka	69	59	52	50	60	50	60	39	82	86	75	56	61	37	5.7
Sudan	74	68	76	56	53	55	61	48	73	84	64	79	64	83	3.1
Suriname	66	66	60	51	68	50	47	52	71	78	65	43	38	42	5.0
Swaziland	68	69	69	51	65	47	48	46	63	71	57	65	57	65	3.3
Sweden	23	9	1	6	39	53	49	56	25	6	49	20	29	7	4.2
Switzerland	31	22	27	15	35	52	56	46	37	19	57	19	27	7	3.4
Syrian Arab Republic	73	76	76	73	54	47	49	44	60	69	54	64	67	48	5.6
Tajikistan	79	80	48	69	91	11	3	22	72	63	78	66	67	52	10.0
Tanzania, United Republic of	71	73	51	65	77	27	18	37	65	69	61	57	38	74	7.3

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
Thailand	45	43	10	56	57	32	36	29	47	46	51	45	43	41	1.8
Timor-Leste	71	73	70	59	66	31	21	42	71	51	85	42	26	59	8.6
Togo	59	56	42	55	58	55	55	55	57	61	55	63	44	76	1.5
Tonga	48	48	25	53	58	54	52	55	48	49	51	41	38	38	1.0
Trinidad and Tobago	62	68	53	56	74	52	54	49	56	62	54	36	37	31	5.9
Tunisia	58	55	55	50	49	50	53	46	64	81	50	49	51	38	2.7
Turkey	51	41	43	40	39	21	15	29	57	35	77	54	59	36	4.9
Turkmenistan	60	54	59	43	50	62	67	55	61	67	58	64	71	40	1.1
Tuvalu	63	68	60	56	67	52	49	53	55	63	51	44	35	50	5.1
Uganda	74	79	84	67	58	17	6	29	43	46	45	64	45	77	11.6
Ukraine	64	69	29	93	63	52	55	48	53	53	56	49	53	34	5.1
United Arab Emirates	39	21	38	17	21	53	65	40	51	53	54	44	54	22	3.0

Country	Total Risk Score	Domain 1: Interactions with Government				Domain 2: Anti-Bribery Laws and Enforcement			Domain 3: Governmental and Civil Service Transparency			Domain 4: Capacity for Civil Society Oversight			Variance Penalty
		Dom 1 Overall Risk	d1.1	d1.2	d1.3	Dom 2 Overall Risk	d2.1	d2.2	Dom 3 Overall Risk	d3.1	d3.2	Dom 4 Overall Risk	d4.1	d4.2	
United Kingdom	32	27	25	16	47	47	50	43	33	18	52	25	32	13	2.3
United States	27	35	32	32	44	23	16	31	1	11	7	7	12	4	7.2
Uruguay	46	48	53	19	64	55	57	51	44	37	55	32	33	26	2.1
Uzbekistan	92	100	75	86	95	51	58	43	72	74	69	63	66	47	11.0
Vanuatu	47	49	27	51	59	34	24	44	35	47	31	45	35	51	3.4
Venezuela	77	80	58	73	79	40	8	70	73	76	69	56	65	32	7.5
Viet Nam	82	61	36	70	62	31	27	37	100	98	94	82	91	52	9.6
Yemen	94	88	70	100	61	100	100	94	91	73	100	100	100	77	1.7
Zambia	58	44	31	51	45	48	55	41	65	71	61	66	48	78	3.9
Zimbabwe	77	64	46	61	67	29	19	39	88	84	86	74	55	86	7.4

Appendix E: List of Reviewed Data Sources

Table E.1. List of Reviewed Data Sources

Source	Indicator	Countries	Years	Website
Afrobarometer	Afrobarometer	35	1999–2012 (not every year for every country)	http://www.afrobarometer.org
Anti-Corruption Authorities	Anti-Corruption Authorities	60	Current year only	http://www.acauthorities.org
Bertelsmann Foundation	Bertelsmann Stiftung's Transformation Index (BTI)	128	2003–2012	http://www.bti-project.org/index/
Business Environment Risk Intelligence	Business Risk Reports	50	1980–2012	http://www.beri.com/Publications/BRS.aspx
Business Environment Risk Intelligence	Mineral Extraction Risk Assessments	115	1997–2010	http://www.beri.com/Publications/MERA.aspx
Business Environment Risk Intelligence	Quality of Workforce Index	42	2005–2012	http://www.beri.com/Publications/QWI.aspx
Business Environment Risk Intelligence	Financial Ethics Index	115	1985–2010	http://www.beri.com/Publications/FEI.aspx
Center for Global Development	Quality of Official Development Assistance Assessments	30	2010	http://www.cgdev.org/publication/quality-official-development-assistance-assessment-report
World Bank	Country Policy and Institutional Assessment (CPIA)	78	2006–2012	http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/IDA/0,,contentMDK:21378540~menuPK:2626968~pagePK:51236175~piPK:437394~theSitePK:73154,00.html
World Bank	Database on Political Institutions	177	1975–2012	http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html
Economist Intelligence Unit	Country, Risk, and Industry Analysis	188	2008–2013	http://www.eiu.com
The Fund for Peace	Failed State Index	177	2006–2013	http://ffp.statesindex.org
Fraser Institute	Economic Freedom of the World	141	1996–2011	http://www.freetheworld.com
Freedom House	Freedom in the World	195	1972–2012	http://www.freedomhouse.org

Source	Indicator	Countries	Years	Website
Freedom House	Freedom of the Press	196	2001–2012	http://www.freedomhouse.org
Freedom House	Freedom on the Net	60	2009–2013	http://www.freedomhouse.org
HIS	Global Insight Country Risk	204	Current year only	http://www.ihs.com/products/global-insight/index.aspx?pu=1&rd=globalinsight_com
Global Integrity	The Global Integrity Reports	120*	2004–2011	http://www.globalintegrity.org
Vision of Humanity	Global Peace Index	162	2005–2012	http://www.visionofhumanity.org/#/page/indexes/global-peace-index
Centre for Law and Democracy	Global Right to Information Rating	89	1951–2013	http://www.rti-rating.org
Heidelberg Institute for International Conflict Research	Conflict Barometer	Regional	1992–2013	http://www.hiik.de/en/konfliktbarometer/index.html
Heritage Foundation	Index of Economic Freedom	169	1995–2014	http://www.heritage.org/index/
United Nations Development Programme	Human Development Index	186	1990–2013	http://hdr.undp.org/en/statistics/hdi
DARA	Humanitarian Response Index	23	2007–2013	http://daraint.org/humanitarian-response-index/
IMD	World Competitiveness Yearbook	60	1989–2013	http://www.imd.org/wcc/
The PRS Group	International Country Risk Guide	140	1984–2013	https://www.prsgroup.com/about-us/our-two-methodologies/icrg
International Labour Organisation	ILOStat	124	2009–2010	http://www.ilo.org/ilostat
International Labour Organisation	Global Wage Report	124	2008–2013	http://www.ilo.org/global/research/global-reports/global-wage-report/lang--en/index.htm
International Labour Organisation	LABORSTA	124	1969–2008	http://laborsta.ilo.org
Latinobarómetro Corporation	Latinobarometer	18	1995–2010	http://www.latinobarometro.org/lat.jsp
IREX	Media Sustainability Index	80*	2000–2012	http://www.irex.org/project/media-sustainability-index-msi
International Budget Partnership	Open Budget Index	100	2006–2012	http://internationalbudget.org/what-we-do/open-budget-survey/
Center for Systemic Peace	Polity IV	168	2000–2012	http://www.systemicpeace.org
World Bank	Public Accountability Mechanisms	87	Current year only	http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPUBLICSECTORANDGOVERNANCE/0,,contentMDK:23352107~pagePK:148956~piPK:216618~theSitePK:286305,00.html

Source	Indicator	Countries	Years	Website
Reporters Without Borders	World Press Freedom Index	180	2012–2014	http://en.rsf.org
World Bank	Shadow Economies all over the World	162	1999–2007	http://elibrary.worldbank.org/doi/book/10.1596/1813-9450-5356
Center for Systemic Peace	State Fragility Index	166	1995–2012	http://www.systemicpeace.org
Transparency International	Corruption Perceptions Index	178	1995–2012	http://www.transparency.org/research/cpi/overview
Transparency International	Bribe Payers Index	28	1999–2011	http://bpi.transparency.org
Latinobarómetro Corporation	Latinobarometer	18	1995–2010	http://www.latinobarometro.org/lat.jsp
Transparency International	Global Corruption Barometer	107	2003–2013	http://www.transparency.org/gcb2013
World Bank	Ease of Doing Business Index	189	2003–2013	http://www.doingbusiness.org
World Bank	Database of Political Institutions	176	1975–2012	http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20649465~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html
World Bank	World Development Indicators	214	1960–2013	http://data.worldbank.org/data-catalog/world-development-indicators
World Bank	Enterprise Surveys	135*	2002–2014	http://www.enterprisesurveys.org
World Economic Forum	Global Competitiveness Reports	148	2005–2011	http://www.weforum.org/issues/global-competitiveness
World Economic Forum	Global Risks Report	Global	2006–2013	http://www.weforum.org/issues/global-risks
World Bank	Worldwide Governance Indicators	210	1996–2011	http://info.worldbank.org/governance/wgi/index.aspx#home
World Justice Project	Rule of Law Index	97	2011–2013	http://worldjusticeproject.org/rule-of-law-index

Appendix F: TRACE Matrix Country Rankings

Table F.1. TRACE Matrix Country Rankings of Business Bribery Risk

TRACE Rank	Country	TRACE Rank	Country	TRACE Rank	Country
1	Ireland	36	Spain	70	Turkey
2	Canada	37	Bulgaria	71	Indonesia
3	New Zealand	38	Barbados	72	Saudi Arabia
4	Hong Kong	39	Peru	73	Montenegro
5	Sweden	40	Israel	74	Belarus
6	Finland	41	Thailand	75	Kiribati
7	Singapore	42	Mauritius	76	Malta
8	Japan	43	Colombia	77	Dominican Republic
9	Germany	44	Uruguay	78	Saint Kitts and Nevis
10	United States	45	Hungary	79	Brunei Darussalam
11	Georgia	46	Cyprus	80	Puerto Rico
12	Norway	47	Qatar	81	Bermuda
13	Netherlands	48	Saint Vincent and the Grenadines	82	Palau
14	France	49	Vanuatu	83	Romania
15	Chile	50	Costa Rica	84	Guatemala
16	Switzerland	51	Andorra	85	Ecuador
17	Korea, Republic of	52	Czech Republic	86	Rwanda
18	Lithuania	53	Bahrain	87	Armenia
19	United Kingdom	54	Tonga	88	Mexico
20	Austria	55	Marshall Islands	89	Dominica
21	Denmark	56	Slovakia	90	Samoa
22	Estonia	57	Liechtenstein	91	Aruba
23	Luxembourg	58	Croatia	92	Jordan
24	Iceland	59	Oman	93	Bosnia and Herzegovina
25	Latvia	60	Botswana	94	Bolivia
26	Belgium	61	Grenada	95	Bahamas
27	Slovenia	62	Malaysia	96	French Polynesia
28	Panama	63	Monaco	97	Faroe Islands
29	Australia	64	Seychelles	98	Namibia
30	United Arab Emirates	65	San Marino	99	Macao
31	Poland	66	Micronesia	100	Paraguay
32	Portugal	67	Serbia	101	Guyana
33	Italy	68	Antigua and Barbuda	102	Sao Tome and Principe
34	Macedonia	69	Nicaragua		
35	South Africa				

TRACE Rank	Country	TRACE Rank	Country	TRACE Rank	Country
103	Jamaica	135	Benin	167	Gabon
104	Tunisia	136	Suriname	168	Sierra Leone
105	Kosovo	137	China	169	Congo
106	Zambia	138	Lebanon	170	Malawi
107	Morocco	139	Mozambique	171	Egypt
108	Lesotho	140	Azerbaijan	172	Iraq
109	Senegal	141	Kazakhstan	173	Pakistan
110	Fiji	142	Mali	174	Lao
111	Gambia	143	Swaziland	175	Bangladesh
112	Cape Verde	144	Ghana	176	Zimbabwe
113	Togo	145	Burkina Faso	177	Kuwait
114	Cuba	146	Sri Lanka	178	Venezuela
115	Turkmenistan	147	Ethiopia	179	Liberia
116	Saint Lucia	148	Guinea-Bissau	180	Congo, DR
117	Albania	149	Brazil	181	Mauritania
118	Belize	150	Equatorial Guinea	182	Tajikistan
119	Bhutan	151	Comoros	183	Algeria
120	Papua New Guinea	152	Philippines	184	Central African Republic
121	Madagascar	153	Haiti	185	India
122	El Salvador	154	Timor-Leste	186	Eritrea
123	Niger	155	Tanzania, United Republic of	187	Cameroon
124	Trinidad and Tobago	156	Mongolia	188	Viet Nam
125	Solomon Islands	157	Iran	189	South Sudan
126	Greece	158	Libya	190	Chad
127	Maldives	159	Kenya	191	Burundi
128	Tuvalu	160	Cote d'Ivoire	192	Guinea
129	Honduras	161	Kyrgyzstan	193	Cambodia
130	Moldova, Republic of	162	Syrian Arab Republic	194	Uzbekistan
131	Djibouti	163	Afghanistan	195	Angola
132	Ukraine	164	Uganda	196	Yemen
133	Argentina	165	Nepal	197	Nigeria
134	Russian Federation	166	Sudan		

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