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POLICY BRIEFS ON LAVA JATO

Competing to be Corrupt: The Multinational Dynamics of Public Procurement Bribery in Latin America

Connor Wahrman

Edited by
Paul Lagunes
Jan Svejnar

COLUMBIA | SIPA
Center for Development Economics and Policy

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ABOUT THE PROJECT

Lava Jato

Lava Jato or Operation Car Wash refers to Latin America's largest known corruption scheme in living memory. Related events began unfolding in Brazil in March of 2014. Construction companies were colluding with employees of Brazil's state-owned oil company to win public works contracts. The oil company's employees took bribes, while politicians obtained kickbacks as personal gifts or campaign donations.

The relevant scholarship had warned that corruption could result in public works being constructed at inflated costs. However, such warnings were ignored, and so the people involved in the scheme managed to steal billions in state funds. Prosecutors further revealed that bribes paid by the region's largest construction group extended to eleven other countries besides Brazil.

In spite of the continued interest among policy practitioners and academics, there are key questions about Lava Jato that remain unanswered. For instance, how did the construction company that led the corruption scheme choose the countries in which to do business? According to the international press, the scheme played a role in the 2014 World Cup, but was corruption also at work in the planning and execution of the 2016 Rio Olympics? Also, what is motivating some of the key actors fighting corruption in Brazil, and what can be done to avoid similar corruption scandals in the future?

To answer these and related questions, the Center on Global Economic Governance (CGEG) at Columbia University's School of International & Public Affairs has collected a series of policy briefs on Lava Jato-related themes. This project is proudly cosponsored by the Center for Development Economics and Policy (CDEP), Columbia Global Center in Rio, and the Latin America Initiative at Rice University's Baker Institute for Public Policy with the goal of shedding light on a complex problem that has affected the lives of millions.

POLICY BRIEF

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ABOUT THE POLICY BRIEF CONTRIBUTOR

Connor Wahrman is a recent graduate of Columbia University's Quantitative Methods in the Social Sciences program, and received his B.A. from Brandeis University with a major in Politics and minors in Economics, History, and International & Global Studies.

His research interests include the role of corruption in managing natural resource conflict, the incentive structures of corruptible public officials and private actors, and applications of experimental & econometric methods more broadly.

Competing to be Corrupt:

The Multinational Dynamics of Public Procurement Bribery

in Latin America

Connor Wahrman

Abstract

This policy brief analyzes public procurement sectors throughout Latin America, investigating whether Odebrecht, the Brazilian industrial conglomerate implicated in Operation Car Wash, chose countries in which to do business based on their perceived corruptibility. From 2001 through 2016, Odebrecht paid $788 million in bribes and received $3.336 billion in profits from ten Latin American countries: Argentina, Brazil, Colombia, the Dominican Republic, Ecuador, Guatemala, Mexico, Panama, Peru, and Venezuela. Odebrecht revealed these details as part of a plea deal with the U.S. Department of Justice in late 2016, to reduce its penalties for FCPA violations. Using this information, as well as public procurement corruption data from the 2004-2005 Global Competitiveness Report, econometric analysis suggests that Odebrecht avoided markets in which its bribery strategy was less likely to be successful. This revealed preference challenges the claim that Odebrecht was a neutral actor in a corrupt environment, instead serving as evidence that the company actively exploited regional variation in public procurement corruption as part of its business practices.

For companies seeking government contracts, bribery may be a tempting business strategy. Illicit payments to corruptible officials may facilitate market access in the future, providing a competitive edge against rival firms. However, public procurement corruption is harmful both to governance and to markets. An official who accepts bribes in exchange for public contracts betrays the public's trust and wastes its collective resources; the result is lower-quality goods and services, at higher prices. The bribe-paying firm steals market share from its competitors who may be more qualified. This form of corruption is difficult to observe; because both officials and firms benefit, neither has an incentive to inform on the other.

Analyzing the behavior of a specific scandal-ridden multinational firm offers an opportunity to study corrupt business strategies. Multinationals have the ability to choose the markets in which they do business, so corrupt multinationals may choose to operate in more corrupt countries. A comparison of the countries in which a corrupt multinational operates against countries with similar markets in which that firm could otherwise have done business, assessing the relative levels of corruption in each set of countries, may provide evidence that the company selected its markets based on their reputations for potential corruption.

The following analysis uses the case of the Brazilian multinational construction firm Odebrecht to test this proposition. It compares the 10 Latin American countries in which Odebrecht did business, and that were implicated in the Lava Jato or "Operation Car Wash" corruption investigation, against 9 other regional countries which did not do business with the company from 2001 through 2016. Using cross-national data on public procurement corruption from the 2004–

05 Global Competitiveness Report,[1] statistical analysis finds significant evidence that the countries implicated in Lava Jato had reputations of being more corrupt than their Latin American neighbors during the period of analysis, and that this difference may have had a substantial role in determining Odebrecht's business ties. In other words, a country's perceived public procurement corruption predicted whether or not it would receive Odebrecht's business. This finding suggests that, despite former CEO Marcelo Odebrecht's claim that "this is how Latin America works,"[2] the company avoided countries in the region where attempts at corruption may have been less likely to succeed.

Theories of Corruption as a Business Strategy

The modern consensus is that corruption — the exploitation of public office for private gain — distorts the structure of economic and political incentives that guide and shape public-private interactions.[3] If a firm sees that its competitors win contracts unfairly through bribe payments, the firm has to choose between paying bribes itself or losing out on business. Even if the firm prefers an environment where no one pays bribes and it can win contracts on merit, expectations of others' behavior can pressure it to pay bribes anyway.[4]

[1] World Economic Forum. *The Global Competitiveness Report: 2004-2005*. Ed. Augusto Lopez-Claros. New York, NY: Palgrave MacMillan, 2004.
[2] https://www.lanacion.com.ar/2109913-las-lecciones-de-odebrecht.
[3] Raymond Fisman and Miriam A. Golden, *Corruption: What Everyone Needs to Know*, (New York: Oxford University Press, 2017), at 3.
[4] Ibid., 6.

The behavior of a firm that is inclined to pursue a strategy involving corruption may depend on expectations of corruption. The safest place to engage in corrupt behavior, where impunity might be most expected, is one where corruption is widespread. At the societal level, the presence of extensive corruption may inhibit efforts to reduce it: no individual wants to take action alone, for fear of the consequences of deviating from established norms.[5] For example, in Costa Rica, survey experimentation suggests that increasing the perceived levels of societal corruption actually makes individuals more willing to engage in corruption themselves.[6] In societies with entrenched systems of corruption, intermediaries often take on the role of coordinating between corruptible officials and private actors willing to pay bribes. Such intermediaries facilitate corruption by reducing information asymmetries between the two parties, and also have a psychological effect in minimizing the perceived moral costs of corruption.[7] Cultures of corruption appear to be self-reinforcing, as corruptible actors rationalize their behavior based on the environment around them. Such environments may therefore be more attractive for actors who believe that they can benefit from corrupt activity.

Economic actors may incorporate the landscape of corruption into their financial strategies, shifting resources away from corruption when it introduces inefficiencies and towards corruption when it offers tangible benefits. There is substantial evidence that firms take the possibilities of corruption into account when determining their business plans. In Italy, firms subject to government regulation shifted their expenditures away from or towards Mediaset, the media

[5] Persson, Anna, Bo Rothstein, and Jan Teorell. "Why anticorruption reforms fail—systemic corruption as a collective action problem." *Governance* 26, no. 3 (2013): 449-471.

[6] Corbacho, Ana, Daniel W. Gingerich, Virginia Oliveros, and Mauricio Ruiz-Vega. "Corruption as a Self-Fulfilling Prophecy: Evidence from a Survey Experiment in Costa Rica." *American Journal of Political Science* 60, no. 4 (2016): 1077-1092.

[7] Drugov, Mikhail, John Hamman, and Danila Serra. "Intermediaries in Corruption: An Experiment." *Experimental Economics* 17, no. 1 (2014): 78-99.

conglomerate associated with former Prime Minister Silvio Berlusconi, depending on expectations about his political future.[8] Similarly, throughout the Egyptian Arab Spring, firms that were associated with members of various political factions saw their stock prices vary in sync with the political fortunes of their respective factions, suggesting that investors valued firms based on their anticipated abilities to collect illicit rents.[9] In South Africa, firms' choices between two local ports reflected preferences for transport routes that would avoid uncertainties over the firms' ability to extract illicit payments with impunity.[10]

Other research focuses specifically on the behavior of multinational corporations (MNCs). A survey experiment in Vietnam finds that removing restrictions on foreign entry to local markets reduced the incidence of bribe payment by foreign MNCs.[11] In China, an increased concentration of multinationals in local markets is associated with higher rates of corruption.[12] Such studies suggest that competition among MNCs over local market access increases the opportunities and pressures for public-private corruption.

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[8] DellaVigna, Stefano, Ruben Durante, Brian Knight, and Eliana La Ferrara. "Market-based lobbying: Evidence from advertising spending in Italy." *American Economic Journal: Applied Economics* 8, no. 1 (2016): 224-256.
[9] Acemoglu, Daron, Tarek A. Hassan, and Ahmed Tahoun. "The power of the street: Evidence from Egypt's Arab Spring." *The Review of Financial Studies*, hhx086, https://doi.org/10.1093/rfs/hhx0866.
[10] Sequeira, Sandra, and Simeon Djankov. "Corruption and firm behavior: Evidence from African ports." *Journal of International Economics* 94, no. 2 (2014): 277-294.
[11] Bai, Jie, Seema Jayachandran, Edmund J. Malesky, and Benjamin A. Olken. "Firm Growth and Corruption: Empirical Evidence from Vietnam." *The Economic Journal* (2015): 435.
[12] Zhu, Boliang. "MNCs, rents, and corruption: Evidence from china." *American Journal of Political Science* 61, no. 1 (2017): 84-99.

Choosing the Proper Measure

Testing whether Odebrecht chose markets based on their propensities to be corrupt requires data that accurately measure public-procurement corruption. This analysis uses a measure of corruption specific to the provision of public contracts from the 2004-05 Global Competitiveness Report (GCR). The GCR indicator ranks countries on a scale from 1, indicating that undocumented payments or bribes are common, to 7, indicating that they are uncommon, based on interviews with businesses involved in government contracting. This measure indicates the predisposition of a country's officials to ask for bribes, independent of their country's specific relationship with Odebrecht. Figure 1 on the next page illustrates the distribution of this measure throughout 19 Latin American countries. Brazil is shown in gray and the other countries implicated in the Lava Jato investigation in blue.

While it is unknown whether Odebrecht specifically relied on GCR data in making its investment decisions, this measure reflects information available to the general business community regarding public procurement corruption throughout Latin America in 2006. At about this time, Odebrecht was developing an in-house bribery coordination team, known as the Division of Structured Operations, to organize the transfer of funds from company accounts to government officials and their associates.[13] The more corrupt a given country, as reflected in the GCR measure, the easier it would be for Odebrecht's Division of Structured Operations to make these transfers, making business more attractive for Odebrecht in that country.

[13] https://www.justice.gov/criminal-fraud/file/920096/download.

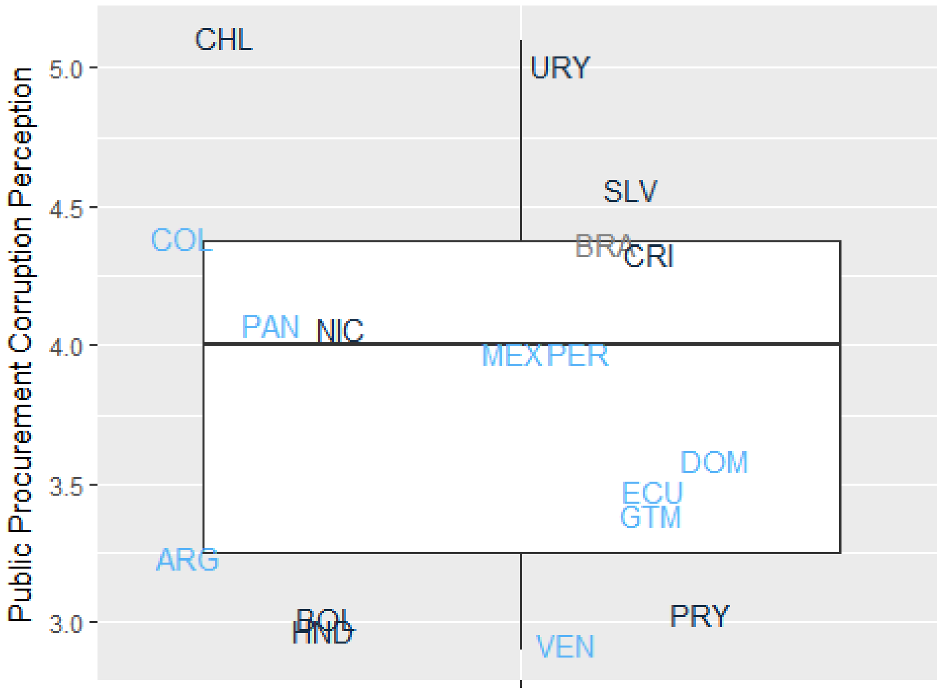

Figure 1. The distribution of public procurement corruption perception throughout the region, with Brazil in gray and other countries with Odebrecht business ties in blue. Venezuela has the lowest (most corrupt) score and Chile the highest (least corrupt). No Latin American country scores at the very top or bottom of the 1-7 distribution.

Statistical Analysis of Odebrecht's Multinational Choices

Of the eighteen Latin American countries in the sample, nine (apart from Odebrecht's home country, Brazil) did international business with Odebrecht as revealed through Lava Jato.[14] Comparing these nine countries against the eight countries in which Odebrecht did not do business

[14] The countries in the sample share a common identity as former Iberian colonies. The nine countries involved in the Lava Jato scandal, apart from Brazil, were: Argentina, Colombia, the Dominican Republic, Ecuador, Guatemala, Mexico, Panama, Peru, and Venezuela. The other countries are Bolivia, Chile, Costa Rica, El Salvador, Honduras, Nicaragua, Paraguay, and Uruguay. Cuba also did business with Odebrecht during the period, but data on its level of public procurement corruption is unavailable.

reveals a significant difference in average public procurement corruption. A Welch Two Sample t-test (Table 1) indicates that the countries in which Odebrecht chose to do business had reputations (as indicated by the GCR measure) for more extensive corruption in public procurement. Figure 2 below displays this comparison; although some countries (Honduras, Paraguay, and Bolivia) in which Odebrecht did not do business had corrupt reputations, all but one (Colombia) of Odebrecht's markets fall below the median score of the non-contracting countries.

Table 1. Welch Two Sample t-test: Corruption Perception & Odebrecht Business

Test statistic	df	P value
16.22	31.15	9.592e-17 ***

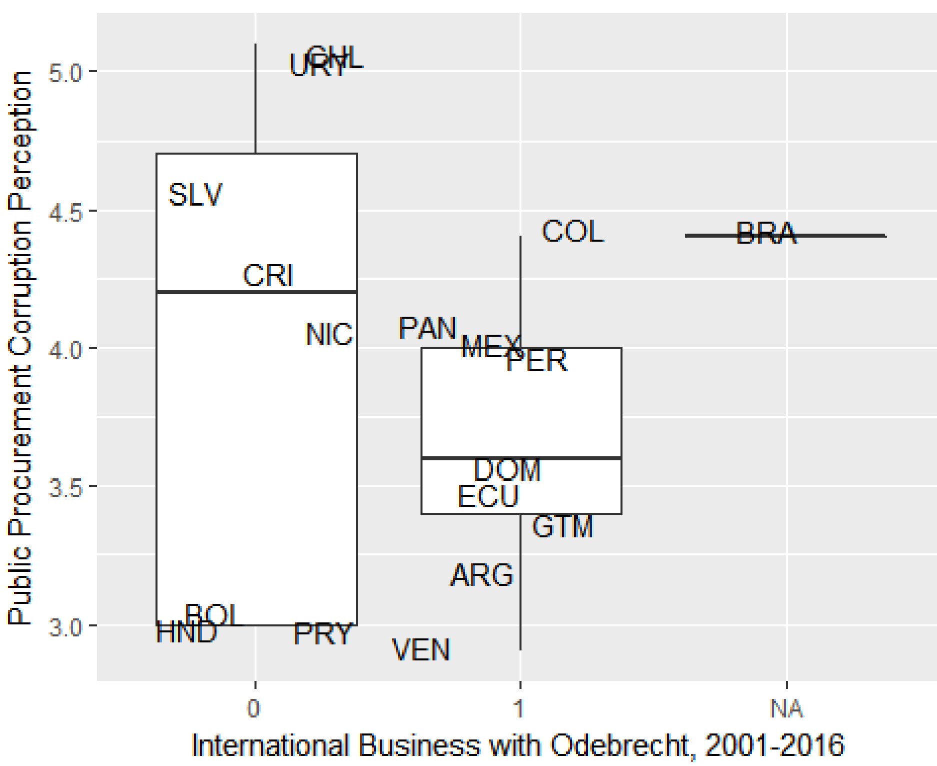

Figure 2. The left box represents the 25th-75th percentile range of corruption perception for Latin American countries which did not do business with Odebrecht during the period, while the middle box represents those that did do such business. On average, countries with Odebrecht ties had reputations for being more corrupt than those without.

Table 2.

Welch Two Sample t-test: Log Infrastructure Investment & Odebrecht Business

Test statistic	df	P value
22.1	20.38	1.022e-15 ***

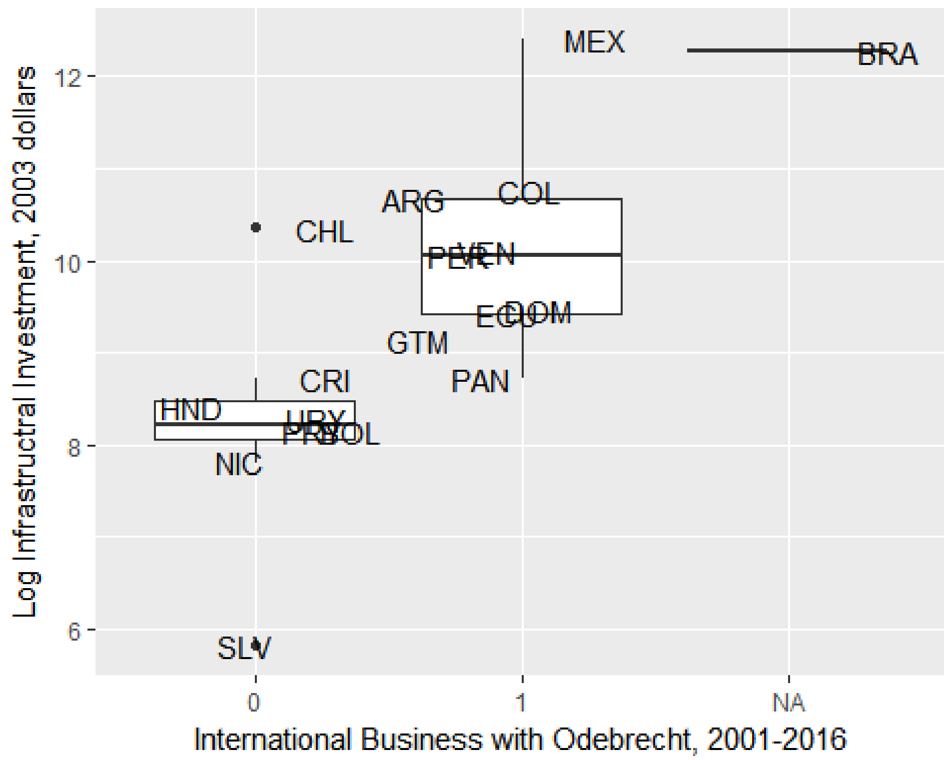

Figure 3. The box on the left represents the 25th-75th percentile range of infrastructural investment for Latin American countries that did not do business with Odebrecht; the box on the right represents those that did (apart from Brazil).

An alternative explanation of Odebrecht's choices could be that it allocated its resources first towards countries with the largest markets for public procurement, and that it took corruption levels into account only after it made its initial investments. To test this alternative hypothesis, the next t-test and box-plot pair (see Table 2 and Figure 3 above) examine the relationship between infrastructure investment in 2003[15] and business with Odebrecht. The results suggest that there is a significant relationship between these variables.

Of particular interest in this comparison are the two cases of Chile and Costa Rica. On average, countries with Odebrecht ties had larger investment markets than those which did not, suggesting some level of selection based on this variable; Chile, however, is an outlier: the country's market size is larger than the median for the distribution of countries doing business with Odebrecht, but the company did not have any business in Chile during the period. Next, Costa Rica is roughly equivalent to Panama in terms of market size, but Odebrecht pursued business only in Panama. As Panama had a substantially higher corruption index than Costa Rica, it is arguably the case that any choice by Odebrecht between the two countries would be on this basis.

Plotting the variables of market size and perceived levels of corruption in two-dimensional space can help illuminate these cases. In Figure 4 on the next page, the countries with which Odebrecht chose to do business (in blue) feature both large market size and reputations for public procurement corruption, placing them at the bottom-right of the graph. This is visual evidence that reputation for corruptibility was highly correlated with Odebrecht's choices of markets.

[15] Natural log of the product of the percent of GDP dedicated to investment and real GDP. Investment data from the IMF World Economic Outlook Database, https://bit.ly/2hIeGq8; real GDP data from Professor Kristian Gleditsch, https://bit.ly/2yBqdwZ.

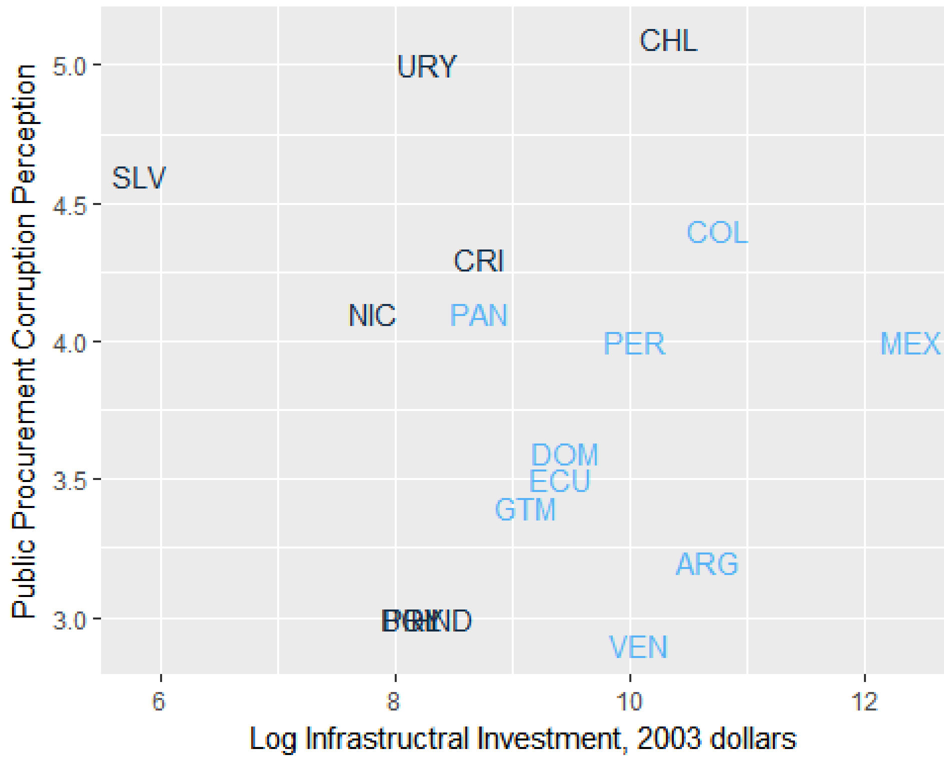

Figure 4. This scatter plot shows the distribution of investment market size and corruption perception measures for Latin American countries, showing those with international Odebrecht business ties in blue and those without in black. The blue labels are clustered in the bottom right quadrant of the graph. Odebrecht chose Panama over Costa Rica, and Argentina over Chile, despite similar market sizes.

Policy and Research Implications

The countries in which Odebrecht located its projects were generally those perceived to be more corrupt than other Latin American countries. Although the company did not choose countries for investment based solely on this criterion, the corruption variable seems to help explain why Odebrecht did business in Panama, for example, but not in Costa Rica, and why it did not participate in Chile despite its large market. Given Odebrecht's size and clout throughout the region — its chief Marcelo Odebrecht was referred to as "the prince of public works"[16] — it is unlikely that the company would have been unable to win contracts without access to corrupt officials. It is more likely that Odebrecht decided to allocate its resources towards markets where, through corruption, it could maximize profits. Odebrecht's Division of Structured Operations was effectively an innovation to improve performance in a corrupt business environment, a finding that is consistent with the discoveries of Lava Jato and the surrounding investigations.

The results highlighted in this post should be of value to scholarship on business responses to corruption. While the literature has shown businesses avoiding countries because of corruption, this case provides an example of a multinational company, one based in a relatively less corrupt country, taking advantage of regional variations in corruption to maximize its potential profits.[17] If companies seeking public contracts actually prefer working in markets with high corruption potential, then international cooperation in the monitoring and enforcement of anti-corruption efforts is urgently needed. Such efforts would require the cooperation of states and also of multinational corporations, some of which, like Odebrecht, might be large enough to wield significant influence in the countries in which they operate.[18] So long as a single country has a reputation for public procurement corruption, it will retain an unfair international advantage in attracting foreign investment from corporations willing to engage in bribery schemes.

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[16] Alconada Mon, Hugo. "Las Lecciones De Odebrecht." *La Nación*, 2018, February 17 ed., sec. Opinión. https://www.lanacion.com.ar/2109913-las-lecciones-de-odebrecht

[17] Morris, Stephen D., and Charles H. Blake. "Introduction: Political and Analytical Challenges of Corruption in Latin America." *Corruption & Democracy in Latin America*. Eds. Charles H. Blake and Stephen D. Morris. (Pittsburgh, PA: University of Pittsburgh Press, 2009), 1-22.

[18] Rose-Ackerman, Susan, and Bonnie J. Palifka. *Corruption and Government: Causes, Consequences, and Reform*. (Cambridge University Press, 2016), at 492.

This proposed explanation of Odebrecht's decision-making process may also be useful for developing strategies to monitor corporate behavior. If there is evidence that an international company concentrates its business in environments known to be more corrupt, such evidence could serve to trigger a more thorough investigation of its practices. Such a strategy could prove effective in shaping international business behavior, and in removing the external financing that supports and sustains corrupt political systems.