

BUSINESS PERFORMANCE IN LATIN AMERICA UNDER CORRUPTION AND INCOME INEQUALITY

Jaime Ortiz Texas A&M International University

■ *Corruption and income inequality have developed into a threat throughout Latin America. Their expansion generates a sense of urgency to confront the problem. Both perversely influence business decisions despite inherently sound macroeconomic reforms. Empirical evidence for twenty Latin American countries confirms a relationship between a set of political and economic variables to explain business performance. The analysis supports that mainly corruption, rather than income inequality, adversely affects business performance. However, when taken together, both corruption and income inequality reinforce their negative effects. Business executives must take a stance to demand minimum levels of transparency and equity.*

Introduction

According to Easterly *et al* (1997), there is consensus among Latin American policy-makers that economic growth depends on improved governance and the expansion of free-market policies. Fierce global competition compels them to make efforts toward achieving economic stability and offer a solid business environment. However, Dominguez and Carman (2001) argue that policies that encourage free trade and financial openness *per se* do not suffice to entice a satisfactory business performance. The Inter American Development Bank (1998) admits that Latin America is known for having a combined high rate of corruption along with the most uneven income distribution of any region of the world. The ECLAC (2002) goes on to say that an explanation for the former may be deeply rooted in its culture, while an explanation for the latter may be that disadvantaged interest groups have not been politically well represented enough to advance policies that would ensure a

more progressive income distribution.

Espach and Tulchin (2000) observe that Latin American policy-makers are eager to advance institutional change and have cleaner democratic governments. In fact, they have made conscious attempts to lay out well-intentioned anticorruption reforms despite inherently tough macroeconomic policies. Nevertheless, some spectators remain skeptical. Scandals involving corruption are far from being isolated cases, but rather seem to be an everyday event. Johnston (1997) provides examples where key suspects in extortions and evasion have committed suicide, brought down popularly elected administrations, or forced former presidents to flee their countries. Transparency International (2003), on the other hand, highlights irregularities in activities as diverse as drug-related money laundering and even soccer championships. In other instances, multinational companies have

acknowledged actions inconsistent with headquarter policies after their subsidiaries have bribed government officials to win contracts.

Corruption entails resource misallocations that hinder the economy in several forms. Chand and Moene (2002), estimate that corruption shaves between 0.5 to 1 percentage point-off a country's GDP. Recently, however, high profile Latin American policy-makers have taken steps to guard against fraud and embezzlement. Parliament members themselves are asking for tougher sanctions against contributors that finance congressional campaign expenses. Furthermore, leading political figures in the anti-corruption movement have removed judges proven to be involved in irregular procedures surrounding legal outcomes. Their removal has been seen as a profound shift in the political culture of Latin America. Luckily, Beranbeim, (2002) asserts that there seems to be a political clout that no longer protects its own from charges of corruption or other wrongdoing.

The expectations of the citizenry in Latin America have strengthened democratic governments. Reforms for less government involvement and further regional integration are moving forward to suggest positive operational results. However, the ECLAC (2002) indicates that most of the instruments devised to effectively improve the pattern of income distribution have achieved poor results. Among the possible reasons for this failure is the interrelation between corruption and income inequality. Mauro (1995) and, subsequently, Treisman (1999) both suggest that corruption ultimately deteriorates income distribution by lowering economic development. In contrast, a study by Smarzynska and Wei (2000) implies exactly the opposite. That is, income equality may actually improve with higher levels of corruption. Regardless of causality considerations, corruption and income concentration impact on business performance through low per-capita purchasing power to extremely thin market segments.

Purpose

Latin American governments face serious political crises when accountability is undermined and allegations of corruption emerge. Smarzynska and Wei (2000) cite that lack of confidence among interest groups threatens the viability of institutional reforms. In particular, the loss of trust and support of the business sector results in substantial political and economic costs. Prospective foreign investors are certainly discouraged by signs of political instability. Yet, corruption potentially would be the greatest drag on business profits. Espach and Tulchin (2000) maintain that inevitably, host countries experience a reduction in foreign investment opportunities and competitiveness if businesses are deterred either by demands for bribes or by the perception that contracts will not be awarded based on their own exclusive merits.

The simultaneous occurrence of corruption and income inequality and its impact on business performance has not been explored. Previous studies led by Husted (1999) and Berambein (2002) have dealt with how a perceived level of corruption is affected by income distribution and some cultural variables. Failing to provide for the relationship between corruption and distribution of income, these studies have fallen short in their findings, as the correlation between both variables would be masked by the initial level of the countries' economic development. Interestingly, a link between corruption and income inequality can be found in the long-term successes in economic policies. Human development indicators are often good predictors of corruption and income inequality. The World Bank (2002) ranks criminality, mortality, and literacy rates as consistently higher in countries where both corruption and wealth concentration are also high.

Therefore, this study attempts to examine the impact of both corruption and income inequality in explaining business performance across Latin America using both company and country specific aggregate data. In 2002 the countries under study represented about 95 percent of the land, value of exports and imports, gross domestic product, and net foreign direct investment in Latin America. This study is organized in five sections. The following section discusses how corruption and income inequality affect business performance. The third section introduces an analytical framework where corruption is endogenously treated and separated from the current income distribution status. Section four empirically tests and discusses the main hypotheses set forward. The final section considers the conclusions reached.

Review of Literature

Based on Broadman and Recanatini (2001), corruption is considered as the broad range of activities that involves appropriation of public property or license for private gain. Identifying specific actions as corrupt seems easy. However, the motives behind corrupt acts bear differing degrees of legitimacy according to Rose-Ackerman (1999) since its effectiveness depends upon a clear division between the public and private sectors. In addition to legal differences, Ades and Di Tella (1999) note that there exist significant and often contrasting attitudes across countries, multinational companies, and international organizations. Social conditions are one criterion to determine if corruption is either accepted or rejected across nations. Thus, corruption would be difficult to define because it assumes multiple forms with different functions and effects within a society and government. In the view of Abed and Gupta (2002), interest groups would then show some ingenuity in creating methods for either being open to corruption or covering up misdeeds.

Regional development organizations have made fighting

corruption central to their efforts to reinforce democracy throughout Latin America. In fact, Beranbeim (2002) reports that international financial institutions have declared corruption deterrence to be a priority in their agendas over the next decade. Nowadays, they only provide financial and technical assistance to governments that enact anticorruption reforms. In addition, nongovernmental organizations have also stretched themselves to demand better governance by proposing complementary anticorruption measures. Specifically, they seek to strengthen judicial systems and encourage citizen action. According to Kaufmann *et al* (1999), successes have been mixed as local governments have proven to be more innovative and aggressive in their anticorruption reforms than their national counterparts.

Furthermore, Ortiz (2005) sustains that corruption has been labeled as part of a phenomenon highly related to the most fundamental aspects of a country's culture. The parameters of what are considered corrupt activities are sensitive to the idiosyncrasies of specific countries as anyone can be corrupt in ways others do not object to because they benefit from them as well. Accordingly, Espach and Tulchin (2000) contend that corruption is inevitable in Latin America as a result of its inherently corrupt culture. In their view, the Spanish and Portuguese colonialism and the prominence of government and church hierarchies may have created an environment favorable to the use of public office for private enrichment. Archaic political systems, tight family bonds, and rigid social structures still prevail in a region characterized by underdevelopment and ethnic division. In his study on the practice of international business education in Latin America, Ortiz (2005) points out that the complexity of these observations are compounded by the fact that every single Latin American country suffers some form of corruption not just because of its specific culture but, most likely, because of its highly skewed income distribution.

The Case when Corruption Prevails

Tanzi (1998) advances two parallel views about corruption. One view suggests that corruption is like *sand in a machine* when it adds bulkiness that lessens business performance, while another view suggests that corruption is like *oil in a machine* when it facilitates processes that enhance business performance. On the other hand, Rose-Ackerman (1999) classifies corruption in terms of its extent, level, and occurrence. Thus, it may involve low-level bureaucrats extracting small sums through extortion, bribery, or misuse of official property. That type of corruption undermines the ability of institutions to effectively deliver public services. Conversely, it may involve high-level bureaucrats using their offices to grant contracts, extract money from the government purse, or use their regulatory authority to manipulate market outcomes

for their personal or political enrichment. Whichever the case, corruption becomes endemic when either type dominates.

Gupta *et al* (2002) reflect on the generalized perception that corruption is pervasive throughout countries where political factors show signs of deterioration. Corruption exists in those countries at different levels of sophistication depending on the extent to which state functions are layout. Business opportunities such as procurement, distribution, or privatization remain barely defined in terms of transparency and accountability. It is common to discover public financial transactions that violate internationally accepted accounting standards, or judicial systems deciding corruption cases based on the economic strength of the perpetrators.

However, others regard corruption as a symptom of distortionary market policies rather than as a political issue *per se*. La Porta *et al* (1998) consider corruption in the context of structural reforms and link them with underlying market distortions and weak institutional foundations. They note that progresses on market-based reforms such as reliance on market-based pricing and the establishment of a sound regulatory environment would be more important than corruption itself in explaining differences in business performance. In a related vein, Abed and Davoodi (2000) advocate for incentives leading to increased competition in government services in order to limit opportunities for natural monopolies to expand. This strategy would be optimal for governments with scarce resources and public support for fundamentally transparent reforms.

Ades and Di Tella (1999) find out that the relation between output and corruption indicates that the more significant the public good the higher the corruption rate. In addition, the level of corruption would be influenced by the relative size of the private sector. Kaufmann *et al* (1999) offer an examination of the relationship between the business climate and the incidence of corruption. Using a variety of cross-country indicators, they find a large causal effect running from improved governance to better development outcomes that ultimately translates into a negative relationship between operational revenues and corruption.

Business executives agree to point out that almost every public institution in Latin America is susceptible to corruption. In that sense, Abel and Gupta (2002) specify that large or small ones are neither better nor worse environments for its proliferation. In fact, corruption tends to flourish at times of political transition when statutes are being amended and power relations renegotiated. Business executives perceive the problem of corruption similarly. At the multinational level, corruption is controlled mainly by compliance systems that consist of codes of conduct, training, decision-making, and reporting mechanisms. This self-regulatory approach has been standard in other places after the enactment of foreign corrupt practices. However, views have changed on whether these self-regulatory codes

of conduct to prevent bribe paying are efficient. In the words of Beranbeim (2002), warning systems responding to risk management needs are now part of an inclusive process that draws on collective intelligence and experience.

Changes in the business environment may predict an increased political commitment to fight against corruption. Gupta *et al* (2002) provide the following evidence. Firstly, economic crises stimulate policy-makers to either pursue far-reaching reforms or rent-seeking actions to re-establish equilibrium. Secondly, a new government that succeeds notoriously corrupt ones has both an incentive and an opportunity to differentiate itself from previous administrations. Finally, increased democratization that leads to a larger number of independent policy-makers creates greater potential for bureaucrats to hold each other accountable. As expected, interest groups with a strong moral aversion to corruption become concerned about its impact on the business environment. By the same token, Treisman (1999) mentions that bureaucrats may obtain political advantages by advocating reforms that support interest groups that are victims of corruption or undermine political opponents who benefit from it. The basic argument behind such a relationship is that reducing corruption improves enterprise profitability, which is limited when corruption is perceived as being significant.

Hypothesis 1: The higher the general level of corruption, the lower the level of operational revenues.

The Case When Income Inequality Prevails

A perfectly equitable economy is an unrealistic benchmark because income concentration exists everywhere. Ferrari *et al* (2003) label inequality in Latin America as extensive, pervasive, and resilient in terms of differences in income, access to services, power, and influence. Concentration of ownership and income disparity is nonetheless expected among countries with high capital-output ratios and less variability in specialization. Such a fact is confirmed by Meller (1978) who shows Latin American countries as having low elasticities of substitution that, generally speaking, prevent them from productivity gains in capital intensive activities. Moreover, inequality slows down the overall development process because of its lower dynamic impact on poverty unless significant redistribution takes place. Londoño and Székely (2000) emphasize resource misallocations as another negative connotation of income concentration that, in turn, leads to sub-optimal levels of profits.

Chong (2001) suggests that, historically, income concentration in Latin America tends to increase during periods of economic opening and free market reforms. This has given room to critics of allegedly redistributive approaches coming from market-oriented policies, which

are singled out as disequalizing in nature. Hence, Acemoglu *et al* (2002) assert that more proactive and interventionist approaches through progressive taxation and public expenditures seem to have a larger influence in affecting the distribution of income. Given the broad scope of income disparity, certain reforms may not ameliorate current levels of income inequality and instead may lead to further income concentration. In that case, Dominguez and Carman (2001) envision that macroeconomic policies would not suffice unless they are coupled with better governance and inclusive market institutions.

Székely (2001) contends that income distribution in Latin America cannot be perceived as having either a beginning or an end only in the social and political commitment of government officials. In practice, they have failed to relate these facts to the current pattern of income distribution or the scope for redistributing income. According to Londoño and Székely (2000) the provision of key public goods such as macroeconomic stability, property rights, and a broad-based provisioning of services financed by taxes, also defines the extent of income inequality and purchasing power. Changing the pattern of delivering public goods to affect income distribution would depend on taking a concerted, early action to obtain larger and broader gains. A perspective from Inter American Development Bank (1998) would involve a simultaneous consideration of asset concentration, market shaped institutions, and empowering the redistributive potential of the State.

The vulnerability of Latin American countries to capital flights due to a combination of moderate to high public debt levels, excessive reliance on foreign and dollar-linked debt, low export and tax ratios, weak prudential regulation and supervision, and pro-cyclical fiscal policies is highlighted by the Inter American Development Bank (1998). Financial crises are also regressive because the wealthy enjoy asymmetric information to almost immediately move money out of their countries and prevent capital losses. Therefore, Acemoglu *et al* (2002) propose that policies to decrease the likelihood and severity of crises are necessary in order to improve income equality. The best course for macroeconomic policy to reduce inequality would, in the opinion of Ferrari *et al* (2003), most likely be one of increasing public sector savings and adopting sound regulatory practices in the financial system during good economic times, while at the same time opening up the economies, developing long-term domestic capital markets, improving debt management, and increasing tax ratios.

Household surveys for Latin America reported by Székely (2001) and subsequently by Ferrari *et al* (2003) confirm that there is hardly any other region in the world with comparable income inequalities. On average, the richest 10 percent of individuals receive approximately 45 percent of total income while the poorest 20 percent receive only 3 percent of total income. Such a highly skewed income concentration at the top of the distribution suggests the existence of a viable market for luxury goods or

sophisticated services. Alternatively, it also implies missing relatively profitable business opportunities from the remaining population segments.

In a pragmatic fashion, Prahalad (2004) argues that the business attractiveness of countries with severe income inequalities is not based on individual purchasing power or upscale products or services. Rather, it is given by the magnitude of those low-and-middle income earners who constitute the vast majority of population and choose to join the market economy. Their overwhelming spending potential, which Prahalad (2004) values worldwide at \$13 trillion a year, along with its massive market opportunities is actually larger than initially thought. Low-and-middle income earners disguised as informal, unemployed, or underpaid workers have remained largely invisible to traditional business executives who disregard them as a perennial source of profits. As the income gap between poor and rich widens, the underprivileged defy conventional managerial strategies of most business plans simply because their sheer market size constitutes the biggest potential opportunity. Thus, business executives are required to develop creativity and imagination to understand the complexities of dealing with the untapped market of low-and-middle income earners in Latin America.

Hypothesis 2: Widespread income disparity leads to a lower level of business performance.

The Co-existence of Corruption and Income Inequality

In the absence of narrowing income inequalities, corruption leads to a second-best solution with a strong income redistribution bias according to Beranbeim (2002). However, there is some reluctance to label corruption as a bribe. Broadman and Recanatini (2001), rather, categorize it as a mere income transfer aimed to serve a redistributive purpose. Overzealous bureaucrats deliberately impose red tape to demand bribes to secure a stream of future revenues, which are re-injected into the economy instead of being dissipated elsewhere. This additional consumption ultimately improves business performance and help to sustain the economy. Heilbrunn (1999) acknowledges that recipients of corruption do not produce additional units of output, but they account for a significant portion of the economy-wide wealth. Under these conditions, corruption does act as an income enhancement mechanism that redistributes wealth from one interest group to another.

Acemoglu and Ventura (2002), however, highlight a negative relationship between corruption and income distribution in less developed countries. Such a negative relation uncovers openness factors as a feasible option to induce better income equality. In an open-economy, the business environment forces an exogenous corruption

incentive that is independent of any income distribution pattern. By contrast, a desired income distribution structure can be achieved when corruption is supplied from within in a closed-economy. Their arguments to understand the interrelatedness between corruption and income distribution are the following: First, there is a simultaneous effect on the long-run profitability of businesses where a marginal increase in corruption in an economy with a relatively even income distribution may indeed trigger further private expenditures. Second, there is the effect of corruption being set optimally under the presence of market distortions. In that case, profit maximization is prevented if marginal revenues, instead of consumption are being taxed equally. Lastly, the view that corruption might be exogenous is unrealistic as it may have misleading policy implications. Under an exogenous corruption regime the long-term income growth rate would be independent from the level of wealth concentration.

Nevertheless, the above outcome differs sharply in cases when the supply of corruption services is endogenous and both corruption and income redistribution are just two, non-distortionary, policy distributive mechanisms. According to Barreto (2000), an economy would reach Pareto optimality when corruption is endogenously considered. In his view, the endogeneity of corruption through a reward-punishment tradeoff is crucial in yielding a role to increased income influencing such a tradeoff. His model explicitly considers a public sector acting as a monopoly in the provision of public services. This scenario is still quite common throughout Latin America despite strong privatization waves. As compared with the ideal characteristics of a public good being provided competitively, corruption leads to business expansion and near-to-optimal levels of income distribution.

Similarly, Gupta *et al* (2002) show that in a scenario of concurrent corruption and income inequality less public goods are produced at prices higher than the competitive ideal. Thus, an endogenous corruption level represents monopolistic rents that ultimately depend on the level of wealth concentration. In a situation where public goods are subject to significant red tape, interest groups tend to prefer an equilibrium corruption level to red tape eradication despite efficiency losses. Chand and Moene (2002) demonstrate that resource transfers that would have otherwise been lost to bureaucracy translate into income redistribution brought about by corruption. The resulting outcome would be Pareto superior to a bureaucracy plagued competitive equilibrium as the economy achieves comparatively higher growth rates.

Although unethical, Johnston (1997) points out that corruption would, socially speaking, be entirely rational as an income redistribution mechanism to the undeserving. His main argument is that consumption takes place when business transactions involve the provision of public goods as a result of the government's natural monopoly. Interest groups recognize the roles of public goods and become

aware of the monopolistic rents available. On the other hand, bureaucrats add themselves as another interest group to exploit a monopoly power to fulfill their own interests. Therefore, the extent of income gains out of the public sector is limited by the ability of the private sector to exert control over government activities.

Shleifer and Vishny (1993) showcase a self-interested government behavior being modeled as a situation where bureaucrats are in position to profit from selling a public good. Their model portrays three possible scenarios. First, there is no corruption and hence the price of a public good is equal to the marginal cost of producing it. A second scenario emphasizes that bureaucrats are empowered to sell the public good without probability of detection and hence they choose to behave as a monopoly. Their third scenario centers on bureaucrats that provide a stolen public good at no cost to them, without any likelihood of detection, and irrespective of production cost and hence they charge prices below market prices as if by perfect competition. In such a case, corruption would be efficiency enhancing. Along these lines, Chand and Moene (2002) believe that corruption improves social welfare because it avoids cumbersome procedures and rewards for underpaid bureaucrats. Since policymakers face an upward challenge to reduce corruption through institutional reforms that must be targeted across economic activities and income levels, resources would be transferred from politically lagged interest groups to the most powerful ones.

Hypothesis 3: The higher the general level of both corruption and income disparity, the lower the level of business performance.

A Model of Corruption and Income Inequality

Consider a linear policy preference function where two interest groups coexist with a government (G). These interest groups are business executives (E) and bureaucrats (B). The government collects taxes on profits and controls expenditures to maintain a balanced budget. The underlying welfare function describing policy preferences under a given institutional and political structure is defined as:

$$(1) \quad W = f(E, B)$$

Furthermore, the government considers equity issues by incorporating weights (Θ_i, j) according to the political strength of each interest group. Subscripts i and j represent political pressures of E and B, respectively, which in turn are determined by their relative costs to organize. These weights can be modified to allow for a variety of policy scenarios in the bargaining process between E and B that form coalitions to lobby the government. Thus, the maximizing problem for the government becomes:

$$(2) \quad \text{Max } W = \Theta_i E_i + \Theta_j B_j$$

The existing levels of corruption (C) and income distribution (ID) characterize the economic environment. Both are discretionary policy elements taken into consideration by the government to maximize overall welfare. First-order conditions for each interest group in this welfare maximization setting can be represented as:

$$(3a) \quad \frac{\partial W}{\partial C} = \Theta E_i \frac{\partial E}{\partial C} + \Theta B_j \frac{\partial B}{\partial C} = 0$$

$$(3b) \quad \frac{\partial W}{\partial ID} = \Theta E_i \frac{\partial E}{\partial ID} + \Theta B_j \frac{\partial B}{\partial ID} = 0$$

Equations (3a) and (3b) highlight the interactions between corruption and income distribution decisions. The government determines a policy mix given the political weights exerted by each interest group associated with each first-order condition. The joint optimization over both policy options in a general equilibrium setting leads to a trade-off of welfare between E and B. Recognizing the interaction between policy options, the government responds to political pressures from business executives and bureaucrats by balancing the marginal welfare benefits from C and ID.

Assuming a well-behaved concave welfare function, the optimal level of policy intervention is found at the bargaining equilibrium point between the marginal rates of welfare obtained from corruption and income distribution. Tangency conditions, where both E and B are willing to trade one policy instrument for another in order to maximize their surplus, are represented by:

$$(4) \quad \frac{\frac{\partial E}{\partial C}}{\frac{\partial B}{\partial C}} = \frac{\frac{\partial E}{\partial ID}}{\frac{\partial B}{\partial ID}}$$

The framework above portrays a government that encourages business activities where both corruption and equity considerations are considered. A welfare maximizing government allows resource transfers to each interest group resulting from any combination of profits and taxes. Such a distinction among policy options is important and has tacitly been made elsewhere by Gupta *et al* (2002). However, these studies have failed to make it explicit.

Empirical Results

Latin America was split into three geographical regions: South America to include Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela; the

Caribbean to include Dominican Republic, Haiti, and Trinidad and Tobago; and Central America to include Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama. It is fully recognized that returns on sales may have been a better measure of profitability across firms and countries. Their absence though led to the use of the value of sales as a proxy for business performance. The empirical results obtained are based on the latter as dependent variables.¹ This set of dependent variables is obtained from the World Business Environment Survey (WBES). The WBES initiative is sponsored by the World Bank Group and other affiliated institutions. It uses a uniform methodology to compile and generate indicators on standard core enterprise information from private firms across countries. The WBES covers perceptions of the investment climate as shaped by economic policy, governance, regulation, infrastructure, finance, and public service quality.

Several organizations provide quantitative and qualitative measures of corruption for both developed and developing countries. Their indexes rank them in terms of the degree to which corruption is perceived to exist among bureaucrats and politicians and reflect the opinions of citizens, business executives, and country-risk analysts. Among the indexes available, the *corruption perception index* compiled by Transparency International extracts information out of 16 surveys from eight independent institutions. It captures the inherent subjectivity of different forms of national corruption across countries. Using different ranges, the *corruption perception index* portrays a low number being associated with a high rate of corruption. This index was inversely rescaled in order to facilitate the results interpretation.

The *business international corruption index* was also used. Incorporated into The Economist Intelligence Unit, it embraces the perception of experts from different sources and methods to measure distinct, but potentially related types of corruption. Despite its relatively mild correlation with the *corruption perception index*, the econometric estimates obtained after using the *business international corruption index* were consistently inferior to the ones obtained through the *corruption perception index*. Therefore, the *business international corruption index* was discarded earlier.

The set of macroeconomic variables are obtained from the Statistical Annals of Latin America and the Caribbean published by ECLAC (2002) and the World Development Indicators published by the World Bank (2000). In turn, they were normalized by country size. These variables include *inflation*, *exports*, *imports*, *foreign direct investment*, *public sector / private sector participation*, and *GDP*. The *Gini index of inequality in the distribution of equivalized household income* was obtained from Ferranti et al (2003).

The combined *political rights and civil liberties index* is taken from *Freedom in the World*. The Freedom House

annually publishes its survey of political rights, civil liberties, and freedom status for several countries and territories. Each of the first two ratings is measured on a one-to-seven scale. The freedom status is the arithmetic average of the previous two ratings with one representing the highest freedom and seven the lowest. Subsequently, countries are classified as free, partly free, and not free based on their combined averages.

The Case When Corruption Prevails

Table 1 reports the estimates when corruption is included in each geographical region as well as the entire Latin America. The explanatory variables account, on average, for about 38 percent of variation in the volume of sales and have the expected signs in each geographical specification. In addition, the F-statistics are significant at the 10 percent level. They suggest that sales are closely linked with the economic and political variables identified to affect business performance.

Inflation is inversely related with the volume of sales but its impact becomes significant at the 10 percent level only for the Caribbean. The degree of openness of a country to the rest-of-the world measured as the combined value of exports and imports to GDP also matters when entered in each regression although not always in a statistically significant fashion. In fact, this trade liberalization variable is found to be positively related to current sales for South America, Central America and Latin America as a whole at the 10 percent level.

Foreign direct investment as a proportion of GDP determines business activity. Its role consistently appears as statistically significant at the 5 or 10 percent level in all regressions but the Caribbean. This result confirms the fact that firms reduce their investments in places where corruption is viewed as risky and ineffective. In these cases, firms demand higher returns to compensate for the additional transaction costs of doing business in corrupted countries. The public/private sector ratio variable is consistently non-significant in every regression except Central America. This result is counterintuitive, as South America has gradually adopted privatization and public administrative reforms as key to open the door for investment that can revitalize their economies.

The political rights and civil liberties index conveys a statistically significant and positive effect on sales at the 10 percent level for South America and the whole Latin Central America. Such an index suggests that the capability of people to freely choose their political leaders and act spontaneously in areas outside the control of government is related to the volume of sales. The GDP per-capita variable is added as a proxy for people's willingness to spend money. Its coefficients have positive signs and are significant at the 5 or 10 percent level except for the Caribbean. These results demonstrate that relatively high

TABLE 1
OLS ESTIMATES INCLUDING A CORRUPTION PERCEPTION INDEX
DEPENDENT VARIABLE: VALUE OF SALES

	South American Companies ¹	Caribbean Companies ²	Central American Companies ³	All
Constant	2.08* (1.85)	1.82 (1.74)	1.09* (1.92)	1.42* (1.90)
Inflation	-0.39 (-1.52)	-0.43* (-1.89)	-0.52 (-0.56)	-0.58 (-1.79)
Share Xs & Ms in GDP	1.23* (1.81)	1.32 (1.52)	1.55* (1.88)	1.24* (1.87)
FDI to GDP	0.78** (1.98)	0.41 (1.16)	0.64** (2.04)	0.60* (2.02)
Public / Private Sector Ratio	0.21 (1.75)	0.55 (1.55)	0.39** (2.24)	0.37 (1.22)
Political Rights & Civil Liberties Index	0.36* (1.77)	0.45 (1.61)	0.36 (1.86)	0.32* (1.90)
Per capita GDP	0.42* (1.81)	0.36 (0.99)	0.49** (2.14)	0.43* (2.00)
Corruption Perception Index	-0.72** (-1.91)	-0.82* (-1.80)	-0.29* (-1.89)	-0.51* (-1.85)
Adjusted R ²	0.38	0.36	0.40	0.39
F-statistics	6.21**	6.83*	7.02*	6.96*
Number of Companies	1,003	322	760	2,085

Notes: Figures in parentheses are *t*-statistics based on White heteroscedasticity-consistent standard errors.

*Significant at 10 percent level.

** Significant at 5 percent level.

1. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela.

2. Dominican Republic, Haiti, and Trinidad and Tobago.

3. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

per-capita income regions like South and Central America show spending patterns large and varied enough to positively affect current sales.

There is a negative impact of the level of corruption on the volume of sales at least at the 10 percent level of significance. Interestingly, a 5 percent statistical significance was found for South America, which is perceived as relatively more corrupt than the other sub-regions. A two-tailed test for the pooled Latin America regression measures the impact of corruption on the volume of sales. The null hypothesis that corruption has zero correlation with the volume of sales is rejected. Thus, a one-standard deviation change in the corruption index (2.36) affects the volume of sales by about 3.0 percent (-

$$0.51 \times 2.36 \div 0.40 = -3.0.$$

The Case when Income Inequality Prevails

Table 2 shows the econometric estimates for the case when only a measure of income inequality is included in each geographical region and Latin America as a whole. The explanatory variables account for about 40 percent of variation in the volume of sales and have the expected signs. In addition, all F-statistics are, on average, significant at the 5 percent level.

The statistical significance of inflation on the volume of sales increases when income inequality replaces the

TABLE 2
OLS ESTIMATES INCLUDING AN INCOME INEQUALITY INDEX
DEPENDENT VARIABLE: VALUE OF SALES

	South American Companies ¹	Caribbean Companies ²	Central American Companies ³	All
Constant	1.88** (2.02)	1.73 (1.60)	1.14* (1.72)	1.22* (1.94)
Inflation	-0.40* (-1.86)	-0.28** (-1.93)	-0.40 (-0.85)	-0.36* (-1.82)
Share Xs & Ms in GDP	1.38* (1.81)	1.35 (1.72)	1.40* (1.91)	1.33* (1.77)
FDI to GDP	0.63* (1.78)	0.39 (1.22)	0.51* (1.83)	0.41** (2.01)
Public / Private Sector Ratio	0.32 (1.75)	0.63 (1.36)	0.35** (2.07)	0.46* (1.80)
Political Rights & Civil Liberties Index	0.23* (1.88)	0.17* (1.83)	0.28 (1.70)	0.37* (1.82)
Per capita GDP	0.33* (1.89)	0.41 (1.22)	0.38* (1.81)	0.40* (1.84)
Gini Index for Household Income	0.51* (1.90)	0.69 (1.71)	0.38 (1.60)	0.44* (1.82)
Adjusted R ²	0.40	0.37	0.42	0.40
F-statistics	4.51**	5.02*	4.88**	5.23**
Number of Companies	1,003	322	760	2,085

Notes: Figures in parentheses are *t*-statistics based on White heteroscedasticity-consistent standard errors.

*Significant at 10 percent level.

** Significant at 5 percent level.

1. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela.

2. Dominican Republic, Haiti, and Trinidad and Tobago.

3. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

corruption index. The volume of sales is negatively associated with inflation with its coefficients being significant at the 5 and 10 percent level with the exception of Central America. The value of exports and imports relative to overall GDP does play a role in affecting the volume of sales. This variable shows a 10 percent significance level in sub-regions where trade restrictions are fewer and markets become more open. The Caribbean did not show a statistically significant relationship for this variable though.

Foreign direct investment also relates to the volume of sales. Its statistical significance ranges from 5 to 10 percent across sub-regions with the exception of the Caribbean. These results are consistent with those found by Smarzynska and Wei (2000) as income inequality seems to

limit countries' capabilities to adjust to variable foreign direct investment. The ratio between the public/private sector variable shows statistical significance in the case of Central America as well as in the pooled regression for Latin America. The most plausible interpretation for this result is that countries in both regions have experienced a continuous expansion of their private sector, which has helped them to preserve their markets and revamp their economies.

The political rights and civil liberties variable shows a statistical significance at the 10 percent level except for Central America. It concurs with Transparency International (2003) that political uprisings and government changes, which depart from true democratic governance, prevents the expansion of business operations. The GDP

per-capita variable provides an indication of market potential and shows its statistical significance at the 10 percent level with the exception of the Caribbean where most of its economic recovery has been overshadowed by illegal business activities. The argument then would be that bigger markets are more likely to maintain a broad consumer base regardless their consumption spending.

The impact of income inequality on business performance does suggest a positive relationship but only significant at the 10 percent level in South America and the overall Latin America. However, a two-tailed test for the pooled country regression rejects the null hypothesis that income inequality has zero correlation with the volume of sales. Hence, one-standard deviation changes in the Gini index for household income (1.96) influences the volume of sales by about 2.2 percent ($0.44 \times 1.96 \div 0.40 = 2.2$).

The Co-existence of Corruption and Income Inequality

Table 3 provides the estimates of an instrumental variable technique to address the simultaneous effect of corruption and income inequality on the volume of sales. The underlying idea is that both variables could be interacting with each other to affect business performance. The instrumental variable technique isolates the impact of corruption and income inequality on the volume of sales by using variables, which are correlated with them but are not influenced by other explanatory variables. Three variables, whose results are deliberately omitted, are used as instruments following comparable empirical studies. These are the exchange rate variation, the capital-output ratio, and government spending on social programs relative to GDP. The fitted regressions show higher adjusted R-squared than previous OLS specifications and yield even more robust results when the corruption index and a measure of income inequality are both included. They account, on average, for 45 percent of variations in the volume of sales. Most of the estimated coefficients maintain correct signs and increase their statistical significance.

Inflation is inversely related to the volume of sales. However, it is statistically significant at the 10 percent level only in South America and the Caribbean. The value of exports and imports to GDP confirms its importance in explaining business performance in terms of both the direction and magnitude of its coefficients. Surprisingly, South America shows a non-significant coefficient despite being single out as one the freest regions in the world.

The role of foreign direct investment under corruption and income inequality is, except for the Caribbean, statistically significant at the 5 percent level and positive in all cases. This finding is especially revealing for South and Central America where Brazil, Chile, and Mexico are among the safest emerging markets due mainly to their efforts to overhaul legislations on foreign investment

restrictions and convincingly attract international financiers. The public/private sector ratio correctly signals its positive relation with the volume of sales. However, it is only significant at conventional statistical levels in Central and Latin America despite explicit measures taken by governments in South America and the Caribbean to privatize state-owned enterprises, deregulate key industries, and remove barriers to competition.

The political rights and civil liberties index is important in explaining the volume of sales across countries. The only exception is the Caribbean where most interest groups still create some form of instability. Over time these countries have moved from quasi-totalitarian regimes to relatively asymmetrical democracies. The per capita income variable is, at different statistical levels, positive and significant in all regressions but the Caribbean. Undoubtedly, reforms implemented to improve income earnings have allowed Latin American families to access a broader market of goods and services.

Previous specifications presented in Tables 1 and 2 show the individual impact of corruption and income inequality on the volume of sales, respectively. However, as discussed earlier, business performance may also be affected through the simultaneous impact of corruption and income inequality. These two variables increase their significance after their interaction is controlled for. Acting together they affect the value of sales to make their impact on sales quantitatively important. Using similar calculations than before, a one-standard deviation change in the corruption index and the Gini index for household income affects the volume of sales by about 3.7 and 2.8 percent, respectively. These results imply that government policies intended to reduce corruption by allowing transparency and achieve better income redistribution by fostering economic growth are conducive to a business climate that boosts sales volumes.

Conclusions

This study empirically examined the role of corruption and income inequality on the volume of sales in twenty Latin American countries. Three basic hypotheses were tested using cross-section analyses for partitioned sub-regions as well as the entire group of countries. The first hypothesis suggests an inverse relationship between the level of corruption and operational revenues. The empirical results support the claim that firms obtain better operational results in countries, which show greater transparency. The main policy implication is that policy-makers, politicians, and public officials should convince the business community that they value the associated benefits of probity as exceeding its cost. They must take into account though that the cultural heterogeneity and wide range of expectations among *Latinos* impede the establishment of a streamlined bureaucracy across the board. Hence, "good-

TABLE 3
IV ESTIMATES INCLUDING CORRUPTION PERCEPTION AND INCOME INEQUALITY INDEXES
DEPENDENT VARIABLE: VALUE OF SALES

	South American Companies ¹	Caribbean Companies ²	Central American Companies ³	All
Constant	1.90** (2.22)	1.91 (1.51)	1.22* (1.96)	1.36** (2.22)
Inflation	-0.42* (-1.89)	-0.30* (-1.87)	-0.36 (-0.65)	-0.49 (-1.54)
Share Xs & Ms in GDP	1.31 (1.81)	1.39** (2.55)	1.32 (1.77)	1.27* (1.87)
FDI to GDP	0.56** (2.28)	0.30 (1.61)	0.45** (3.23)	0.56** (2.01)
Public / Private Sector Ratio	0.38 (1.75)	0.61 (1.04)	0.36** (2.31)	0.39* (1.92)
Political Rights & Civil Liberties Index	0.44* (1.88)	0.32 (1.31)	0.34* (2.27)	0.31* (1.82)
Per capita GDP	0.41* (1.89)	0.42 (1.53)	0.47* (1.90)	0.43** (2.09)
Gini Index for Household Income	0.50** (1.97)	0.61* (1.80)	0.31 (1.66)	0.57* (1.90)
Corruption Perception Index	-0.80** (-2.16)	-0.72 (-1.70)	-0.30* (-1.92)	-0.62* (-1.89)
Adjusted R ²	0.43	0.44	0.45	0.47
Sargan's P-value	0.56	0.80	0.66	0.65
Number of Companies	1,003	322	760	2,085

Notes: Figures in parentheses are *t*-statistics based on White heteroscedasticity-consistent standard errors. Sargan's misspecification test indicates the validity of the instruments being used.

*Significant at 10 percent level.

** Significant at 5 percent level

1. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela.

2. Dominican Republic, Haiti, and Trinidad and Tobago.

3. Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama.

governance" policies that successfully fend off corruption in one country may not be equally effective in another.

A second hypothesis proposes that widespread income disparity leads to a lower level of business performance. The empirical results indicate that the impact of income inequality on shrinking sale volumes is indeed important yet slightly less than corruption. The magnitude of its influence is large in South American firms where income redistribution depends more on the economic and political power exerted by interest groups to exploit rent-seeking opportunities and build coalitions. Therefore, policies

aimed at promoting income redistribution require political will and active monitoring of a committed civil society in order for Latin American firms to successfully cope with lethargic sale volumes as repressed purchasing power takes place.

The third hypothesis combines corruption and income disparity in relation to their effect on the volume of sales. It implies that higher levels of both variables decrease volume of sales. Empirical results are consistent with the hypothesis. Other things being equal, the simultaneous negative effect of red tape and wealth concentration is

compounded and proves significant in the policy framework for Latin American countries. Implementing sound economic policies, market liberalization strategies, and wise integration agreements with the rest of the world can mitigate corruption and income inequality. In turn, these policies will help to further generate opportunities to the business community.

Note

1. The expectations of whether or not sales would change over time were also tested as a dependent variable on separate ordered *probit* specifications. The underlying assumption was that sales expectations would also be affected by the same set of explanatory variables. However, their results did not yield statistically better results as compared to the volume of sales and, therefore, were left out of the analysis.

References

- Abed, G. and Davoodi, H. "Corruption, Structural Reforms and Economic Performance in the Transition Economies", International Monetary Fund, Working Paper No 132, Washington D.C., 2000.
- Abed, G. and Gupta, S. Eds. "The Economics of Corruption: An Overview" in *Governance, Corruption, and Economic Performance*, International Monetary Fund, Washington D.C., 2002.
- Acemoglu, D. and Ventura, J. "The World Income Distribution", *Quarterly Journal of Economics*, 117 (2002): 659 - 705.
- Acemoglu, D., Johnson, S., and Robinson, J. "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution", *Quarterly Journal of Economics*, 118 (2002): 1231-94.
- Ades, A. and Di Tella, R. "Rents, Competition and Corruption", *American Economic Review*, 89 (1999): 982 - 993.
- Barreto, R. "Endogenous Corruption in Neoclassical Growth Model", *The European Economic Review*, 59 (2000): 645 - 661.
- Beranbeim, R. Implementing Anticorruption Programs in the Private Sector. Retrieved from <http://www.worldbank.com/countrydata/article>, 2002.
- Broadman, H. and Recanatini, F. Seeds of Corruption: Do Market Institutions Matter?, The World Bank, Working Paper, Washington D.C., 2001.
- Chand, S. and Moene, K. "Controlling Fiscal Corruption" in Abed, G. and Gupta, S., Eds. in *Governance, Corruption, and Economic Performance*, International Monetary Fund, Washington D.C., 2002.
- Chong, A. Inequality, Democracy, and Persistence: Is There a Political Kuznets Curve?, *Economics & Politics*, 16 (2004): 189 - 212.
- Dominguez, L. and Carman, J. "Organizational Transformation in Transition Economies: Hypotheses", *Journal of Macromarketing*, 21 (2001): 453 - 469.
- Easterly, W., Loayza, N., and Montiel, P., "Has Latin America's Post-Reform Growth Been Disappointing?", *Journal of International Economics*, 43 (1997): 287 - 311.
- ECLAC. *Statistical Annals of Latin America and the Caribbean*, Santiago – Chile, 2002.
- Espach, R. and Tulchin, J. *Combating Corruption in Latin America*. Washington D.C.: Woodrow Wilson Center Press, 2000.
- Ferranti, D., Perry, G., Ferreira, F., and Walton, M., Inequality in Latin America and the Caribbean: Breaking with History?, World Bank, Latin American Division, Washington D.C., 2003.
- Gwarney, J. and Lawson, R. Eds. *Economic Freedom of the World. Annual Reports*, The Fraser Institute, Vancouver, 1997.
- Gupta, S., Davoodi, H., and Alonso-Terme, R. Does Corruption Affect Income Inequality and Poverty? *Economics of Governance*, 3 (2002): 23 – 45.
- Heilbrunn, J., Assessing Political Commitment to Fighting Corruption. Retrieved from <http://www.worldbank.com/countrydata/articles>, 1999.
- Husted, B., "Wealth, Culture and Corruption", *Journal of International Business Studies*, 30 (1999): 339 - 360.
- Inter-American Development Bank. *Facing Up to Inequality in Latin America*, Baltimore, MD: Johns Hopkins University Press, 1998.
- Johnston, M., "Public Official, Private Interest, and Sustainable Democracy: When Politics and Corruption Meet", in K. Elliott, Ed. *Corruption and the Global Economy*, Washington – IIE, 1997.
- Kaplan, R. Ed., *Freedom in the World: The Annual Survey of Political Rights and Civil Liberties*, Freedom House, New York, Several issues.
- Kaufmann, D., Kraay, A., and Zoido-Lobaton, P., "Aggregating Governance Indicators", *World Bank Policy Research*, Working Paper No. 2195, Washington D.C., 1999.
- La Porta, R., Lopez-de-Silanes, F., and Shleifer, A., "Corporate Ownership Around the World." *National Bureau of Economic Research*, Working Paper No. 6625, 1998.
- Londoño, J. and Székely, M., "Persistent Poverty and Excess Inequality: Latin America, 1970–1995", *Journal of Applied Economics*, 3 (2000): 93–134.
- Mauro, P., "Corruption and Growth", *Quarterly Journal of Economics*, 110 (1995): 681- 712.
- Meller, P., "The Pattern of Industrial Concentration in Latin America", *Journal of Industrial Economics*, 27 (1978): 41 - 47.
- Ortiz, J., Toward the Internationalization of Business Education in Latin America in *Business and*

- Management Education in Transitioning and Developing Countries: A Handbook*, Ed. J.R. McIntyre and I. Alon, M.E. Sharpe Inc., 2005.
- Prahalad, C.K., *The Fortune at the Bottom of the Pyramid. Eradicating Poverty Through Profits*, Pearson Publications, 2004.
- Rose-Ackerman, S., *Corruption and Government: Causes, Consequences, and Reform*, Cambridge University Press, 1999.
- Shleifer, A. and Vishny, R., "Corruption", *Quarterly Journal of Economics*, 108 (1993): 599 - 617.
- Smarzynska, B. and Wei, S., "Corruption and Composition of Foreign Direct Investment: Firm-level Evidence", World Bank, Working Paper 2360, Washington D.C., 2000.
- Székely, M., "The 1990s in Latin America: Another Decade of Persistent Inequality, but with Somewhat Lower Poverty", Inter American Development Bank, Working Paper 454, Washington D.C., 2001.
- Tanzi, V., "Corruption Around the World: Causes, Consequences, Scope, and Cures", International Monetary Fund, Working Paper 63, Washington D.C., 1998.
- Transparency International, "Corruption Perception Index", Retrieved from <http://www.transparency.deipress/>, 2003.
- World Bank, *World Development Indicators and The World Business Environment Survey*, Washington D.C., 2000.

Jaime Ortiz is Assistant Vice President for International Programs and Faculty in the Department of Accounting, Finance, and Economics at Texas A&M International University. His research and consulting interests are international business and economic growth and development in Latin America and the Caribbean.

Author's Note: The author thanks both the Editor and reviewers for their comments and suggestions. The research assistance of Rohan Mills and Ali Taal in data collection and processing is also gratefully acknowledged.



JOURNAL OF GLOBAL BUSINESS

Volume 17

Spring 2006

Number 33

Globalization and its Effects on the Convergence of Corporate Governance Systems?

Frederick V. Perry and Scheherazade S. Rehman

Business Performance in Latin America Under Corruption and Income Inequality

Jaime Ortiz

Cluster Analysis as a Reprocessor for Fitting Aggregate Production Functions

Rafael Solis and K.C. Tseng

Promotional Strategies Adopted in the Motorcoach Industry Post 9/11

Kathryn J. Ready and Kathryn Dobie

Management Challenges of XXist Century: Focus on Information

Tom Wielicki

A Business Perspective of US International Seaborne Security Measures: Impact on Importers

Luka Powanga

Looking Below the Surface into Japanese Corporate Governance

William McCarty and Makoto Toda