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Subnational politics and foreign direct investment in Mexico

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ABSTRACT

Focusing on Mexico, this article makes two departures from existing studies of the determinants of foreign direct investment (FDI): (1) it disaggregates investment into three types (resource-, market- and efficiency-seeking); and (2) it models variation in investment subnationally, across the 32 Mexican states. Using panel data for foreign investment between 2000 and 2009, we find that the predictors of subnational variation in investment go beyond simple geographic and economic conditions and include factors such as local political party control, social stability and the perceived effectiveness of state authorities. Moreover, the three types of investment are shaped by distinct social, political and economic dynamics. Insofar as the location and type of foreign investment can affect economic development and inequality within – and not just between – countries, the subnational distribution of investment is of consequence for both academics and policy makers.

KEYWORDS

Foreign direct investment; Mexico; political parties; corruption

INTRODUCTION

Because of the vaunted benefits of foreign direct investment (FDI) – from higher-paying jobs (Moran, 2002), increased labor productivity (Ramirez, 2000), technology spillovers, more rapid economic growth, to reduced income inequality (Jensen and Rosas, 2007) – attracting it has become a top priority for developing and middle-income countries in recent decades. National governments of all stripes and regions have striven to generate

conditions that will be perceived by investors as auspicious for generating returns on their investments. Determining exactly what those conditions are – and what makes one country more propitious than another – has correspondingly become a major concern of political economists and scholars of international business. Existing scholarship, however, has tended to focus on overall investment nationally and to ignore lower levels of aggregation – investment *within* countries and across types of investment – a gap we hope to help fill. Are potential investors deterred by local levels of violence, corruption and political competition? To what extent do regional conditions – not only economic but political and administrative – affect the distribution of investment into different sectors? What factors might subnational governments address in order to attract higher levels of investment from abroad? Insofar as FDI can be linked to economic development, these questions have important ramifications for the regional economic development and equity within national borders.

We focus on the case of Mexico, which has been the top recipient of FDI in Latin America (Dussel Peters, 2009), and draw upon three insights from previous research on foreign investment. First, while the bottom line for multinational corporations (MNCs) is the return on their investment in foreign countries, overtly economic factors such as labor or transport costs alone do not shape the decision to invest. The claim that both economic and political or administrative factors shape the decisions of MNCs to invest in operations in one country or another is well founded (Jensen, 2006). Studies have asserted the importance of political risk (Jensen and McGillivray, 2005; Desai, Foley and Hines, 2006; Busse and Hefeker, 2007), government efficiency, corruption (Abed and Davoodi, 2000; Wei, 2000a, b; Smarzynska and Wei, 2002), political stability (Biglaiser and Brown, 2004), social stability and criminality (Daniele and Marani, 2011) and the rule of law (Busse and Hefeker, 2007). In contrast to conditions that can be factored directly into the costs of production and calculations of revenue, these variables theoretically have an effect on the certainty of a firm's return on its investment in a particular area. While their effect may be seen in economic terms by investing MNCs, the indicators themselves are largely political or administrative in nature.

Second, in addition to being unevenly distributed globally, investment often flows unevenly to different regions within recipient countries (Ortega Gómez, Cruz and Alcaráz Vargas, 2010). While numerous studies have assessed the determinants of FDI flows cross-nationally, much less attention has been paid to whether those or related variables are also important in determining the flows of FDI to states, districts or other federative units.¹ The argument may be made that policies, such as trade or capital regulations, and conditions, such as democratic competition at the national level, are stronger determinants of FDI flows; however, there is little reason to assume that subnational variation does not affect investment meaningfully.

Insofar as state governments are responsible for any policies or conditions that affect the viability of foreign investment, investors will theoretically be sensitive to local political conditions.

Third, all FDI is not created equally, in spite of the tendency of extant studies of the determinants of FDI to lump it together without regard to the sector into which the investments are made and to assume that all investment is driven by the same variables. Foreign investment can be subdivided based on its purpose: whether investors seek to access natural resources, to expand markets for their products, or to take advantage of lower costs of production (Dunning, 1993; UNCTAD, 1998; Dunning and Lundan, 2008; Schultz, 2009). There is reason to believe that, because the types of investment differ in nature and are motivated by distinct goals, they will be responsive to different political and economic conditions. In a cross-national study, for example, Schultz (2009) has shown, with regard to regime type as a predictor of levels of investment, that the assumption that all types of FDI are roughly the same does not necessarily hold true: democracies tend to be more attractive to investors who hope to capitalize on lower production costs and less attractive to those who seek natural resources.

Using time-series panel data that disaggregates the types of foreign investment for the years 2000 to 2009 in Mexico – a world leader in FDI inflows, and a geographically and economically diverse and politically transitional country – we assess the effect of key geographic, economic and political variables that may shape the distribution of FDI across the Mexican states. We seek: (1) to contribute to both the understanding of how local political conditions shape foreign investment in Mexico; (2) to suggest that the Mexican case, in spite of its uniqueness, is suggestive of how other federated developing countries may also experience unequal distribution of FDI based on local conditions; and (3) to contribute to the literature on FDI by advancing the understanding of how types of investment differ from one another with regard to their determinants.

TYPES OF FDI

Following previous theorizing on the nature of FDI, we divide aggregate annual investment into three types: ‘resource-seeking’ ‘market-seeking’ and ‘efficiency-seeking’ (Dunning, 1993; UNCTAD, 1998; Dunning and Lundan, 2008).² This division is based on the presumed interest of the investors and how they seek to take advantage of the Mexican economy to create a return on their investments. In other words, what foreign investors hope to get out of the Mexican economy affects what they put in. Between 2000 and 2009, the annual flows of these three kinds of investment vary markedly and are uncorrelated (Figure 1).³ This suggests that the types of investment do behave differently and that, when

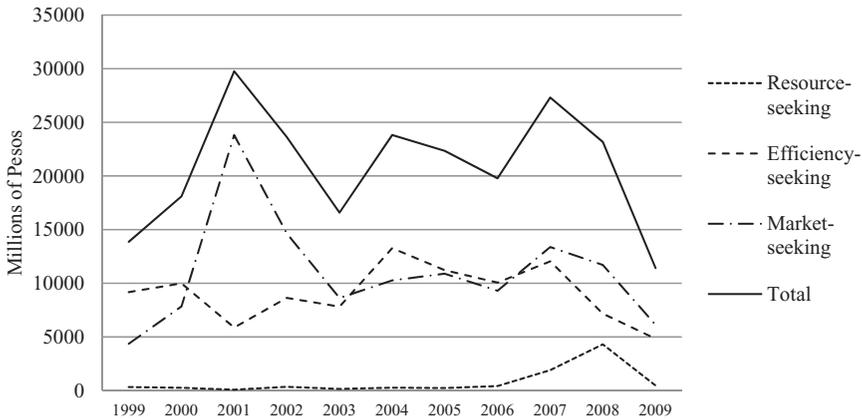


Figure 1 FDI flows to Mexico by type.

aggregated, some of the effects of independent variables may be muddled or concealed. The following section explains how FDI is divided into type.

‘Resource-seeking’ investment is made in order to take advantage of the presence of primary goods in the recipient country that are not being extracted by domestic ventures. Such investors seek reliable stocks of materials that are either not available or not present in their home countries (Dunning and Lundan, 2008; Schultz, 2009). Typically this includes extraction of oil and gas and the mining of metallic and non-metallic minerals (UNCTAD, 2007), along with agricultural products (Dunning and Lundan, 2008). Resource-seeking investment tends to be relatively immobile and location-bound, because it frequently involves the construction of the infrastructure necessary for the extraction of primary goods (Dunning and Lundan, 2008; Schultz, 2009). In Mexico’s case, because the constitution designates that the ownership, extraction, processing and distribution of hydrocarbons be controlled by the state, resource-seeking investment in the country is generally limited to the area of other kinds of mineral extraction, which was opened to full foreign ownership in 1990. We arrive at figures for resource-seeking investment by combining the annual figures for FDI made in the mining and agricultural sectors.

The aim of ‘market-seeking’ foreign investment is to either provide non-tradable goods and services to consumers in the target country or to avoid cost-raising barriers to trade by establishing local production of tradable goods (Dunning and Lundan, 2008). For tradable goods, this means establishing the capacity to produce and sell competitively within the domestic market of the target country, whether by avoiding a trade barrier or simply locating within the target market. For non-tradable goods and services (banking, telecommunications and so forth), the intention is to

compete with local providers for domestic clients. This kind of investment often involves the duplication of business structures in the target country (Schultz, 2009) and tends to produce goods and services sold within the target country, rather than exported. Dunning and Lundan (2008) argue that market-seeking investment is particularly affected by government policy, both investment incentives and trade barriers. Our aggregate figure for market-seeking FDI includes investment in services, construction, utilities, commerce, transportation, finance and 'other services' (INEGI, various years). Again, Mexico has legal restrictions on foreign investment in some areas, such as the generation and transmission of electricity. These policies, however, are dictated by federal law and are thus expected to have little impact on the subnational variation of FDI in Mexico.

'Efficiency-seeking' investment in middle-income and developing countries is made with the intent to lower costs of production and marketing by taking advantage of differentials in the costs of inputs and relies on relative openness of cross-border markets (Dunning and Lundan, 2008). We include low labor costs, low transportation costs and potential to benefit from agglomeration. Schultz (2009) points out that this type of investment often relies on vertically integrated supply chains, where a single portion of the production process is outsourced to take advantage of lower labor costs. This characterizes much foreign investment into the *maquila* sector that has clustered on the US–Mexico border. Schultz (2009) also notes that efficiency-seeking foreign investment is most common in high-value-added manufacturing with low transport costs (e.g. textiles, electronics, computers, machinery). Investment in the manufacturing sector may also be market-seeking, typically where trade barriers make the import of particular products inefficient or expensive. In Mexico, however, manufacturing investment is reasonably treated as primarily efficiency-seeking: (1) Mexico has had very low tariff barriers for the past two decades; and (2) manufacturing investment is concentrated in the border states, where transport to US markets is least expensive, suggesting that the intent is to seek efficiency rather than access to Mexican markets. Moreover, *excluding maquiladoras* nearly two-thirds of Mexican manufactures are exported, primarily to the US market, and FDI into the manufacturing sector has been dominated by investment in the maquiladora sector (Máttar, Moreno-Brid and Peres, 2003). For these reasons, we use annual figures for flows of manufacturing investment as approximations of the amount of efficiency-seeking investment across the 32 federative units in Mexico.

Assuming the intent of investors based on the sector into which they invest is an approximation, potentially papering over sectoral differences and investment seeking to take advantage of more than one aspect of the Mexican economy. Given the characteristics of Mexico's economy, however, the divisions by type are largely justifiable by sector; this may not be true of other target countries. For example, other large countries with

higher trade barriers are likely to have a higher proportion of manufacturing investment that is market-seeking than Mexico, whose manufacturing investment is heavily dominated by firms seeking to export to the US market. Because sectors and the intent of investors line up relatively neatly in the Mexican case, it is a good case for examining investment through the lens of investor intent rather than by sector alone. Distinguishing between types of investment is crucial for more nuanced studies of foreign investment for a variety of reasons. First, the geographic distribution of the three distinct types of FDI is likely to be affected by different variables (both cross-nationally and subnationally); resource-seeking investment, for example, will obviously be affected more by the presence of natural resources than either market- or efficiency-seeking FDI. Second, they differ with regard to their potential to benefit the countries in which they are made. Schultz (2009; UNCTAD, 2007) points out that resource-seeking investment tends to be relatively immobile, infrequently generates linkages within the local economy, and has benefits that accrue primarily to the host government in the form of tax revenue and licensing fees rather than to its citizens in the form of salaries or lowered costs for goods. By contrast, efficiency- and market-seeking investment are more likely to create linkages to other parts of the economy and potentially generate positive spillovers, although market-seeking FDI may crowd out domestic firms. The compelling larger issue, then, is how local political and economic conditions affect economic development by influencing flows of foreign investment.⁴ The analysis here focuses on the first part of this relationship but should be understood as a step toward understanding the larger relationship as a whole.

THE CASE OF FDI IN MEXICO

The broader questions about the subnational distribution of FDI addressed here are particularly important for Mexico. The opening of Mexican markets to foreign investment was part of the larger structural adjustment and liberalization project that Mexico undertook beginning in the mid-1980s (Samford, 2010). The opening to FDI went along with the privatization of many state-run enterprises and the elimination or reduction of most trade barriers, and was seen as a major pillar of the federal government's development strategy. Although some earlier sectoral allowances were made – such as the allowance of foreign exploitation of mineral wealth in 1990 – in 1993, the Mexican government published the Law of Foreign Investment, which established federal policies opening Mexico quite broadly to foreign investment. While this policy has failed to resolve many of the fundamental problems facing the Mexican economy, such as the formation of local linkages and finance (see Dussel Peters, 2000), it has indeed been effective at raising the levels of investment across a

variety of sectors. The 1993 law articulated a national policy of deregulating previously prohibited foreign investment and favoring its attraction as a developmental policy; it did not, however, specify or dictate what policy authority the 32 Mexican states (including the Federal District) would have to shape investment within their territories. As a consequence, state-level strategies have not been coordinated, leading to a patchwork of policies across states. To give some idea of the variation in strategies, ProMexico (2012) provides a list of 22 broad investment incentives offered by states, ranging from temporary exemption from a variety of state taxes to reduction of license fees to subsidized water and sewage connections. States grant anywhere from zero of these incentives to all 22 (Zacatecas) (with an average of 9.5). Moreover, a number of states have identified themselves as providing incentives on a discretionary basis (e.g. 'The Yucatán State Government also provides discretionary incentives, according to the company, sector, and jobs generated' (ProMexico, 2012).) These discretionary incentives frequently represent significant costs to the states; the state of Campeche, for example, lists such infrastructure assistance as the construction of roads, electrification projects and water treatment facilities (ProMexico, 2012). In short, while the Law of Foreign Investment legalized and loosened restrictions on most forms of foreign investment, it allowed for the states to actively develop their own approaches to encouraging it in their states.

As long as it has been attempting to attract FDI, the Mexican federal government has expressed an interest in the decentralization and the devolution of policy-making authority and fiscal decision-making to state governors and legislatures. Although technically a federation of states, Mexico under the Partido Revolucionario Institucional (PRI) (1929–2000) was characterized by a hyper-centralized political order that ensured institutionalized party control over all levels of government and 'effectively controlled most organizations in Mexico through its labor, peasant, and popular "sectors"' (Coppedge, 1993: 254; Edmonds-Poli, 2006). The rising presence of competing parties at the state level in the 1990s 'destroyed the elements ensuring institutional subordination to the [PRI] president' and opposition parties took steps to rationalize state-level government (Hernández-Rodríguez, 2003: 108). Since it took control of the presidency in 2000, the Partido Acción Nacional (PAN) has furthered efforts at fiscal and political decentralization. Although sometimes met with scepticism (see Edmonds-Poli, 2006), two important changes have been accomplished: (1) the percentage of the central government's expenditures that are transferred to the states has risen; and (2) political competition for control of state governorships and legislatures has increased markedly. These changes suggest that local political and administrative differences are likely to be of increasing import in determining the geographic distribution of foreign investment among the Mexican states.

In their study of FDI and income inequality in Mexico, Jensen and Rosas (2007) assume that investment that flowed into Mexico during the period between 1990 and 2000 (especially after the implementation of NAFTA) was shaped primarily by the exogenous and invariant characteristics associated with proximity to the border. While location is still indubitably important to FDI flows to Mexico, since 2000, with the country's democratization, increased fiscal decentralization, the national presence of both a business-friendly right party (PAN) and a social democratic party (PRD) to the left of the ideologically nebulous PRI (Coppedge, 1997), and increased political competition, the assumption that location is the sole determinant is no longer tenable. We incorporate these other variables in the period following Jensen and Rosas's (2007) study in order to estimate their impact on the distribution of investment.

Aside from these reasons, Mexico is an excellent case for subnational analysis: state-level institutions across Mexico are very similar, yet the states vary widely in levels of political competition, income and social stability. While state legislatures differ in size, the members are elected by the same mixed formula of 'first past the post' representatives elected from single-member districts (two-thirds of members) and representatives elected through proportional representation (the remaining one-third of members). Governors are elected for a single six-year term. Hecock (2006) points out that these and other institutional features of Mexican state government are broadly similar across the Mexican states. While Mexico, as a federal entity, is unique in many respects (proximity to the US, history of hegemonic party rule and so forth), the dynamics of foreign investment in the country are likely to be at least suggestive for other developing and middle-income federated countries both in the region (Brazil, Argentina, Venezuela) and outside (India, Nigeria, Russia, Malaysia).

The period after 2000 and before the global economic crisis was a period of relative stability in flows of foreign investment. Major inflows of FDI followed the 1993 liberalization of investment rules and 1994 implementation of NAFTA. By the late 1990s, this spike had flattened significantly. Moreover, important adjustments were made in the Law of Foreign Investment over the course of the 1990s, further loosening the restrictions on foreign investment. For example, partial restrictions on foreign ownership of firms engaging in the production of automotive parts and accessories were eliminated from the law in 1998. For this reason, we examine investment patterns in the in the 10 years beginning in the year 2000.⁵

FDI: cross-national and subnational

Most previous studies of the factors that shape the decisions of MNCs to invest in foreign countries have approached the issue with cross-national

research designs. This decision is certainly justifiable as many conditions that might theoretically affect levels of investment are determined by the federal government and do not vary appreciably within countries: exchange rates, capital controls, import/export policies, national political issues, federal government efficiency and the like. There are, however, a variety of factors – economic, political, social and administrative – that have been assessed in cross-national analyses that can and do vary at the subnational level. It is this local variation that we are interested in and expect to affect the distribution of foreign investment subnationally. Both state government officials and investors are active participants in the process, the latter weighing benefits and risks of regions against each other, and the former working where possible to affect the conditions in their states (or perceptions thereof) to shape the decisions of investors.

Economic conditions

Previous studies of aggregate FDI flows to Mexico have proposed a variety of geographic factors that shape the economics of investing in Mexico. First, location on the US–Mexico border has been found to be a significant positive predictor of aggregate foreign investment because of ease of moving products to Mexico’s largest export market in the US (Ortega Gómez, Cruz and Alcaráz Vargas, 2010). With FDI disaggregated into three types, however, this relationship is expected to hold only for efficiency-seeking investment, as investment in the border region is likely to be primarily intended to take advantage of lower labor costs close to the consumer markets in the US. Proximity to the US is not expected to have a significant effect on market-seeking or resource-seeking investment, as location on the border is neither an indication of larger markets or greater natural resource reserves.

Presence in the Mexico City Federal District has also been found to be a strong positive predictor of general foreign investment because of its importance as the commercial and political center of the country, as well as having the highest level of economic development and business agglomeration (Ortega Gómez, Cruz and Alcaráz Vargas, 2010). We expect it to have a positive effect on all three types of FDI when they are disaggregated. Investors seeking to take advantage of resources, local efficiencies and markets, whose investments are typically registered in the state where they are made, are also likely to establish offices and infrastructure in the Federal District, the country’s political and business center. Although we expect positive relationships with all three types, we anticipate that the strength of the relationship with market-seeking investment will be notably stronger than the other two; Mexico City is not only the probable site for offices and headquarters for market-seeking investments made in

other states but is itself also the country's largest and wealthiest consumer market.

Finally, the presence of ports should theoretically be positively associated with investment in general, although this relationship has not been substantiated by previous studies of aggregate FDI (Ortega Gómez, Cruz and Alcaráz Vargas, 2010). When disaggregated, we anticipate that the presence of ports in a state will have a positive effect on efficiency-seeking investment, because of the potentially lower costs of transportation of produced goods to market. As the primary areas of investment in mining and mineral extraction are in highland areas, we anticipate a negative relationship between states with ports and resource-seeking investment. We anticipate no meaningful relationship between the presence of ports and market-seeking investment; most Mexican ports are not major population centers, which tend to be inland.

Five other economic factors are anticipated to affect the distribution of FDI: (1) market size and agglomeration (measured by state GDP); (2) local wealth (measured by per capita GDP); (3) production costs (approximated with mean salary); (4) levels of human capital (measured with mean educational level); and (5) for resource-seeking investment, an approximation of non-petroleum mineral resources (approximated with the proceeds of mining production in 1998). The size of the market and demand for investment, most often measured with figures for gross domestic product (GDP), is generally expected to be positively associated with aggregate flows of investment (Jensen, 2006; Busse and Hefeker, 2007; Ortega Gómez, Cruz and Alcaráz Vargas, 2010). GDP may also be indicative of agglomeration, or the presence of complementary firms and a trained workforce, which should lower the cost of inputs and the need to train workers. However, while this factor may have a positive effect on market-seeking and efficiency-seeking investment, we anticipate that it will have no effect on resource-seeking investment. We similarly expect mean per capita income, as a measure of wealth, to have no effect on resource-seeking investment. It is anticipated, though, to be positively correlated to market-seeking investment, as higher levels of individual wealth may attract providers of goods and services. We expect a negative relationship with flows of efficiency-seeking investment, as the potentially inflated prices of land, rents or inputs in wealthy areas may dissuade investors seeking efficiencies such as lower production costs. With regard to employees, levels of human capital are expected to be positively correlated with all three kinds of investment, all else equal, as better-educated laborers are more productive. Mean salary levels, however, are expected to be negatively correlated with each type of FDI, given that ventures of all types require local workers; the strongest relationship might be anticipated with efficiency-seeking investment. Finally, a state's level of mineral wealth will affect the levels of resource-seeking investment.

Political factors

The claim that both economic and political factors shape decisions to invest in operations in one country or another is relatively non-controversial (Jensen, 2006). Beyond factors that are overtly economic in nature, political and administrative factors also vary widely in Mexico, among them level of political competition and concentration of political parties, levels of corruption and governmental efficiency, rates of criminality and labor stability. Again, given that investors make careful choices about where they invest, there is little reason to assume that political and administrative factors that do vary between subnational units play no part in their investment decisions (Bandelj, 2002). Like those at the federal level, state lawmakers have incentives to encourage foreign investment within their borders. Many of the benefits that are said to be provided by FDI accrue not only at the federal level but at the state level as well. Moreover, as Paul (2002: 483) argues, given the rising role of subnational units in global economic activities means that 'it is no longer plausible that the national scale will hold most of the answers for questions regarding regulation of the global political economy'. As state governments themselves engage in the task of attracting FDI, subnational analyses become increasingly important.

Cross-national studies have repeatedly found that democratic governance is positively correlated with inflows in foreign investment (Harms and Ursprung, 2002; Jensen, 2003; Busse, 2004; Busse and Hefeker, 2007). In contrast, Benton (2008) suggests that electoral certainty, or lower level of electoral competition, may actually improve levels of investment because of the predictability it provides to investors. These views are not necessarily entirely at odds with one another: while the democratization of Mexico at the federal level may have helped raise investment because of increased transparency and responsiveness, electoral stability at the state level may ensure the continuity of state-level bureaucrats and policies, which generates a degree of local stability where firms are actually located. In keeping with Bennet (2008), then, we hypothesize that lower degrees of state-level political competition will be positively associated with levels of investment; we expect this relationship to hold regardless of the type of investment. Mexico emerged from single-party control at the federal level in 1997 (2000 in the executive branch), but pockets of PRI dominance remain in some states while others voted the PRI out of state legislatures and governorships prior to 2000. As the erosion of the PRI's hegemonic control was in large part advanced by electoral victories at the state level before the loss of the PRI majority in the federal legislature and presidency, there is great variation in the political conditions and dynamics in state-level politics (Hecock, 2006). Some states remain strongly dominated by the PRI (e.g. Campeche, Puebla, Quintana Roo,

Sinaloa), while others have moved solidly away from the PRI and regularly elect PAN (e.g. Querétaro) and Partido de la Revolución Democrática (PRD) governments (e.g. Baja California Sur). Because of the historical dominance of the single-party PRI regime, decreasing party concentration in state legislatures and gubernatorial margins of victory have been interpreted as heightened levels of electoral competition. We use a bivariate measure to indicate undivided control of state executive and legislative branches by a single political party, an indication of lower levels of party competition.

We also assess the effect of party control in the state governments by each of the three major political parties: the PRI, PAN and PRD.⁶ Although the liberalizing reforms of the 1980s and 1990s were enacted by the ruling PRI, the PAN arose as the right-of-center, pro-business alternative to the PRI (Nolan, 1999). The conventional wisdom has been made that in comparison to the PRI, 'the party's pro-business stance tends to instill investor confidence and subsequently spark the economies' in areas of PAN control (Nolan, 1999: 32). The PRD's leftward political bent, by contrast, has often been interpreted as hostile to business, particularly to multinationals, who have been criticized by party luminaries such as Andrés Manuel López Obrador for 'looting' and 'pillaging' Mexican resources and wealth. In short, the expectation based on the conventional wisdom about the major Mexican parties is that states where the PAN has a strong presence will have an advantage in efficiency-seeking FDI over those controlled by the PRD or PRI, because of the party's greater willingness to work to attract such investment and to employ available discretionary incentives (as discussed above). Market-seeking investment, which potentially benefits incumbent parties by lowering costs and raising quality of goods and services in the domestic market, is not expected to be affected greatly by which party dominates as it is more likely to be sought by parties of all stripes. These expected effects need not be based only on actually implemented policy but may be a consequence of party reputation as well.⁷ We include dummy variables that indicate executive control by the rightist PAN and leftist PRD, leaving historically dominant and ideologically less-defined PRI as the residual category.

Social stability

We use a set of variables to approximate the relative social stability of the Mexican states. Jensen (2006) states that one of the top concerns reported by investors in foreign markets is the safety and security of their employees and installations. Investors' perceptions of the degree of criminal behavior are thus expected to affect their willingness to invest in a particular region. The rate of reported crimes per 100,000 state residents is used as an indicator of the level of uncertainty faced by investors in this respect.

Cross-national studies have used the presence of internal armed conflict to capture the uncertainty posed by violence (e.g. Busse and Hefeker, 2007); however, for Mexico during the time period in question, criminality was clearly a more germane concern than internal conflict.

Although union density has greatly declined in Mexico since the 1980s, organized work stoppages continue to represent a threat to some sectors. At the beginning of the period in question (2000), union density stood at just under 20 per cent of the formal workforce; however, density varied from nearly 50 per cent in some areas of mineral extraction, around 30 per cent in the service sector, under 20 per cent in manufacturing, to about 2 per cent in construction (Fairris and Levine, 2004).

The number of strikes recorded in the year in question is used as an indicator of the uncertainties that investors may face from labor stoppages and the consequent disruption of business. Both because of the higher union density and the relative immobility of their investment, we anticipate that resource-seeking investors will be more sensitive to both strikes and criminality than market- and efficiency-seeking investors, whose investments tend to be relatively more mobile and are made in sectors with lower levels of union density.

Administrative competence

Finally, indicators of corruption and overall efficiency are used to approximate the variation in the bureaucratic conditions that foreign investors face when deciding where to locate investment in Mexico. Previous studies have found that higher levels of governmental corruption depress inflows of investment (Abed and Davoodi, 2000; Wei, 2000a, b; Smarzynska and Wei, 2002). The general logic behind the negative relationship is that corruption tends to raise the costs – by creating the need to pay bribes – and uncertainty associated with investing in a particular location. As such, investors of all types can be expected to avoid locations where levels of corruption and malfeasance are perceived to be high.⁸ The state corruption index scores and state ranks from *Transparencia Mexicana*'s (various years) National Index of Corruption and Good Governance are used here to approximate perceived levels of corruption. Similarly, investors can be expected to avoid, as much as possible, areas with local governments that are believed to be generally inefficient. The Government Efficiency and Effectiveness Index from the *Instituto Mexicano para la Competitividad* (Mexican Institute for Competitiveness) is used to capture the variation in the quality of state administration.⁹ The index consists of elements such as ease of opening a business, government transparency, efficiency of government investment and use of electronic forms (for full description and weighting of index factors, see IMCO, 2008). Lower index numbers are indicative of lower levels of efficiency and effectiveness; as such the

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Table 1 Variable definitions and sources

Condition	Indicator	Definition	Source
Outcome: FDI	FDI (log)	Annual FDI into state, divided by types (millions)	INEGI
Market size	GDP (log)	Annual state GDP (thousands)	INEGI
Individual wealth	GDP pc (log)	Annual state GDP per cap(thousands)	INEGI
Transport costs	Border Ports	States with US border = 1 States with ports totalling >1,000,000 tons = 1	- Secretaría de Comunicaciones y Transportes
Effect of Federal District	DF	Federal District = 1	-
Production costs	Salary	Average daily salary	Comisión Nacional de los Salarios Mínimos
Human capital	Education	Average educational attainment level	INEGI
Mineral wealth	Proceeds from mine extraction	Annual value of mining proceeds (1998)	INEGI
Party politics	Undivided government	Governor and legislative plurality of same party = 1	State electoral commissions
	PAN governor	PAN governor = 1	State electoral commissions
	PRD governor	PRI governor = 1	State electoral commissions
Social stability	Strikes	Annual number of major work stoppages	INEGI
	Crime rate	Reported crimes/100,000 residents	INEGI
Administrative quality	Corruption	Corruption Index score (lowest = 1)	Transparencia Mexicana
	Corruption rank	Corruption Index rank (lowest = 1; highest = 32)	Transparencia Mexicana
	Efficiency and Effectiveness Index	Efficiency and Effectiveness Index score (lowest = 0; highest = 100)	Instituto Mexicano para la Competitividad

index is expected to be positively correlated with flows of FDI. Tables 1 and 2 summarize these variables and their anticipated relationships with each of the types of foreign investment, descriptive statistics and bivariate correlations are provided in Appendix Tables 1 and 2.

Table 2 Anticipated associations with foreign direct investment

Variable	Indicator	Resource-seeking FDI	Market-seeking FDI	Efficiency-seeking FDI
Market size	GDP (log)	0	+	+
Individual wealth	GDP per capita (log)	0	+	-
Production cost	Mean min wage	0	-	-
Human capital	Mean years of education	0	+	+
Natural resource wealth	Value of mineral production (1998)	+		
Location effects	Federal District	+	+	+
	Border	0	0	+
	Ports	-	0	+
Party politics	Undivided government	+	+	+
	PAN governor	0	0	+
	PRD governor	0	0	-
Social stability	Strikes/year (log)	-	-	-
	Crimes/100,000	-	-	-
Administrative quality	Efficiency and Effectiveness Index	+	+	+
	Corruption Index	-	-	-
	Corruption Index	-	-	-

STATISTICAL METHOD

We test these expected relationships by estimating a series of random-effects generalized least squares (GLS) regression models, using three different dependent variables for each model (i.e. flows of resource-seeking, market-seeking and efficiency-seeking). Due to the likelihood of unmodeled heterogeneity between the panels, a Hausman specification test was used to determine whether fixed-effects models should be used in lieu of random-effects models. Because of the presence of variables in the base model that do not vary within panels (location dummies for the Federal District, border states and port states), the fixed-effects model was estimated using Plümper and Troeger's (2007) fixed-effects vector decomposition method, a three-stage method that allows for the estimation of fixed-effects models that have slow-moving or unchanging variables within panels. The results of the Hausman test ($\chi^2 = 5.19$, $p = .52$) fail to reject the null hypothesis and recommend the use random-effects over fixed-effects models.¹⁰

With FDI disaggregated into types, we run three parallel models that are the same in every respect except for the dependent variable, which is either resource-, market- or efficiency-seeking investment flows. The 32

panels include the years 2000 to 2009, with each of the independent variables lagged one year (i.e. $t-1$, or from 1999 to 2008) in order to clarify the direction of causation. We focus particularly on three elements of the regression models results. First, we look across the three parallel models at whether or not the coefficients have the direction and significance that is expected and how the significance of the predictors differs across the different dependent variables. Second, we compare the size coefficients across each set of three models in order to compare the sensitivity of each kind of investment to the independent variables. Finally, we are attentive to the overall amount of variation that can be explained for each kind of investment, as indicated by each model's R^2 . We begin with a primarily economic base model that is based on a study of aggregate FDI by Ortega Gómez, Cruz and Alcaráz Vargas (2010) and includes an indicator of market size, wealth, production costs (salary), human capital (education), three bivariate geographic predictors and the proxy for resource wealth for resource-seeking investment. The three models that follow each include independent variables for testing the effects of party politics, social stability, administrative competence or quality; the final model combines many of the independent variables (see Table 3).

The base model reveals important differences between the predictors for the different types of foreign investment that remain generally constant through all of the estimated models. As expected, resource-seeking investment is not affected by the size of the market/agglomeration, while the other kinds of investment rise by between 0.4 and 0.8 per cent for every 1 per cent increase in the state's GDP.¹¹ Contrary to expectations, individual wealth has a significant negative impact on market-seeking investment. Mean salary level also defies expectations, being positive for market-seeking investment. Educational levels affect resource- and market-seeking investment as predicted, but are not significantly related to resource- or efficiency-seeking investment. The Federal District dummy shows a very strong effect across the models and, as expected, a much stronger association for market-seeking investment than the other forms: on average 455 per cent higher than the 31 other states, 355 per cent and 280 per cent for efficiency- and resource-seeking investment, respectively. The effect of being a border state is very strong as well: roughly 350 per cent increase in investment over non-border states. Crucially, however, the effect only holds for efficiency-seeking investment in the manufacturing sector. Finally, contrary to our predictions, the indicator for the presence of ports is negatively associated with efficiency-seeking investment (and resource-seeking investment in later models). Because many of these states are in southern Mexico, this perhaps underlines the importance of land proximity to the American market for efficiency-seeking investors. Finally, the overall R^2 for these models indicates that they explain between about a

quarter of the variation in resource-seeking FDI and over half the variation in efficiency-seeking FDI.

Model 2 demonstrates a relationship between party politics and levels of investment across the Mexican states. Those states with undivided governments have roughly 60 per cent higher levels of both resource- and efficiency-seeking investment, suggesting a bias toward local political stability over close political competition. Broken down by party in control of the executive branch, there is a very clear preference among efficiency-seeking investors for states controlled by the conservative, business-friendly PAN. Other factors held constant, states controlled by a PAN executive have 70 per cent more investment in manufacturing than states controlled by other parties. The apparent effect of the PAN, as expected, is limited to investors seeking efficiencies. The presence of these political variables raises the R^2 of efficiency-seeking investment to 0.60, from 0.54 in the base model.

The findings of Model 3 for social stability run counter to expectations in several ways. None of the forms of foreign investment were significantly deterred by the number of labor strikes in the previous year, suggesting that investors see higher levels of labor activity as a reasonable risk. In fact, market-seeking investors appear to be quite tolerant of labor disputes. Rates of criminality and, contrary to expectations, neither market- nor efficiency-seeking investors appear to be dissuaded by higher levels, displaying a tolerance of common criminality. Resource-seeking investment, however, does fit with the expectation that higher levels of criminality create uncertainty that deters investors. The inclusion of these indicators of stability has the greatest effect on the social stability model, raising the proportion of variation explained from 0.26 to 0.31. Finally, we find apparent tolerance for levels of corruption and inefficiency by market- and efficiency-seeking investors. Neither of the measures of corruption (index score or rank) approached a significant association with any of the types of investment. It is quite possible that a moderate level of corruption is simply written off as costs of investing in Mexico or that the actual costs of corruption do not vary enough to matter to investors.

The final model combines most of the previous variables; the coefficients remain quite stable from the earlier the models. Resource-seeking investors appear to have a very strong preference for undivided state government (73 per cent more foreign investment in such states), a preference for lower levels of criminality, and a bias toward states whose governments are reportedly more efficient and effective, which did not emerge in the partial model. Market-seeking investors appear to be less sensitive to political and administrative conditions in the states, being motivated primarily by the size of the market, salary, education and location within the Federal District. Aside from being strongly affected by location, market size and

Table 3 Determinants of annual state-level FDI flow by type, 2000–09 (Part 1)

Dependent variable: type of FDI	Base model			Party politics			Social stability		
	Resource	Market	Efficiency	Resource	Market	Efficiency	Resource	Market	Efficiency
GDP _{t-1}	-0.17 (0.27)	0.77*** (0.25)	0.41* (0.25)	-0.11 (0.30)	0.76*** (0.26)	0.60** (0.25)	-0.18 (0.25)	0.76*** (0.24)	0.42** (0.22)
GDP per capita _{t-1}	0.13 (0.34)	-0.56*** (0.20)	-0.73*** (0.23)	0.06 (0.35)	-0.54*** (0.21)	-0.95*** (0.24)	0.11 (0.31)	-0.52*** (0.20)	-0.69*** (0.23)
Salary _{t-1}	0.004 (0.006)	-0.02** (0.006)	0.000 (0.006)	0.003 (0.006)	-0.02** (0.007)	-0.000 (0.006)	0.004 (0.006)	-0.01** (0.006)	0.001 (0.007)
Education _{t-1}	0.33 (0.33)	1.03*** (0.34)	0.60 (0.47)	0.45 (0.34)	1.08*** (0.36)	0.70 (0.45)	0.45 (0.32)	0.96*** (0.33)	0.46 (0.48)
DF	2.80*** (0.90)	4.55*** (0.58)	3.55*** (0.61)	2.48** (1.04)	4.55*** (0.87)	3.39*** (0.72)	2.65*** (0.89)	3.66*** (0.58)	2.85*** (0.92)
Border	0.34 (0.63)	0.19 (0.70)	3.47*** (0.56)	0.28 (0.66)	0.11 (0.74)	3.33*** (0.52)	0.43 (0.52)	-0.05 (0.68)	3.21*** (0.51)
Ports	-0.62* (0.34)	0.53 (0.48)	-1.26** (0.53)	-0.73* (0.40)	0.41 (0.52)	-1.12** (0.25)	-0.45 (0.31)	0.38 (0.46)	-1.46*** (0.55)
Mining production	0.34*** (0.10)			0.29** (0.12)			0.35*** (0.10)		
Undivided government _{t-1}				0.61** (0.30)	0.14 (0.23)	0.59** (0.25)			
PAN governor _{t-1}				-0.04 (0.40)	-0.36 (0.25)	0.70** (0.34)			
PRD governor _{t-1}				0.08 (0.29)	-0.17 (0.60)	0.08 (0.44)			
Crime rate _{t-1}							-0.0004*** (0.0001)	0.0002 (0.0002)	0.0004** (0.0002)
Strikes _{t-1}							0.09 (0.14)	0.28*** (0.10)	0.21 (0.25)
Effectiveness Index _{t-1}									
Corruption Index _{t-1}									
Constant	-4.01 (5.19)	-15.50*** (4.19)	-6.94 (4.43)	-5.47 (5.42)	-15.45*** (4.53)	-11.02** (4.76)	-4.40 (4.58)	-15.25*** (3.92)	-6.78 (4.23)
<i>n</i>	320	320	320	320	320	320	320	320	320
χ^2	804.6***	1175.5***	425.5***	887.4***	1206.7***	522.1***	813.3***	1367.2***	460.6***
R ² (overall)	0.26	0.44	0.54	0.27	0.43	0.60	0.31	0.47	0.57

Note: Time-series random-effects generalized least squares regressions with robust standard errors. Table gives coefficient and (robust standard error).

*** $p \leq .01$, ** $p \leq .05$, * $p \leq .10$; two-tailed.

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wealth, efficiency-seeking investment is strongly linked to undivided state
government and electoral dominance PAN.¹²

DISCUSSION: THREE MOTIVES, THREE DYNAMICS

What emerges from these statistical models is a very clear impression that quite different dynamics are at work once FDI is disaggregated into the three subcategories based on its presumed intent. These disaggregated results underline some pieces of conventional wisdom, such as the Federal District's importance for investment. They also point to problems with aggregated investment data by showing that, for example, the border effect is limited to efficiency-seeking investment but has a strong enough effect on that sector that it also appears to be associated with aggregate FDI flows.

Investors seeking to gain access to the domestic Mexican market appear to be neither greatly encouraged nor perturbed by state-level political and social conditions; these variables jointly only explain 3 per cent more variation than economic factors alone. Location in Mexico City and market size have the most notable effects; this is consistent with Schultz (2009), who predicts that market size will be one of the primary factors determining levels of investment and that otherwise location will not be a strong predictor. While it can have the effect of crowding out less efficient domestic businesses, market-seeking foreign investment may have the effect of lowering prices and improving the quality of the goods in the Mexican market. As such, the appeal of this kind of investment may extend across party lines as a popular means of raising the living standards of the population and thus produces no systematic bias against or in its favor at the state level (see Baker, 2003). The unexpected finding that investors appear unconcerned by levels of criminality either appears to gainsay investors' stated interest in the safety of their workers (Jensen, 2006), or suggests that concern does not necessarily include employees in the target country. Moreover, it may imply that major differences between states are not perceived by investors or simply that the levels of criminality were simply not perceived as costly enough to keep investors from trying to tap into Mexican markets. Why these investors do not stay away from areas of higher crime or labor unrest (or the tipping point at which they would begin to) is a potentially more difficult question to address. This paper offers little insight into the levels at which investors will cease to accept this kind of uncertainty. In short, market-seeking investment is shaped primarily by what are typically viewed as economic factors, many of which are not likely to change due to short-term policy changes.

While efficiency-seeking investment clearly clusters in the border region in order to make the most of both inexpensive Mexican labor and proximity to the American market, it is also affected by political factors, namely the

Table 4 Determinants of annual state-level FDI flow by type, 2000–09 (Part 2)

Dependent variable: type of FDI	Admin quality			Combined		
	Resource	Market	Efficiency	Resource	Market	Efficiency
GDP _{t-1}	-0.16 (0.27)	0.74*** (0.26)	0.42* (0.23)	-0.10 (0.25)	0.72*** (0.24)	0.56** (0.22)
GDP per capita _{t-1}	0.11 (0.33)	-0.54** (0.22)	-0.74*** (0.24)	0.02 (0.29)	-0.50** (0.20)	-0.85*** (0.24)
Salary _{t-1}	0.005 (0.01)	-0.02** (0.01)	0.000 (0.01)	0.003 (0.01)	-0.02** (0.006)	0.000 (0.01)
Education _{t-1}	0.31 (0.30)	1.05*** (0.34)	0.60 (0.47)	0.54* (0.30)	1.02*** (0.34)	0.54 (0.46)
DF	2.56*** (0.99)	4.61*** (0.59)	3.63*** (0.83)	1.85 (1.16)	3.80*** (0.91)	2.57** (1.10)
Border	0.06 (0.65)	0.31 (0.69)	3.43*** (0.62)	0.14 (0.60)	-0.08 (0.69)	3.01*** (0.59)
Ports	-0.56 (0.35)	0.50 (0.48)	-1.26** (0.53)	-0.48 (.040)	0.22 (0.49)	-1.31** (0.53)
Mining production	0.36*** (0.11)			0.32** (0.13)		
Undivided government _{t-1}				0.73** (0.29)	0.06 (0.22)	0.56** (0.22)
PAN governor _{t-1}				0.08 (0.42)	-0.46** (0.31)	0.58* (0.31)
PRD governor _{t-1}				0.25 (0.34)	-0.27 (0.54)	0.08 (0.39)
Crime _{t-1}				-0.0004*** (0.0001)	0.0002 (0.0002)	0.0003* (0.0001)
Strikes _{t-1}				0.10 (0.14)	0.29*** (0.10)	0.21 (0.23)
Effectiveness Index _{t-1}	-0.02 (0.05)	-0.01 (0.01)	0.003 (0.02)	0.03* (0.02)	-0.01 (0.01)	0.01 (0.01)
Corruption Index _{t-1}	0.03 (0.02)	0.02 (0.03)	-0.01 (0.04)			
Constant	-5.46 (5.00)			-7.33 (4.82)	-14.65*** (4.36)	-10.55** (4.75)
<i>n</i>	320	320	320	320	320	320
χ^2	717.5***	1206.6***	436.1***	764.7***	1651.7***	600.3***
<i>R</i> ² (overall)	0.27	0.45	0.54	0.32	0.48	0.62

Note: Time-series random effects generalized least squares regressions with robust standard errors. Table gives coefficient and (robust standard error). *** $p \leq .01$, ** $p \leq .05$, * $p \leq .10$; two-tailed.

policy stability provided by single-party control and the presence of PAN governments. While efficiency-seeking investors apparently strongly prefer policy stability, they much prefer the promise of stable PAN policy. We propose that this effect is due to a greater willingness of PAN governments to use discretionary incentives to attract investors, along with investors' desire to benefit from these incentives. For market- and resource-seeking investors, who intend to take advantage of more than lower production and delivery costs, these incentives are of relatively less importance. Additionally, like market-seeking investment, efficiency-seeking investment is at least tolerant of higher levels of criminality. Bob Cook, president of the El Paso Regional Economic Development Commission, recently played down investor concerns about border violence in the popular press: 'Central location, great infrastructure, suppliers and labor pool. Those things haven't been tampered with by organized crime' (Archibold, 2011). Investors seeking efficiencies abroad are unlikely to be endlessly tolerant of rising levels of violence and instability, but Mexican states up to 2009 apparently did not reach that point.

Regarding the finding that partisanship seems to affect efficiency-seeking investment, the obvious question that arises is how much control state governments in Mexico have over policies that might affect the decisions of investors. Doubts about the policy options of states are likely to stem from the historical lack of budgetary discretion available to the state governments. As previously noted, however, modest fiscal decentralization has increased their abilities to make decisions – programmatic and discretionary – that attract new foreign investors or retain existing investors. Dussel Peters (2009: 4) notes that as a consequence of decentralization since the 1990s, states:

have started to develop [not only] industrial, micro, small and medium firms, but also R&D and technological policies . . . In some specific cases, and given the arbitrary decision-taking process in the respective states, competition for attracting FDI of specific firms have led to a "down-to-the-bottom-race," i.e. for example granting free real estate and infrastructure costs.

Without what he describes as a homogenous approach to promoting FDI, state administrations have been left to their own devices (Dussel Peters, 2009), which have included a variety of discretionary incentives. The right-leaning PAN governors appear more willing to employ them to compete for efficiency-seeking FDI.

Each of the states in the federation has adopted some mix of policies intended to promote investment and they articulate these goals in their state development plans. Although it is clear that state administrations and agencies have made efforts to attract FDI, it is extraordinarily difficult to quantify the amount each has spent on attracting and retaining

investment. First, as Dussel Peters (2009) notes, many efforts by state administrations are ad hoc and discretionary. That is, in addition to having standing policies of, say, subsidizing the cost of land for investors, consideration of additional measures is undertaken on a case-by-case basis. This is borne out very clearly by anecdotal evidence in which local administrations negotiate to attract or retain a foreign business by offering to deliver a variety of services, from training centers to improved roads. The ad hoc and uncoordinated nature of the interventions makes the quantification and comparison of state-level investment in FDI promotion difficult.¹³ Recent changes since 2008 that have sought to homogenize promotion strategies among states may make more precise measurements possible in the future (Dussel Peters, 2009). Without a reliable manner of quantifying and comparing the actual policies undertaken by state governments of different parties, caution is advised in interpreting the party effect strictly as a consequence of a greater willingness to provide incentives to foreign investors; the PAN's greater success may be a consequence of either reputation or a greater willingness to court efficiency-seeking investors without necessarily providing incentives.

The estimated models explain the least variation in the levels of investment that seeks to capitalize on the extraction of primary resources from Mexican territory. Although these variables may explain less variation in flows of investment, they identify an apparent sensitivity of resource-seeking investors to political and social factors that are suggestive of stability and predictability. Undivided government – which indicates the dominance of any particular party and hence the possibility of less change in state-level policy and continuity of appointees to state bureaucracies – and a preference for lower levels of crime go hand in hand in the sense that they are both indicative of stability and safety. This sensitivity to stability and predictability is consistent with the fact that resource-seeking investment is typically long-term investment that involves the construction of the infrastructure for extraction. Moreover, resource extraction is positively associated with state levels of efficiency and effectiveness, albeit at levels of significance that are borderline; as resource extraction is a highly bureaucratized process in Mexico, it is unsurprising that this sector is more sensitive to perceived levels of effectiveness – and hence, predictability – at the state level. The apparent insensitivity of other kinds of investors to government inefficiency in Mexico is suggestive that studies that rely on aggregate levels of FDI may be missing variation within that category.

CONCLUSION

While there are three notably different investment patterns that emerge from this analysis, the potential policy implications for state-level governments are much less clear. First, for states with higher levels of extractable

natural resources, combating crime and corruption (or at least lowering perceived levels) is more important than it would be for states that focus on increasing investment into manufacturing and service provision. However, although market- and efficiency-seeking investors are less sensitive to these ills at levels experienced in Mexico up to 2009, there is little to recommend allowing corruption and levels of crime to rise unchecked, especially given that our analysis offers little insight into the levels at which these might actually have a negative impact on investment. Policy makers whose top priorities are the attraction of foreign investors may find them tolerant of crime and corruption and more positively responsive to the presence of the markets and efficiencies they seek (although they have less control over these latter factors). Second, states seeking increased efficiency-seeking investment face the problem that conditions shaping those decisions appear in part to be political. Adopting a PAN government is obviously no more a policy choice for Mexican states than having an undivided government; however, adopting policies and business-friendly rhetoric that mirror those of PAN states may help raise investment of this sort. Again, however, the relationship between party- and state-level investment incentives remains quite murky and will require further work to clarify. Efforts to enhance the professionalization of state bureaucracies and the cessation of the widespread practice of awarding positions to (often unqualified) political supporters may generate some of the political and bureaucratic stability and efficiency that appears to affect decisions about resource-seeking and efficiency-seeking investment.

While the political and social conditions considered here do shape the patterns of investment across Mexico, they do so significantly less than the economic and locational factors considered. The importance of these latter factors as the primary drivers of decisions about investment is consistent with previous studies such as Ortega Gómez, Cruz and Alcaráz Vargas, (2010). While more subtle, the effects of political and social factors are not unimportant, and their inclusion provides a fuller understanding of the factors that shape the decisions of (or are dismissed by) foreign investors. A complicating factor is that both economic and political characteristics found to be relevant in this study (e.g. per capita income (see Jensen and Rosas, 2007)) are potentially affected by long-term investment patterns themselves). There is, however, still significant debate about whether FDI affects economic features such as GDP growth (Carkovic and Levine, 2005), and there is a dearth of research into its potential effects on political, administrative or social outcomes. The primary barrier to untangling the potential endogeneity of the predictors used in the models presented here is the unavailability of complete data reaching back to the early 1990s (i.e. before the implementation of the Law of Foreign Investment). Hence, whether or not there is a significant endogenous effect of investment on the economic and political landscapes of Mexican states remains an open question.

Although the dynamics of Mexico's economy are specific to itself, some of the broader patterns that emerge from this study are likely to be borne out in other federated, developing countries as well. For example, resource-seeking investment in other countries is likely to be shaped not only by the presence of natural resources, but also by the kind of stability that will allow them to be exploited over a long period of time. Efficiency-seeking investment is likely to be more sensitive to the willingness of subnational governments to encourage investments and to offer incentives for investors, because they are focused on low production costs. While these broad patterns hold true, there is no reason to expect that the exact variables will be the same. For example, resource-seeking investors in other countries might face uncertainty in the form of the threat of expropriation or nationalization of their investments. The Mexican case as used here both tests variables found to be important in cross-national studies and provides a set of testable hypotheses about types of investment, the testing of which may offer broader insight into the decision-making of foreign investors.

Finally, none of this is to suggest that any of the types of FDI generate the kinds of benefits for local economies that they are purported to by advocates of foreign investment promotion. The benefits of the different types of investment are likely to be as divergent as the factors that influence the investment itself. Consequently, policy makers seeking to attract foreign investment for the purposes of economic development should be aware of the different dynamics that motivate investors and that, depending on their intentions, investment decisions may rely upon factors as varied as location, market size, local party control, political stability, crime and corruption.

NOTES

- 1 Most of the existing subnational studies focus on East Asian economies, especially China and Vietnam (e.g. Zhou, Delios and Yang, 2002; Chadee, Qiu and Rose, 2003; Meyer and Nguyen, 2005; Malesky, 2008).
- 2 Dunning and Lundan (2008) note that there is a fourth type of investment: strategic investment, which seeks to obtain strategic assets or capabilities, such as technologies. However, Máttar, Moreno-Brid and Peres (2003: 134) note specifically that this kind of strategic investment is not a motivator of investment in Mexico.
- 3 The Pierson's correlation between the three types of investment on a national level are $-.16$, $.05$ and $-.09$, none of which are statistically significant at $p < .05$.
- 4 Some work has already been done in this area (Dussel Peters, 2009), but many issues still remain to be addressed.
- 5 An additional consideration is that data for some of the independent variables (particularly the indicators of administrative competence) are unavailable for earlier years.

- 6 Numerous other parties exist. The PRI is the long-dominant party and PAN and PRD are the two parties that have consistently challenged the PRI's domination in state and national politics.
- 7 These incentives are difficult to standardize because they differ greatly from state to state, are often ad hoc, and may represent very different values or incentives even to investors in the similar sectors.
- 8 An alternative view of corruption has been advanced by Egger and Winner (2005): corruption may be positively associated with investment because it speeds the potentially cumbersome legal requirements for investment and large investors are often willing to take advantage of it.
- 9 In spite of well-known concerns with indices of this sort (e.g. that in aggregate form what they measure is not transparent), we feel that the use of this wide-ranging index is justifiable because it is likely that it captures the reputational quality of the state government.
- 10 Wooldridge (2002) tests for serial autocorrelation of each of the three series did not reject the null hypothesis of no serial autocorrelation in the panels at $p < .05$.
- 11 Given log-transformed dependent variables, for log-transformed predictors (GDP, GDP per capita, mining production) coefficients are interpreted as percentage change in y associated with 1 per cent change in x (i.e. elasticity); for dichotomous predictors (location dummies, party politics variables) $100 \times (\text{coefficient})$ is interpreted as the effect of the discrete change in x from 0 to 1; for non-transformed predictors, $100 \times (\text{coefficient})$ percentage change is interpreted as the effect of one unit change in x .
- 12 To check the robustness of the findings, the three combined models were also estimated with the inclusion of the lagged dependent variable and using panel-corrected standard errors. The results reported here remain stable across these alternative models, although there is some difference in the size of the mean effect of independent variables, particularly with the inclusion of the lagged dependent variable.
- 13 To counter this problem, Mejía (2002) recommends incorporating indicators that take into account different criteria of the regulatory framework – regulatory reform, business opinion about the state procedures, quality improvement programs and the average days for procedures for opening a business – much of which we gauge with the Corruption and Efficiency and Effectiveness indices.

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APPENDIX
Table A1 Descriptive statistics

	Obs	M	SD	Min	Max
Resource FDI	<i>n</i> = 320 <i>T</i> = 10	26.4	132.1	-55.2	1,443.4
Efficiency FDI	<i>n</i> = 320 <i>T</i> = 10	284.0	671.6	-201.9	1,252.0
Market FDI	<i>n</i> = 320 <i>T</i> = 10	364.4	340.3	-1,985.9	4,804.7
GDP	<i>n</i> = 320 <i>T</i> = 10	1,86e8	1823.7	-84.0	2,896.2
PDP per capita	<i>n</i> = 320 <i>T</i> = 10	61.4	795.5	-38.2	21,269
Port	<i>n</i> = 320 <i>T</i> = 10	0.38	2,44e8	7,936.87	1,53e9
Border	<i>n</i> = 320 <i>T</i> = 10	0.19	66.5	5.82	6,1e9
DF	<i>n</i> = 320 <i>T</i> = 10	0.03	44.0	-222.7	235.4
Salary	<i>n</i> = 320 <i>T</i> = 10	160.2	0.48	0	1
Education	<i>n</i> = 320 <i>T</i> = 10	7.95	0	0.375	1
Undivided government	<i>n</i> = 320 <i>T</i> = 10	0.83	0.39	0	1
PAN governor	<i>n</i> = 320 <i>T</i> = 10	0.27	0	0.19	1
PRD governor	<i>n</i> = 320 <i>T</i> = 10	0.14	0.17	0	1
Strikes	<i>n</i> = 320 <i>T</i> = 10	5.9	40.2	0.03	0.03
Crime/100,000	<i>n</i> = 320 <i>T</i> = 10	1502.0	82.6	82.6	308.6
Corruption Index	<i>n</i> = 320 <i>T</i> = 10	7.9	30.2	89.9	230.9
Corruption rank	<i>n</i> = 320 <i>T</i> = 10	16.1	0.95	5.4	10.4
Efficiency and Effectiveness Index	<i>n</i> = 320 <i>T</i> = 10	42.8	0.4	7.2	8.6
Mineral production	<i>n</i> = 320 <i>T</i> = 10	977,357	1,627,125.0	9,314	8,484,489
			0	977,357	977,357

Note: Overall variation = $\sum_i \sum_j (x_{ij} - \bar{x})^2$; Within panel variation = $\sum_i \sum_j (x_{ij} - \bar{x}_i)^2$

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Table A2 Bivariate correlations of variables

	Res FDI	Eff FDI	Mark FDI	GDP	GDP pc	Port	Border	DF	Sal	Ed	Undiv gov	PAN gov	PRD gov	Strikes	Crimes	Corr Index	Corr rank	Eff and Eff		
Eff FDI	0.27																			
Mark FDI	0.25	0.42																		
GDP	0.26	0.43	0.42																	
GDP pc	0.19	0.14	0.23	0.71																
Port	-0.16	-0.22	-	-	0.15															
Border	0.21	0.52	0.19	0.22	0.18	0.12														
DF	0.32	0.31	0.48	0.34	0.18	-0.14	-													
Salary	0.24	0.40	0.38	0.73	0.75	-	0.14	0.36												
Ed	0.35	0.50	0.53	0.46	0.60	-	0.40	0.39	0.70											
Undiv gov	-	-	-	-	-	0.22	-	-	-	-										
PAN gov	-0.13	0.24	-	-	-	-0.22	-	-0.10	-	-	-0.20									
PRD gov	0.16	-	-	-	-	-	-0.20	0.44	0.15	-	-0.13	-0.24								
Strikes	0.21	0.35	0.39	0.20	-	-	0.15	0.39	0.13	0.24	-	0.26	0.16							
Crimes	-	0.30	0.34	-	0.12	0.27	0.30	-	0.18	0.38	-	0.23	-	0.30						
Corr Index	-	0.28	0.38	0.37	-	-0.24	-0.17	0.51	0.23	0.15	-0.12	-0.12	-	0.21						
Corr rank	-	0.17	0.22	0.27	-	-0.15	-0.18	0.30	0.16	-	-	-	-	0.14						
Eff and Eff	0.24	0.40	0.15	0.21	0.18	-	0.34	0.30	0.18	0.33	-	-	-0.13	-						
Mineral	0.28	-	-	-	-	-	0.36	-0.16	-	0.12	0.23	-0.24	-	-	0.13					-0.20

Note: All correlations listed significant at $p < .05$; statistically insignificant values not listed.