

Chapter 7

Explaining Subnational Governance: The Role of Governors' Codified and Uncodified Knowledge



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Scholars, donors, and practitioners worldwide search for the tools and means to improve governance. Throughout this search, stakeholders recognize the importance of bringing actors together from public, private, and non-profit sectors for problem solving. The cross-sector effort is expected to lead to effective governance, which in turn should result in improved management, effective implementation of instruments, improved service delivery, and higher outcomes. “Governance comprises the legal, social, political, economic, environmental, and administrative arrangements put in place to ensure the intended outcomes for stakeholders are defined and achieved”¹ (CIPFA & IFAC, 2013, p. 8). In Latin America, for example, decentralization has been one of the adopted governance arrangements. By increasing autonomy and assigning more responsibilities to subnational governments, decentralization is expected to improve service delivery and peoples’ lives. Despite the generalized increase in the role of subnational governments, considerable performance variation exists across regions, leading us to question what factors explain subnational governments’ performance.

Although the terms of subnational governments are very broad, encompassing second-level (state or province) and third-level government (municipalities) (Herrera Gutierrez, 2015), we here refer to the second level of government as states/provinces/departments/regions. In explaining governance performance,

¹Based on this definition, governments are a component of the variety of arrangements needed for public action to happen. So, in this paper, when referring to governance, we are talking about the different arrangements to pursue national goals and when using the term government, we refer to the organizations and branches/levels that comprise the public sector.

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scholars have stressed the role of political factors, such as partisanship² (Brollo & Nannicini, 2010; Cox & McCubbins, 1986; Solé-Ollé & Sorribas-Navarro, 2008), party ideology (Strøm, 1990; Wittman, 1990), electoral competitiveness (Holbrook & van Dunk, 1993; Key, 1949), and electoral cycle (Ames, 1987; Buchanan & Tullock, 1962; Nordhaus, 1975). Others explain performance as a function of resources (Sharkansky, 1967), oversight mechanisms (Blair, 2000), intergovernmental/interorganizational networks (Agranoff & McGuire, 1998, 2003), population size and nature (Durant & Legge, 1993), and organizational capacity (Collins & Gerber, 2006; Hall, 2008; Terman & Feiock, 2015). Finally, another branch of research identifies collaborative arrangements as key drivers of governance performance (Meier & O'Toole, 2001; Page, 2008).

Without denying their explanatory power, we find the above factors neglect the potential role of government CEOs' knowledge. In this second level of governments, the CEO/manager of the state/province/department is a directly elected governor or an appointed intendent (as in Chile), who performs both political and administrative functions and who enjoys managerial autonomy and discretion. Given his/her significant autonomy and discretionary power, his/her knowledge influences decision-making, and, in turn, governance performance. A top manager's individual traits are thus expected to contribute to her decision-making in setting strategic and tactic goals, selecting middle-level managers, rearranging organizational structure, risk taking, adopting innovation, networking with other levels of government, and/or adopting a participatory process.

In this study, we consequently specifically seek to assess the effect of governors' knowledge (codified and uncoded) on performance at the subnational level. In doing so, we rely on data derived from 32 Mexican states and 32 Colombian departments/provinces during the 1995–2010 and 2004–2013 periods, respectively. We assess subnational performance in terms of two objective indicators—enrollment in secondary education and infant mortality rate (IMR)—that are mainly the responsibility of both Mexican states and Colombian departments.

Identifying the drivers of governance performance at the subnational level is relevant for several reasons. In some countries, half the national budget is currently allocated to subnational governments (Herrera Gutierrez, 2015). Moreover, as delivery of health, education, and development programs happens at the subnational level, long-term development is a function of governance performance at this level. Finally, subnational performance is vital for strengthening democracy, transparency, and citizens' trust of government. Moreover, most researchers studying subnational governance performance focus on the United States and/or the United Kingdom. However, both countries enjoy highly developed, post-industrial economies, as well as fully democratic systems. Therefore, it is unknown whether the identified drivers of performance in these developed settings apply to

²In political science, partisan and partisanship refer to strong adherence and loyalty to a political party or group (see, e.g., Allan & Scruggs, 2004, or Bartels, 2000).

underdeveloped and new democracies, such as Mexico and Colombia, where existing institutions might generate different incentives.

In the following section, we present the theoretical underpinnings that link knowledge to governance performance. In the chapter we then offer the rationale for alternative explanations, which we will also test in the empirical analysis. In the next section, we provide a brief background of the Mexican and Colombian estates, as well as a description of the data collection and variable operationalization. Afterward, we present the empirical analysis, interpret and discuss the results, identify some of the limitations, and develop our conclusions.

Explaining Governance Performance

As mentioned above, several factors seem to contribute to governance performance. Although no clear drivers seem to explain variation in performance, at risk of simplifying, researchers have paid considerable attention to seven drivers: resources, market competition, accountability, organizational structure, political/environmental/internal context (O'Toole & Meier, 2015), collaborative arrangements (Meier & O'Toole, 2001; Page, 2008), and management (Boyne, 2003; Lynn, 2003; Meier & O'Toole, 2002). According to O'Toole and Meier, (1999), management (i) provides organizational stability and structure, (ii) coordinates achievement of organizational goals, (iii) exploits opportunities, and (iv) buffers the organization from external shocks.

For some, public management makes the difference between the success and failure of policy implementation (Avellaneda, 2009; Lynn, 1987; Meier & O'Toole 2002; O'Toole & Meier, 1999). Under this view, qualified management—the “management-quality” hypothesis—facilitates program success, contributing to overall organizational performance. The notion is that managers are expected to rely on structure, craft, and institutions (Lynn, 2003, p. 2) to direct routine activities in purposeful organizations. However, managerial influence works through different causal pathways (Meier & O'Toole, 2002), as management influences performance through multiple mechanisms: goals, material and human resources, regulation, representation, workforce diversity, organizational strategy, and leadership. Nevertheless, “it is increasingly clear that (individual) managers can improve program effectiveness, sometimes in substantial ways” (Boyne, Meier, O'Toole, & Walker, 2005, p. 634). For it is “[a]t the higher levels of the bureaucracy and among the elected officials, for example, that important decisions on what services to deliver or how to deliver them are made that limit a street-level bureaucrat's ability to affect service distributions” (Meier, Stewart, & England, 1991, p. 158, see also Avellaneda, 2009). Or as Lynn (1987, p. 103) posits, “[i]n its most concrete and observable sense, the activity of government agencies is the product of the behavior of identifiable individuals who occupy responsible positions.” However, how do individual managers/leaders contribute to governance performance?

Governors' Codified Knowledge and Subnational Governance

Although education is codified knowledge, experience is uncoded knowledge. The mechanisms by which codified knowledge contributes to performance and governance can be explained at the macro- and micro-level. At the macro-level, Adam Smith highlighted the role of education as a contributor to the process of the production of assets and services (Sen, 1997). Specifically, technical formation and learning contribute to production (Sen, 1997, p. 70). Codified knowledge, that is education, is part of human capital. Solow's (1956) theory of economic growth stresses the importance of human capital on a country's growth and development (see also Besley, Montalvo, & Reynal-Querol, 2012; Jones & Olken, 2005). Since Solow (1956), many others have highlighted the role of human capital in production (Lucas, 1988; Mankiw, Romer, & Weil, 1992), encouraging empirical research that reports a positive relationship between school years and growth rate (Bassanini & Scarpetta, 2001).

At the micro-level, codified knowledge also contributes to governance performance through several mechanisms. Education brings recognition, leads to better choices and empowers leaders to argue and communicate strategies. Hence, "[c]ognitive resource theory assumes that more intelligent and knowledgeable leaders make better plans and decisions than do those with less ability and knowledge" (Fiedler, 1986, p. 533). Knowledgeable leaders are expected to be more innovative and more direct in communicating plans, decisions, and strategies. As Dearborn and Simon (1958) posited, "[w]hen presented with the same problem, executives with different functional areas defined the problem largely in terms of the activities and goals of their own areas." Therefore,

H1: The higher a governor's codified knowledge, the higher the state/province performance.

Governors' Uncodified Knowledge and Subnational Governance

Besides the codified, scientific, and technocratic knowledge, the uncoded, intuitive, and artistic knowledge of managers also influences performance (Lynn, 1996, pp. 112–113). Hence, "[k]nowledge is, by no means, the only cognitive resource expected to influence a leader's performance" (Avellaneda, 2009, p. 289). Leaders acquire scientific knowledge at the university and/or workshop level. On the contrary, uncoded, intuitive knowledge is obtained through mentorship and job experience (Avellaneda, 2009; Lynn, 1996). This is considered learning through experience and practice (Arrow, 1962). According to Fiedler (1986, p. 32), experience likely affects a leader's performance in several ways: "by (a) providing useful and job-related knowledge, (b) enhancing the ability to cope with stressful

conditions, and (c) engendering a feeling of greater self-confidence and control of the leadership situation." That is, experience helps governors anticipate technical and administrative obstacles and allows them to search for previous adopted strategies to overcome them. Experience should also help governors cope with task difficulty.

According to the resource-based view, experience and expertise are rare, valuable, inimitable, and non-substitutable organizational resources, which contribute to its competitive advantage (Penrose, 1959; Rumelt, 1984; Wernerfelt, 1984). Riccucci (1995), Doig and Hargrove (1990), and Avellaneda (2009, 2012, 2016) have examined the experience-performance relationship and find that political leaders' experience positively influences their organizational effectiveness. Others, however, report no empirical support for the experience-performance relationship (Fernandez, 2005; Fiedler, 1966; Fiedler & Chemers, 1968). The use of different indicators for qualitative and quantitative dimensions of experience may explain the inconsistent results (Olvera & Avellaneda, 2019). Nevertheless, the uncoded knowledge-performance relaxations deserve to be tested in underdeveloped settings. Therefore,

H2: Governors' uncoded knowledge (experience) is positively correlated with state performance.

Alternative Explanations of Subnational Governance Performance

Governance performance may also be influenced by elected officials' ideological alignment with other elected officials at higher or equal levels of government. Researchers have mainly tested this partisan alignment hypothesis in studies to explain grant approval. Proponents of this hypothesis specifically posit that due to risk aversion, grants tend to be allocated to co-partisan jurisdictions (Cox & McCubbins, 1986). There is some empirical evidence supporting this claim. Brollo and Nannicini (2010) find that Brazilian municipalities in which the mayor is affiliated with the coalition of the president received 36 to 43 percent larger transfers than non-aligned municipalities in the final 2 years of the mayoral term. Likewise, Solé-Ollé and Sorribas-Navarro (2008) find that, in Spanish municipalities, grants to co-partisans led to some political support, but grants to opposition parties did not bring in more votes. However, a number of studies also support a contrary hypothesis that grants tend to be directed toward jurisdictions with a high number of swing voters as a means of winning support (Dahlberg & Johansson, 2002; Dixit & Londregan, 1998; Johansson, 2003; Lindbeck & Weibull, 1987; Mejía Guinand, Botero, & Rodríguez Raga, 2008). The plausibility of both hypotheses calls for further testing at the subnational level in understudied contexts. Therefore,

H3: States whose governors are ideologically aligned with other elected officials at the state and national level tend to have higher performance.

Besides partisanship, government ideology also has been suggested as a driver of governance performance. Downs (1957) suggested that party competition takes place along a left-right ideological spectrum, suggesting that political parties are policy seekers, rather than just vote seekers (Strøm, 1990; Wittman, 1990). Although some question the validity of this one-dimensional scale, researchers have used left-right continuum to test several theoretical propositions. Regarding social policies, for example, the debate centers on whether or not parties of the left spend more money than parties of the right (Blais, Blake, & Dion, 1993; Solano, 1983; Swank, 2002). Greater social spending, in turn, may enhance program coverage. Blais et al. (1993) and Swank (2002) found that parties make a difference, whereas Solano (1983) and Avellaneda (2009) report no party ideology effect at all. The potential explanatory power at the state level in developing settings justifies testing party ideology. Here, the expectation is that states led by governors affiliated with rightist parties tend to expend less, resulting in lower performance.

Finally, others link program implementation and performance to electoral competitiveness (Holbrook & van Dunk, 1993; Key, 1949). Proponents of the electoral competitiveness hypothesis suggest that when elections are tight, candidates and incumbents tend to provide more services in order to gain political support from many segments (Key, 1949). Party competition hypothesis has received some support (Holbrook & van Dunk, 1993), but others report no support or little impact (Dye, 1966). This inconclusiveness calls for additional tests of the competitiveness hypothesis at the subnational level in new democracies.

We will test the generated hypothesis and expectations in a data set derived from the Mexican states and Colombian departments/provinces. In the next section, therefore, we provide a brief background of these subnational governments.

Case Analysis: Mexican States and Colombian Departments

Since the adoption of decentralization in the 80s, Mexican states and Colombian departments have expanded their fiscal, political, and administrative autonomy. Despite having the same responsibilities, considerable variation exists across Mexican states and Colombian departments in terms of several indicators and dimensions of performance. Understanding the drivers of this variation is central to this study, and we suggest that governors' knowledge explains this subnational variation. Beside cross-state variation, both Mexican and Colombian states have experienced violence. Nevertheless, Mexico is a federal system, but Colombia is a unitary system. In addition, their party systems also exhibit variations. Mexico has a highly institutionalized three-party (PRI, PAN, and PRD) system versus Colombia's multi-party system (11 parties represented in the 2018 Senate elections). Although the common features serve as controls, differences justify testing

our propositions to understand their impact on governance performance at the sub-national level.

Mexican States

We test our hypotheses using data derived from the 32 states in the Estados Unidos Mexicanos (United Mexican States) and the 32 departments of Colombia (Fig. 7.1). In this section, therefore, we provide a background on both Mexican and Colombian subnational governments. The Constitution of 1917 formally established Mexico as a federal republic. However, the country was highly centralized until 1980. From the early 1980s to late 1990s, the federal government initiated a process of administrative, political, and fiscal decentralization, delegating many governmental responsibilities, including health and education services, to states (Rowland & Ramírez, 2001). Consequently, Mexican states have attained a high degree of political, administrative, and budgetary autonomy (Falleti, 2010).

State autonomy also has increased governors' power (Falleti, 2010; Modoux, 2006), enabling governors to block federal policies (Rodríguez, 2003) and control decisions for municipalities' resource allocation (Alvarado, 1996). This significant expansion of responsibility has inspired numerous studies addressing the role Mexican governors play in federal and local politics (e.g., Figueras Zanabria, 2009;



Fig. 7.1 Mexican States. Source: Design by Volker Schniepp, Department of Geography, Heidelberg

Hernández Rodríguez, 2008; Langston, 2010; Modoux, 2006; Montero Bagatella, 2014; Morales y Gómez & Salazar Medina, 2009; Oikion Solano, 2012; Rodríguez, 2003). However, no systematic study has examined the effects of governors' characteristics on state performance.

Mexican governors are democratically elected for a six-year term, with no re-election allowed. They head the executive branch, perform political and administrative functions, and are accountable to state legislatures. State legislatures are unicameral and populated by directly and indirectly elected representatives, who serve three-year terms. Consequently, each governor serves alongside two legislative bodies. According to the *Ley General de Educación*, the federal government defines the general principles and goals of Mexico's education policy. However, states are responsible for designing and implementing necessary programs to ensure federal education goals are reached (DOF, 2013). For instance, the governor through the *State Government Plan* determines strategies to achieve education enrollment levels established by the federal government.

Mexican states have two kinds of revenues: (1) their own revenues, and (2) federal transfers. Their own revenues are comprised of state taxes (e.g., vehicle-ownership tax, purchase or sale of used cars, lotteries, etc.), social security fees, provision of public services to individuals (e.g., expedition of driver's licenses), public works that differentially benefit particular individuals, sale of state-owned real estate, and any other revenue derived from the execution of the state's faculties (e.g., traffic ticket fines). Around 8% of states' revenues come from these sources (Ramírez-Cedillo & Lopez-Herrera, 2016). Federal transfers resulted from the *Ley de Coordinación Fiscal* (Law of Fiscal Coordination) enacted in 1978 (*Ley de Coordinación Fiscal*, 1978). Under this law, states agreed to yield some of their tributary faculties to the federal government in exchange for a share of federal taxes. The two types of federal transfers are *participaciones* (participations) and *aportaciones* (contributions). *Participaciones* are determined according to a formula incorporating these elements: (1) level of tax collection, (2) population, and (3) compensations to less advantaged states. States can spend money from this source at their discretion. For the average Mexican state, *participaciones* account for 31% of revenues (Ramírez-Cedillo & Lopez-Herrera, 2016). *Aportaciones* are earmarked funds dedicated to education, health, social infrastructure, municipalities strengthening, etc. On average, this type of federal transfer represents 52% of states' revenues (Ramírez-Cedillo & Lopez-Herrera, 2016).

Governors can implement different strategies to increase revenues from any source. For example, to increase its own revenues, the Mexico City government installed cameras across the city to detect drivers going over the speed limit and fined the speeders. Governors also might apply actions to improve tax collection. For example, a state government may require a tax payment for an individual to use a vehicle. In particular, Mexico City's government may request vehicle owners to pay vehicle ownership taxes to obtain environmental verification needed to travel across the city (Reglamento de Tránsito de la Ciudad de México, 2016).

In terms of health care, states manage primary-care hospitals and are responsible for nutrition, epidemiology, maternity care, and visual and hearing health.

Decentralization reforms made states responsible for providing medical attention to most uninsured populations (Martinez Fritscher & Rodriguez Zamora, 2016). Some argue decentralization of health services allowed governors to use administrative and technical posts as political currency (Gonzalez-Block, Leyva, Zapata, Loewe, & Alagon, 1989). To expand health and education services, governors may seek to increase states' education and health budgets assigned by the federal government. A special federal commission reviews budget requests related to education and health issues from different actors, including governors, mayors, ministries, and associations. Consequently, lobbying strategies and political networks are essential assets for governors seeking resources for education and health.

Colombian Departments

Colombia is a unitary but decentralized republic (Const. 1991, art. 1). According to the 1991 Constitution (art. 311), Colombia's entire territory has been divided into 32 departments and the capital district of Bogotá.³ Colombian departments coordinate and mediate between the national state and the municipalities, which are the main service providers and fundamental territorial authorities (Fig. 7.2). In the last two decades, Colombia has implemented changes over its territorial structure in order to advance fiscal, political, and administrative decentralization (Falleti, 2005).

Fiscal decentralization started with the institution of the "Situado Fiscal," the first attempt of intergovernmental transfers in 1968. The 1991 Constitution strengthened the transfers system and vested the territorial entities with the responsibility of providing social services, such as education, health care, and basic sanitation. These changes furthered administrative decentralization. In 2001, Congress adopted the Participations General System (SGP), which modified the transfer allocation method to achieve fiscal sustainability and improve equality (Bello & Espitia, 2011).

The first mayoral and gubernatorial elections took place in 1998 and 1992, respectively, giving way to political decentralization. Since then, mayors and governors were first elected for a three-year period, increasing to a four-year period on Jan. 1, 2004. An elective body, called the Department Assembly (Const. 1991, art. 299), oversees the subnational executives, approves state budgets, determines size and structure of the departmental government, and creates or suppresses municipalities, among other functions (Const. 1991, art. 300).

Departments raise revenue mainly from three categories of sources: taxes, transfers, and royalties, representing around 85% of their total revenue from 2000 to 2012.⁴ During the same period, transfers' share of departments' revenue has

³Even though other districts exist and enjoy greater autonomy than municipalities, they relate to specific issues (tourism, cultural affairs) and for most purposes, they are part of the respective departments.

⁴The remainder corresponds to capital projects co-financed by the national government, and other non-tax revenues.



Fig. 7.2 Colombian departments. Source: Design by Volker Schniepp, Department of Geography, Heidelberg

fluctuated between 45.7% and 56.8%, taxes have ranged between 23.2% and 27.5%, and royalties have shifted between 10.0% and 16.4%.⁵ Levies on beer, liquor, and tobacco constitute most of the tax revenue collected by the departments, even though the central government determines the respective tax rate. Royalties are directly related to the exploitation and transportation of natural resources, such as oil, gas, metals, and minerals. Nevertheless, the Participations General System (SGP) determines the way the central government transfers resources to each department, district, and municipality. The system allocates a total amount indexed to inflation, the variation of the national current revenue, and the target population for the provision of public services. The resources assigned are earmarked to the provision of education (58.5%), health care (24.5%), basic sanitation (17%), and

⁵ Percentages calculated from Departamento Nacional de Planeación (2013).

other minor purposes (4%) (Barón & Meisel, 2003; Bello & Espitia, 2011; Ley 715, 2001).

Resources are assigned to departments for their administration and distribution, according to municipalities' needs. When municipalities obtain certifications to administer their own education and health resources, transfers bypass the department and go directly to the municipality (Bello & Espitia, 2011). To obtain the National Education Ministry's certification, municipalities must demonstrate they satisfy certain conditions of administrative capacity (Ministerio de Educación Nacional, 2004). In 2002, 46 municipalities were certified, and in 2008, 16 more were certified, bringing the total to 62 localities certified to directly provide secondary education without state involvement. After excluding the certified localities, Colombian departments are still in charge of providing secondary education to about 42% of the potential target population in Colombia (see Table 7.2). The education ministry considers children between 11 and 16 years old as the potential target population for secondary education (Ministerio de Educación Nacional, 2014). By 2013, more than 1.1 million Colombian teenagers still did not have access to secondary education. In Fig. 7.3, we summarize the process of education provision in Colombia, highlighting the role of the departments.

In the case of the provision of health, municipalities can be certified by either the department or the Public Health Ministry (Ley 60, 1993). However, departments still exercise a monitoring role and can subject a municipality to a performance management regime if the municipality fails to maintain a certain level of service

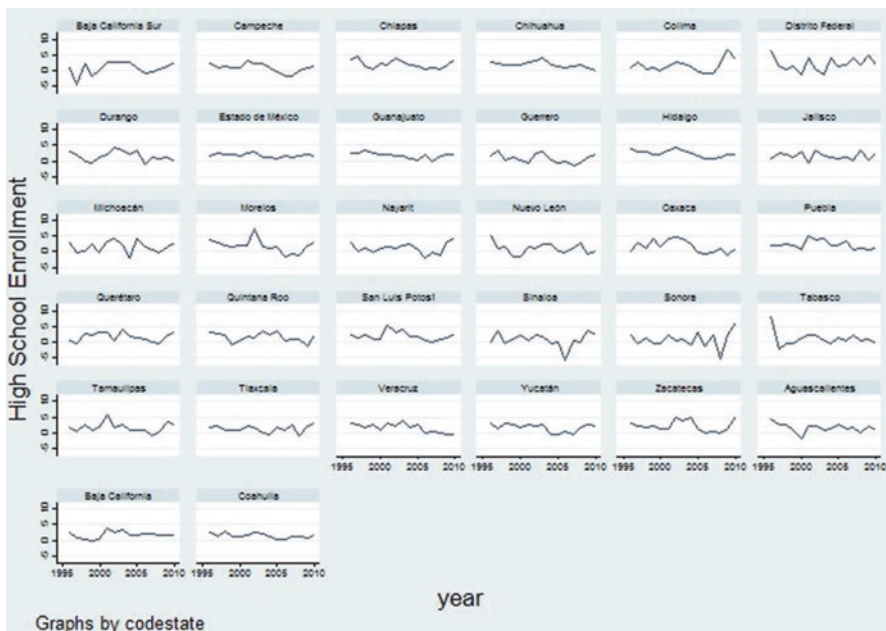


Fig. 7.3 High school enrollment for Mexican States (1995–2010). Source: Design by authors

provision and capacity (Ley 60, 1993). Indeed, between 2002 and 2013, departments recentralized health provisions in 92 municipalities.⁶ In other words, departments influence the achievement of public health outcomes in their territory either by direct administration of the health system or by close monitoring of decentralized municipalities.

Data and Variable Operationalization

The unit of analysis in this study is state-year. Based on data availability, we built two panel data sets—one with information from 32 Mexican states over a 16-year period (1995–2010)—and another panel for 32 Colombian departments from 2004 to 2013. The period for the Mexican states includes three gubernatorial administrations for most states (1994–2000, 2000–2006, and the first 4 years of the 2006–2012 administration), but some states have shifted electoral cycles. The period for the Colombian department covers three gubernatorial administrations (2004–2007, 2008–2011, and the first 2 years of the 2012–2015 administration).

Assessing Governance Performance

Objectively assessing performance has become central in the public management literature. Walker, Boyne, and Brewer (2010) summarized the models used to measure performance. According to them, academics and practitioners have basically followed either the *economy-efficiency-effectiveness (3Es) model* or the *inputs-outputs-outcomes (IOO) model*. Proponents of both models try to capture performance as the ability of the organization to (i) acquire resources from the environment (*system-resource approach*), and (ii) to achieve the organizational goals (*goal approach*).⁷ However, as Walker et al. (2010) recognize, these models lack insight about the organization's internal stakeholders, as well as several "responsiveness values" (Rainey, 2014, p. 105), such as human rights and accountability.

Another perspective to assess performance focuses on the different dimensions of organizational performance that aim to complement the 3Es and IOO models (Boyne, 2002, 2003). In this case, performance is assessed in terms of accountability, effectiveness, efficiency, democratic outcomes (representation, participation, etc.), equity, justice, responsiveness, quantity, and quality of outputs and outcomes. In this study, we opt to assess performance in terms of outputs—enrollments in secondary education—and one outcome—infant mortality rate. Although outputs refer to the direct products generated by an organization, outcomes denote the final

⁶From original data collected by Instituto Geográfico Agustín Codazzi (2018).

⁷See Rainey (2014) for more detail on the alternative approaches to organizational performance.

effect a product has on society (Boyne, 2003). For instance, in reducing infant mortality rate (the final policy goal, i.e., outcome), a governor might promote children vaccination (output) across her state. Although no single indicator is perfect, these two indicators are objective and fully measure a state's performance, as they are implemented at the state/provincial level. Assessing performance in terms of school enrollment and infant mortality rate seems appropriate because Mexico and Colombia face a considerable gap between potential and actual enrollees in secondary education and considerable variations in IMR within the countries.

For Mexico, we obtained high school enrollment data through the Secretaría de Educación Pública (Federal Ministry of Education). This rate measures the percentage of eligible children who enroll in high school in a given state in a particular year. Infant mortality rates are defined as deaths in the first year of life per 1000 live births. We obtained data to measure this variable from Instituto Nacional de Estadística y Geografía (INEGI), the National Center for Statistics and Geographical Data.

The Panel Municipal del CEDE (Acevedo & Bornacelly, 2014) collected a wide range of socioeconomic variables for all municipalities in Colombia. We aggregated the number of high-school enrollees in non-certified municipalities for each department, thus obtaining a total enrollment figure at the department level. We also calculated the total number of children between 11 and 16 years old in such non-certified municipalities, as a measure of the total targeted population for secondary education in each department. The high-school enrollment rate is the ratio between the number of enrollees and the targeted population in each given year. The Panel Municipal del CEDE (Acevedo & Bornacelly, 2014) also reports figures of infant mortality at the municipal level. By aggregating these figures at the department level and determining a ratio of the total number of births in a given year, we obtain infant mortality rates for each department in a given year (Figs. 7.4, 7.5 and 7.6).

In order to test H1, we obtained governors' codified knowledge via background and biographical information of the governors as subnational chief executives. Besides collecting information on their age and place of birth, we originally calculated the number of years of formal education. However, given the large number of governors with pre-graduate education in both countries, we opted to create a dummy variable receiving "1" if the governor has postgraduate education and, otherwise, "0," to test the effect of governors' codified knowledge on state performance. As noted in Fig. 7.7, only 2.63% of Mexican governors have less than a college education, yet 10.31% of Colombian governors do not have college education. In addition, most Mexican governors obtained college degrees (66.67%), but only 29.06% of Colombian governors have college degrees. On the other hand, the majority of Colombian governors (60.62%) have some kind of postgraduate degree (specialty, master or Ph.D.), yet only 30.7% of Mexican governors attained postgraduate degrees.

To test the effect of governors' uncoded knowledge (H2), we also collected information on the years of experience in both the public and private sectors. Moreover, we classified governors' experience at the local, state/department and national levels. As we can see in Fig. 7.8, the distributions of public sector

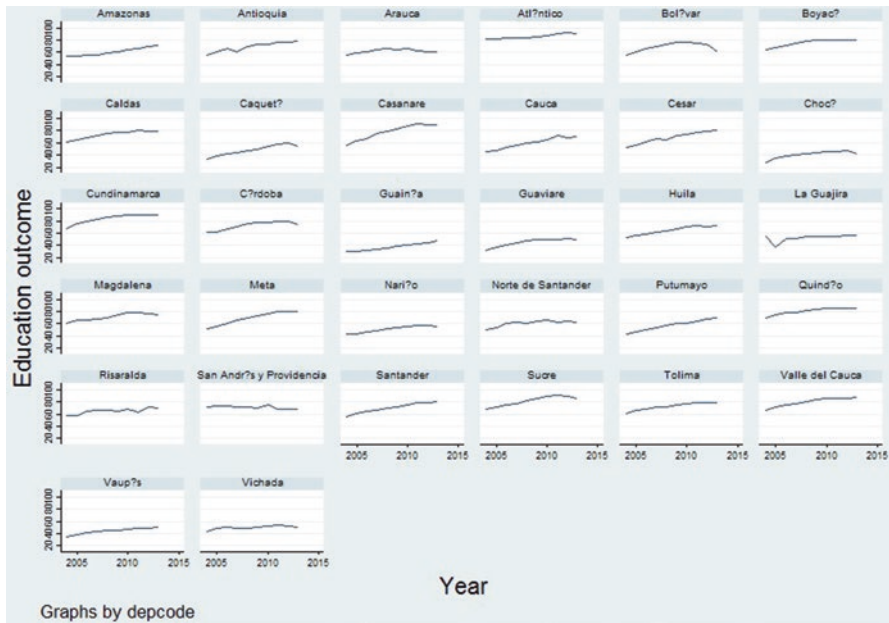


Fig. 7.4 High school enrollment for Colombian departments (2004–2013). Source: Design by authors

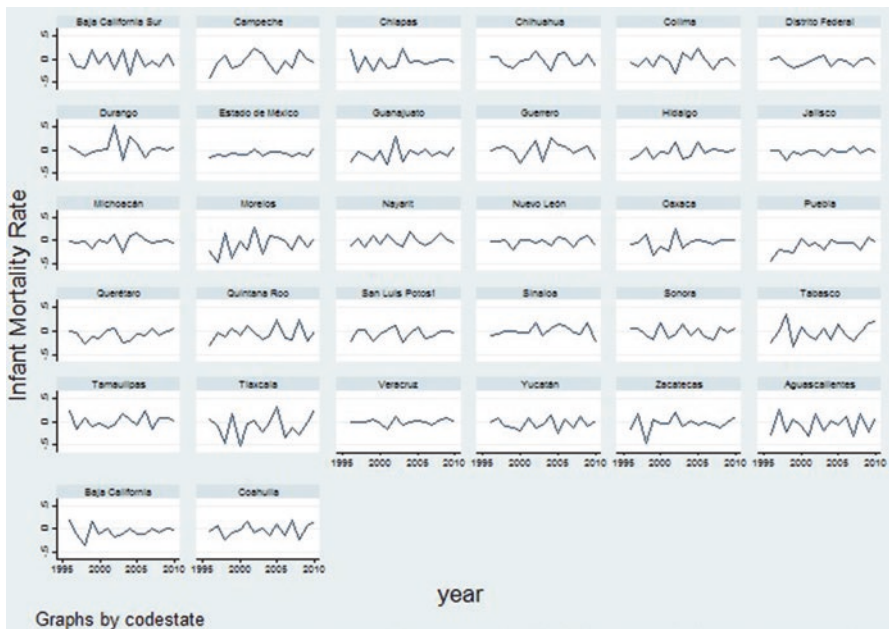


Fig. 7.5 Infant mortality rates for Mexican States (1995–2010). Source: Design by authors

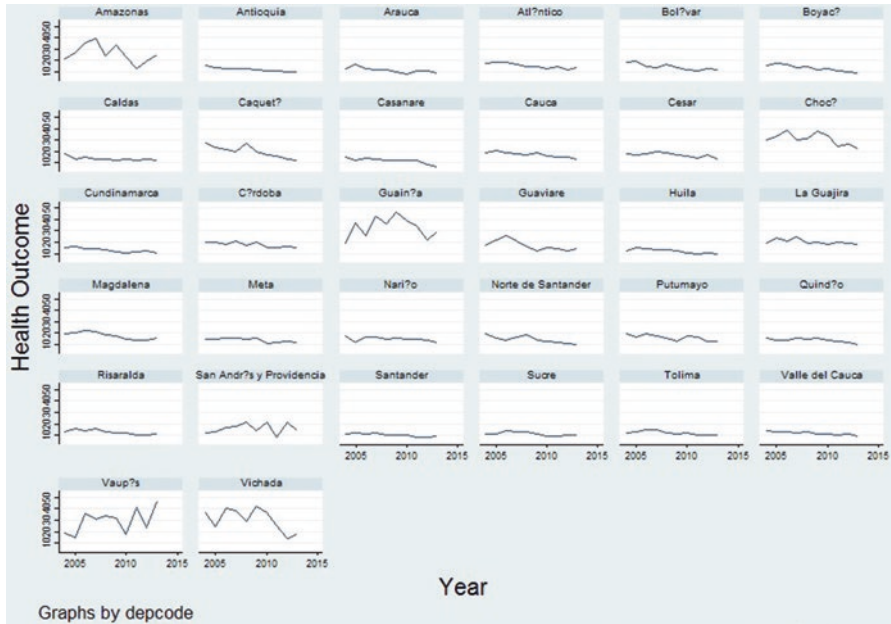


Fig. 7.6 Infant mortality rate for Colombian departments (2004–2013). Source: Design by authors

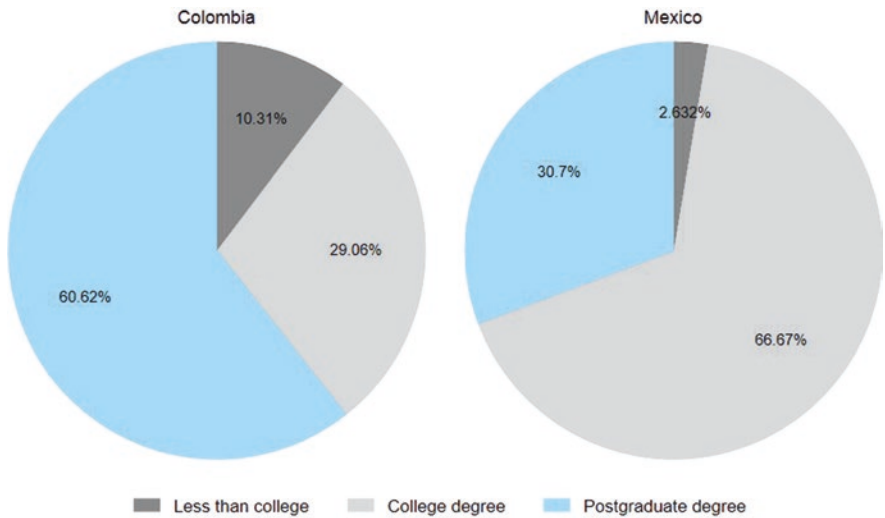


Fig. 7.7 Codified knowledge of Mexican and Colombian Governors, by level of education. Source: Design by authors

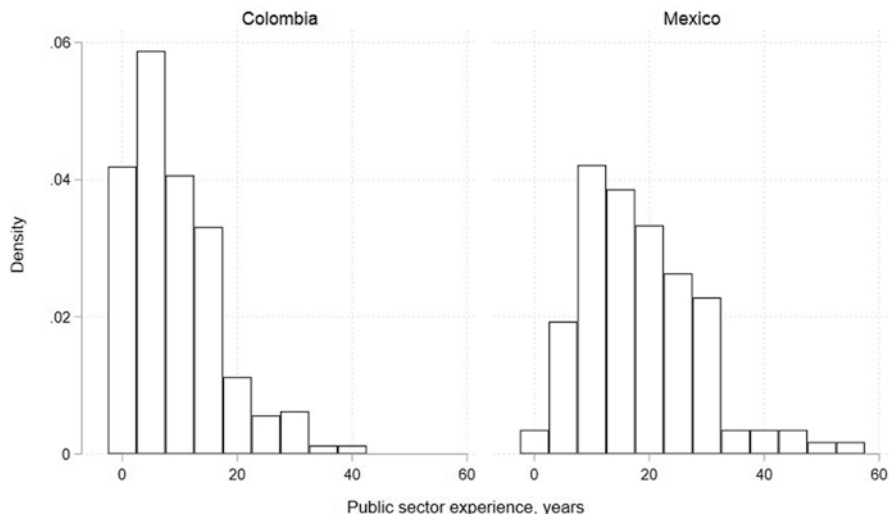


Fig. 7.8 Uncodified knowledge of Mexican and Colombian Governors: by total years of public sector experience. Source: Design by authors

experience in both Mexico and Colombia are negatively skewed. In particular, most Colombian governors have less than 20 years of experience, and most Mexican governors have less than 40 years of public sector experience. Of years spent in the public sector, Colombian governors dedicated 32.78% and Mexican governors dedicated 10.96% to local governments. At the state/department level, Colombian governors dedicated 35.8% of their time, and Mexican governors invested 35.79% of their time. Finally, of the total time spent in the public sector, Colombian governors committed 31.42% of their time to the national government, but Mexican governors gained 53.27% of their experience at that level (Fig. 7.9).

In the Colombian case, to test for the effect of partisanship, we obtained data from the National Registry, which reports electoral information. Governor-state legislature partisanship is assessed as the percentage of members in the subnational assembly who belong to the governor's party. This measure, however, does not take into account the informal alliances and partnerships that governors tend to build to achieve working majorities in the assembly. The alignment between governors and the national level of government in Colombia is measured by a regional-ties approach, which is consistent with this concern over informal partnerships. Governor-national representatives' alignment equates to the number of senators, representatives, and cabinet members who are native to the department. Meanwhile, to measure governor-ministry of health/education alignment, we created a dummy variable receiving "1" if the respective ministry was native to the department; otherwise it is "0." For Mexico, governor-national representatives' partisanship equates to the percentage of both senators and representatives ideologically aligned to the governor's party. Finally, to measure governor-ministry of health/education

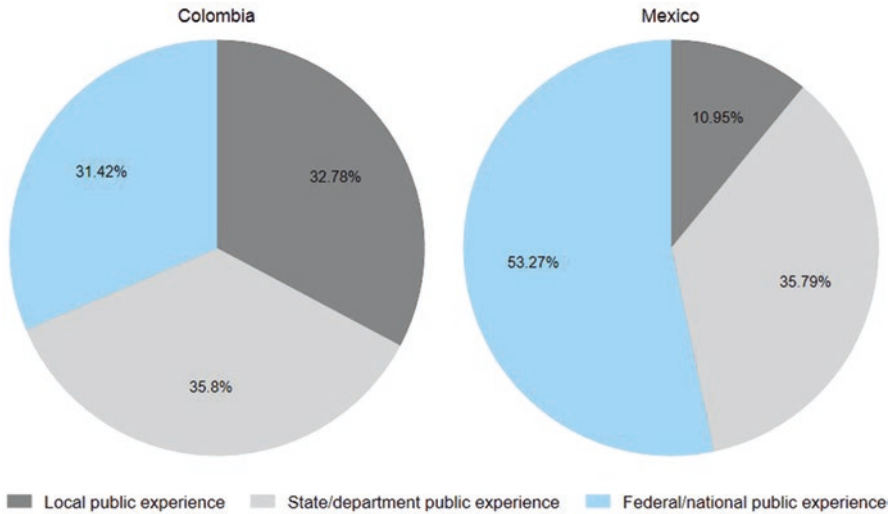


Fig. 7.9 Uncodified knowledge of Mexican and Colombian Governors by level of public experience. Source: Design by authors

partisanship, we created a dummy variable receiving “1” if the governor and respective ministry belonged to the same party; otherwise it is “0.”

In Mexico’s case, given its three-party system, we created two dummy variables to assess governors’ party ideology: PRI and PRD, with PAN indicating the excluded category. The PRI category receives value of “1” if the governor belongs to the PRI; otherwise, it is “0.” Likewise, the PRD category receives a value of “1” if the governor belongs to the PRD; otherwise, it is “0.” These two categories will be compared to the excluded category, PAN. In Colombia’s case, given its multi-party system, it becomes difficult to classify all small parties within the left-right continuum. Historically, Colombia maintained a two-party system. But in the last two decades, dissidents from the traditional parties have created many small and new parties, numbering 59 in the Congressional elections held in March 2006. Therefore, we created a dummy variable for the conservative category and compared it with the base category, in which we group liberal and leftist parties. For both countries, we assessed margin of victory in the gubernatorial as the difference in percentage points between the winner and the runner-up.

For both countries, we also controlled for other economic, fiscal, and sociodemographic factors. For the Colombian case, we specifically controlled for GDP per capita, and state royalties and total state revenues, both of which are reported per capita to make these measures comparable across units. We also controlled for the percentage of rural population per state. Given Colombia’s long-lasting armed conflict, we included a proxy of violence as the number of internally displaced people per 1000 inhabitants. These data were obtained by aggregating municipal figures from the Panel Municipal del CEDE (2014).

Table 7.1 Descriptive statistics for Mexican States (1995–2010)

	Mean	Std. Dev.	Min.	Max.
<i>Independent variables</i>				
High school enrollment	52.52	11.70	22.40	99.90
Infant mortality rate	12.70	4.55	3.00	33.18
<i>Governors' codified knowledge</i>				
Postgraduate degree (dummy)	0.26	0.44	0	1
<i>Governors' uncoded knowledge</i>				
Local experience (years)	2.06	2.56	0	11
State experience (years)	6.62	5.68	0	27
Federal experience (years)	9.84	9.03	0	38
Private sector experience (dummy)	0.35	0.48	0	1
<i>Political factors</i>				
Partisanship				
Governor-State Deputies (%)	0.44	0.10	0.05	0.81
Governor-Federal Deputies (%)	0.39	0.15	0.10	0.62
Governor-Minister of Health (dummy)	0.10	0.30	0	1
Governor-Minister of Education (dummy)	0.36	0.48	0	1
Party ideology				
PAN (dummy)	0.23	0.42	0	1
PRD (dummy)	0.13	0.34	0	1
PRI (dummy)	0.64	0.48	0	1
Margin of electoral victory (%)	17.88	17.57	0.53	81.32
<i>Controls</i>				
Substitute Governors	0.05	0.22	0	1
Homicides/capita (absolute number)	2.64	2.29	0.31	24.31
State revenues/capita (in millions)	6.58	3.85	0.54	20.20
Rural population (absolute number)	761,426.60	693,358.30	22.85	2,976,060

Note. Source: Design by authors

For the Mexican case, we control for four factors. First, we created a dummy variable, receiving “1” if the governor was a substitute, rather than an elected official. Given the Mexican experience with violence derived from drug wars, we control for the rate of homicides per capita. We obtained these data from INEGI. Finally, we control for state income per capita and percentage of rural population, data we also obtained from INEGI. In Tables 7.1 and 7.2, we provide descriptive statistics for Mexico and Colombia, respectively.

Results

We used a two-way fixed effects model to elicit the effect of our independent variables on secondary education provision and infant mortality rate (IMR). This method allows us to control for inherent, unobservable differences among the states/

Table 7.2 Descriptive statistics for Colombian departments (2004–2013)

Variable	Mean	Std. Dev.	Min	Max
Dependent variables				
High school enrollment (%)	64.83	14.50	27.66	91.82
Infant mortality rate	16.90	7.40	6.91	47.29
Governors' codified knowledge				
Postgraduate degree (=1)	0.61	0.49	0.00	1.00
Governors' uncoded knowledge				
Local experience (years)	3.24	4.06	0.00	20.00
State experience (years)	3.50	4.83	0.00	25.00
National experience (years)	3.11	5.06	0.00	24.00
Private experience (years)	2.75	6.92	0.00	40.00
Political factors				
Partisanship				
Governor-State Deputies (%)	24.12	17.33	0.00	87.50
Governor-National Representatives (%)	7.49	6.65	2.00	36.00
Minister of Education (=1)	0.03	0.16	0.00	1.00
Minister of Health (=1)	0.03	0.17	0.00	1.00
Ideology				
Conservative Governor (=1)	0.14	0.35	0.00	1.00
Margin of victory (%)	15.41	15.84	0.05	81.09
Controls				
Displaced people (per 1000)	8.76	8.28	0.31	51.18
Revenue/capita (millions of COP)	0.72	0.55	0.19	3.09
GDP/capita (millions of COP)	7.16	4.33	2.24	25.18
Rural population density (per sq. km)	31.26	79.41	0.33	480.39

Note. Source: Design by authors

departments, as well as for general shocks over time. The standard errors are robust and clustered at the state/department level. The Variance Inflation Factor (VIF) suggests that multi-collinearity is not an issue.

In Table 7.3, we report estimations for our two measures of performance in the 32 Mexican states from 1995–2010. Observations number 512 in each model. In explaining high school enrollment (model 1), postgraduate degree (codified knowledge) does not reach statistical significance. From our measures of uncoded knowledge, only private sector experience is statistically significant at the 0.10 level and in the expected direction. States whose governors come to office with previous private sector experience tend to exhibit 1.47 percentage points less in high school enrollment than states whose governors do not have that experience. In model 1, none of our measures of partisan alignment reaches statistical significance. Of our control variables, homicides and state income per capita are statistically significant at the 0.10 and 0.05 level, respectively.

Model 2 of Table 7.3 shows results for our health outcome. According to these results, the governor's codified knowledge does not explain IMR. Governors' previous experiences in local, state, and federal government achieve statistically

Table 7.3 Explaining state performance in Mexican States (1995–2010)

	(1). School Enrollment	(2) IMR
<i>Governors' codified knowledge'</i>		
Postgraduate degree (dummy)	−0.800 (0.532)	−0.016 (0.040)
<i>Governors' uncoded knowledge'</i>		
Local experience (years)	0.076 (0.155)	−0.011* (0.006)
State experience (years)	0.074 (0.055)	−0.010** (0.003)
Federal experience (years)	−0.045 (0.039)	0.006** (0.003)
Private sector experience (dummy)	−1.470* (0.735)	0.110** (0.037)
<i>Political factors: Partisanship</i>		
Governor-State Deputies (%)	−0.477 (2.844)	0.196 (0.148)
Governor-Federal Deputies (%)	2.744 (2.395)	−0.260* (0.142)
Governor-Minister of Health (dummy)		−0.098* (0.050)
Governor-Minister of Education (dummy)	−0.871 (0.755)	
<i>Party ideology</i>		
PRD	−0.620 (1.572)	0.134* (0.076)
PRI	−0.809 (1.049)	0.149** (0.043)
<i>Margin of electoral victory</i>		
	−0.014 (0.023)	0.002 (0.002)
<i>Controls</i>		
Substitute Governor	1.095 (1.052)	0.033 (0.062)
Homicides/capita (lg)	−1.658* (0.837)	0.095** (0.033)
State revenues/capita	−0.967** (0.299)	0.015 (0.010)
Rural population (lg)	−0.068 (0.124)	0.015* (0.008)
State and year fixed effects	Yes	Yes
Constant	45.330*** (3.239)	1.127*** (0.186)
N	512	512

Note. Source: Design by authors

*p < .10; **p < .05; ***p < .001

significant effects on IMR at the 0.10 and 0.05 levels, respectively. Holding all else constant, experience at the local and state government decreases IMR. One additional year of experience at the local level decreases IMR by 0.011, and one additional year of experience at the state level decreases IMR by 0.010. In contrast, one additional year of experience at the federal level increases IMR by 0.006. Likewise, private sector experience is associated with worse health outcomes. Specifically, states whose governors took office with private sector experience have an IMR higher by 0.11 IMR on average than states whose governors arrived without private sector experience. Governors' partisanship with federal deputies exhibits statistical significance at the 0.10 level. A 1% increase of federal deputies aligned with governors' party decreases IMR in 0.26. Similarly, partisan alignment with the minister of health at the federal level decreases IMR in 0.098 and this coefficient is statistically significant at the 0.10 level. Another political factor that affects our health outcome is political ideology. Compared to PAN (conservative) governors, states with governors representing PRD (left) and PRI (center) ideologies have on average higher levels of IMR. Of our controls, homicides per capita and rural populations are both associated with higher levels of IMR, as their coefficients are positive and statistically significant at the 0.05 and 0.10 levels, respectively.

In addition, Table 7.4 reports estimations for our two measures of performance in the 32 Colombian departments during 2004–2013. Observations number 273 in each model. In explaining high school enrollment (model 1), neither governors' codified nor uncoded knowledge (postgraduate) reach statistical significance. Moreover, none of the political factors serves to explain variation in high school enrollment. Two control factors, GDP/capita and rural population, do reach statistical significance with the expected direction. Specifically, states with higher GDP/capita and lower rural population exhibit higher enrollment in high school, holding everything else constant.

In explaining the IMR health outcome for Colombian departments, according to Table 7.4, model 2, governors' codified knowledge fails to reach statistical significance. From our measures of uncoded knowledge, only experience at the state level is statistically significant at the 0.10 level and in the expected direction. That is, states whose governors come to office with previous state-level experience tend to exhibit 0.07 percentage points more in high school enrollment than states whose governors come to office without state experience. None of the political factors explains variation in high school enrollment in Colombian departments. Finally, none of our control measures reaches statistical significance. Of our control variables, homicides and state income per capita are statistically significant at the 0.10 and 0.05 level, respectively.

Table 7.4 Explaining subnational performance in Colombian Departments (2004–2013)

	(1) High School Enrollment	(2) IMR
<i>Governors' codified knowledge</i>		
Postgraduate degree (=1)	0.745 (0.757)	0.0466 (0.486)
<i>Governors' uncoded knowledge</i>		
Local experience (years)	-0.00973 (0.0962)	-0.0218 (0.0799)
State experience (years)	0.121 (0.0768)	0.0757* (0.0411)
National experience (years)	-0.0222 (0.0640)	0.0109 (0.0318)
Private experience (years)	0.0121 (0.0394)	0.0553 (0.0444)
<i>Political factors – Partisanship</i>		
Governor-State Deputies (%)	-0.0247 (0.0291)	-0.0267 (0.0246)
Governor-Nat. Representativas	0.0444 (0.290)	-0.00637 (0.118)
Minister of Education (=1)	-1.557 (2.466)	
Minister of Health (=1)		-0.601 (1.236)
<i>Political factors – Ideology</i>		
Conservative Governor (=1)	1.469 (1.470)	0.203 (0.654)
<i>Electoral competitiveness</i>		
Margin of victory (%)	0.000896 (0.0281)	0.0312 (0.0261)
<i>Controls</i>		
Displaced people (lg)	0.397 (0.388)	-0.198 (0.826)
Revenue/capita (millions COP)	1.404 (1.269)	-2.447 (2.607)
GDP/capita (millions COP)	0.570** (0.248)	0.140 (0.198)
Rural population (lg)	-24.03* (12.03)	-2.333 (12.03)
State and year fixed effects	Yes	Yes
Constant	101.2*** (27.24)	24.33 (25.71)
N	273	273

Note. Source: Design by authors

*p<.1; **p<.05; ***p<.001

Discussions and Conclusions

This chapter seeks to explain governance performance at the subnational level in terms of educational output (high school enrollment) and a health outcome (IMR). In doing so, we suggest states CEOs' codified and uncoded knowledge contribute to state/province performance. We test the explanatory power of governors' knowledge against political factors, such as partisanship, electoral competitiveness, and government ideology, while controlling for other state-level factors. The suggested explanations tested are two data sets derived from the 32 Mexican states and the 32 Colombian departments.

Results are inconsistent across both countries and the two indicators of state/department performance. For instance, although few factors seem to explain high school enrollment across both countries, some differences are still worth mentioning. In the Mexican case, governors' prior experience in the private sector is negatively correlated to high school enrollment. On the other hand, in the Colombian case, neither governors' education nor their experience type is statistically correlated to high school enrollment. The lack of statistical significance suggests other factors, not taken into account in this study, may explain state/department variation in high school enrollment.

In explaining the IMR health outcome, results show large inconsistencies across both countries. Specifically, although IMR is positively correlated with governors' federal and private-sector experience in the Mexican case, none of these drivers is statistically correlated with IMR in the Colombian case. Likewise, although governors' local and state experience seems to be negatively correlated with high school enrollment in the Mexican case, governors' state experience is positively correlated with IMR in the Colombian case. This inconsistency in results calls for caution when interpreting results. Although the operationalization of variables is consistent across both countries, intra-country variation in terms of aggregation of data and other standard mechanisms may still be an issue.

The results seem to provide more support for the role of political factors in explaining state/department performance, but only for the Mexican case. Hence, scholars have emphasized the power of partisanship, especially in settings where the distribution of resources is contingent on political ties. Our results suggest that political factors play no role in explaining high school enrollment or IMR in the Colombian case. However, in the Mexican case, as expected, governors' partisanship with federal deputies and with the minister of health tends to reduce IMR. Moreover, party government also serves to explain state performance, but only in the Mexican case. States whose governors are ideologically affiliated with the PRD and PRI tend to report higher IMR, compared to governors affiliated to the PAN, considered a right-wing party. In the Colombian case, conservative governors do not perform statistically differently from governors affiliated to other parties in terms of education or health. Given the lack of party discipline and the multi-party system, party ideology in Colombia does not seem to be a good predictor of governance performance.

Our study has limitations. First, more indicators of performance are needed to fully assess the role of governors' knowledge on performance. Implementation of different policies/programs require different skills, knowledge, and experience. Therefore, future studies should assess state performance in other policy areas. Secondly, our study disregards the role of organization capacity, in terms of human resources, on state/department performance. Data unavailability impedes us from testing the explanatory power of organizational capacity. Finally, our study is limited to two countries. Although our study is one of the first comparative studies in governance performance, future research should replicate this study across other countries in the region.

The two-country study presented here conveys three broad lessons. First, what drives performance in one country may not hold the same explanatory power in another country. Hence, what serves to explain performance in Mexican states differs from the reasons boosting performance in Colombian departments. This finding highlights the importance of refraining from extrapolating conclusions to different contexts. Second, what boosts performance in one policy area may not do so in another policy area. Although governors' uncoded knowledge (experience) does explain health performance in Mexican states, leaders' uncoded knowledge fails to improve educational outputs. Third, although political factors (e.g., partisanship and party ideology) help explain performance in Mexican states, demographic and socioeconomic factors (GDP and rural population) do so in the Colombian departments.

In sum, with this study we provide one of the few comparative tests of the role of chief executives' knowledge on governance in an understudied region. We are cautious about generalizing results based on our findings. What works in a country in a particular policy area may not work in another country in the same policy area. Indeed, additional research should explore the contingences to governors' traits-performance relationship. Although governors are the decision-makers at the subnational level, implementation of their decisions is outside of their control, for it takes place outside of their realm. In such case, characteristics of administrative personnel and street-level bureaucrats may moderate the performance-governors' codified and uncoded knowledge relationship. In addition, given the considerable differences between Colombian and Mexican governors' education attainments and experiences, future studies should explore whether party system, electoral rules, and/or campaign rules contribute to explain the type of politicians' traits in a particular country. The above research is needed to gain a better understanding of the workings of subnational governments, for they are important actors in service delivery in regions where performance improvement is desperately needed.

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