

Political Hawks vs Technocrats. The Impact of Governor's Career Path on Gubernatorial Performance

Claudia N. Avellaneda, Johabed G. Olvera and Julio Alberto Ramos Pastrana
Indiana University, Bloomington

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Abstract: This paper aims to identify leaders' skills that either enhance or hinder government performance. We estimate the causal effect of the career pursued by a chief executive on government performance. We argue that skills accumulated from technocratic experience differ from those accrued from a political career. Once in office, leaders align their differentiated set of skills with implementing certain policies to boost performance. Specifically, we expect that chief executives who pursue mainly technocratic career paths will have higher performances in carrying out policies requiring an administrative implementation process. Chief executives focused on political career paths will have higher performances in carrying out policies requiring a political implementation process. We test our proposition in the Mexican context, using a panel dataset of Mexican governors during the 1995-2014 period, covering four gubernatorial administrations. State performance is operationalized in terms of health outcomes (infant mortality rates) and vocational training outputs. The causal effect of career paths on gubernatorial performance is estimated using a Generalized Difference in Difference identification strategy, along with an instrumental variable approach. Our findings suggest that governors with greater technocratic experiences exhibit higher performance of health outputs, while governors with greater political career paths exhibit higher performance in terms of vocational training outputs.

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1 Introduction

In the ongoing search among public administration scholars and practitioners for ways to improve governmental performance, health and labor outcomes are primary areas of interest. In federalist countries, subnational governments are the main implementers of social programs. As a result, long-term development is largely determined by subnational governmental performance. In both developed and developing settings, state performance varies considerably, which have lead public administration scholars to study what determines this variance.

Scholars have identified leadership and management as key drivers of performance. Although, the literature has separated leadership and management as two distinct variables (Mintzberg 1972; Zaleznik 1977), conceptually and in practice the difference between them is rather fuzzy (Fernandez et. al. 2010). This difference becomes even more blurred when the locus of analysis is chief executives, since the influence of these actors in organizational or program success is highly related with the impulse they give to certain strategies and behaviors in public agencies (Petrovsky 2010). Thus, in this study the terms leadership and management are used somewhat interchangeably when discussing the role of chief executives in determining government performance.

Among the research on the effect of leadership on public sector performance, three main approaches can be identified. The first focuses on analyzing how a specific style of leadership (e.g. transactional and transformational) generates certain outcomes in the public sector (e.g. Kim 2002; Wright et. al. 2010; Moynihan et. al. 2011). The second is concerned with the interactions between the leader and their employees (Tummers and Knies 2013) or between political and managerial leaders (Baddeley 2008; Berman et. al. 2017). The third strand of explanations focuses on the characteristics of chief executives and how these lead to differences in organizational outcomes (O'Toole and Meier 2011; Hamman 2004). This study will concentrate on this last vein of research within public management studies.

Although considerable scholarship has examined the leadership-performance relationship, we still have little knowledge on whether and to what extent leaders' career paths within the government might result in a particular level of performance, depending on the type of public agency or public policy implementation process. In other words, little is known about whether having a specific career path inside the public sector generates a better fit for some public policies or public agencies, and if this will have an impact on performance. This paper aims to contribute to the public administration literature by empirically studying the relationship between elected executive leaders career path and government performance.

We argue that a manager that has accumulated a large experience related to technical activities will develop different skills than a manager that has dedicated to advance a political career. Thus, using a Transaction Cost framework and taking into account distinct types of public policy implementation process, we explain why certain managers' career path results in a particular level of performance, depending on the type of public policy implementation process. In particular, we expect that executive

public managers that pursued a technocratic career path will have higher performance in public policies requiring an administrative implementation process, while chief executives that pursued a political career path will have higher performance in public policies requiring a political implementation process. These are the testable implications of our framework.

We will test this proposition in the Mexican context, using a panel dataset for Mexican governors for the 1995 – 2014 period, covering roughly four gubernatorial administrations. The main independent variable, governors’ political career path, is measured as a proportion. It takes into account all the employment history of the governor up to the moment of taking office. This variable adds up all the years spent in political posts and divides them over the total number of years worked by the governor in the public sector up to the moment of taking office. On the other hand, we measure government performance using two variables: infant mortality rate and the number of courses approved in vocational schools. We use these indicators given that one of the main attributions of the Mexican governors is to improve health conditions of the population and increase jobs to promote the overall well being of the population.

We propose to estimate the causal effect of administrative career on government performance using an instrumental variable approach combined with a generalized Difference in Difference (DiD) design. We adopt this identification strategy because a direct pooled OLS or state fixed effects regression would return biased estimates due to the presence of omitted variables. In order to deal with these issues, similarly as in Galiani, Torre and Torrens (2016) we propose to use the exogenous variation provided by two independent but related Mexican political reforms. The 1977 political reform established the figure of proportional representation at the Mexican state congress. The 2002 political reform imposed a genre quota which required political parties to have at least 30% female candidates. We take advantage of the fact that both reforms changed the relative cost of pursuing political career for the Mexican politicians, while the specific characteristics of the reforms did not affect states’ performance. Our results indicate that governors with greater political experience exhibit lower performance in terms of infant mortality rate but higher performance in terms of vocational training outputs.

2 The Role of Elected Executive’s Attributes in Government Performance

Broadly speaking, studies that examine the relationship between leadership and performance content that based on their characteristics, leaders might have differentiated capacity to boost the attainment of organizational goals. These differences might take the form of motives, means or opportunities (Petrovsky 2010). For example, a top manager might help an organization to achieve its goals by 1) mobilizing the resources an organization needs to achieve its objectives, 2) creating structures to buffer the environment,

3) look for opportunities to increase the resources (either human or financial) required to boost the performance of an organization, 4) selecting and training the staff, 5) motivating employees, and 6) adopting certain policies (O'Toole and Meier 1999, 2011). Based on that argument, several scholars have empirically tested the effect of managerial quality on the performance of public programs and organizations (Meier and O'Toole 2002; Carmeli 2004; Fernandez 2005; Damanpour and Schneider 2009; Avellaneda 2009).

This literature has measured managerial quality in different ways. As Meier and O'Toole (2002) assert, measuring managerial quality is difficult because it is linked to what a manager is expected to do, and this varies by organizational goals, policy sector, resources, and context. Still, public management scholars have engaged in this endeavor. For example, Meier and O'Toole (2002) measure superintendent quality in Texas school district using a residual-based measure derived from a model that predicts superintendent salary. The variables included in this model account for job size, human capital, personal characteristics and past performance. According to these authors, the residuals of this model should incorporate, among other things, an assessment of managerial quality. Other authors have relied on a slightly different approach and used variables such as tenure, education (Damanpour and Schneider's, 2009) and job-related experience (Avellaneda, 2009) as proxies for managerial quality.

In addition to the question of whether leadership matters for performance, scholars have also asked under what conditions and through which mechanisms it affects performance (Yukl 2010 provides an extensive review of this literature). Among other contingencies, scholars have suggested that the fit between managers and their organizations influences leadership effectiveness. Work in the private sector has explored the ways in which the congruence between the task at hand and the skills and abilities of the leaders influence organizational outcomes (Doig and Hargrove 1990; Svara 1994). In fact, behavioral and management researchers have studied different kinds of fits (see Kristof-Brown et. al. 2005 for a review), for example, the fit between the person and the job (Edwards 1991) or between the person and the organization (Bertrand and Schoar 2003), and their impact on performance. However, this relationship has been rarely tested in public organizations.

While it is true that public administration specialists have barely paid attention to this topic, the scholarship on executive politics have somehow made reference to it. Several scholars have studied the difference in terms of competences between political appointees and merit-selected public servants, and how this difference impacts performance (Krause et. al. 2006; Lewis 2007). These authors have highlighted the relevance of having a good alignment between the organization and the individual's characteristics. These studies identify that different means of selecting personnel (e.g. at-will or politically autonomous) affect bureaucratic behavior, which in turn influence performance. Nonetheless, this literature does not take into account that regardless of the selecting personnel system, some job characteristics provide specialized policy expertise (Mumford et. al. 2000). Thus, the manager-job fit in terms of the kind

of expertise needed for a certain task might influence performance, notwithstanding the way a person obtained the job. As mentioned before, this association has been hardly among public administration scholars.

Recognizing this oversight, some public management scholars have started to explicitly study the relationship between manager-organization (MO) fit and performance, taking into account the unique aspects of public organizations. Petrovsky et. al. (2015) is perhaps the first to elaborate a theoretical framework to explain the connections between fit and organizational performance within the public sector context. In particular, these authors look at the publicness fit, which refers to the match between the level of publicness of an organization and the managerial experience of the new leader, and how it affects performance. The authors propose a continuous measure of publicness integrated by three dimensions: public ownership, degree of public funding, and public regulations. According to these authors, the level of publicness experience that a manager gains through its career provides he or she a certain amount of public sector socialization, value orientation and expertise in political issues. This publicness fit will shape the relationship between top management succession and organizational performance.

Petrovsky et. al. (2015) provide a well-developed set of theoretical propositions but invite others to empirically assess them. Adding to this endeavor, Rutherford (2016) tests the linkage between executive managerial fit and organizational performance in the US higher education context. Given that fit is a multidimensional concept, she constructed an index using a number of variables that account for key organizational characteristics (e.g. task complexity, size, resources, clientele). The manager-organization fit index is a measure of the degree of congruence between the features of the organization that the individual directed in the immediate past and those of the current organization. Although, the measures were selected to account for the specific context of US higher education, which is a very unique policy area, the organizational features behind the variables can be used in other contexts. The findings of her paper indicate a nonlinear relationship between managerial fit and organizational performance: performance increases with the level of fit but very high levels of fit are actually negatively associated with performance.

As noted above, the literature on the management-performance relationship includes an extensive number of studies that consider whether management matters for performance and what contingencies shape this relationship, including the managerial and publicness fit. Notwithstanding the proliferation of research, O'Toole and Meier (2011) asserted that certain terms of the management-performance model have not been systematically analyzed. The research on managerial and publicness fit is moving the discussion towards the right direction as it is trying to move beyond a broad definition of managerial quality and disentangle the specific managerial features that might positively affect organizational performance, given the characteristics and context of the organization.

However, the managerial and publicness fit research has some limitations. The publicness fit framework does not explain the case in which a person who has a given background resulting in the same level

of publicness fit for two different agencies might have distinct levels of performance in each organizations, keeping all other relevant variables constant. The measure of managerial fit developed by Rutherford (2016) does not fully account for how the experience and expertise gained through out a given career might alter the fit of a given chief executive with a particular agency. Thus, the field of public management still has little knowledge on whether and to what extent leaders' career paths within the government might result in a particular level of performance, depending on the type of public agency or public policy implementation process. In other words, little is known about whether having a specific career path inside the public sector generates a better fit for some public policies or public agencies, and if this will have an impact on performance. This paper aims to contribute to the public administration literature by empirically studying the relationship between elected executive leaders career path and government performance.

3 A Framework for Understanding the Impact of Governors' Career Path on Gubernatorial Performance

3.1 Transaction Costs and Implementation Process

Public policies would most likely be unsuccessfully implemented without the support from several key actors. Thus, trade and cooperation between chief executives and different interest groups bring gains. However, the dynamic political environment (Rainey 2014) and the lack of enforceability of contracts between elected chief executives and interest groups (Weingast and Marshall 1988) involve a kind of cost, additional to the costs of actually producing or delivering a good: transaction costs. A transaction cost can be broadly understood as the cost of contracting and include costs of planning, adapting, monitoring, drafting, negotiating, safeguarding contracts, among others (Scott and Davis 2007). In this context, transaction costs take the form of negotiation efforts for the adoption and implementation of public policies, as well as in the planning (or approval) of the policies. Just as legislators take into account transaction costs when designing policies (Weingast and Marshall 1988; Spiller and Tommasi 2003), chief executives consider those costs when deciding which policies to implement.

The transaction costs faced by the chief executives will be differentiated based on to the type of public policies pursued during their administration. Matland (1995) noted that public policies require different implementation processes, which can be classified based on two of their features: the level of conflict and ambiguity. According to his categorization, public policies with low levels of conflict and ambiguity are implemented through an administrative process. In this kind of implementation process, the executive manager is in charge of defining the procedures for policy implementation, which are hierarchical followed by the bureaucratic machinery. On the other hand, programs with low ambiguity

but high degree of conflict will require a political implementation process. This type of implementation process is characterized by the need of a high level of bargaining between agents for the policy to be implemented. Thus, when the chief executive decides to give impulse to public policies that require primarily an administrative implementation process, the transaction costs will be related to the planning and monitoring of the policy. On the other hand, when the chief executive decides to give impulse to public policies with a political implementation process, the transaction costs will be mostly related to the cost of bargaining with different interest groups in charge of supporting the policy.

3.2 Career Path and Leadership Skills

Chief executives' career path provides them with certain qualifications (Dearborn and Simon 1958; Ericsson et. al. 1993; Mumford et. al. 2000; Krause 2006; Berman 2013), i.e. different career paths afford executives with distinct skills. A manager that has pursued a technocratic career path will develop different skills than one that has dedicated to advance a political career path. As technocrats are technically trained experts (Fisher 1990; Caramani 2017) or personnel with technical expertise (Centeno and Silva 1998), a technocratic career path will help chief executives to develop hard skills, e.g. managerial or technical skills (Bowman et. al. 2010). A political career will provide the chief executive with soft skills, specifically political skills. These include the ability to influence team processes and read political currents correctly, understands patterns of relationships fast, and create relationships with peers and subordinates (Riggio and Tan 2014).

As result, in this paper, we conceptualize a technocratic career as work experience in jobs that predominantly require specialized knowledge or skills. A political career is conceived as work experience in jobs that require to deal with political matters.

3.3 Leadership Skills and Performance

A career path generates different incentives when deciding the portfolio of public policies that will be implemented in their administration. Similar as in Weingast and Marshall (1988) we assume that elected chief executives seek to fulfill citizens' needs by providing goods and/or services¹, and that they have the liberty to choose which policies will be implemented during their administration. As a result, assuming that chief executives decide the portfolio of policies to be implemented based on their potential gains, they will consider the costs and possible difficulties that each policy will face to be effectively implemented. As different experiences generate different skills, which in turn provide distinct tools and resources to navigate through the policy processes, elected executives with different career paths will face different costs and success probabilities for each policy. A technocratic career path will help them to define the procedures in those policies that require an administrative implementation process. As a result, it is

¹In order to obtain a political retribution.

expected that elected executives with a technocratic career path will decide to focus their efforts and give more impulse to public policies with a predominantly administrative implementation process, since their accumulated skills will allow them to perform better in this kind of policies. Thus,

- H1: Compared to technocrat elected executives, those with a political career path will exhibit lower performance in policies with a predominantly administrative implementation process.

On the other hand, when the elected executive has a political career path one would expect him or her to focus his or her efforts to pursue public policies that require a political implementation process. Whenever the implementation of public policies requires getting the consensus between the executive manager and several political groups, the lack of political capital will place technocrats in a weaker negotiating position, increasing the probability of failure of the policy. Thus,

- H2: Compared to technocrat elected executives, those with a political career path will exhibit higher performance in policies with a predominantly political implementation process.

4 Mexican Governor's Career Path and Government Performance

We test our hypothesis in the Mexican context. Specifically, we use governors' career path to explain state government performance in two policy areas: health and labor. In particular, we analyze health policies aiming to reduce infant mortality and job training programs. We chose these two kinds of policies for two reasons. First, the state government implements both of them and, second, they exemplify the kind of policy implementation process for which our framework makes specific claims.

Similar to governors in the U.S., Mexican governors are elected through a democratic process. However, Mexican governors serve for one six-year term with no reelection possible. State elections are held on different dates in an electoral year (e.g. January, July, or September). However, all governors take office on either the last or the first month of the year. Given these inauguration dates, we can associate the start of a gubernatorial administration with the beginning of a calendar year and attribute performance indicators accordingly. As in the U.S., Mexican governors are the head of the executive branch, perform political and administrative functions and are accountable to the state legislature.

As a result of the decentralization process, governors enjoy considerable autonomy in providing public service delivery, such as health and vocational training. According to the Health Federal Law (*Ley Federal de Salud*), is attribution of the state government to design and implement local programs to enhance health conditions in their localities, through the Department of Health. Regarding vocational training programs, state government is also in charge of its management. In 1963, the first centers for vocational training were created, however, it is until 1990 that the state government takes over the

responsibility of managing vocational training programs. Administrative responsibilities in health and vocational training policies are, therefore, the direct responsibility of governors (Hernandez 2008). For instance, it is the governor, through the State Government Plan, who determines the strategies that will be followed to achieve the goals of those types of policies. Moreover, the governor appoints both the head of the Health Department and the General Director of the institutes that provide vocational training. So, these two executive managers respond directly to the governor.

In Mexico, health programs aiming at reducing infant mortality rates are characterized by having low levels of both ambiguity and conflict. Diminishing infant mortality rate is a goal shared by different interest groups participating in the policy implementation process. Regarding the conflict, the kinds of interventions that are implemented to reduce infant mortality rates generally have a well-defined process. This procedure consists of improving mothers' capabilities for taking care their babies. The governments of Mexico City and Tamaulipas provide an example of the different mechanisms that different Mexican state governments have used to reduce infant mortality rate. In Mexico City, the state government provides mothers with a tool-kit for the basic care of the baby, for example cradles, hypoallergenic soap, clothes, thermometer, diapers, etc. On the other hand, Tamaulipas state developed a prevention program that accompany women during their pregnancy to make sure they have good health and provide them with information and resources to give good care to their babies.

On the other hand, vocational education programs have low ambiguity since improving workers' human capital is well regarded among distinct interest groups. However, there are several conflicting views regarding the types of interventions that are more effective to enhance worker's human capital. For example, some stakeholders might argue that private markets working efficiently will provide the needed amount of capacity for work without a government intervention. So, these groups might support policies that reduce regulation or taxation. Other groups of actors might argue that existence of market failures like imperfect information, externalities and credit constraint justifies government intervention (CEPAL, 1996). Nonetheless, some these actors might prefer supporting entrepreneurs, while some others will advocate for vocational training.

To further investigate the role of Mexican governors' on defining the public policies that will be undertaken during their administration, we carried out field research in Mexico City and the Quintana Roo during the summer of 2017. During our trip we conducted a series of interviews with high level public officials in both the health and labor ministries. The information obtained through these interviews shows the predominant role of Mexican governors in determining the kind of public policies that will be carried out during their administration and the differentiated emphasis given to different policy areas.

One of the most remarkable differences in terms of attention to specific policy areas was seen between the former Mexico City governor (Miguel Angel Mancera) and the former Zacatecas governor (Amalia Garcia). According to our conceptualization, Mancera is classified as having a technocratic career path

and Garcia has a political career. In our interview with Amalia Garcia, she explained how she focused her efforts as governor to increase employment and reduce migration in Zacatecas. To do that, she created agreements with different institutions to provide vocational training programs. She thought that by providing skills that the labor market demands, employment should increase. As a political hawk, she used most of her political capital to impulse vocational training programs.

In contrast, the administration of Mancera put great emphasis on health programs. The program Doctor at Your Home (Medico en Tu Casa) was maybe the most important during his administration. From our interviews with the Mexico City Minister of Health and the Doctor at Your Home program's Director, we learned the process that gave birth to this program. In 2014, the Medical Report of Maternity Deaths carried out by Mexico City's government found that in 69.5 of 100,000 births the mother died during or soon after labor. This figure was the highest of any Mexican city despite Mexico City enjoying the country's best health care system. Thus, Mancera requested the Health Minister to explore the reasons behind this high maternity mortality rate. In September 2014 the government of Mexico City started to visit each home to identify pregnant women. Soon after Doctor at Your Home was born. As a technocrat, he used specialized knowledge to address a pressing problem in Mexico City.

5 Data and Identification Strategy

5.1 Data

To analyze our hypothesis we constructed a panel data set for the years 1995 to 2014 including the 32 Mexican States. We take advantage of the variation in governors' profile to identify the effect of their career path on performance. As mentioned before, our sample period covers roughly 4 administrations for each state (each with a length of 6 years), however, in some cases governors did not last their entire 6 years period². Hence, for some states we observe more than 4 administrations, allowing us to observe a high number of governors and levels of performance throughout the Mexican states in our sample period. Another relevant feature our dataset comes from the fact that there is also great variation in the timing in which governors take office. This is a result of the Mexican context, where gubernatorial elections for each state are not all simultaneous, i.e., in a given years some states elect governor, while others not, and do it in other years.

As mentioned before, our dependent variable aims to measure the performance of the Mexican governors in two specific policy areas: health and labor. With respect to health policies we measure governors' performance through the change in infant mortality rate³. In our sample, on average 1.22% of newborn dies in each state, each year. With respect to labor policies, we measure governors' performance

²This might be related to death of the elected governor or other causes as sickness, etc.

³The percentage of deaths in babies that are younger than 1 year old

through the number of courses approved in vocational schools⁴. This variable aims to capture governors' effectiveness to promote employment through job training programs. The variation in this measure is considerable: some states have 0 courses approved while other have 210,471.

The independent variable of interest is the proportion of time spent by the governor in political posts. In order to construct this variable we relied on the information available in Ai Camp (2011). For governors whose information was not in the book we used public information on internet. The variable considers governors' employment history up to the moment they took office, and it is composed by the sum of the years spent in political posts divided over the total amount of years spent in both technocratic and political posts. As a result, this variable measures the proportion of time spent by the governors' in political posts throughout his or her public sector career. It is important to notice that we do not considered the time spent in private sector nor in academic jobs. However, we do take into account this information by including dummy variables that control for whether or not the governors has private or academic experience. For the period of time analyzed in this study, before coming to office the average time spent by governors in political posts was 53%.

The other controls included in the analysis are two measures of the political environment: party affiliation of the governor and the margin of victory in the election. We also include two state level variables: whether the governor was elected or he or she entered into office as a substitute and the income per capita of the state. Finally, we include two governors' characteristics: his or her age, and his or her level of education.

In Table 1 below we present summary statistics for all the variables included in the analysis.

Table 1: Descriptive statistics

⁴The measure includes the total number of students that approved some course, and if the student approved several courses it is taken into account as many times as courses approved. Secretariat of Public Education available at <http://cumplimientoef.sep.gob.mx/content/pdf/Glosario%202008%2024-jun-08.pdf>

Variables	N	mean	sd	min	max
infant mortality rate	640	1.228	0.426	0.300	3.318
Δ infant mortality rate	608	-0.0377	0.142	-0.530	0.520
Number of students that approved courses	629	31,570	29,823	0	210,471
Political career	640	0.523	0.306	0	1
Margin of victory	640	16.702	16.670	0.530	81.320
Foreign direct investment	640	685.4	1,142	-85	10,212
Population	640	3339797	2825444	400667	16618929
Governor's age	640	50.40	7.665	31	72
Governor's education (years)	640	16.77	1.853	12	21

5.2 Identification Strategy

Our identification strategy is based on an instrumental variable approach combined with a generalized DiD design. This approach was chosen considering that a direct analysis either through pooled OLS or a state fixed effects would suffer from omitted variable bias. This bias would arise as we do not have information regarding the number of both technocratic and political posts related to diminish infant mortality rate, or to increase employment through vocational courses, in previous administrations. It is expected that a greater effort to tackle infant mortality could have generated several positions in the past, both political and technocratic, as these efforts would have called for an increase in clinics and the development of social and health programs, but also an increase in staffing. It is expected that this increase would have had a negative relationship with infant mortality rate, and viceversa. On the other hand, previous efforts to tackle infant mortality rate would have affected the relative cost of pursuing a career path for governors deciding their path at that time. The fact that this unobservable variable is correlated with both our independent and dependent variable would generate a bias in our coefficient of interest. We face a similar problem with respect to the number of vocational courses approved. In particular, our coefficient suffers from omitted variable bias because a previous allocation of resources for training purposes might have increased the amount of both technocratic and political posts, while it had also increased the number of courses approved in this kind of schools.

In order to address this issue, similar as in Galiani, Torre and Torrens (2016), we propose to exploit plausible exogenous variation provided by two independent but related Mexican political reforms. These reforms altered the relative cost of pursuing a political career, allowing us to use a generalized DiD design to compare the performance of each state against itself before and after experiencing such an exogenous change in the perceived availability of political positions. Just as in the United States, in Mexico there is

separation of powers between the executive, legislative and judicial branches of government at the state level. The state legislature consists of representatives that can be elected either by direct vote or appointed through proportional representation. The 1917 Mexican Constitution stipulates that the number of state elected representatives is determined by the size of the population in each state. The figure of proportional representation was included through a Constitutional reform in 1977. As at that time the Institutional Revolutionary Party had a clear advantage in the number of deputies as well as *all* the offices of the governors, so one of the objectives of the reform was to promote political competition in the Mexican states. This political reform mandated state legislatures to include either minority representatives or proportional representatives, which seats are allocated as a function of the share of votes obtained by each party (Paoli, 1985). However, states were free to implement this process as they saw fit. Initially, only 8 states introduced the figure of minority representatives, while 23 introduced proportional representation (Madrazo 1985). It is important to notice that the number of proportional representatives did not follow any kind of pattern among state legislatures. The actual number of representatives varied between states and did not depend of the population size or any other characteristic of the state. It was possible to see states with a similar level of population and very different proportional seats, such as Aguascalientes and Hidalgo, where the latter has 33% more proportional seats. Also, we can see that the proportion of seats assigned in each state varies greatly, for example Jalisco has 50% of seats reserved for proportional deputies while Baja California Sur only assigns 24% (Flamand, 2010). We claim that, by increasing the availability of political posts available, this reform changed the relative cost of obtaining a political post. In particular, we would expect an increase in the number of proportional deputies to increase the proportion of time spent in political posts. It is expected that such number of proportional deputies does not have any relationship with the performance of the public policies under study, as we are not considering the distribution among political parties, although it is expected for it to change the perceived availability of political positions and set a benchmark regarding the total number of political posts available.

The second political reform used in our study consists of the Constitutional reform of the year 2002. This reform implemented a minimum genre representation for candidates. In particular, it imposed a quota of at least 30% of female candidates. As a result, this reform can be considered as a further exogenous change in the cost of attaining a political office. In particular, as the reform made parties to select almost one third of female candidates, it changed the relative price of attaining a political position. In the case of men, the relative price of a political position increased while it decreased in the case of women. Taking into consideration that there are only 2 women governors in our whole sample, we claim that the reform increased the relative cost of obtaining a political position. As a result, we would expect to observe a decrease in the proportion of time spent in political posts after the 2002 political reform. Furthermore, regarding the exogeneity of this reform, it is not expected that the establishment of the

30% quota for women candidates is related in any way to the performance of the Mexican states. This as the reform did not entail an automatic change in the composition of the genre in political posts. The reform forced parties to postulate women, not to have actual elected officials. Furthermore, several studies recognize that such reform was ineffective to increase women's representation (Pena Molina, 2014). Hence, by not changing the actual composition of the legislative branch, the reform did not have a direct effect on states' performance.

Notice that there are different treatment dates for each state by the 2002 political reform. This as the newly elected governor was not affected by this change in the relative cost of obtaining a political office and each state hold elections in different years after the reform. We exploit this fact in order to improve our identification strategy (Angrist and Pischke, 2008; Daniele and Geys, 2015). Hence our estimating equation is:

$$\text{Performance}_{st} = \sum_s \delta_s \text{State}_s + \sum_t \delta_t \text{Year}_t + \theta \text{Percentage Political Career}_{st} + X'_{st} \beta + \varepsilon_{st} \quad (1)$$

where, Performance_{st} represents the level of performance of each state with respect to infant mortality rates or vocational schools; $\text{Percentage Political Career}_{st}$ represents the proportion of time spent by the governor of each state in political positions; X_{st} is a set of control variables, and we include state and year fixed effects. As mentioned before we include as control variables two measures of the political environment, party affiliation of the governor and the margin of victory in the election; two state level variables, whether the governor was elected or he or she entered into office as a substitute and the income per capita of the state; and two governors' characteristics, his or her age, and his or her level of education. This allow us to control for factors that affect the level of performance of each state, as well governors' decisions regarding their career path. In particular, party affiliation is included as the party in office clearly affects performance, but it also affects governors' career decisions as parties have different reach and scope, thus offering different career opportunities. Margin of victory accounts for the fact that a governor who win the election with a greater margin might have a better position to implement his or her policies. On the other hand, the type of career might affect career strategies and in turn margin of victory. The dummy for whether the governor is substitute or not accounts for the fact that, depending on the situation that called for the need of a substitute executive, he or she might face a more difficult or easy situation, affecting performance. On the other hand, the fact that a individual is in a position to become a substitute governor will depend of his or her career decisions. With respect to income per capita, we include it as it is clearly related to performance as well as the state level available job opportunities, and thus career decisions. Finally, the governor specific variables age, level of education, private and academic experience, are included as, given previous empirical evidence, they affect performance, and could also affect career choices by the development of differentiated skills.

6 Empirical Results

Table 2 below present the first stage estimates for the relationship between the percentage of time spent in political posts and the number of proportional deputies interacted with the variable Post, which takes the value of 1 after the year 2002 and 0 otherwise. The first column presents the estimation when analyzing the effect on infant mortality rate, and the second column presents the results when analyzing vocational courses approved.

Table 2. First stage regression

Dependent variable: Perc Pol Car		
Variables	Infant Mort Rate	Vocational Courses Appr
Number of Prop Deputies * Post	0.031*** (0.011)	0.034*** (0.011)
Political controls	Yes	Yes
Governor controls	Yes	Yes
State controls	Yes	Yes
State FE	Yes	Yes
Year FE	Yes	Yes
Observations	608	629

Clustered standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As can be seen from the previous results, and as it was expected, there is a positive correlation between the number of proportional deputies in each state Congress and the amount of time spent in political posts by the elected governors. In particular, after the 2002 political reform, one more proportional deputy seat generates an increase of around 3% in governors' political experience. It is important to notice that we are not worry about having a weak instrument since our F statistics is greater than 10, specifically 310.58 when evaluation infant mortality rate and 388.26, which is the standard accepted in instrumental variable studies.

Table 3 below presents the 2SLS results. In the first column we are analyzing the effect on infant mortality rate and in the second column the impact on vocational schools.

Table 3. DiD with IV

Dependent variable: State Performance		
Variables	Infant Mortality Rate	Vocational Courses
Perc Pol Career	0.127** (0.059)	41,812.68** (18,701.85)
Political controls	Yes	Yes
Governor controls	Yes	Yes
State controls	Yes Yes	
State FE	Yes	Yes
Year FE	Yes	Yes
Observations	608	629

Clustered standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

As can be seen, our results indicate that an increase of 10 percentage points in political experience increases in 1.27 percentage points the growth of infant mortality. With respect to vocational courses our results indicate 10 percentage points in political experience increase in 4181 the number of vocational courses approved.

7 Conclusions

This paper has the goal of identifying the kind of skills that either enhance or hinder government performance. The core argument of this study is that a chief executive that has accumulated a large experience related to technocratic posts will develop different skills than a chief executive that has dedicated to advance a political career. Based on our framework, we hypothesize that elected executives with a predominantly political career background will have higher performance when undertaking public policies with a predominantly political implementation process, and viceversa.

We test our hypotheses using the Mexican context. We constructed a panel dataset for Mexican governors for the 1995-2014 period, which roughly covers four gubernatorial administrations. State performance was measured in terms of infant mortality rate and number of vocational courses approved. We chose these indicators as addressing infant mortality requires policies with a predominantly administrative implementation process. On the other hand, deciding to improve labor outcomes through vocational courses would require a predominantly political implementation process.

We estimated the causal effect of career path on gubernatorial performance using an instrumental variable approach along with a Generalized Difference in Difference identification strategy. We use plausible exogenous variation from two independent but related Mexican political reforms. Our findings are

in line with our theoretical proposition. In particular, we found that governors with greater political experience exhibit lower performance in terms of infant mortality rate, but exhibit higher performance in terms of vocational training outputs.

8 Appendix

8.1 Jobs Categorization

As mentioned above, jobs are divided in two mutually exclusive categories: political and technocratic. I consider as political jobs those that develop primarily political skills. The positions that are considered to develop this kind of skills can be divided in three main groups. Firstly, there are certain agencies at the federal, state and local level that, given the nature of their work, develop primarily political skills. The specific agencies are chosen taken into consideration their specific goals. For example, according to the official website of the Mexican Secretariat of Government, it is in charge of the national politics as well as the interaction between the executive branch and another levels of government.⁵ Secondly, a group of jobs that is considered to develop primarily political skills are those directly related to politics. In particular, every job within a political party or any position in a political campaign is taken to develop primarily political skills. Finally, the last group of jobs that fall in the category of political jobs are not agency specific, they are public sector jobs that might be found in any agency, however, its intrinsic characteristics primarily foster the development of political skills by the employee. In particular, these jobs are deputy, senator, private secretary, technical secretary, etc. Another post considered political is the post of advisor for political positions, such as advisor for a candidate for president or the president of a political party. For a list of the jobs and agencies considered as political jobs see Table 4 below.

The second category is denominated as technocratic jobs. The jobs that fall in this category are considered to develop primarily hard skills, and they can be divided in 2 groups. Firstly, there are some jobs that are agency specific. Taken into consideration agencies' goals we consider them to develop primarily hard skills. For example, according to its official website, the Mexican Secretariat of Finance is in charge of developing the economic policy in the country.⁶ Secondly, there are certain jobs that, regardless of the agency where they are carried out, develop hard skills, for example, treasurer, judge, etc. Mayors are also considered to develop hard skills in this research. Even though a mayor is an elected official with political experience, as we are considering governors in this study, mayors executive experience should provide them primarily with technical and administrative experience for their new positions. For a list of the agencies and jobs considered see Table 4 below.

⁵<http://www.gob.mx/segob>

⁶<http://www.gob.mx/hacienda>

Table 4. Jobs Categorization

Technocratic	Political
Agencies	Agencies
Office of the Presidency	Secretariat of Government (Federal and State Level)
Judicial Branch	Secretary of Foreign Relations
Army	Unions
Secretariat of Finance (Federal and State Level)	Political Parties
Secretariat of Economic Development (Federal and State Level)	Political Campaigns
Secretariat of Housing and/or Public Works (Federal and State Level)	
Secretariat of Agriculture (Federal and State Level)	
Secretariat of Health (Federal and State Level)	
Secretariat of Commerce (Federal Level)	
Secretariat of Energy (Federal Level)	
Attorney General (Federal and State Level)	
Secretariat of Culture (Federal and State Level)	
Secretariat of Public Security (Federal, State and Local Level)	
Secretariat of Tourism (Federal and State Level)	
Secretariat of Public Education (Federal and State Level)	
Secretariat of Transportation (Federal and State Level)	
Secretariat of Labor	
INEGI (National Statistics Institute)	
IMSS and ISSSTE (Social Security)	
Water Commission (Federal and State Level)	
Electoral Institute (Federal and State Level)	
CNBV (Banking System Regulatory Agency)	
INFONAVIT (Public Housing)	
Human Rights Commission	
Universities (non academic posts)	
NAFIN (National Development Bank)	

Table 4. Jobs Classification (continued)

Technocratic	Political
Specific positions	Specific positions
Congress. Analysis department	Private secretary
Adviser to Technocratic Jobs	Deputy (Federal and State Level)
Mayor	Adviser to Political Jobs
Judge	Public Trustee
Treasurer (Local Level)	Public Notary
Comptroller (Local Level)	Ambassador
Delegates D.F	Senator
Hospitals' Directors	Human and material resources manager (Official mayor)
Secretary City Government (Local Level)	

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