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Lento or Presto? Subnational Government Capacities and the Pace of Implementation of Contentious Policies

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Abstract: Mexico's implementation of mandatory teacher assessments in 2013 was part of a group of federal reforms aimed at enhancing the quality of state-run education. The reforms elicited strong opposition from key stakeholders. Building on the idea that policy capacities are the set of capabilities necessary to perform policy functions, we examine the effect of subnational government capacities on the pace of implementation of the mandatory teacher assessment in Mexico, a country with one of the most powerful teachers' unions in the world. After conducting statistical analyses based on panel data encompassing information on subnational government capacities from 2015 to 2017, we find that while subnational governments' human resources and fiscal capacities are associated with higher proportions of evaluated teachers, repressive capacities do not seem relevant for this purpose. Our research offers valuable lessons for policy makers in terms of recognizing adequate resource allocation and predicting the speed of policy implementation, even in contexts of significant opposition.

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¿Lento o presto? Las capacidades de los gobiernos subnacionales y el ritmo de implementación de políticas contenciosas

Resumen: La implementación de evaluaciones obligatorias a los docentes en México en 2013 fue parte de un grupo de reformas del gobierno federal diseñadas para mejorar la calidad de la educación pública. Las reformas desencadenaron una oposición significativa entre las principales partes afectadas. Partiendo de la idea de que las capacidades de políticas son un conjunto de capacidades necesarias para ejecutar políticas públicas, examinamos el efecto de las capacidades de los gobiernos subnacionales en el ritmo de la implementación de evaluaciones obligatorias a los docentes en México, un país con uno de los sindicatos magisteriales más poderosos del mundo. Tras realizar análisis estadísticos basados en datos de panel que abarcan información de las capacidades de políticas de los gobiernos subnacionales de 2015 a 2017, hallamos que, si bien las capacidades en materia de recursos humanos y fiscales de los gobiernos subnacionales se asocian con una mayor proporción de docentes evaluados, las capacidades de represión no parecen relevantes para este propósito. Nuestra investigación ofrece lecciones valiosas a los formuladores de políticas públicas respecto al reconocimiento de la importancia de la asignación debida de recursos y para la predicción de la velocidad de la ejecución de las políticas públicas, incluso en contextos de oposición significativa.

Palabras-clave: reforma educativa; evaluación docente; evaluación del alto impacto; monitoreo y evaluación; México; capacidades de gobierno subnacionales

¿Lento o presto? As capacidades dos governos subnacionais e o ritmo de implementação de políticas contenciosas

Resumo: A implementação de avaliações docentes obrigatórias no México em 2013 fez parte de um grupo de reformas do governo federal destinadas a melhorar a qualidade da educação pública. As reformas desencadearam uma oposição significativa entre as principais partes afetadas. Partindo da ideia de que as capacidades de políticas são um conjunto de capacidades necessárias para executar políticas públicas, examinamos o efeito das capacidades dos governos subnacionais sobre o ritmo de implementação das avaliações docentes obrigatórias no México, um país com um dos mais poderosos sindicatos de professores do mundo. Depois de realizar análises estatísticas com base em dados de painel cobrindo informações sobre as capacidades das políticas dos governos subnacionais de 2015 a 2017, descobrimos que, embora as capacidades fiscais e de recursos humanos dos governos subnacionais estejam associadas a uma proporção maior de docentes avaliados, as capacidades de repressão não parecem relevantes para este propósito. Nossa pesquisa oferece lições valiosas para os formuladores de políticas públicas no reconhecimento da importância da alocação adequada de recursos e na previsão da velocidade da implementação das políticas públicas, mesmo em contextos de significativa oposição.

Palavras-chave: reforma educacional; avaliação docente; teste de alto impacto; monitoramento e avaliação; México; capacidades dos governos subnacionais

Lento or Presto? Subnational Government Capacities and the Pace of Implementation of Contentious Policies

This article asks what role subnational government capacities play in the pace of implementation of contentious policies aimed at enhancing educational quality. We evaluate the role of three types of government capacity—human resources, fiscal resources, and repressive capacities—in expediting recent educational reform in Mexico that saw new standards for the hiring, evaluation, and promotion of teachers.

Our research analyzes the case of a developing and federal country where political discourse on educational reform enabled parties across the ideological spectrum to establish an improbable alliance to approve an agenda that would weaken the most powerful teachers' union in the world—Mexico's National Education Workers Union (SNTE; Cooper, 2000; Larreguy et al., 2017; Rojas, 2018). Mexico's 2013 reform proved highly contentious, with new teacher evaluations eliciting particularly strong opposition from stakeholders and vested interests (Bonilla-Rius, 2020; Grindle, 2004; Moe, 2015). Similarly, because such reforms have been hallmarks of global policies associated with the new public management perspective, critics of the Global Educational Reform Movement (GERM) tend to view them as viruses infecting education systems around the world (Sahlberg, 2012; Verger, 2014; Verger & Curran, 2014).

After conducting statistical analyses based on panel data on subnational government traits for the period 2015–2017, we find that subnational governments' human resources and fiscal capacities are associated with higher percentages of evaluated teachers. Our findings suggest that greater human and fiscal resources increase the odds of successfully implementing contentious policies. Our results also indicate that building human resources and extractive capacities before implementing major reforms is crucial, and that (against our expectations) repressive capacities are not relevant to push forward changes of this nature.

Although educational reforms may boost the development and quality of education and improve student learning, our study shows that merely approving a reform is not enough to guarantee its achievement. Once the reform is adopted, the capacities of subnational governments are crucial for effective implementation. Yet not all types of capacities are equally important: our study shows that even in cases of significant resistance from critical stakeholders, carrot-like capacities (staff or fiscal extractive ones) become more effective than stick-like capacities (ability to repress through the police).

The rest of our article proceeds as follows. In the first section, we describe the reforms Mexico introduced in 2013 to improve its educational system. We discuss how the forging of an unexpected coalition among political parties, which curtailed the SNTE's power through new rules for teachers' selection, promotion, and performance, relied on large-scale mandatory teacher assessments. We also provide examples showing the critical roles subnational government capacities played in the successful implementation of the reform. Building on the government capacity literature, in the second part we develop theory-based hypotheses about the role of subnational government capacities to further policy implementation. In the third part, we test the validity of our hypotheses using a panel data model to estimate the effect of government capacities on the annual pace of reform implementation. The last part concludes and offers suggestions for further research.

Education Policy in Mexico: The Importance of Capacities

In recent decades, the transformation of educational systems has been driven by a range of objectives. These have included a desire to achieve equality of educational opportunity in the sixties

(Coleman, 1966; Jencks et al., 1972), to accomplish academic excellence in the eighties (National Commission on Excellence in Education, 1983; Rhodes, 2014), and to promote educational quality in the nineties (Gentili et al., 2004; Grindle, 2004). These continuous efforts to fix educational systems to improve student learning through changes in governance structures, curriculum, teaching methods, and teacher employment policies (Berube, 1988; Urban, 1982) are what Tyack and Cuban (1995) regard as tinkering toward utopia. Others see them leading to a dystopia, with high-stakes accountability, increased standardization, curriculum narrowing, and corporate management practices constituent parts of a global educational orthodoxy that has deleterious effects on student learning (Fuller & Stevenson, 2019; Sahlberg, 2016).

The modernization of Mexico's education system included policies aligned with this new global orthodoxy and the quality-oriented reform narrative that paved the way for large-scale and mandatory teacher assessments. In 1992, Mexico decentralized education provision from the federal government to subnational governments and introduced a merit-pay system to shape teachers' professional development, along with other curricular changes to increase educational quality. The launching of the *Carrera Magisterial* in 1993—a non-mandatory merit-pay program—offered teachers higher salaries based on their experience, professional development and education, peer review and students' performance (Echávarri & Peraza, 2017). In 2008, Mexico introduced professional examinations to determine who could occupy new teaching positions; this reform was intended to curtail the automatic entrance of graduates from teachers' colleges, as well as to assign principal or superintendent vacancies through the Alliance for Educational Quality (Ornelas, 2012).

The 2013 education reform introduced a new curriculum and policies to promote a stronger focus on student learning, while also reorganizing teachers' professional careers (Bonilla-Rius, 2020). Mandatory teacher performance assessments were the most contentious aspect of the reform as they created significant turmoil among teachers (Ornelas, 2019). The Teachers Professional Service (TPS) introduced large-scale performance assessments to determine who could enter the service (selection), continue to teach (performance evaluation), earn a higher salary (merit pay) or be promoted (promotion). The TPS combined features of the *Carrera Magisterial* and the Alliance for Educational Quality with the goal of instigating formal evaluations of more than 1.5 million teachers in about 200,000 public schools, attended by more than 30 million students at preschool, elementary, middle school, and high school levels (De Hoyos, 2019; Instituto Nacional para la Evaluación de la Educación, 2016). The aim was to lay the foundations to ensure student learning was at the center of all educational policies in a country where 55% of students are low performers, based on international student assessments (Bonilla-Rius, 2020; OECD, 2016).

The 2013 reform was highly contentious because its broader political objective was to dismantle the pillars of a corporatist pact between the Institutional Revolutionary Party (PRI)—the hegemonic political party that governed Mexico for more than 70 years—and the SNTE (Del Castillo-Alemán, 2014; Ornelas, 2018; Rojas, 2018).¹ The origins of the corporatist pact trace back to 1942 when the PRI established an alliance with three teachers' unions to form the SNTE, which as a single entity became a *de facto* arm of the PRI.² The PRI granted the SNTE's leaders monopolistic legal representation of teachers with considerable and stable resources through mandatory dues (1 percent of teachers' monthly salary) in exchange for controlling rank and file members and their electoral mobilization (Cortina, 1989; Gindín, 2008; Loyo, 1997). Over time, the SNTE expanded its

¹ The PRI ruled Mexico from 1929 to 2000 and led a period of dominance vis-à-vis competing political parties (Greene, 2007; Langston, 2017)

² The pact between the *Sindicato de Trabajadores de la Educación de la República Mexicana* (STERM), the *Sindicato Único de Trabajadores de la Educación* (SUNTE) and the *Sindicato Mexicano de Maestros y Trabajadores de la Educación* (SMMTE) in 1942 gave birth to the SNTE, which was officially recognized in 1944 (Ruiz, 2018).

power by ensuring that loyal members took up low-, middle- and high-level positions in the Ministry of Education as well as in subnational educational ministries (Bonilla-Rius, 2020; Muñoz, 2005; Ornelas, 2018).

After Mexico transitioned to democracy in 2000, the SNTE retained some power as its 2 million members could still influence which presidential candidate could win in increasingly competitive presidential elections (Hecock, 2014; Larreguy et al., 2017).³ Despite this influence, the federal government, in agreement with the most important political parties, introduced teachers' assessments as part of a broader set of structural reforms known as the Pact for Mexico.⁴ The assessments broke the clientelist and corporatist relationship between the State and the SNTE, ending decades of joint decision making on who could become a teacher and who could be promoted through joint boards, which had long operated with limited transparency and accountability (Muñoz, 2008; Ornelas, 2018; Rojas, 2018; Rosales Saldaña, 2016).

Furthermore, before the reform, teachers in the education sector could inherit, rent or sell their positions through the black market to aspiring candidates with the acquiescence of subnational authorities (Nieto de Pascual, 2009). These practices often allowed graduates from teachers' colleges to obtain teaching jobs automatically. The 2013 reform proscribed, or at least diminished, the operation of this black market. The reform also introduced evaluations to determine promotions to superintendent and school principal positions (Bonilla-Rius, 2020; Ornelas, 2019). These were positions that the SNTE had previously controlled to reward loyal members and alienate dissident teachers who were intent on challenging its monopolistic control.⁵

The requirement for teachers to be evaluated every four years to demonstrate continued professional capacity was what elicited the greatest opposition to the 2013 reform from the SNTE (Arriaga, 2015; Larreguy et al., 2017). Teachers were reluctant to accept performance evaluations as they threatened employment stability and ended the tenure they could obtain after six months in service (Arriaga, 2015; Rojas, 2018). Teachers were also uneasy about mandatory high-stakes assessments, as unwillingness to participate in them could result in contract termination. Similarly, unsatisfactory performance in three consecutive assessments could result in dismissal (for teachers hired after 2013) or assignment to administrative work duties with no possibility of teaching again (for teachers hired before 2013).

Performance evaluations also met the SNTE's resistance as higher standards could result in a smaller membership and, consequently, a reduction in union dues and strength to bargain collectively or strike effectively (Cooper, 2000; Strunk & Reardon, 2010). Opposition to the mandatory performance evaluations was so fierce that the former SNTE union leader, Elba Esther Gordillo Morales, was arrested shortly after she challenged this aspect of the reform and initiated a campaign of teacher resistance. The government used this tactic to discipline her and the SNTE (Ornelas, 2019).

Opposition to educational reform also arose from the National Coordinating Committee of Education Workers (CNTE), a social movement of dissident teachers with substantial political clout

³ The SNTE has more than 2 million members. About 1.5 million are teachers and the rest are other employees not subject to any of the reform's large-scale assessments (see De Hoyos, 2019).

⁴ The Pact for Mexico was the result of an unusual alliance between the main political parties in Mexico across the left, right, and center of the ideological spectrum that crafted a common set of agreements on structural reforms, ranging from education and telecommunications to justice and electoral reform. The study of the political incentives that made this agreement possible is beyond the scope of this paper.

⁵ The reform eliminated joint board committees through which the SNTE promoted loyal aspiring teachers on equal terms with the Ministry of Education. The SNTE could appoint half of all the positions on these committees (Cook, 1996; Sandoval, 2016).

in some Mexican states. It has maintained a historical power struggle against the SNTE due to the latter's antidemocratic and vertical internal leadership and submissive relationship with governments (Arriaga, 2015). Since its emergence in 1979, the CNTE has organized protests and blockades on critical infrastructure in the capital and subnational entities through cycles of mobilization-negotiation-mobilization (Cook, 1996). The CNTE tested the government's commitment to implementing the reform and willingness to concede to their demands with mobilizations in territories that were not part of their strongholds to expand its presence in SNTE-dominated states.⁶ The blockades on Mexico City's international airport and its main public square (see Zabudovsky, 2013) for several months were part of the CNTE's strategy to voice its opposition and show political muscle. In addition to opposing the four-year evaluations, the CNTE opposed entrance examinations that could prevent new members from taking over teacher positions in their strongholds. This constituted a vital mechanism to enhance dissident teachers' loyalty in its dispute against the SNTE.

Implementation of the reform required the cooperation of subnational authorities, as they were responsible for applying the National Institute for the Evaluation of Education (INEE)'s teacher assessments. Assessments to determine which teachers could join the profession or remain in teaching included not only knowledge exams but also other forms of evaluation, such as a portfolio showcasing the teacher's abilities based on their students' work, and online examinations to test their pedagogical knowledge and competencies. Implementing these examinations represented a formidable logistical challenge for several subnational governments. Various state governments also became reluctant to implement these evaluations in case they triggered a confrontation with the SNTE and damaged electoral alliances or caused major disruption to governability, especially in CNTE strongholds.

The Role of State Governments' Capacities

We use the term "capacity" to describe a government's capabilities to implement its objectives (Zibblatt, 2008). Overall, state governments lack effective organizational capacities in Mexico (Cabrero & Arellano, 2011), yet subnational government capacities were required to implement critical aspects of the 2013 reform. Even though Mexico's federal government sets the agenda at the national level, it is not directly involved in managing schools, personnel or staff, as its responsibilities are restricted to normative and regulatory policies. And while the federal government finances teachers' salaries (through transfers to subnational governments), the constitutional reform determined that subnational governments were responsible for calling and evaluating teachers in their territories.

Policy implementation therefore hinged on the full commitment of subnational governments. One of the most important drawbacks of the reform was precisely the limited subnational capacities to implement it (De Hoyos, 2019):

⁶ The history of the CNTE traces back to 1979, when it emerged as a caucus within the SNTE to denounce its corporatist ties to the PRI government and to protest against the highly authoritarian nature of its leadership (Hecock, 2014, p. 77). CNTE members have long argued that SNTE leaders prioritize their interests rather than those of their base; they have thus resorted to protests, blockades, meetings, and other collective action to express dissatisfaction and increase pressure on authorities to concede to their demands (Cook, 1996; Hecock, 2014). The CNTE's opposition to the 2013 reform included protests and strikes in territories that went beyond its traditional stronghold states of Oaxaca, Chiapas, Michoacán and Guerrero. The CNTE reached 14 states across the country to increase its political clout in SNTE-dominated territories (Badillo, 2019).

Going from no evaluation to evaluating 1.5 million teachers involved significant implementation challenges, which were not adequately addressed and diminished the credibility of the evaluation [...] The evaluation was computer-based, and many locations lacked the minimum conditions: functioning computers, well-trained facilitators, clear instructions, among others. Under these conditions, the evaluations could take as much as 8 hours.

There is evidence that subnational authorities worked at a different pace to implement mandatory performance evaluations. The initial target was to evaluate one-quarter of all teachers every year to reach full completion at the end of the fourth year. This annual target of one-quarter of teachers was established in Article 52 of the Ley General del Servicio Profesional Docente (see Diario Oficial de la Federación, 2013). This federal law required subnational governments to evaluate almost 1.4 million teachers at least every four years (Galaz et al., 2019). The implementation pace during the first two years showed that some states would take at least twice that time (eight years), while Chiapas, Guerrero, Michoacán and Oaxaca, the CNTE's strongholds, would take between 19 and 38 years (Heredia & Rojas, 2018). Dissimilar patterns in subnational implementation of the reform were also evident regarding the time state legislatures took to adapt their laws to federal norms (Rojas, 2018).

The teachers' unions' resistance to the reform and their alliance with the National Regeneration Movement (MORENA), a new political party, explain its reversal in 2018. After the tragic outcome of a confrontation between the federal government and teachers in Oaxaca in 2016, resulting in the death of nine civilians, authorities no longer enforced mandatory application of the reform and the federal government made performance evaluation voluntary.⁷ The pact MORENA established first with the CNTE and then with the SNTE, in favor of its presidential candidate, Andres Manuel López Obrador, set the stage so that the new president was able to pull back the reform once in power (Bocking, 2020). As we show below, limited capabilities at the subnational level were probably an additional factor contributing to the decision to reverse the reform.

An understanding of state capacity to implement reform is critical in anticipating its effective adoption. Overall, we define capacities as a set of competencies and capabilities necessary to perform policy functions (Gleeson et al., 2009; Wu et al., 2017). Policy capacities are critical to ensure policies pass through all stages of the policy process framework—the agenda-setting, policy formulation, implementation, and evaluation stages (Anderson, 2015; Dye, 2017)—as well as transformation into successful outcomes (Soifer, 2009). We aim to assess whether key policy capacities influence how quickly (*presto*) or slowly (*lento*) subnational governments execute their commitment to reform. Based on the policy capabilities literature, we investigate three dimensions for this purpose: human resources, extractive or fiscal, and repressive capacities.

The Role of Human Resources Capacities

Human resources capacities refer to the staff or personnel that governments rely on when delivering policies. For example, Ziblatt's (2008) study of German cities shows that the educational level of the bureaucracy is positively related with higher levels of public service provision. By taking into account the percentage of officials with university degrees and the ratio of low-level public servants with technical qualifications to those without to measure municipal capabilities, Ziblatt finds that the degree of staff professionalism is positively related with the building of more clinics in Germany during the first part of the 20th century. Another example is Soifer's (2009) analysis of

⁷ Consult Azam & Semple (2016); Partlow (2016).

Chile's educational system, showing that the expansion and professionalization of school inspection in the 19th century ensured the cooperation of local state agents and the implementation of policies designed by the central government. According to Soifer, school inspectors sought to achieve the support of the communities in which they served as a strategy to enhance the quality of education and the coverage of educational services. By providing better services to their communities, school inspectors also facilitated the expansion and oversight of the central government (Soifer, 2009, pp. 176–177).

Human resources capacities may also be critical to push forward educational reforms and to employ available resources efficiently for the provision of public services. For instance, in the United States, there is evidence that many states faced significant challenges when implementing the policies of the “No Child Left Behind” program due to staff shortages that resulted in numerous schools and districts failing to meet federal standards (Orfield, 2016). Inadequate capacities for policy planning and program development were therefore common during implementation of the Every Student Succeeds Act (ESSA) in 2015, a reform that constitutes a return to state-dominated implementation of education policy in the United States (McGuinn, 2019; Orfield, 2016). Lack of professionalism may even lead to inefficient government spending, as human resources capacities are crucial to use available resources effectively. In some countries like Peru, subnational governments can barely spend the resources that the national government transfers to them (Ponce & McClintock, 2014).

We contend that the strength of human resources capacities is central to policy implementation. If state governments possess stronger human resources capacities, the likelihood of successful reform implementation increases. State governments need enough employees to make reform implementation feasible and effective, especially in developing countries where these numbers are relatively low due to limited resources. If state governments already have these assets, they might not need to hire new personnel to implement the reform. High-quality officials could also potentiate the effect of such capacity on the pace of reform. These attributes lead us to consider this type of capacity as distinct from fiscal capacity. *Hypothesis 1. The advancement of the mandatory teacher evaluation system is positively related to the human resources capacities of subnational governments.*

The Role of Fiscal Capacities

We could consider fiscal capacities as the financial ability to accomplish policy objectives. Where a greater number of public services is required, subnational governments may need to collect more income and/or allocate a greater portion of the available budget to those services. Zibblatt (2008) has shown that local provision of public services at the subnational level in Germany during the early 20th century largely depended on municipal capacities to collect taxes. By measuring fiscal capacity as the total fiscal income per capita collected by municipalities, Zibblatt shows that the overall level of public service provision is vital to achieving higher levels of infrastructure in the long run. These findings are important as they pinpoint how capacities to collect taxes are critical to determine whether local government authorities are committed to specific policies and ensure the provision of infrastructure.

Given our interest in the ability of subnational government to implement the educational reform, we argue that subnational government fiscal capacities also depend on the extent to which they employ fiscal resources to advance the policy reform in education. Administrative or logistic changes always require additional funding for design or implementation purposes. For instance, additional financial resources might be needed to rent additional space, hire new personnel, train staff, or buy new office materials. Furthermore, fiscal resources may be needed to compensate the losses of actors who oppose the reform, at least in the short term.

Various factors might contribute to the enhancement of fiscal capacities. If the state's budget becomes relatively larger due to greater tax collection or federal transfers, more available resources might be employed to further the implementation of the reform. Policymakers may strengthen fiscal capacities by providing financial incentives. For instance, the United States federal government's "Race to the Top" reform—created in 2009—required states to implement a system of teacher evaluation as a prerequisite to securing funds from this grant program (Moran, 2017). Fiscal capacities can also be strengthened as a byproduct of local legislators' decision to tie state aid to standards-based reforms at the subnational level in the United States (Fahy, 2012; McDermott, 2004; Nguyen-Hoang & Yinger, 2014). Conversely, fiscal capacities might be weakened due to insufficient financial resources. For instance, the implementation of high-stakes reforms, such as the "No Child Left Behind" program, undermined school systems and strained their finances (Rice & Roellke, 2009).

Even if the state budget (e.g. federal transfers) were relatively constrained, the state administration might seek to increase its spending on education by allocating a greater proportion of available resources or collecting more taxes to achieve this goal.⁸ The latter option demands state authorities' willingness to do so. This interest in strengthening education might then manifest through increasing financial resources in the sector from any possible source.

To sum up, we claim that the scope of fiscal capacities in the education sector shall contribute to the effective implementation of the reform. Based on these considerations, we propose the following hypothesis: *Hypothesis 2. The advancement of the mandatory teacher evaluation system is positively related to the fiscal capacities of subnational governments in education.*

The Role of Repressive Capacities

Repressive capacities of the state refer to the government's abilities to push a potential agenda through the use of force (Mann, 2008). While not all policies will demand states or governments prepare for war-like scenarios, these capabilities are critical to deter or dissuade opponents—the SNTE and the CNTE in our case—from adopting contentious strategies. Repressive capacities might be relevant in policy implementation contexts in which stakeholders are excluded from the reform's design or in situations in which no incentives are pushing the reform at the subnational level. In reforms that required states to evaluate teachers for high-stakes decisions—such as promotion, tenure, hiring, and firing—repressive capacities proved less relevant. For instance, available financial resources from the "Race to the Top" program probably made state governments submit applications for school reform beyond what teachers' unions would have allowed because the money this grant offered was large enough to surpass the unions' opposition or because political leaders and educators persuaded union leaders to cooperate (Brill, 2010). The combination of financial incentives and the creation of political pressure to drive change help to explain why repressive capacities were less relevant. Similarly, a potential conflict, which could have led to the adoption of repressive capacities, was probably avoided as the result of a stronger application of the rule of law. Some teachers' unions filed lawsuits over the details of the evaluation system (Boser, 2012).

How state administrations manage conflict is important to an understanding of how successful they will be in implementing policies. A display of credible threat may secure an upper hand in negotiations with unions and other opponents and consequently advance reform implementation. Alternatively, conflict management may see strategies to weaken the political power of the opposition. Hence, the following hypothesis accounts for the repressive capacities of

⁸ In Mexico, approximately 84% of state governments' income comes from federal transfers (Ponce & De Lira, 2018).

subnational governments: *Hypothesis 3. The advancement of the mandatory teacher evaluation system is positively related to the repressive capacities of subnational governments.*

Empirical Analysis

Since we are interested in explaining which capacities sped up the implementation of mandated teacher evaluations, we employ a direct measure of this progress: the proportion of teachers evaluated in each state over a year. This is the dependent variable in our empirical analysis; theoretically, it could range from zero to 0.25, since one-quarter of teachers had to be evaluated every year in each state to achieve full assessment cycles every four years based on the normative framework the federal government enacted in 2013 (DOF, 2013). To estimate the impact of the explanatory variables (the various capacities) testing our hypotheses on this dependent variable,⁹ we construct a panel data set that considers time (three years from 2015 to 2017) and units of analysis (Mexican states or subnational entities).¹⁰ We run a static panel data model with random effects to compute valid standard errors.¹¹ The model seeks to estimate the association between the advancement of reform implementation and the types of capabilities being evaluated, and at the same time controls for other factors that might also drive implementation of the reform.

To evaluate our first hypothesis, we consider two different variables: the number of state employees and the number of state employees working in the education sector. While the first variable reflects the total quantity of available human resources within state governments, the second captures the number of public employees committed exclusively to the education sector. The first variable captures the total size of the state bureaucracy, presuming that employees in other administrative areas also contribute to advancing the reform. We expect scale economies exist in the realization of administrative duties, as the number of additional employees enhances the influence, effectiveness, and ability to implement important reforms. The presence of dedicated staff for logistics, accounting, and law might prove helpful for implementation purposes.

In relation to our second hypothesis, we employ various strategies to capture the different dimensions of fiscal capacities: 1) taxes collected by the state government to help finance education; 2) the fiscal transfers from the federal government to pay salaries in the education sector; and 3) the budget for basic education. Unlike the second and third measures, whose values depend on transfers from the federal government, the first measure aims to capture not only the capacity to collect (further) resources but also a willingness and effort to do so. Thus, the state government's interest in boosting educational quality might be revealed by this measure. The second measure reflects not only the availability of fiscal resources to finance the personnel working in the sector but also some ability by local authorities to obtain resources from the federal government for education. Finally, the third variable directly quantifies the total budget for the sector.

⁹ Our key independent variables testing our hypotheses are calculated in per capita terms. For descriptive statistics and descriptions of the variables used in the analyses, consult Online Appendices 1 and 2. Online Appendices can be found at: <https://sites.google.com/site/aldofponcegolini/data>.

¹⁰ Panel data models offer greater flexibility to model heterogeneity in behavior across units of analysis (Greene, 2003). For example, panel data models allow us to model unobserved (fixed or random) determinants producing heterogeneity across states in our analysis. In addition, they are equipped to account for dynamic effects across time, such as autocorrelation or stationarity.

¹¹ Limited variation of several independent variables over time makes the adoption of random effects suitable for our empirical analysis. The Hausman test (1978) confirms that random effects are preferable to fixed effects.

To test our third hypothesis, we use the number of policemen. State police might provide state authorities with legal means to use force against union mobilizations and protests. We test whether the size of this group is associated with faster advancement of the reform.

As control variables, we employ a battery of potential determinants that could help explain the implementation of this policy reform. In the case of a contentious policy, we can expect higher resistance from critical stakeholders, such as unions, during the policy adoption and implementation stages as parties gain information about incentives and sanctions the reform will create for them (Grindle, 2004, p. 18). Broadly speaking, the policy literature has shown that critical stakeholders react in two ways to reformist plans in education. When such reforms are “access-oriented”, teachers’ unions and bureaucrats support them as they imply hiring more teachers, building new schools or buying new equipment to increase access to education for more students (Grindle, 2004). By contrast, “quality enhancement” reforms elicit strong opposition from these groups, as new accountability and transparency measures might imply the firing of personnel or measures to increase the efficiency of economic resources, affecting their working conditions (Grindle, 2004).

Previous studies have shown that unions’ ability to influence policy is a matter of membership, cohesion, and political activism. Historically, unions and social movements have exerted more influence over policies when their organizations are cohesive (Crouch, 2017; Santibañez & Jarillo, 2007; Tarrow, 2011). In our case, the power of the union also depends on the SNTE’s long history as a cohesive political machine that influenced voting behavior, something that became more evident after the transition to democracy with increasingly competitive elections (Larreguy et al., 2017; Muñoz, 2011). In Mexico, some states have more than one SNTE section or local branch, which is an institutional disadvantage for the union as authorities can seek to trigger divisions among them by pulling teachers in different directions and creating fissures (Meade & Gershberg, 2008; Santibañez & Jarillo, 2007). Thus, we control for the fragmentation of the SNTE by adding in a dummy variable that indicates whether the SNTE is fragmented in each Mexican state. Furthermore, we identify CNTE-dominated states with a binary variable according to the classification system of recent research designed to distinguish organizational strength (i.e. union fragmentation) from political activism (Hartney & Flavin, 2011; Larreguy et al., 2017).

We also include a variable that indicates the year in which the mandatory system of evaluation became voluntary. After the violence that erupted in Oaxaca, in 2016, between the federal and subnational government authorities and the CNTE’s dissident teachers, government authorities suspended the mandatory performance evaluations and made them voluntary (Partlow, 2016). Such a change might be associated with a diminished willingness to participate among teachers. Moreover, we expect the pace of the reform to advance more rapidly in subnational governments where the governor is from the same political party as the president. These governors might have a greater incentive to follow the policy agenda set by the executive. To control for this potential effect, we incorporate a binary variable that indicates whether the president and governor belong to the same party. We also include a dichotomous variable that distinguishes whether federal elections occurred, as one would expect some local union branches to cooperate closely with federal authorities in such cases. Finally, we incorporate the gross domestic product per capita as a measurement of wealth. Wealthier states might be able to secure additional advantages, such as greater quality in the available pool of human resources or stronger demands from citizens for better education.

Results

Table 1 shows our results. We test the association between our key independent variables and the progress of reform implementation in each of the first six model specifications. We find that only the number of state employees and the amount of taxes collected to finance education are

positively correlated with advancement of the reform. To confirm the robustness of these findings, we include both variables in the same regression (in the seventh model specification). Our previous results remain robust to this additional check.

In other words, we find support for our first two hypotheses, but only when we employ these specific measures. Overall, we verify that the size of the state government, measured by human resources, is positively correlated with the percentage of evaluated teachers. Larger state apparatus correlated positively with advancement in the implementation of the education reform. Likewise, subnational governments' efforts to finance education accounts for the advancement in reform implementation. We did not find support for our third hypothesis, as repressive capacities do not show any association with the pace of implementation.

Table 1*Explaining the Advancement of the Reform*

VARIABLES	Model 1	Model 2	Model 3	Model 4
Testing Our Hypotheses				
<i>First hypothesis: Human resources capacities</i>				
Number of state employees (per 100 inhabitants)	0.01** (0.003)			
Number of state employees in education (per capita)		-0.25 (0.44)		
<i>Second hypothesis: Fiscal capacities</i>				
Taxes collected to finance education (per capita)			0.01* (0.004)	
Fiscal transfers from the federal government to pay salaries for the education sector (per capita)				-4.37e-06 (2.68e-06)
Budget for basic education (per capita)				
<i>Third hypothesis: Repressive capacities</i>				
Number of policemen (per capita)				
Control Variables				
SNTE's fragmentation	0.02*** (0.005)	0.01*** (0.01)	0.01 (0.01)	0.01** (0.01)
CNTE presence	-0.01*** (0.005)	-0.02** (0.01)	-0.02*** (0.01)	-0.02*** (0.01)
Voluntary evaluation	-0.07*** (0.01)	-0.07*** (0.01)	-0.06*** (0.01)	-0.06*** (0.01)
Governor from the same party	0.004 (0.01)	0.005 (0.01)	0.01 (0.01)	0.01 (0.01)
Ln (Gross domestic product per capita)	0.03*** (0.01)	0.03*** (0.01)	0.02*** (0.01)	0.03*** (0.01)
Federal elections	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
Constant	-0.27*** (0.08)	-0.26*** (0.09)	-0.22*** (0.08)	-0.23*** (0.08)
Observations	93	93	93	93
Number of states	31	31	31	31
R-squared overall	0.81	0.79	0.79	0.79

Table 2 (Cont'd.).*Explaining the Advancement of the Reform*

VARIABLES	Model 5	Model 6	Model 7
Testing Our Hypotheses			
<i>First hypothesis: Human resources capacities</i>			
Number of state employees (per 100 inhabitants)			0.01*** (0.003)
Number of state employees in education (per capita)			
<i>Second hypothesis: Fiscal capacities</i>			
Taxes collected to finance education (per capita)			0.01** (0.003)
Fiscal transfers from the federal government to pay salaries for the education sector (per capita)			
Budget for basic education (per capita)	-0.001 (0.003)		
<i>Third hypothesis: Repressive capacities</i>			
Number of policemen (per capita)		0.04 (0.09)	
Control Variables			
SNTE's fragmentation	0.01*** (0.01)	0.02*** (0.01)	0.01* (0.01)
CNTE presence	-0.02*** (0.01)	-0.02*** (0.01)	-0.01*** (0.004)
Voluntary evaluation	-0.07*** (0.01)	-0.07*** (0.01)	-0.06*** (0.01)
Governor from the same party	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Ln (Gross domestic product per capita)	0.03*** (0.01)	0.03*** (0.01)	0.02*** (0.01)
Federal elections	0.02*** (0.01)	0.02*** (0.01)	0.02*** (0.01)
Constant	-0.26*** (0.09)	-0.26*** (0.09)	-0.23*** (0.07)
Observations	93	93	93
Number of states	31	31	31
R-squared overall	0.79	0.79	0.82

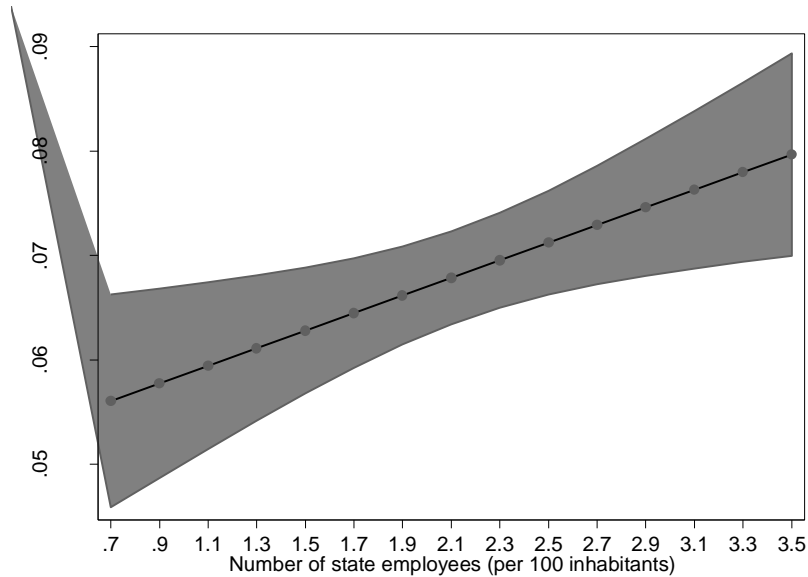
Note: *** statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level

Our results are not only statistically significant but also meaningful regarding the size of the marginal effects. In Figures 1 and 2, we show how the reform advances as our two statistically significant independent variables vary. Reform implementation could advance 33% more (from approximately 6% to 8% of teachers evaluated) if states reached either the maximum amount of taxes collected for education or the maximum number of employees (compared to those underachievers with the fewest records). If we combined both changes, the reform could make 66% more progress in these states. Since each teacher should have been evaluated every four years (with 25% of all teachers evaluated each year), even this significant increase would prove insufficient.

Much improvement is needed to strengthen human and fiscal resources for education at the subnational level. Policymakers need to consider expanding these capacities substantially at the subnational level if a variant of this reform is implemented in the future.

Figure 1

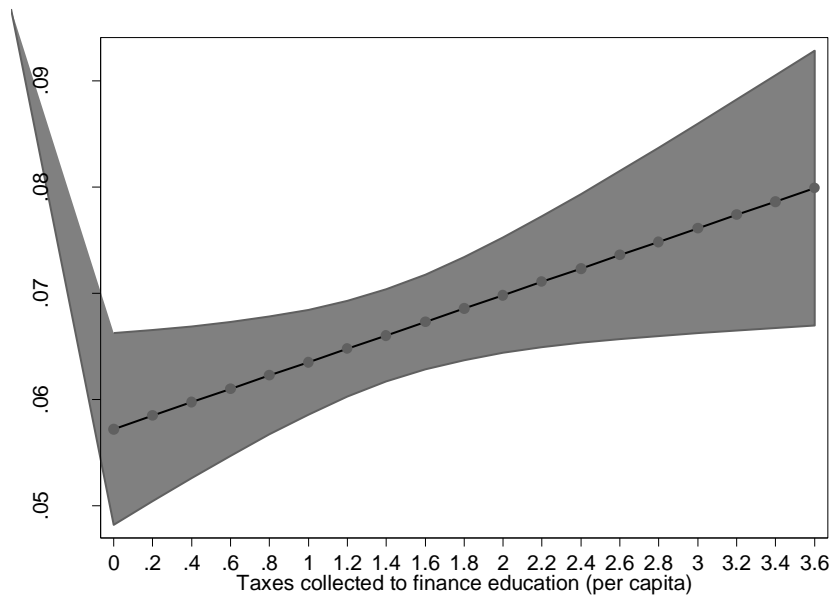
Predicting the Advancement of the Reform as the Number of Employees Varies



Note: Predictive margins with 95% confidence intervals. Calculated based on the seventh model of Table 1.

Figure 2

Predicting the Advancement of the Reform as the Taxes Collected to Finance Education (Per Capita) Vary



Note: Predictive margins with 95% confidence intervals. Calculated based on the seventh model of Table 1.

Our control variables relate to advancement of the reform in the expected direction. The fragmentation of the SNTE and the relative weakness of the CNTE at the subnational level, and years in which performance evaluations were mandatory, are positively associated with advancement of the reform. Thus, mandatory evaluations are necessary as voluntary ones do not carry strong incentives to ensure compliance. Having more than one local union branch and a weaker presence of the dissident teachers' union is associated with higher odds of evaluating a higher percentage of teachers. This means that it is important for state and federal administrations to incentivize cooperation from these actors, especially as they can slow down reform implementation, as happened between 2013 and 2018, or bring it to a halt, as happened after 2019. In addition, wealthier governments and the occurrence of federal elections are also positively correlated with the progress of the education reform at the subnational level.¹²

¹² We employ a battery of robustness checks to assess the validity of our reported results. First, we employ a generalized least squares model. The empirical analysis confirms the results of the panel data with random effects reported in this article. We display the results of the estimation in Online Appendix 3. Second, since values of the dependent variables range between 0 and 0.25, we employ a random-effects panel Tobit model estimated through the maximum likelihood technique (Tobin, 1958). Online Appendix 4 displays the models' results based on the seven models of Table 1 and corroborates Table 1's results regarding the relevance of the two key independent variables. However, data never take values equal to this threshold, which means that the data are not actually censored from above. Due to this disadvantage, we also employ a fractional response model to test our hypotheses as an additional (third) robustness check. This empirical analysis corroborates the Tobit models' results reported in this article. We show the results of the estimation in Online Appendix 5. The statistical significance of our two key independent coefficients remains relatively similar to those of Table 1. Fourth, we run the models displayed in Table 1 with additional control variables to verify whether our previous findings hold. We include two additional control variables: 1) a variable indicating the percentage of urban population in case more urbanized populations put more pressure on education quality; and 2) a dummy variable indicating there was a governor election during that year (to account for changes in responsiveness during years when governor elections took place). Our key results hold even after adding these variables, whose coefficients are statistically significant. We display these results in Online Appendix 6. Fifth, we employ alternative variables to test the validity of the first and third hypotheses. To examine the first hypothesis, we use: 1) the share of state personnel working in education; 2) the state bureaucrats' average number of years of schooling; and 3) the bureaucrats' average number of years working for the state administration. We would expect these qualities to be associated with a greater speed of reform. Although we find positive estimated coefficients for these variables, they are not statistically significant. To evaluate the third hypothesis, we employ: 1) the number of security personnel (per capita); and 2) the number of preventive security personnel (per capita) in each state. Their coefficients present the expected positive sign: they tend to increase the percentage of evaluated teachers, but such impacts are not statistically significant. We speculate that the relative lack of variation across states in these quality-type determinants help explain why these variables do not become relevant. Online Appendix 7 displays these results. Further research is needed to determine whether these determinants become important in other settings. State capacities are likely to be so weak that expansion of personnel produces a relevant impact in the implementation of this policy in the Mexican case. Finally, we test whether multicollinearity poses a concern in our analysis. The Variance Inflation Factor (VIF) indicator shows that this potential problem does not seem to distort our results significantly. It is advisable that the value of the Variance Inflation Factor does not exceed 10. The mean VIF equals approximately 1.30 across models (see Online Appendix 8) and VIF does not exceed 10 for any independent variable. (Any value greater than 10 would suggest further investigation.)

Conclusions

Our study shows that the mere design, enactment or adoption of a reform does not guarantee its success and confirms the importance of government implementation capacities. But unlike previous research, our study empirically demonstrates that not all subnational capacities matter equally for the implementation of highly contentious policies that face significant stakeholder opposition. Our results support the idea that human resources and fiscal capacities of subnational government are valuable for the advancement of major educational reform, whereas governments' repressive capacities do not seem to be relevant for this purpose.

This article demonstrates that local government capacities impacted how quickly (*presto*) or slowly (*lento*) authorities implemented a particularly contentious facet of Mexico's 2013 educational reform: mandatory performance evaluations of all teachers every four years. Furthermore, the whole state apparatus appears critical to set in motion and sustain major policy change. Highly disruptive reforms demand using the entire government personnel or staff to its fullest extent at the corresponding government level. Our results also suggest that increases in personnel in subnational governments poorly endowed with capacities like in Mexico (Cabrero & Arellano, 2011) help advance the implementation of key reforms. It is therefore important to expand these capacities.

Effective implementation is related with fiscal capacities revealing subnational governments' interest in reforming the sector. As our study suggests, fiscal capacities indicating the extent to which subnational authorities were already committed to financing education through their own tax collection are positively associated with higher percentages of evaluated teachers. This means local fiscal resources reflecting the government's effort and interest, rather than those derived from the federal government (transfers), were what enabled sustained momentum during implementation. This result is consistent with previous research arguing that subnational governments' commitment is critical for genuine educational transformation (Rivlin, 1992; Vergari, 2010). Thus, we point out that commitment is a necessary condition for reform success.

The analysis of the 2013 reform offers valuable lessons for policymakers in other developing countries with scarce subnational capacities. First, policy designers must provide extra resources to entities where overall policy capacities are limited before implementing the reform to ensure its proper execution. Second, while reform success partially depends on the efforts and interests of state administrations, it is important that voters demand higher-quality education provision from subnational authorities. Something similar has been seen in unitary countries like Chile, where local communities have played a relevant role in educational quality enhancements (Soifer, 2009). If in federal countries these demands reward parties with future electoral support, then state administrations might be more willing to support them. Federal administrations might want to provide relevant information to voters on states' performance in education and the progress made to implement key reforms to strengthen education quality. These actions could help enhance both responsiveness and accountability in any polity.

The halt of the reform shows the complex interplay between educational policy and the politics of education reform. After establishing an electoral alliance with the SNTE and the CNTE, MORENA (the political party of the candidate who won the 2018 presidential elections) approved a reform that eliminated the mandatory performance assessments. Teachers' rights before the 2013 reform were reinstated and tenure was no longer under threat. Moreover, teachers' representatives now oversee admission and promotion processes on a tripartite joint board with subnational authorities, the Secretariat of Public Education, and graduates from public teacher colleges (Mexican Congress, 2019). Despite this significant backlash, these changes did not restore the entire status quo before the 2013 reform. This means state capacities will still be relevant in furthering this new set of

policies, and that further research should analyze their impact on teacher selection and promotion processes as new data become available. Attention should be paid to comparing policy implementation trajectories to assess how states implement the new guidelines and measuring the impact of government policy capacities on student learning. Another topic for further investigation is how state bureaucrats can increase the chances of successful policy implementation by avoiding perceptions of punitive reform and instead highlighting the benefits of action aimed at improving education quality (see Bonilla-Rius, 2020). Adjustments to communication strategies might improve the prospects of such reforms in the future.

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