

A survey measure of state capacity: advantages and challenges

Hillel David Soifer, Temple University

Juan Pablo Luna, Pontificia Universidad Católica de Chile

Version for the State Capacity Workshop, Duke University, April 2019. We thank the audience at APSA 2018 and Catherine Boone for comments on an earlier version.

Local stateness

Our paper is motivated by three shifts in the study of comparative politics in recent years. Rather than elaborating on these and justifying them in detail, we take them as given and state them to provide a motivation for both the paper and the larger project on which it draws. First, the subfield has seen a massive turn toward subnational analysis in recent years, motivated both by a shift in substantive concerns toward the study of policy implementation and effectiveness, and a shift in methodology toward increased emphasis on causal identification via more tightly controlled analysis. Second, at the same time, the study of state capacity has shifted away from cross-national comparisons of state development to also explore the subnational variation that characterizes many states, especially in the historical and contemporary developing world. Third, there has been a growing (and in our view appropriate) realization that state capacity acts as a control variable, interactive effect, or scope condition in shaping other elements of subnational variation, and therefore it is more commonly included as an independent variable and not just as an object of interest in its own right. For all these reasons, many scholarly agendas in comparative politics would benefit from a better designed measurement of subnational state capacity. The purpose of our paper is to introduce such a measure, justify our approach, address some plausible threats to inference it might face, and provide some first guidelines toward its use.

1. Why do we need a new measurement strategy?

Given the multitude of existing strategies to measure state capacity, including the identification of new and promising indicators (Lee & Zhang 2017; Chong et al 2014) and the deployment of novel statistical techniques (Hanson & Sigman 2013), one might ask why a new approach is needed. Following Luna & Soifer (2017), we suggest that three problems tend to characterize the existing scholarship on state capacity (including these novel contributions) and we believe that the approach we explore, which departs from existing measures in important ways, is unique in its ability to avoid these problems.

First, nearly all existing measures ranging from GDP per capita to data assembled from government statistics, rely on data used by the state to measure its capacity.¹ This is problematic most of all because the quality of this data is associated with the very characteristic of the state that scholars seek to measure. Because data quality is likely associated with state capacity itself, the quality of state capacity indicators is endogenous to state capacity itself, which leads to systematic measurement error.²

Second, existing measures of state capacity tend to suffer from limitations in data availability. Nearly all are measured on an annual basis, while some are assessed even less frequently. This means that consumers of this data are unable to explore the short-term dynamics of shifts in state capacity, which a new wave of scholarship (Luna & Feldmann 2012; Giraudy & Luna 2015) has highlighted. The absence of sub-annual data has also contributed to a growing inconsistency in how state power is discussed between scholars of state development and scholars of internal conflict like Kalyvas (2006) who see its control as shifting in a rapid fashion. Even annual data is not always available, since the regularity of collection can be lacking: countries fail to collect or release national statistical data in some years, and at times even have to postpone major, less frequent data generation exercises like the census – Peru, for example, failed to conduct a census between 1876 and 1940. Data generated by scholars and non-state sources is not immune to this problem: often datasets are not updated (for example, the Evans & Rauch (1999) measurement of the Weberianness of national bureaucracies) or coding is changed in ways that limit comparability across time or across cases. This places severe limits on the universe of cases that can be included in studies of the patterns, causes, or effects of state capacity.

The third limitation of existing measures of state capacity relates to the use of indicators that do not adequately tap this complex and nuanced concept. These include crude proxies like GDP per capita (Fearon & Laitin 2003) or luminosity (Huntington & Wibbels 2014) that cannot

¹ State-generated data is also characterized by another problem: that its production and dissemination can be affected by political motives. See Jerven (2013) for an especially striking illustration in the calculation of GDP.

² For a notable example of scholarship that uses the extent of irregularity in state-generated data as a measure of state capacity, and that captures the territorial unevenness of the state, see Lee & Zhang 2017. We note that despite this strength, the Lee & Zhang measure is limited in its applicability because it can only be generated for country-years with a census.

be distinguished from other elements of development, or outcome-based measures like literacy (Soifer 2015) or the tax ratio (Kurtz 2013; Slater 2010) that are affected by factors other than state capacity.³ Concept-measure inconsistency is also seen in the fact that scholars too often rely on uni-dimensional measures despite the fact that the multiple facets of state capacity do not always co-vary closely and are analytically distinct. (Sánchez-Talanquer n.d.)

Perhaps most important in terms of the motivation for the approach explored in this paper is a distinct form of concept-measure inconsistency: measures of state capacity are overwhelmingly taken at the national level, ignoring the sub-national variation in the state's reach over territory and penetration of society that are (1) central to this concept, and (2) of such fundamental significance to many of the empirical applications of state capacity. A measure of schooling, taxation, or policing at the national level tells us little to nothing about the presence of the state in a given community within its borders, and it is this presence that is of interest to many of the comparative politics applications of the concept of state capacity.⁴ Yet subnational variation in state capacity is of central and growing importance for many research areas in the field of comparative politics. To give but a few examples, scholars of internal conflict (Kalyvas 2006; Straus 2006) have focused on territorial control as a determinant of patterns of violence, and scholars of social mobilization like Yashar (2005) have argued that social identities are only shaped by state institutions and practices in regions where the state's apparatus can effectively extend and penetrate. Perhaps the most systematic and thorough attempt to link the uneven reach of the state to political outcomes can be found in O'Donnell (1993), who argues that where state presence is limited, formal democratic institutions do not translate into the fully instantiated exercise and protection of democratic rights and practices. Because of all of these scholarly claims (and many more that space precludes us from mentioning), the territorial reach of the state has been of special interest, especially to scholars of developing countries like those in Latin America and Africa.⁵ We suggest that the large and growing community of scholars who focus

³ On the problems with outcome-based measures, see Fukuyama (2013).

⁴ On this point, see O'Donnell (1993) for a fundamental statement, and Soifer (2008; 2012) and Giraudy (2012) for further explorations.

⁵ Slater (2010, 36) claims that the spatial reach of the state not central to the analysis of state capacity in Southeast Asia. The quickly growing literature on state territorial reach in other world regions suggests that his argument, even if correct, identifies an exception to a broader pattern of intellectual attention.

on this aspect of state strength and weakness suffer from serious limitations in the existing measurement approaches available to measure stateness across territory.⁶

Even where subnational data on relevant indicators is available, the unit of analysis at which it is available affects how scholars can measure state capacity. Data is only available at certain levels of aggregation, and this places limits on how scholars can operationalize state capacity. For example, Peruvian census data is available at the district level, and at the *centro poblado* level, but the latter varies wildly in size, from a single household to units of over 1 million residents, making comparisons across observations problematic. Thus, scholars have no choice but to turn to the district as a unit of analysis, despite the fact that districts are so large as to make them awkward proxies for “local” conditions. The units at which existing data are available, then, often drive decisions about how we measure state capacity, and we cannot know how different our ‘scores’ of state capacity would look at different levels of analysis. We return below to this problem, fundamental not only in the study of state capacity but in the study of spatial aggregates more generally, in discussing how we attempt to circumvent it in our approach.⁷ For the moment, however, we have shown that existing measures of state capacity are not well-suited for measuring the contemporary territorial variation in stateness *within* national borders that lies at the heart of much research in comparative politics. The remainder of this paper is devoted to presenting and justifying a new method that can better serve these purposes.

2. Our novel, survey-based approach

Building on our earlier work (Luna & Soifer 2015; 2017), we investigate the promise of a new measurement strategy for assessing state capacity. Though not without its own limitations (discussed in more detail in our earlier papers), this new strategy largely addresses the concerns

⁶ Many existing measures used in cross-national research do not vary subnationally since they are characteristics of the national state. This is the case for tax revenue data (Thies 2005; Lieberman 2003, but see Soifer (2015, Chapter 4) for an examination of municipal tax collection in 19th century Chile) and for data on coercive capacity such as military manpower or spending used in the Correlates of War dataset or by scholars like Mann (1984). Moreover, even data available at the subnational level, whether generated by state agencies or other providers, is often limited by the frequency with which it is updated.

⁷ See Soifer (forthcoming) and Soifer (n.d.) for detailed discussions of the challenges in choosing spatial units of analysis, and the problems entailed by letting data availability determine this element of research design.

noted above. The approach we explore has two key features that distinguish it from existing measurement schemes: (1) it is based on citizen surveys rather than on state-generated data or outcomes as proxies, and (2) it is explicitly designed to capture territorial variation in state capacity within individual countries. We describe each of those key features here, and then explain our approach to measurement validation, which is the subject of this paper.

Our approach is based on the implementation of a survey module that asks citizens, chosen based on their place of residence, questions based on their experiences with the state. Questions are designed to tap three distinct dimensions of stateness – reach across territory, imposition of taxation, and provision of basic public goods including property rights – that are commonly seen as central in conceptual and empirical scholarship on state capacity. (Soifer 2012) The state’s *reach across territory* is assessed with a question about how long respondents believe it would take police to arrive at their home if they were called in response to a burglary on a typical day around noon. This dimension is measured on a five point scale (0-5) with lower scores reflecting faster police response times. The state’s ability to *impose taxation* is assessed with a question about the regularity with which respondents receive a receipt, whether or not they request one, when shopping at a corner market. This question is intended to tap the enforcement of the value added tax (VAT) on individual transactions, which is a major source of revenue across Latin America, and is measured on a 4 point scale (0-4) with lower scores indicating a greater likelihood of VAT collection. Finally, the *enforcement of property rights* is captured via a series of questions that capture whether respondents have housing titles or formal rental contracts.⁸ This question is scored as a binary (0 or 1) response, with 1 representing the presence of property rights.

One might fear that asking respondents to report about the state taps their *perceptions* of its capacity, and thus makes this approach vulnerable to the criticisms of such approaches by scholars like Kurtz & Schrank (2007). But this concern is mitigated by the fact that the survey

⁸ For question wording and other details of implementation and coding, see Luna & Soifer (2015). As discussed below, we use data based on responses to these questions in the 2014 LAPOP AmericasBarometer dataset. The variables’ names in the LAPOP dataset are INFRA, COER1, and PRCLEAR respectively – note that PRCLEAR is calculated from PR1, PR2, and PR3 as described in Luna & Soifer (2015).

asks people about their concrete experiences with the state, rather than their evaluations of it.⁹ Second, it does not ask about state capacity itself, since responses about that broader concept might be characterized by social desirability bias, contamination due to government approval or satisfaction with the economy, and variation in how people define such an abstract and complex concept.¹⁰

Designing a survey-based assessment of state capacity provides solutions to many of the problems discussed in the previous section. First, by its nature, it precludes the potentially problematic reliance on state-generated data. It thus short-circuits the problems that plague data from state agencies. Because the survey can be carried out at a time and place chosen by the researcher, data availability need not be a concern for contemporary analyses – though of course it is impossible to construct similar data for past historical periods, and sampling design places limits on inferences that can be drawn about spatial variation. Indeed, the survey could be carried out as frequently as funding and logistical requisites permit, including the ability to implement it in relatively quick fashion in response to some shock or other trigger of interest. Yet while we suggest that the survey-based approach has broad utility, we limit our claims about the validity of the specific questions we use to the Latin American context – scholars wishing to use survey questions to assess state capacity in other contexts will need to tailor the indicators used to the setting in which they are working.

3. Validation of the measure

We chose to undertake a particularly hard validation exercise by focusing on the case of Chile. Chile is broadly believed to have the most effective state in Latin America, in which territorial unevenness is quite limited if not absent, and this belief is indeed supported with evidence from a variety of measures of the state's reach across its territory. We therefore expect that if this measure can capture subnational variation in a context where it is especially subtle, and if the

⁹ To be specific, this is true for two of the three dimensions: the measure of territorial reach that asks about police response times does ask people to speculate about a hypothetical scenario.

¹⁰ Another concern about this measure is that by focusing on the state's presence in the lives of residents, it conflates state capacity with the strategic deployment of that capacity. We recognize this concern, but suggest that its severity is mitigated by the specific questions used, which are designed to assess functions the state actively seeks to provide and that are not often strategically withheld.

variation we observe is consistent with our intuitions and knowledge of the case, we can be more confident in the validity of the measurement approach. Since the inference we draw from the validation exercise depends on this claim that Chile poses a hard test for the measure due to the strikingly even presence of the Chilean state across the national territory, we first provide some evidence to that effect by showing that the Chilean state effectively reaches across its national territory to a striking extent by comparison to other Latin American cases.

A first indication can be seen in examining the Myers score for age heaping in census data. Scored on a range from 0 to 100, the Myers score represents the extent to which a population's age pyramid based on self-reported data deviates from that expected from purely demographic processes – ie the extent to which the census contains incorrect information about the age of respondents. Lee & Zhang (2017) argue that this measure reflects the state's ability to make its population legible – the higher the score, they argue, the weaker the state. Subnational data from the 2013 census in Chile is used to calculate the Myers score at the municipal level. We find that the mean Myers score is 2.91. Based on the distribution of Myers scores shown in Figure 2 of Lee and Zhang (2017), this places the average Chilean municipality well below the global mean for country-level Myers scores, and 324 of Chile's 345 municipalities with a Myers Index smaller than the mean for Latin America. Chile's municipalities, in other words, are nearly all characterized by a strikingly effective state by regional and global standards.

Evidence of greater and more evenly distributed stateness in Chile can also be seen by analyzing responses to our survey questions in the 2014 AmericasBarometer. As we have shown in Soifer & Luna (2015) Chile ranked 4th fastest for police response time of the 25 countries for which data is available, falling in the group of countries that performed best on this measure. In terms of the question about tax regularity, Chile was a dramatic positive outlier, scoring significantly higher than all of the other countries (n=10) where the question was asked. 58% of Chilean respondents report getting always receipts for transactions in neighborhood stores, and another 28% report sometimes getting them. Similarly, Chile is a clear standout (along with Costa Rica) on our measure of the extent of property rights, with over 90% of respondents declaring formal title or rental contract for their housing. Moreover, Chile displayed significant subnational homogeneity on these dimensions of stateness – Chile out-performed other countries in the region in both rural areas and small cities as well as in urban areas.

Thus, if we are able to capture indications of subnational variation in state capacity in Chile, this suggests that ours is a sensitive measure that could be used in other contexts where such variation might be more easily observed. This makes Chile an appropriate case for a subnational validation exercise.¹¹ To do so, we investigate the association between our measure of stateness and patterns of social conflict in Chile's Araucanía region, which has seen a long-simmering and recently intensifying conflict between landowners, indigenous communities, and the Chilean state. In this analysis, we are able to leverage the vast and high-quality municipal level data available as well as newly assembled data that geo-codes violent incidents in the Mapuche conflict for the year 2014 (Barómetro de Conflictos 2014).

The Araucanía region of southern Chile has been the site of significant conflict over indigenous land claims since Chile's transition to democracy, and of significant social exclusion of the Mapuche indigenous population concentrated within the region. Thus issues of property rights, policing, and public good provision – our core dimensions of state capacity – are salient in regional dynamics. Tensions date to the settlement of ancestral Mapuche lands by non-indigenous settlers supported by the state during the 19th and 20th century, and re-emerged with the recent rupture of agreements that had been signed between indigenous communities and the state at the time of Chile's transition to democracy in the early 1990s. (Salazar & Pinto 1999; Bengoa 2000). While those pacts were based on the premise that the state would seek to buy ancestral lands and reconstitute Mapuche communities previously displaced to reservation camps, and some communities were “successfully” resettled and de-mobilized (and benefitted from increased state provided public goods), during the late 1990s and 2000s, a radical wing of the Mapuche movement gained autonomy from established political parties and the center-left in government (Bidegain 2015). At the same time, the traditional conflict between non-indigenous settlers who formally acquired landowning rights and the displaced Mapuche communities spiraled in some sectors of the region, due to the expansion of the lumber industry. (Klubock 2014, 270ff) That industry acquired a large proportion of Araucanía lands, and introduced new forestry initiatives that further challenged the viability of ancestral agricultural practices.

¹¹ Chile is also a promising site for a subnational measurement investigation due to the presence of high-quality municipal-level data on a wide range of variables, generated from both state and non-state sources.

As a result of these economic changes, the assimilation of some Mapuche communities, and the radicalization of others, the Araucanía now displays an uneven pattern of conflict between indigenous groups, landowners, and lumber companies. Whereas in some areas those groups interact peacefully, in others open and violent confrontations are frequent (Bengoa 2004). Confrontations range from armed scimmages and arson against landowners and trucks from the lumber complexes, to livestock theft and violent land seizures. Those incidents are usually met by state repression, which has led to frequent charges against the state for violating the human rights of Mapuche activists (Bengoa 2004). Our aim in this section is to explore the extent to which the territorial dynamic of the Mapuche conflict is associated with intra-regional variance of the enforcement of property rights, the deployment of state's coercive power, and the distribution of state capacity across the territory of the Araucanía region. We ask whether there is empirical evidence consistent with descriptions of this conflict as a phenomenon associated with state weakness – is it true, as Klubock (2014, 15) writes, that “because of the state’s restricted reach in the [Chilean] south, social conflict ... took on a more violent cast”?

Data:

We draw for our analysis on responses to the state capacity module included in the 2014 wave of LAPOP’s AmericasBarometer, which included an oversample in this region.¹² We also draw on a variety of other municipal level indicators. As indicators of state reach into communities, we use data from the 2012 census on the percentage of homes connected to sewage and electric grids, and Ministry of Education data on the number of public schools. We also include demographic characteristics of the municipality – the urbanization rate¹³ and the indigenous proportion of the population, both drawn from the 2012 census. We calculate a poverty rate for each municipality using an income-based measure and data from the CASEN survey, and a

¹² While the survey was designed to be nationally rather than locally representative, we are able to identify 30 municipalities in Araucanía where we can calculate relatively reliable point-estimates for responses to our state capacity module because they had a sufficient number of respondents sampled. For most municipalities we can count on a somewhat larger respondent pool (8 have 12 respondents, 6 have 18, and the remaining 10 have 30 or more respondents surveyed) but in 7 municipalities we do draw a point-estimate from only six individual respondents.

¹³ Since the entire country of Chile is divided into municipal jurisdictions, some municipalities are wholly rural and others contain both urban and rural regions.

natural log of the number of violent crimes (robbery, assault, street fighting, and homicide) in each municipality, using data from the Ministry of the Interior. Finally, we collect data on violent incidents related to the Mapuche conflict collected by the Barómetro de Conflictos con Connotación Indígena (2014), which reports all incidents denounced by victims to relevant state agencies (the police or prosecutor offices). While this data is compiled by the business association of the Araucanía, which is clearly an interested party in the conflict, it is used by other scholars of the conflict and its data on these incidents coincides with independent accounts. Descriptive statistics for all of these variables are shown in Table 1, below, which also includes national means on all of our variables.

Table 1: Descriptive Statistics, Araucanía

Variable	Obs	Mean	St Dev	Min	Max	Nationwide Mean ¹⁴
PRCLEAR	30	0.799	0.144	0.5	1	0.928
COER1	29	1.293	0.193	1	1.667	1.602
INFRA	30	2.428	0.574	1.167	3.667	2.837
Sewage	30	73.492	12.499	45.777	95.247	90.399
Electric	30	85.004	8.722	61.752	97.140	96.112
Myers Score	30	3.009	0.659	1.78	5.07	2.91
Schools	30	16.9	7.662	5	44	16.159
Clinics	30	0.567	1.331	0	7	0.423
Poverty	30	30.217	5.232	20.3	37.6	17.045
Indigenous	30	28.333	16.608	3.1999	64.329	7.928
Urbanization	30	53.699	19.174	19.089	94.775	61.019
Crime	30	1658.446	725.483	404.58	3747.83	2039.896
Violence	30	0.837	1.305	0	4.220	n/a

Findings:

As stated above, the purpose of exploring state capacity in Araucanía is to examine its association with issues of indigenous mobilization and land conflict in the region – to the extent that we see associations that are described by experts on the conflict, we will have greater confidence in the validity of our measurement strategy. Because our unit of analysis is the municipality, and because our study is limited to municipalities where enough respondents were sampled in the LAPOP survey to generate reliable municipal-level ‘scores’ for our state capacity measure, our N is 30 municipalities. This small N precludes the use of regression, since degrees

¹⁴ Calculated as the mean of municipal-level scores, not weighted for population.

of freedom are severely limited. We therefore limit ourselves to comparing differences of means in this section, comparing groups of municipalities within the region that fall into high and low groups on each of the other characteristics measured to see if the groups have different levels of state capacity in each of our indicators.¹⁵ We divide municipalities into groups based on whether their score for a particular indicator falls below or above the median.¹⁶

Tables 2-4 (below) examine how our measures of state capacity differ across groups of municipalities with high and low levels of the other indicators discussed above. Table 2 considers socio-economic conditions – urbanization, poverty rates, and indigenous share of population. Table 3 examines state-produced indicators of state capacity, and Table 4 examines ordinary crime, and violence related to the Mapuche conflict.

Socio-economic conditions

Table 2 explores the association between state capacity and socio-economic conditions (urbanization, indigenous share of the population, and percentage of households with income below the poverty line) at the municipal level within Araucanía. We find that while urbanization is associated with a stronger state on all three dimensions of state capacity, only the relationship with police response time is statistically significant. Other socio-economic conditions display a wider range of significant relationships with state capacity: we find that in communities that have a large proportion of indigenous residents, police response time is slower, and property rights are less formalized. The property rights trend holds up when we split the group of municipalities by poverty instead, but here there is no substantive difference in police response time. Yet we see weaker enforcement of tax collection in poor municipalities.

Because we lack a sufficient number of municipalities to carry out a multivariate exploration of these relationships, we emphasize that we are limited in the inferences we can draw from this analysis. Yet two points do emerge from this set of bivariate findings: first, our

¹⁵ The results shown below from the difference of means analysis are largely consistent in terms of substantive interpretation with the results obtained from examining bivariate correlations among variables – those results are available from the authors.

¹⁶ A search for outliers, which are of particular concern with a small N, reveals no significant concerns for two of our dimensions of state capacity (taxation and property rights). We do find police response time for Lonquimay to represent a significant outlier, and below we show results for that dimension that exclude this one municipality.

measures of stateness reveal that even the strikingly homogeneous Chilean state displays some differences in state capacity across space, and these are associated (in ways that are quite intuitive) with socio-economic conditions. Second, the fact that distinct dimensions of state capacity are associated with different aspects of local conditions clearly show that one cannot speak of stateness as a unified concept, or reduce it to a single indicator without impairing inferences not only about the empirical reality of subnational variation in state capacity but also about its relationship to other variables.

Table 2: Differences of means, socio-economic conditions

	Urbzn High	Urbzn Low	F
PRCLEAR	0.8145 (0.1350)	0.7840 (0.1561)	0.33
COER1	1.2864 (0.1699)	1.3001 (0.2173)	0.04
INFRA3	2.3059 (0.3940)	2.6499 (0.6120)	3.29**
	Indig. Pop High	Indig. Pop Low	F
PRCLEAR	0.7525 (0.1484)	0.8460 (0.1281)	3.41**
COER1	1.2728 (0.1942)	1.3128 (0.1956)	0.30
INFRA3	2.7315 (0.3855)	2.2297 (0.3855)	8.10***
	Poverty High	Poverty Low	F
PRCLEAR	0.8556 (0.1296)	0.7428 (0.1396)	5.26**
COER1	1.2340 (0.1640)	1.3508 (0.2098)	2.53**
INFRA3	2.4993 (0.5738)	2.4427 (0.6363)	0.08

Objective indicators of stateness

Table 3 provides a clear instance of validation of our measurement approach. While we find little systematic association between our tax enforcement or property rights measures and levels of state presence generated from state-produced data (sewer coverage, number of schools, and the Myers score for age heaping in the census) across municipalities in Araucanía, nearly all of these are strongly and positively associated with state reach. This gives us more confidence that the

measure of police response time may in fact be tapping an underlying concept of the extension of stateness over territory.

Table 3: Differences of means, objective state reach

	Sewer Coverage High	Sewer Coverage Low	F
PRCLEAR	0.8015 (0.1530)	0.7969 (0.1403)	0.01
COERI	1.3289 (0.2111)	1.2609 (0.1720)	0.77
INFRA	2.1982 (0.4068)	2.7653 (0.5003)	11.29**
	Schools High	Schools Low	F
PRCLEAR	0.7922 (0.1497)	0.8062 (0.1435)	0.80
COERI	1.2827 (0.1863)	1.3050 (0.2053)	0.76
INFRA	2.3215 (0.5438)	2.6124 (0.4960)	2.27**
	Electric Prov. High	Electric Prov. Low	F
PRCLEAR	0.8299 (0.1365)	0.7685 (0.1498)	0.25
COERI	1.3154 (0.1975)	1.2699 (0.1915)	0.53
INFRA	2.2933 (0.3206)	2.6635 (0.6486)	3.88**

Crime and violence.

Perhaps the most interesting finding from our analysis of Araucanía is contained in Table 4, which examines how stateness is associated with ordinary crime and with violent incidents related to the Mapuche conflict. None of the dimensions of state capacity are associated with the crime rate. This divergence might be interpreted as a successful instance of discriminant validation for our purposes: since in general crime data reported by state agencies is not thought to be a good proxy for state capacity, we are pleased to see that the two are not associated in our data. By contrast, we find a strong association with police response time for the Mapuche conflict: police are slower to respond where the conflict produces more violent incidents. This suggests that state weakness is associated with the Mapuche conflict, which fits well with both contemporary (Bidegain 2015) and historical (Klubock 2014) accounts of the conflict.

An examination of the top panel of Table 4 shows that property rights are actually slightly stronger in regions where the Mapuche conflict is more intense. One interpretation of this result is that wealthy landowners who see the Chilean state as an ally have been able to draw it into conflicts at the local level as they seek to protect their interests. Again, this interpretation is consistent both with accounts of the relationship between the state and landowners in the Mapuche conflict (Klubock 2014) and with broader accounts of the ability of wealthy actors in Chile to use the state to protect their interests. (Fairfield 2015) Thus, once again, our measure of this aspect of stateness seems to comport with our knowledge of local conditions.

Table 4: Differences of means, crime and violence

	Violence High	Violence Low	F
PRCLEAR	0.8141 (0.1278)	0.7843 (0.1622)	0.31
COER1	1.2762 (0.1869)	1.3119 (0.2037)	0.24
INFRA	2.6413 (0.5022)	2.2905 (0.5173)	3.43**
	Crime High	Crime Low	F
PRCLEAR	0.8348 (0.1501)	0.7636 (0.1337)	0.18
COER1	1.3382 (0.2143)	1.2456 (0.1599)	0.20
INFRA	2.3955 (0.2082)	2.5539 (0.7396)	0.64

Localities or individuals?

Overall, we take the validation exercise presented in the previous section as evidence that, even with its limitations, our measure is able to capture differences in state capacity that we expect to be present, even when those differences are likely to be relatively muted, and that it does not capture other kinds of differences across communities. When added to the cross-national validation in Luna & Soifer (2015) and the region-wide subnational validation in Luna & Soifer (2017), we therefore have some confidence in the validity of our measure. The remainder of this paper is devoted to addressing an important concern that might remain about the utility of a survey-based approach to measuring an objective phenomenon: we might be worried that individual-level respondent characteristics drive responses, and that the scores obtained for state

capacity in a given locality are, therefore, a function of individual-level factors rather than locality-level factors. We need to address this concern in order to make sure that we're measuring stateness itself, rather than individual experiences with or impressions of the state. The remainder of this paper addresses this issue, showing that once we account for country and a small set of locality-level characteristics, no individual attributes we add to our model have any significant association with state capacity.

Our approach:

At a later stage in this project, one might undertake this investigation with locally representative survey data. Before we invest in fielding a survey of our own, we prefer to carefully validate the measure using existing data as much as possible. We therefore continue to draw on the AmericasBarometer survey. Though it has many advantages, a crucial limitation for us is that it is designed to be nationally representative rather than drawing representative samples at the local level. Locality-level samples are thus small and unrepresentative.

Under these circumstances, it might seem natural to turn to an MRP approach, or (given the nature of data in Latin America) the MRSP approach developed by Leemann & Wasserfallen (2017) which combines the ability of the MRP model to deal with sparse coverage at the subnational level with loosened constraints in terms of data availability for the post-stratification stage. We choose not to do so, however, because we do not know to what level of analysis we should aggregate individual responses to generate locality-level measures of state capacity. The MRP approach requires that individual responses be aggregated along the lines of the administrative or jurisdictional units for which census data is available. But we have no reason to believe that this is the most appropriate way to divide up a country to measure subnational state capacity. The choice of the spatial unit for measuring subnational stateness is a complicated and consequential question indeed, and one that each researcher must address in her particular research setting, as we discuss further below in proposing how scholars might put our state capacity measure to work. For the purposes of further validation of our measure and showing that it captures variation across localities rather than across individuals, we therefore take a different approach that allows us to avoid making assumptions about how subnational variation in state capacity should be theorized and operationalized. The approach we take makes no assumptions about how state capacity is patterned subnationally. In remaining agnostic about the

borders of these communities or localities, we avoid introducing problems of inference related to what geographers call the modifiable areal unit problem that can arise if a set of unit boundaries are drawn arbitrarily.

Instead, our approach groups individuals into ‘locality types’ based on how people describe conditions in their communities in a series of questions included in the LAPOP survey. We note that for all of these questions, respondents were not asked to respond in terms of a specific spatial unit. Because we only use data from individual responses, we can avoid making any assumptions about the spatial unit people have in mind when they answer questions about local conditions. This approach does not allow us to map state capacity as it varies within and across countries, but it does allow us to explore the relative importance of country, locality, and individual factors in how people assess state capacity.

We conduct an analysis that combines country-level, local-level, and individual level characteristics to examine state capacity, using data from eight countries - Belize, Chile, Costa Rica, Dominican Republic, Guyana, Panama, Trinidad & Tobago, and Venezuela.¹⁷ We show that: (1) variation across countries is a significant component of variation across respondents in state capacity even after controlling for local-level and individual-level factors, (2) community ‘type’ (an analytical construct on which we elaborate below) is significantly associated with state capacity in sizable and analytically meaningful ways, and (3) individual-level factors such as socio-demographic characteristics or attitudinal characteristics, while associated with differences in state capacity, do not account for much of the variation once national and community-level factors are taken into account.

Before proceeding to explaining our analytical approach and presenting our results, we remind the reader that our regression results are not intended to be predictive. We make no claims about the direction of causation, but only about associations between a wide range of characteristics of individuals and communities and state capacity. While we endeavor to be careful with our language in the discussion that follows, we encourage the reader to keep this caveat of our analysis in mind. Equally important, although our measures seek to tap behaviors and factual knowledge, we remind the reader that they are still based on public opinion

¹⁷ These countries were chosen because they are the only 8 for which our property rights indicator is available. Our territorial reach indicator is also available for all 8 cases, and our taxation indicator for four of the eight.

indicators. The fact that we found our measures to be more systematically associated with structural correlates (i.e. types of communities) than with individual characteristics is nonetheless indicative of the relatively low elasticity of our proposed measures of state capacity as a function of individual-level factors and thus increases our confidence in this measurement strategy.

Locality types:

After identifying the eight countries that would be part of the analysis, we then created an empirical taxonomy of neighborhood conditions. To do so, we first drew on the LAPOP data and identified all the survey questions that related to local conditions. After limiting our analysis to only those questions that were asked in all 8 countries, we were left with ten indicators of local conditions, listed below in Table 5.¹⁸

Table 5: Indicators of Local Conditions

Variable Name	Description
aoj11	Perception of neighborhood security
pese1	Perception of neighborhood violence
aoj17	Gang presence in neighborhood
sd2new2	Satisfaction with roads
sd3new2	Satisfaction with public schools
sd6new2	Satisfaction with public health services
vicbar1	Burglaries in the neighborhood
vicbar3	Sale of illegal drugs in the neighborhood
vicbar4	Extortion or blackmail in the neighborhood
vicbar7	Murders in the neighborhood

As is apparent from reading the descriptions in Table 5, these variables fall into tightly associated groups. Indeed, a factor analysis reveals that they can be captured with four factors, of which two capture 94% of the variance. After a (conventional) VARIMAX rotation, Factor 1, which is the strongest, includes the first three variables and seems to capture something we might call ‘perception of neighborhood security.’ Factor 2, which is strongly correlated to the last four variables, captures something we might call ‘personal victimization.’ Factor 3 seems to capture

¹⁸ We note that for all of these questions, respondents were not asked to respond in terms of a specific spatial unit. Because we incorporate no data from official sources about these communities, we can remain agnostic about the spatial unit individuals had in mind in answering these questions. We discuss this aspect of our methodology further in the conclusion.

‘satisfaction with public goods’, and taps the middle three variables. We retain these three factors for the analysis that follows, given that the fourth factor was a trivial one (i.e. was not strongly correlated with any of the variables included in the model and had a very modest eigenvalue that barely reached the threshold for extraction).

We combine these three factors and two additional variables to a cluster model we use to generate locality types. We include wealth (by quintile) because a dramatic feature of life in Latin America is the extent to which residential location is segregated along economic lines (Caldeira 2000). We also include locality size because we expect that, all else equal, experiences with the state will be different in large and small communities. LAPOP codes locality size based on a five category scale, with groups for the national capital (and metropolitan area), large cities, medium cities, small cities, and rural areas.¹⁹

Using the three factors, locality size, and wealth quintile, we generate k-means clusters of neighborhood configurations (which we call ‘locality types’) for each survey respondent in our eight countries. After exploring various numbers of clusters, we settle on five because this provides the most balanced distribution of individuals across clusters. Table 6, below, shows the number of individual respondents in each country that fall into each locality type. We see that our Chilean respondents, for example, are over-represented in clusters 3 and 4, while those from Trinidad and Tobago are overwhelmingly located in clusters 1, 2, and 5. This confirms the reality that the different countries in our sample contain localities that differ systematically in their type.

¹⁹ Locality size is coded by LAPOP, and we are still determining exactly how scores on this variable are determined.

Table 6: Clusters by country

Country	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	# obs
Costa Rica	288	249	262	156	261	1216
Panama	101	145	218	388	133	985
Chile	82	111	180	327	85	785
Venezuela	240	135	274	279	106	1034
DR	170	192	237	303	124	1026
Guyana	187	302	48	77	312	926
Trin & Tob	554	707	150	302	596	2309
Belize	183	344	145	230	261	1163
TOTAL	1805	2185	1514	2062	1878	9444

Before we continue, it is valuable to confirm that our locality types look different in terms of the variables used to build them. We present data to this effect in Table 7, below. The three factors we generated are scored on a standardized scale (centered on 0, with a standard deviation of 1), which approximately ranges from -2 to 2 points in each case. Wealth quintile (from lowest to highest) and locality size (from largest to smallest) are on a 5 point scale. Locality type 1 (the first row of Table 7) seems to be middle class areas of large cities and metropolitan areas, where public goods are relatively well distributed but security concerns are relatively low. Type 2 includes insecure, poor areas of large cities with low public good provision. Type 3 localities are poor rural areas and small cities, with low security concerns but also low public good provision. Type 4 localities are upper middle class, secure localities in large cities and metropolitan areas with slightly above average assessments of public good provision. Finally, type 5 localities are the wealthiest and most secure, located in capital cities, and having below average satisfaction with public goods provided.

Table 7: Descriptive features of locality types

Locality Type	Victimization	Security Perception	Local Public Goods	Income Quintile	Locality Size
1	-0.1211 (0.698)	-0.0939 (0.7391)	0.1105 (0.7684)	3.2560 (0.4754)	4.0914 (0.7556)
2	0.1227 (0.6275)	0.1753 (0.6623)	-0.0059 (0.7264)	1.4870 (0.4999)	4.4645 (0.5516)
3	-0.1848 (0.7272)	-0.3129 (0.7232)	-0.0742 (0.7383)	1.5271 (0.5021)	1.8639 (0.8105)
4	-0.0968 (0.7322)	-0.1858 (0.7312)	0.0338 (0.7615)	4.0441 (0.7865)	1.4762 (0.5352)
5	0.2194 (0.5640)	0.3447 (0.5773)	-0.0824 (0.7034)	4.5532 (0.4973)	4.4398 (0.6596)
TOTAL	-0.0019 (0.6874)	0.0004 (0.7268)	-0.0011 (0.7429)	2.9996 (1.3905)	3.3189 (1.4776)

Table 8, below, provides confirmation that there are significant differences in state capacity across our locality types, by showing the means and standard deviations for our three dimensions of stateness for each cluster. INFRAX is measured on a 6 point scale, where higher scores represent a longer police response time and therefore less state capacity. COER1 is measured on a 4 point scale, where higher scores represent lower likelihood of being given a receipt on a purchase in a local shop, and therefore weaker state capacity. PRCLEAR is a binary variable where 1=property rights present; therefore higher scores represent more state capacity.²⁰ The differences we observe here align with the descriptions of the locality types provided in the previous table in intuitive ways: for example, locality types 4 and 5, which are wealthiest, have the strongest property rights, and above average responsiveness (lower time) by the police. To test the significance of mean differences across types of locality we ran a series of ANOVA analyses with Bonferroni post-hoc tests to detect the significance of pairwise differences of means. For INFRAX, type 4 has a mean that significantly differs from that of types 1, 2, and 3. No significant differences of means are detected for the 4-5 pair, and for the group of 1-2-3 types. For COER1 we found all pairwise differences of means to be significant, with the exception of localities pertaining to the pair formed by types 2 and 5. For PRCLEAR most pairs

²⁰ We apologize to the readers for the fact that our results might be more intuitive to interpret if some variables (including INFRAX and COER1) were inverted. We intend to do so in future research.

of locality type display significant differences of means, with two exceptions: pairs 1-3 and 4-5. The fact that we see such systematically significant differences across locality types is striking, given that we know based on previous work that cross-national variation is sizable and we're not accounting for that here. This provides systematic evidence that state capacity varies not only across countries, but across locality types within them.

Table 8: State capacity by cluster, 8 countries

Locality Type	INFRAX (police response time)	COER1 (VAT collection)	PRCLEAR (housing property rights)
1	3.2663 (1.3597)	3.1221 (1.1508)	0.7593 (0.4277)
2	3.3419 (1.3989)	2.9432 (1.1699)	0.6517 (0.4766)
3	3.3059 (1.4277)	2.7096 (1.2964)	0.7732 (0.4189)
4	3.1271 (1.3831)	2.4320 (1.2569)	0.8694 (0.3370)
5	3.0336 (1.3173)	2.9117 (1.1663)	0.8375 (0.3690)
TOTAL	3.2128 (1.3814)	2.8106 (1.2317)	0.7788 (0.4151)

Since we are interested in how these locality types are systematically associated with state capacity, however, we need to move beyond correlations. We begin with a simple regression that incorporates country into our analysis – we create dummy variables for country and locality type, leaving Panama and Type 5 as our omitted variables. As Table 9, below, shows, both country and locality type are significant across all three dimensions of state capacity. This suggests that stateness is both associated with country-level characteristics and characterized by within-country territorial unevenness. We note that locality-level effects seem most important for our property rights measure. We remind the reader once again that these regressions are not intended to be predictive, but to describe associations between variables.

Table 9: Regression results: countries, locality types, and state capacity dimensions

Variable	PRCLEAR	INFRA	COER1
Locality type 1	***		
Locality type 2	***	+	
Locality type 3	***		***
Locality type 4	***	-+	***
Costa Rica	***		OMITTED
Chile	***	*	***
Dom. Rep.	***	***	OMITTED
Guyana	***	***	***
Trinidad	*	***	OMITTED
Belize	***	***	***
Venezuela		***	OMITTED
# obs.	11873	14334	6058
Adjusted R ²	0.0563	0.1151	0.4404

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant included in all models.

Another feature of the three sets of results in Table 9 is the difference in model fit across dimensions of state capacity. Country and locality type variables explain much more variation in the collection of the VAT than in police response time, and property rights performs even more weakly. The fact that variation in these three dimensions is patterned so differently is further caution against folding them together into a single index and supports our underlying theoretical claim that distinct aspects of stateness are best conceptualized and analyzed separately.

Are individual characteristics associated with state capacity responses?

That our neighborhood types differ in terms of state capacity provides further support for the claim that we are capturing something fundamentally territorial with our measure. But as we outlined above, one might be concerned that individual-level factors affect how respondents answer survey questions about state capacity – either because they experience the state differently or because they evaluate it differently – and thus we seek to incorporate individual-level factors into our analysis to see how seriously this concern should be taken. We do so in five iterations, incorporating different clusters of variables into our baseline model that includes country dummies and locality type as a way to avoid running ‘kitchen sink’ regressions with a

high degree of colinearity among independent variables.²¹ We begin with socio-demographic characteristics, hypothesizing either that these affect how people experience the state or that they shape how they evaluate it. Second, we examine how broad attitudinal attributes such as interpersonal trust and ideology are associated with state capacity. Third, we examine how views of political institutions are associated with state capacity. Fourth, we turn to political and policy preferences. Finally, we turn to self-reported political behavior. We report and discuss results from each of these five analyses separately, before drawing together our conclusions about how locality type and individual characteristics together are associated with state capacity.

Socio-demographic characteristics

We begin by incorporating socio-demographic characteristics in our model. After narrowing our focus only to variables for which data is available from all 8 country cases, we identified 14 variables for inclusion in this model.²² Table 10 shows regression results for identical models for each of our three dimensions of state capacity. Each model includes country and locality type dummies, as well as the socio-demographic variables.

²¹ For ease of presentation, we suppress the country and locality dummy variables in the tables below.

²² Most of the variables in table 10 are measured directly in the LAPOP survey. The exceptions are the variable for white ethnicity which we generate from the multi-category ethnicity variable, the activity variable which we generate from the multi-category employment variable, the Catholic and Protestant dummies, which we generate from the multi-category religious affiliation measure, and the majority language variable, which we generate from the multi-category variable for mother tongue. Details on how these are generated are available from the authors.

Table 10: Socio-demographic characteristics

	PRCLEAR	INFRA X	COER1
Sex	_***		
Year of birth	_***		**
Receives government assistance	***		**
Years of schooling	***		
Education level of mother		_***	
Catholic		_**	
Protestant	_*		
Importance of religion	_***	**	**
Activity (employment, etc.)	_***		
Marital status			
No. of children under 13 in household	_***	**	
White (ethnicity)	*	_***	
Mother tongue is majority language	***		
Wealth quintile	***	_***	_***
# obs.	9750	11593	4866
Adjusted R ²	0.1030	0.1378	0.4276

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant, country dummies, and locality type dummies included in all models.

An examination of these results reveals several things of note. First and most importantly, in none of the three models did adding these socio-demographic variables appreciably improve model fit. Even when examined via survey responses, and even when individual-level variation is taken into account, state capacity is shown to be fundamentally a feature of countries and localities.²³ We show below that this regularity holds for the other types of individual-level variables as well.

In interpreting these results, we see that each model has certain individual-level variables appear to be significant. Though we can concoct logical accounts that make each of these associations plausible, we caution against making too much of them for several reasons. First, because studies of this kind must remain observational – experimenting with individual state institutions is not the same as manipulating state capacity, which remains a more diffuse concept that can only be captured by proxy – claims about causality are hard to defend. Second and more importantly for our purposes, adding all of these individual-level variables contributes very little

²³ This is confirmed by the fact, not shown here but discussed in the final section of the paper, that country and locality type variables generally retain their significance even when individual-level variables are added to the regression.

to model fit, suggesting that while there might be an association, its explanatory power is very limited. Since this is a theme that will recur in the subsequent analyses, we return to the implications for our approach to state capacity below.

General attitudes towards politics and society

We now turn to the association between what we crudely call general attitudes towards politics and society and state capacity. Once again, we identify questions in the LAPOP survey that were asked in all eight of our country cases, and we are left with seven variables – attention to the news, internet usage, identification with a political party, life satisfaction, interpersonal trust, and ideology.²⁴ We once again include these in a regression along with our country and locality type dummy variables, and the results are presented in Table 11, below.

Table 11: Broad political attitudes

	PRCLEAR	INFRA	COER1
Attention to the news	***	**	***
Internet usage		***	***
Identification with a political party		***	**
Life satisfaction	***	**	*
Interpersonal trust	+	***	*
ideology	***		
# obs.	9177	11022	4721
Adjusted R ²	0.0732	0.1487	0.4237

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant, country dummies, and locality type dummies included in all models.

Once again, our most important finding holds: adding these individual-level characteristics has no appreciable effect on our model fit, nor does it change the significance of our country and locality type variables (not shown) – once again, we suggest that this supports the view that state capacity is fundamentally territorial more than it varies across individuals. We do see significant associations between these individual characteristics and each dimension of state capacity.

²⁴ We generate the ideology variable from two parallel questions in the LAPOP survey: in some countries, they ask respondents to place themselves on a left/right scale and in others on a liberal/conservative scale. Higher values represent placement further to the right or in a more conservative direction. Our abortion attitudes variable also takes a higher value when more conservative positions about abortion are expressed.

Greater attention to the news and internet usage are associated with stronger stateness, as is party identification, conservative self-placement on a left-right scale, and interpersonal trust. These are, once again, all individually plausible findings, but given the poor model fit and the number of variables included we caution against making too much of these results. Instead, we believe that (like socio-demographic characteristics) the association of broad attitudes and stateness is just that – an association, rather than an outcome worthy of deep exploration.

Views of political institutions

Our third set of analyses centers on views of political institutions. Here, we have some priors that we should find a relationship between stateness and these evaluations, given that scholars (O'Donnell 1993; Soifer 2013) have argued that as states get weaker, formal political institutions become less relevant to citizens' lives. Nevertheless, we treat our analysis in this section as the exploration of an association rather than the assessment of a causal claim – we remind the reader, for example, that locational choices might easily be shaped by political attitudes, and that therefore the location attributes of state capacity might be opted into by citizens who choose where to live with this in mind.

The LAPOP survey includes a wide range of questions about attitudes toward political institutions. We find 15 such questions that are asked in all 8 of our countries, and include responses in a regression along with (once again) our locality type dummy variables and country dummy variables. The results for each dimension of state capacity are shown below, in Table 12.

Table 12: Views of political institutions and state capacity

	PRCLEAR	INFRA X	COER1
Confidence in Judiciary to punish guilty	_**	***	*
Courts guarantee fair trial		-+	***
Respect for political institutions	**	**	
Respect for basic rights		_***	
Pride in political system	*		***
People should support the political system			
Trust in judicial system		_*	
Trust in national legislature	_**	***	
Trust in national police		_***	
Trust in executive	_*		
Trust in local government		_***	_**
External efficacy		_**	-+
Internal efficacy	***	_*	_***
Support for democracy or dictatorship			
Satisfaction with democracy		***	
# obs.	9485	11421	4537
Adjusted R ²	0.0649	0.2144	0.4520

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant, country dummies, and locality type dummies included in all models.

The most notable finding here does not relate to the association with a single variable, but to the fact that the adjusted R-squared for INFRA X (police response time) goes up sharply here compared to all the other models we run. This is caused by the especially strong associations and sizable coefficient (not shown) on trust in the police in the model with that aspect of state capacity. Given that the question on which this dimension is based does not ask about actual experience with the police, but about expected response time, we are not surprised to find that the association between trust in institutions and their expected response is high. By contrast, our other dimensions ask about experiences rather than expectations, and see much weaker associations with views of political institutions once we account for locality type and country.

Policy preferences and political predispositions

Our fourth set of analyses focuses on the association between state capacity and individual preferences on politics and policy. As seen in Table 13, below, our analysis includes 17 questions from the LAPOP survey, which tap views about politics, political issues, and political engagement. Importantly, none of these questions relate to self-reported political *behavior*,

which we explore in the next section. Once again, since the nature of the relationship between these attitudes and state capacity is complex and a single hypothesized causal direction would be facile, we limit ourselves to exploring the associations between each of these attitudes and our three dimensions of state capacity.

Table 13: Views about politics and political issues

	PRCLEAR	INFRAX	COER1
Coup is justified when crime is high			
President is justified in governing without legis. during crisis		_**	
Evaluation of administration handling of corruption		_**	-+
Evaluation of administration handling of citizen security		_***	
Evaluation of administration handling of the economy		_***	
Presidential job performance		***	
Govt should implement strong policies for reducing inequality	***	*	***
Approval of participation in legal demonstration	***	_**	
Approval of blocking roads during protest	_***	+	**
Approval of groups attempting to overthrow government			_**
Approval of vigilante justice	_***	**	
Approval of government critics' right to vote	+		
Approval of critics' right to peaceful demonstration	*		
Approval of government critics' right to run for office			+
Approval of government critics' right to make speeches			
Approval of homosexuals' right to run for office			_*
Approval of same sex couples' right to marry		_**	_*
# obs.	9514	11471	4537
Adjusted R ²	0.0627	0.1596	0.4307

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant, country dummies, and locality type dummies included in all models.

Again, we see that many different political attitudes are systematically associated with each dimension of state capacity. These range from attitudes about the role of the state in the economy (should the government “implement strong policies for reducing inequality”?) to moral conservatism (the same-sex marriage question) as well as evaluation of government performance. Showing less regular association are elements of political liberalism (questions about the rights to protest and the breadth of legitimate political participation).

Yet in our view, the biggest take-away is that once we control for national context and location type, these political attitudes account for almost none of the variation in evaluations of state capacity. Once again, this may be because of sorting, or for a variety of other reasons, but

this provides further evidence of our three key claims: the theoretical assertions that state capacity has a fundamentally territorial logic, and that distinct dimensions of state capacity are fundamentally distinct conceptually, and the methodological assertions that a survey-based measure can produce valid assessments of state capacity with fairly limited effort to adjust for location type, and that distinct dimensions of state capacity should be studied separately.

Self-reported behavior

We now, in our final analysis, turn to the association between state capacity and self-reported behavior. Here, too, the causal direction is ambiguous and we limit ourselves once again to non-causal claims. We have 12 questions from the LAPOP survey. Most explore political behavior (participation of various types, in formal political arenas and civil society) though we also include a question about everyday activity as well. Table 14 shows the results of this set of analyses.

Table 14: Behavior and state capacity

	PRCLEAR	INFRA	COER1
Attended municipal meeting			
Requested help from municipal office	**		
Requested help from local official			-+
Tried to solve a community problem			-+
Attended meetings of a religious organization	-+		*
Attended meetings of parent association	***		
Attended meetings of community improvement association	+		**
Attended meetings of a political party	*		
Participated in a protest	**		
Avoided walking through dangerous areas			***
Organized in neighborhood for security	*		
Voted in presidential election	-.***		+
# obs.	11182	13483	5665
Adjusted R ²	.0673	0.1231	0.4385

+<0.1 *<0.05 **<0.01 ***<0.001. COER1 is only measured in four of our eight countries. Constant, country dummies, and locality type dummies included in all models.

Here, we see even clearer evidence for the distinctness of dimensions of state capacity: our taxation measure is associated with none of the behaviors measured in the LAPOP survey, and explained only by locality type and country, and our other two dimensions (property rights and

security) show almost no overlap in their associations with self-reported behavior. We also see another iteration of evidence that state capacity is fundamentally locational: once we know where someone lives (in terms of country and locality type) our knowledge about how they experience the state is not improved by the addition of individual-level information.

Does locality type matter?

The fact that individual-level factors fail to improve the association between state capacity and locational variables has led us to suggest that state capacity is fundamentally territorial. If that is the case, we should see strong effects for locality type and country in all of the analyses in Tables 10-14. Table 15, below, presents the significance of coefficients on these variables for each of the analyses conducted above. And indeed, these findings conform to what we have presented thus far: for most of the analyses we conducted, state capacity is significantly associated with most countries and locality types. We believe, then, that these results justify our claim that the variance we capture through our indicators for different dimensions of state capacity is more significantly and systematically shaped by local configurations than by individual-level traits.

Table 15: Significant associations between country, locality type, and state capacity

COUNTRY	PRCLEAR	INFRAX	COER1
Socio-demographic	Costa Rica, Chile, DR, Guyana	DR, Guyana, Trinidad, Belize, Venezuela	ALL
Broad attitudes	Costa Rica, Chile, DR, Guyana, Trinidad, Belize	DR, Guyana, Trinidad, Belize, Venezuela	ALL
Views of political institutions	Costa Rica, Chile, DR, Guyana, Trinidad, Belize	Costa Rica, DR, Guyana, Belize, Venezuela	ALL
Political and policy preferences	Costa Rica, Chile, DR, Guyana, Trinidad, Belize	Costa Rica, DR, Guyana, Belize, Venezuela	ALL
Political behavior	Costa Rica, Chile, DR, Guyana, Trinidad, Belize	Costa Rica, DR, Guyana, Trinidad, Belize, Venezuela	ALL
LOCALITY TYPE			
Socio-demographic	Group 1, group 2, group 4	Group 2, group 3	Group 2, group 3, group 4
Broad attitudes	ALL		Group 3, group 4
Views of political institutions	ALL	Group 2, group 3, group 4	Group 4
Political and policy preferences	ALL	Group 2, group 3	Group 3, group 4
Political behavior	ALL	Group 2, group 4	Group 3, group 4

Omitted category for country is Panama; omitted category for locality type is Group 5. Dummy variables listed are significant at .05 or greater level. COER1 only measured in four of our eight countries.

How, then, might scholars put our measure to work? We close our paper by broaching two relevant aspects of this issue.

Next steps:

A first consideration in applying our measure is advancing it in a way that allows it to be used to map stateness across the area of interest to the researcher. Here, the fact that our measure does not require the researcher to make any assumptions about the locality a respondent has in mind when answering questions about state capacity can be seen as advantageous in that it does not impose an irrelevant or inappropriate spatial unit of analysis. On the other hand, however, there is a serious downside – because we do not know what spatial unit the respondent has in mind, someone using our approach cannot produce a map of state capacity as it varies, or connect state capacity in a given locality to variables gathered independent of the survey. We therefore plan, as the development of this measure continues, to apply the map-based method developed by

Wong et al (2012) to ascertain how people conceive of the ‘context’ or ‘locality’ that they have in mind. By asking respondents to map the boundaries of their ‘context’, this approach allows the researcher to connect survey responses to objective data assembled with the appropriate spatial unit, and thus to put those responses to work in the service of a much broader set of research tasks.

We close with a second consideration, by suggesting the purposes for which our measure is suited. Given the expense entailed in fielding locally representative surveys, and the resulting inconsistency in data collection that will result, we do not propose this method as a way to generate systematic and exhaustive measurement of state capacity even within a single country. Instead, we think its advantage is that it can be easily incorporated into a survey being carried out for other purposes. As we pointed out in the introduction, local unevenness in state presence is coming to be not only an object of interest in its own right but a cause of many phenomena of interest. Given this analytical trend in the discipline, we suggest that scholars carrying out surveys (whether these are observational or experimental) might prefer to use our measure which can be easily added to their survey rather than off-the-shelf data that (as we discussed in the first section) imperfectly fits their needs. By showing in this paper that state capacity can be measured with 5-6 simple questions in a way that has some validity and seems to capture something territorial rather than individual-level responses, we hope to have made the case for scholars conducting survey research at the local level who are interested in state capacity to draw on our approach.

Works cited:

- Bengoa, J. (2000) *Historia del pueblo mapuche:(siglo XIX y XX)*. Vol. 7. Lom Ediciones.
- Bengoa, J. (2004) *La memoria olvidada. Historia de los pueblos indígenas de Chile*. Bicentenario.
- Bidegain, Germán, (2015). 'Explosión social en sistemas políticos estables: los movimientos mapuche y estudiantil en el Chile de la tercera ola.', PhD. Dissertation, PUC-Chile.
- Caldeira, Teresa (2000) *City of Walls: Crime, Segregation, and Citizenship in Sao Paulo* (University of California Press)
- Chong, A. et al (2014) 'Letter grading government efficiency' *Journal of the European Economic Association* vol.12 #2 pp.277-299.
- Evans, Peter., & Rauch, J. E. (1999). Bureaucracy and growth: A cross-national analysis of the effects of 'Weberian' state structures on economic growth. *American sociological review*, 748-765.
- Fairfield, Tasha (2015) *Private Wealth and Public Revenue in Latin America: Business Power and Tax Politics* (Cambridge University Press)
- Fukuyama, Francis (2013) 'What is Governance?' *Governance* vol.26 #3 pp.347-368.
- Giraudy & Luna. 'A Typology of State Territorial Reach' *unpublished manuscript*. 2015.
- Giraudy, Agustina (2012) 'Conceptualizing State Strength: Moving Beyond Strong and Weak States' *Revista de Ciencia* vol.32 #3 (November-December) pp.599-612.
- Hanson, Jonathan & Rachel Sigman (2013) 'Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research' (unpublished manuscript, Maxwell School, Syracuse University)
- Huntington, Heather and Erik Wibbels (2014) 'The Geography of Governance in Africa: New Tools from Satellites, Surveys, and Mapping Initiatives' *Regional & Federal Studies* vol.24 #5 pp.625-645.
- Jerven, Morten (2013) *Poor Numbers: How we are Misled by African Development Statistics and What to Do about it* (Cornell University Press)
- Kalyvas, Stathis (2006) *The Logic of Violence in Civil War* (Cambridge University Press)
- Klubock, Thomas Miller (2014) *La Frontera: Forests and Ecological Conflict in Chile's Frontier Territory* (Duke University Press)
- Kurtz, Marcus (2013) *Latin American State Building in Comparative Perspective: Social Foundations of Institutional Order* (Cambridge University Press)
- Kurtz, Marcus and Andrew Schrank (2007) 'Growth and Governance: Models, Measures, and Mechanisms' *Journal of Politics* vol.69 #2 (May) pp.538-554.
- Lee, Melissa M. & Nan Zhang (2017) 'Legibility and the Informational Foundations of State Capacity' *Journal of Politics* vol.79 #1 pp. 118-132.
- Leemann, Lucas & Fabio Wasserfallen (2017) 'Extending the use and prediction precision of subnational public opinion estimation' *American journal of political science*, 61(4), 1003-1022.
- Luna, Juan Pablo & Andreas Feldmann (2012). 'Mapeando las interacciones entre desafiantes y agentes estatales en América Latina contemporánea'. *LASA FORUM Vol 43-4*.
- Luna, Juan Pablo & Hillel David Soifer (2017) 'Capturing sub-national variation in state capacity: a survey-based approach' *American Behavioral Scientist* vol. 61 #8 pp.887-907.
- Luna, Juan Pablo & Sergio Toro Maureira (2014) 'State capacity and democratic governance in Latin America: a survey data-based approach to measurement and assessment' *LAPOP Insights Memo # 102*

- Luna, Juan Pablo and Hillel David Soifer (2015) 'Surveying state capacity' *AmericasBarometer Insights* #119 Available at lapop.vanderbilt.edu
- Mann, Michael (1984). The autonomous power of the state: its origins, mechanisms and results. *European journal of sociology*, 25(02), 185-213.
- O'Donnell, Guillermo (1993) 'On the State, Democratization and Some Conceptual Problems: A Latin American View with some Glances at Post-Communist Countries' *World Development* Vol. 21 No. 8, pp. 1355-69.
- Rueschemeyer, D. (2005). Building States—Inherently a Long-Term Process? An Argument from Theory. In *States and Development*, eds. Rueschemeyer and Lange (pp. 143-164). Palgrave Macmillan US.
- Salazar, Gabriel, and Julio Pinto. (1999). '*Historia Contemporánea de Chile, Volumen II: Actores, identidad y movimiento.*' Santiago de Chile: LOM Ediciones.
- Slater, Dan (2010) *Ordering Power: Contentious Politics and Authoritarian Leviathans in Southeast Asia* (Cambridge University Press)
- Soifer, Hillel David (2008). State infrastructural power: Approaches to conceptualization and measurement. *Studies in Comparative International Development*, 43(3-4), 231-251.
- Soifer, Hillel David (2012) 'Measuring State Capacity in Contemporary Latin America' *Revista de Ciencia Política* vol.32 #3 (November-December) pp.585-598.
- Soifer, Hillel David (2013). State power and the economic origins of democracy. *Studies in Comparative International Development*, 48(1), 1-22.
- Soifer, Hillel David (2015) *State Building in Latin America* (Cambridge University Press)
- Straus, Scott (2006) *The Order of Genocide: Race, Power, and War in Rwanda* (Cambridge University Press)
- Thies, Cameron G. (2005). War, rivalry, and state building in Latin America. *American Journal of Political Science*, 49(3), 451-465.
- Wilkinson, Steven (2006) *Votes and Violence: Electoral Competition and Ethnic Riots in India* (Cambridge University Press)
- Wong, Cara, Jake Bowers, Tarah Williams, and Katherine Drake Simmons (2012) 'Bringing the person back in: Boundaries, perceptions, and the measurement of racial context.' *The Journal of Politics* vol.74, no. 4 pp.1153-1170.
- Yashar, Deborah J. (2005). *Contesting citizenship in Latin America: The rise of indigenous movements and the postliberal challenge.* Cambridge University Press.