

UNIVERSIDAD SAN FRANCISCO DE QUITO USFQ

Colegio de Economía

**Building tools to combat autocrats. State capacity and
Autocratization an empirical approach.**

Diego Javier Berrezueta Bonilla

Economía

Trabajo de fin de carrera presentado como requisito
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**HOJA DE CALIFICACIÓN
DE TRABAJO DE FIN DE CARRERA**

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Diego Javier Berrezueta Bonilla

Nombre del profesor, Título académico

Raúl Aldaz Peña, PhD.

Quito, 09 de mayo de 2024

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Nombres y apellidos: Diego Javier Berrezueta Bonilla

Código: 00212556

Cédula de identidad: 1719592469

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RESUMEN

Este trabajo se centra en encontrar la relación entre la capacidad estatal y la autocratización, además observar cómo varía dicha relación en países democráticos y autocráticos. La autocracias han presentado un incremento desde el 2006, por lo mismo se teme sobre las posibles resultados de una tercera ola de autocratización que tendría consecuencias graves para regiones como América Latina. El aporte a la literatura es el uso de material empírico para describir la relación entre estas variables y de esta manera sentar bases para futuros trabajos.

El enfoque metodológico usado es el modelo de efectos aleatorios para datos de panel, el mismo que pasó por pruebas de robustez como la inclusión de variables de control y el tratamiento de variables que presentaban raíces unitarias. El resultado encontrado es que la relación entre capacidad estatal y autocratización es negativa, es decir que países con mejor capacidad estatal tienden a ser más democráticos. Además, esta relación es más fuerte para países democráticos, pero que también es significativa para países autocráticos. En ambos casos, la construcción de capacidad estatal es un avance a países más democráticos.

Palabras clave: Capacidad Estatal, Autocratización, Datos de Panel, V-Dem, América Latina.

ABSTRACT

This paper focuses on the relationship between state capacity and autocratization, as well as observing how this relationship varies in democratic and autocratic countries. Autocracy has been rising since 2006, and there are concerns about the possible results of a third wave of autocratization that would have serious consequences for regions such as Latin America. The contribution to the literature is the use of empirical material to describe the relationship between these variables and thus provide a basis for future work.

The methodological approach used is the random effects model for panel data, which underwent robustness tests such as including control variables and treating variables with unit roots. The result found is that the relationship between state capacity and autocratization is negative, i.e. countries with better state capacity tend to be more democratic. Furthermore, this relationship is stronger for democratic countries but also significant for autocratic countries. In both cases, state capacity building is an advance to more democratic countries.

Keywords: State Capacity, Autocratization, Panel Data, V-Dem, Latin America.

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INTRODUCTION

“No oppression is so heavy or lasting as that which is inflicted by the perversion and exorbitance of legal authority.” Joseph Addison

In recent years, our societies have experienced a regression in democratic values, and a general sense of discomfort has fueled new autocratic regimes. Autocratization has been gaining space, a third wave of this process has been developing. It is pivotal to find what could prevent it and drive societies to a democratic future. There are many studies about democracy and autocracy, concepts that have evolved through the years and continue to be researched. A big challenge that involves this analysis is that while authors can study its past, it is difficult to predict its future. This work centers on taking an empirical approach to the relation between state capacity and autocratization, the dynamics between these two variables can give a tool to understand and prevent further advance of autocratic systems.

There is a consensus that autocratization has been taking place around the world, especially since 2006. Therefore, authors have theorized on the possible causes of this drift from the democratic path. In that sense, state capacity has been one of the main focuses of new literature, however, the use of data to back some theories is limited. This work compiles the basis of autocratization and state capacity and uses an empirical approach to search for the relation that both variables could have.

Several factors shape the empirical method used for this study. The geographic zone selected to study is the Latin American region composed of seventeen countries. The state capacity and autocratization variables are the scores obtained from two complex indexes for each country yearly. In the same fashion, variable controls were added to make a robust data

panel. A Hausman test suggests which model fits better, for this case the random effects model. Interaction models are also included to find the dynamics between the two principal variables. The main result is that there is a negative relationship between these two variables and the relationship is stronger for democratic countries.

The following section is a review of the literature that shaped this study by giving a theoretical guide for the analysis of autocratization and state capacity, then the methodology section explains the empirical strategy used to find the relationship between the two variables that opens the space of the results that are found and the subsequent discussion of what is interesting about this relationship, next a set of conclusions condenses the results, the implications, and limitations of the analysis in this work and the importance of further research in the topic.

LITERATURE REVIEW

One of the objectives of this work is to find out what is influencing the tendency of new autocratic regimes and why they are more common and sometimes seen as more successful than their democratic counterparts. Empirical evidence around autocratization exists, however, few have considered a possible role of state capacity in the autocratic wave. To have a better-informed idea of what topics will be looked into, it is necessary to comprehend what we know about autocratization and state capacity.

1. Autocratization

Autocratization is the process of regime change towards autocracy that makes the exercise of political power more arbitrary and repressive and that restricts the space for public contestation and political participation in the process of government selection. (Cassani &

Tomini, 2019). Is the loss of democratic values that occurs slowly in favor of the empowerment of an autocrat. A so-called third wave of autocratization has been taking place around the world. There have been three waves of democracy so far, the latest one ended in 2006. Since then, it has been declining. After each democratic wave, an autocratic one has followed, the main concern about the current one is that autocracies have taken a different approach to how they access, control, and maintain power.

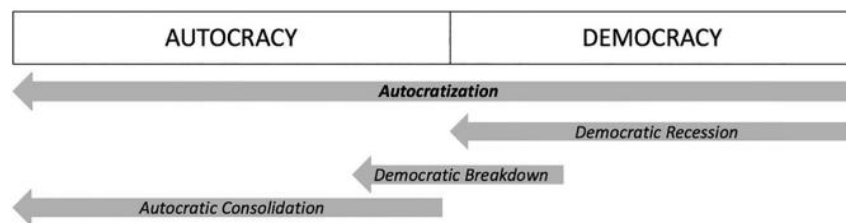
The process in which autocracies are developing now differs from what it used to be. Old autocracies, reached power by brute force. However, as Bermeo has suggested, newly elected executives weaken checks on executive power one by one, undertaking a series of institutional changes that hamper the power of opposition forces to challenge executive preferences at a slower pace. Bermeo has also found that the probability that a democratic state will be targeted by any sort of coup has dropped dramatically since the end of the Cold War. New populist autocrats have figured out that taking power with violence does not result in long-term control of their countries. Therefore, they realized that the general positive popularity of democracy is the way to enter. After, the new and slow process of autocratization starts, at first it might not be evident that this is happening, however, that is the most important part of the plan.

Autocrats start as the answer to the general disbelief people encounter. They win elections, and only then commence to undermine democratic values by weakening the system of checks and balances. They polarize the electorate and harass their opponents until they do not have competition. Mass media is persecuted and is pictured as part of the old regime that had them poor and desoled. Therefore, democracy in these countries is only a façade that autocrats have mastered to control the power (Lührmann and Lindberg, 2019). A slower-paced

process means it is harder to detect and combat. People realize what is happening too late when the autocrat has already taken control of all the branches of the state.

An simpler way to understand this new autocratization process is to see it as an involution of democratization which is a spectrum that has few but long steps. This route is composed of three periods: democratic recession, democratic breakdown, and autocratic consolidation. Every country is part of this spectrum according to the next figure:

Figure 1. Autocratization Process



(Lührmann and Lindberg, 2019)

This way of representing autocratization has advantages and disadvantages. The pros are that it is an intuitive way to understand the process, people can have conjectures on which part of the process their countries are in. The cons are that it is difficult to determine exactly where countries are in the spectrum and which actions could lead to a change of step. Modern indexes by independent organizations have compiled and created databases which have useful insights, they give a score to each country in categories related to healthy democracies. This gives a more accurate image of the reality of countries and conforms an empirical base for studies like this one. .

2. State Capacity

There are different approaches in the process of trying to define what state capacity is. However, two lines of thinking will be discussed in this work. For the definition of state

capacity, this work will use Johannes Lindvall and Jan Teorelland paper *State Capacity as Power: A Conceptual Framework* (2016) and the possible outcomes of state capacity in autocratization processes described by Sebastián Mazzuca and Gerardo Munck in their work *A Middle-Quality Institutional Trap Democracy and State Capacity in Latin America*. (2020)

2.1 Definition

Lindvall and Teorelland propose that state capacity should be defined as a power. The power of the state to force society to do things they would not do by themselves. In this sense, this form of power is exercised by using specific resources to enhance the effectiveness of specific policy instruments (2016). State capacity then is the ability of governments to carry out public policy and provide public services that benefit the population based on the power they acquired. Also, one of the main goals of the authors is to “develop a more general theoretical argument about state capacity that is not tailored to explaining specific outcomes, such as economic growth, or the performance of specific functions, such as tax collection.” (Lindvall and Teorelland, 2016). This conceptual framework identifies state capacity as a broad concept that has different components and different outcomes depending on the use given to the state capacity.

This definition offers broad advantages for the study of state capacity. As it is not centered on a single component of state capacity, it helps to identify that the mechanisms of how it is achieved are not confused with its outcomes. For this empirical work, a complex index that measures different components of state capacity will be used, and its relationship with the autocratization processes in Latin America is its outcome.

2.2 State Capacity as a democratic mechanism.

Munck and Mazzuca, describe state capacity building as a crucial democratic mechanism within the context of Latin America that can determine the success or failure of democratic institutions and processes (2020). They theorized that the building of state capacity could have two different outcomes in totally different directions. One that helps countries to combat autocratization and one that enhances the power of an autocratic figure.

2.2.1 State-centered pro-democracy mechanisms.

Governments and institutions are reinforced to combat social elites that do not want an improvement of the democratic scene by eliminating corruption, inefficiency, and institutional fragility, thereby frustrating their chance of political aspirations. The weakening of institutions and the system is a continuous process that takes time. For an autocrat, it is not a great position to appear as a savior to the people if the system is working. Thus, when state-building is centered on promoting democracy, the inhabitants of a country ask for more, and it creates a mass demand for democracy. It creates a general belief that democracy is the best way to create a virtuous circle where everyone is getting the best out of the system. The demand for democracy increases and so does the demand for building a capable state. For this to work politicians have to decline personal credit for the improvement, if not, it will become an anti-democratic mechanism.

2.2.2 State-centered anti-democracy mechanisms.

As stated before, the new way to access an authoritarian position is by populist campaigns that bring an autocrat to power via democratic procedures. However, once they reach this position the state-building process is a masquerade for the image-building of the leader. Then, pluralism and opposition are persecuted as the figure of the leader reaches higher

popularity. Last, they control the principal sectors that are essential for the preservation of the autocratic system. This new way of accessing power is difficult to detect, therefore predictions of what could happen are more imprecise.

3. Other empirical studies

In the available literature that studies state capacity and autocratization few authors incorporate empirical models that relate both variables in a comprehensive data framework. However, two studies use empirical work that can help to shape the expectations of this work. Contreras in his work *Capacidades estatales y shock económico como factores en la autocratización para América Latina* (2020) uses state capacity and economic shocks as the explanatory variables of the autocratization process in Latin America, the author finds an ambiguous effect of the economic shocks in democracies, however, when the income and the state capacity are combined the result is that autocratization could take place as a result of the positive economic impact of the shock which is used for the enlargement of the autocratic figure. Contreras's work has a limitation in the measurement of state capacity as it lacks observations for countries in some years and it only takes taxation as the measurement of state capacity. The inclusion of another variable for measuring state capacity could lead to a different outcome as taxation is just one of the components of state capacity tasks. A broader concept with a different measurement is needed to truly understand the relationship between state capacity and autocratization.

In Kristin Eichhorn's work, the analysis is about the determinants of the re-autocratization of the world from 1996 until 2013 which coincides with a period that started with a democratic predominance and that has since slowly transitioned to autocracies (2016). The author studies the relationship between the status of a country either democratic or autocratic with four independent variables. Of those none is strictly named as state capacity, however, two of them

make up a part of the state capacity concept used for this work. The variables are the degree of modernization of the state and the perceived governance performance. Later in this text, the index used to measure state capacity will be described and the similarities between both works will assemble. Interestingly, those variables according to the results are significant determinants of re-autocratization. Including more information will put the robustness of the study to test. Until now, literature shows that a stagnant state with poor performance has more probability of becoming autocratic. Both works give a space for the study of the relationship between state capacity and autocratization and the interaction of these variables for autocratic and democratic countries.

In recent years Latin America has shared a series of common problems like corruption, drug wars, violence, economic recessions, etc. Each country has faced these problems differently and has obtained diverse results. Comparative studies are helpful to understand what countries are doing better than others. However, there could be false equivalence when comparing problems of totally different regions. This study aims to contribute to the literature regarding the relationship between state capacity and autocratization in the Latin American region with an empirical approach. The question that leads this work: Is there a relation between state capacity and autocratization?

METHODOLOGY

To better understand this work, I will describe the variables of interest, controls, and models that will be used to find the relationship between state capacity and autocratization in Latin America. The main goal of this study is to find the relationship between state capacity and autocratization, the expected relation based on the literature is that a better state capacity is inversely related to an autocratization process.

About the data, for this study 1970 will be considered as the starting year and 2015 as the last year due to data availability, this timespan is selected because it includes the starting point of the third wave of democratization, the end of this wave in 2006, and the period in which autocratic values have seen a return. The panel has 8 variables, the independent and dependent variables of interest, and six control variables. The study will be conducted for seventeen Latin American countries¹, each country will have a value for each of the variables in each year.

1. Variables of interest

Independent Variable:

The independent variable is state capacity. For this study, the O'Reilly & Murphy Fiscal State Capacity Index (Sci_fisc) will be used, it was obtained from the Quality of Government Institute at the University of Gothenburg. According to their codebook, the index recoups the following information:

O'Reilly & Murphy's Fiscal State Capacity is measured using the first principal component of the five measures: 'particularistic or public goods, 'rigorous and impartial public administration, 'rule of law, 'state authority over territory, and 'state

¹ The countries that will be studied are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panama, Paraguay, Peru, Uruguay.

fiscal source of revenue. When calculating this variable, loadings derived from the principal component analysis of the most recent V-Dem data (v12) have been used. (2024).

The O'Reilly & Murphy Fiscal State Capacity Index is complex. Usually, authors measure state capacity by the fiscal capacity which is the ability to collect taxes and provide public goods to justify their existence. This index has more information on how deeply the state has been able to penetrate society through public goods, such as security, justice, and efficient use of resources. Using a more comprehensive index to measure state capacity is a step further into explaining the complex components of a state. This index has information not only about the fiscal source of revenue but also, about how well countries handle other aspects of the ideal composition of a modern government.

Dependent Variable:

The dependent variable will be autocratization, which will be the score obtained in the Electoral Democracy Index (EDI) which is a complex index built by the Varieties of Democracy Institute, V-Dem. It has five principal elements.

According to the V-Dem Codebook, the EDI contains:

The electoral principle of democracy seeks to embody the core value of making rulers responsive to citizens, achieved through electoral competition for the electorate's approval under circumstances when suffrage is extensive; political and civil society organizations can operate freely; elections are clean and not marred by fraud or systematic irregularities; and elections affect the composition of the chief executive of the country. In between elections, there is freedom of expression and an independent media capable of presenting alternative views on matters of political relevance. In the V-Dem conceptual scheme, electoral democracy is understood as an essential element

of any other conception of representative democracy, liberal, participatory, deliberative, egalitarian, or some other. (2023).

EDI contains the fundamental values of democracy; therefore, it captures most of the impact governments have had on their states during their periods, this index is the score for evaluating modern democracies, taking I account that if autocratization is seen as the reverse process of democratization, this index gives information for this process too as that is the main goal of this study. The EDI is a continuous variable that can take any number between 0 to 1. Zero means that a country is an autocracy, and one means that it is a country that has achieved a full democracy. EDI is one of the most used indexes that measure autocracies and democracies and their development through time.

To measure autocratization, the variance of the EDI is where information about the progression or regression in democratic values can be found. If a country has increased or maintained its score, it is not involved in an autocratization process, however, if the score has continuously decreased, autocratization is taking place.

2. Models

2.1 Base Model

This equation is the base for the Random effects model,

$$(1) \text{EDI}_i = \beta_0 + \beta_1 \text{Sci_fi}_{it} + V_i + \mu$$

$$\text{For } t = 1, \dots, T \text{ and } i = 1, \dots, N$$

EDI is the dependent variable, the value of the level of electoral democracy obtained by the countries each year in the Electoral Democracy Index. For the principal independent variable, Sci_fi is the score obtained in the O'Reilly & Murphy Fiscal State Capacity Index for

each country each year. The years will be represented as t , thus i is the observation for a country in a specific year.

The coefficients indicate the magnitude of the effect between the variables. β_0 corresponds to the intercept, indicating the effect on the dependent variable when the independent variables are zero. β_1 is the effect of Sci_fi on EDI, which is the coefficient of interest for this regression, this shows the relation that for each point that Sci_fi increases then, EDI will increase in a certain proportion to the β_1 . V_{it} is the random individual effect for each country, and μ_{it} is the error term.

For this study, the random effects model is the best fit. The reasoning behind using this model is that the data obtained is a panel of eight principal variables including the EDI and Sci_fi . The panel of data covers the years 1970 until 2015. Using the Hausman test:

Ho: Use Random effects if $\text{Prob} > \text{Chi}^2 (> .05)$. The unobservable effect is not correlated to the explanatory variables.

H1: Use fixed effects ($< .05$)

2.2 Base model with controls

$$(2) \text{EDI}_i = \beta_0 + \beta_1 \text{Sci_fi}_{it} + \beta_k X_{itk} + V_i + \mu_{it}$$

$$\text{For } t = 1, \dots, T \text{ and } i = 1, \dots,$$

X is a vector formed by controls that could explain the dependent variable. This will help to ensure that the correlation obtained in Sci_fi is closer to its real value. For each X there will be a B that will be the effect of each of the elements that conform the vector of controls on the EDI.

As some variables present a unit root problem, the model includes those variables lagged by one period, as shown in the extended equation².

2.2.1 Extended Equation

$$(3) \delta EDI_i = \beta_0 + \beta_1 \delta Sci_fi_{it} + \beta_2 \text{Natural Resources (\%GDP)} + \beta_4 \text{GDP Variance Lag (1)} + \beta_3 \text{Mortality Rate} + \beta_4 \text{Inflation} + \beta_5 \delta \text{Urban_Population} + V_i + \mu_{it}$$

For another view of the relation that the EDI and the Sci_fi have, a new set of regressions with interactive variables emerges with the following equations. The analysis of the two principal variables deepens as they interact, the expectation is that the relationship between state capacity and autocratization could be affected if the country is already in an autocratic state.

2.3 Interaction models

$$(4) \delta EDI_i = \beta_0 + \beta_1 \delta Sci_fi_{it} + \beta_2 \text{Dummy Democracy} + V_i + \mu_{it}$$

$$(5) \delta EDI_i = \beta_0 + \beta_1 \delta Sci_fi_{it} + \beta_2 \text{State Capacity} * \text{Dummy Democracy} + V_i + \mu_{it}$$

$$(6) \delta EDI_i = \beta_0 + \beta_1 \delta Sci_fi_{it} + \beta_2 \text{Dummy Democracy} + \beta_2 \text{State Capacity} * \text{Dummy Democracy} + V_i + \mu_{it}$$

$$(7) \delta EDI_i = \beta_0 + \beta_1 \delta Sci_fi_{it} + \beta_2 \text{State Capacity}^2 + V_i + \mu_{it}$$

Where *Dummy Democracy* is a dummy created based on the EDI score obtained by each country each year. Then, *State Capacity * Dummy Democracy* is a variable that indicates

² For more information about the control variables refer to the table 1 and 2 in the exhibit at the end of this document.

the interaction between being democratic or autocratic and the state capacity score. And *State Capacity*² is the quadratic form of the State Capacity variable. These equations test different functional forms of the baseline regression to assess interactive and non-linear relations.

RESULTS

The main takeaway of this work is that there is a positive relationship between EDI and state capacity. To find the results, a series of procedures were made to ensure the veracity of the information obtained. In this sense, to choose the model that best fits the data available, a Hausman test was run to assess the consistency of the results obtained from both fixed-effects and random-effects models. Is a statistical tool that evaluates whether the parameters estimated from the fixed-effects model significantly differ from those estimated from the random-effects model, the Hausman test helps to determine the most appropriate model specification for our analysis (Montero, 2005). The result obtained for the Hausman test suggests that the random effects model for panel data should be used³. The model was used with the main variables and the controls chosen for this work. Resulting in the following chart:

Table 1. Regressions per Variable (Robust) Random Effects (1970-2015)

VARIABLES	(1) EDI Differentiated	(2) EDI Differentiated	(3) EDI Differentiated	(4) EDI Differentiated	(5) EDI Differentiated	(6) EDI Differentiated	(7) EDI Differentiated
State Capacity Differentiated	0.172*** (0.0335)	0.172*** (0.0335)	0.174*** (0.0316)	0.174*** (0.0317)	0.179*** (0.0316)	0.178*** (0.0322)	0.177*** (0.0328)
Natural Resources (% GDP)		-0.0176 (0.0207)	-0.0190 (0.0214)	-0.0166 (0.0222)	0.000696 (0.0235)	0.0160 (0.0259)	0.0160 (0.0283)
GDP Lag (1)			0.109** (0.0554)	0.111** (0.0551)	0.0549 (0.0403)	0.0502 (0.0430)	0.0676* (0.0404)
Mortality Rate				0.000341 (0.00038)	0.000428 (0.00029)	0.000395 (0.000248)	0.000349 (0.000269)
Inflation					6.73e-06*** (2.14e-06)	6.12e-06*** (1.93e-06)	5.14e-06*** (1.85e-06)
Urban Population Differentiated						0.0101 (0.00772)	0.0103 (0.00779)
Public Debt							7.44e-05

³ For the tables with the results do the Hausman test, refer to the Anexo C

Constant	0.00307* ** (0.00111)	0.00368* * (0.00163)	-0.000378 (0.00271)	-0.00302 (0.00258)	-0.00310 (0.00327)	-0.00844* (0.00437)	(5.46e-05) -0.0124** (0.00508)
Observations	730	730	730	730	646	646	639
Number of country_id	17	17	17	17	16	16	16

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In the first column, the relation between the principal dependent variable, Differentiated Electoral Democracy Index (DEDI), and the principal independent variable, Differentiated State Capacity Index (DSCI), is examined. At first sight, a strong relation is observed. However, the effect could be overestimated due to the lack of controls. Through columns 2 to 7, control variables are added to assess whether the relationship between the DEDI and DSCI changes.

In the last column, the complete extended model can be seen. Three variables have a relation with the DEDI score, including the DSCI. For each point of the DSCI, the DEDI increases by 0.177 points. Regarding the variance of the GDP lagged by one period, it also has a strong positive relation with the DEDI, by 0.0676 points. Finally, inflation also impacts the DEDI. Although statistically significant, the economic relationship between the two variables is close to 0, meaning that it does not have a strong relation with the DEDI.

Regarding the interaction models, the following table condenses the results obtained:

Table 2. Interaction Models with Random Effects (1970-2015)

VARIABLES	(1) EDI_DIFF	(2) EDI_DIFF	(3) EDI_DIFF	(4) EDI_DIFF
State Capacity Differentiated	0.172*** (0.0332)	0.134*** (0.0351)	0.135*** (0.0353)	0.174*** (0.0319)
Dummy Democracy	0.00574		0.00318	

State Capacity*Dummy Democracy	(0.00401)	0.0809***	(0.00354)	0.0791***
		(0.0290)	(0.0282)	
State Capacity ²				-0.00241
				(0.0125)
Constant	-0.000455	0.00265**	0.000709	0.00313**
	(0.00320)	(0.00118)	(0.00315)	(0.00127)
Observations	730	730	730	730
Number of country_id	17	17	17	17

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In all the models, the consistency of the results obtained keeps showing a strong relation between the main variables DEDI and DSCI. However, there is only one model that has an interesting interaction. In column 2, the dummy of being democratic or autocratic has an impact on the DEDI and DSCI as well. A way to interpret this relation is that a better state capacity democratizes a country, and this is more truthful for countries that are already democratic. A democratic country has a stronger relation with the sum of 0.134 from the DSCI+ 0.0809 points of Dummy assigned to being democratic, it is also necessary to point out that even for autocratic countries the building of state capacity leads to a more democratic reality.

DISCUSSION

There are two main propositions obtained from the results of this work. The first one is that a relationship between state capacity and autocratization exists and is strong. The better state capacity a country has the more democratic is. The second one is that this relationship is valid for countries that are already democratic on a bigger scale than autocratic ones. However, for all countries is better to have more state capacity to improve their reality in terms of the fight against autocratization. Yet this study has its limitations that will be discussed in this section.

The inclusion of indexes instead of singular variables could raise questions about the objectiveness of the results obtained in each of the components of said index. In this sense, the inclusion of controls showed that the indexes have fairly unbiased information. The variables that were included as checks for robustness are highly quantitative which is important to avoid using only subjective political views in the process of this analysis. It is also important to note that the information for the indexes is collected by experts in each of the countries that participate in the V-dem surveys. They include qualitative information on each component of the index which is later transformed into intervals that can be used in studies, in other words, it tries to be the translation between subjective concepts to numerical data.

Lastly, this study cannot show causality. Endogeneity could exist, it is not possible to infer a cause-effect relationship between the two principal variables. There could be problems of simultaneity. This means that the two principal variables, state capacity, and autocratization have a bidirectional relationship meaning that each variable influences the other simultaneously. This can lead to a correlation between the explanatory variables and the error

term (Montenegro, 2018). This problem leads to a biased result. An instrumental variable could help solve this problem, further research on this topic is highly recommended.

CONCLUSIONS

The question to be answered was whether there is a relation between state capacity and autocratization. The analysis of data for 17 countries in Latin America from the period of 1970 until 2015 suggests that there is a negative relationship between these two variables. This means that countries with better state capacity tend to be more democratic. The results follow one of the two theoretical outcomes described by Mazzuca and Munk (2020) about the role of state capacity in modern Latin American Countries. Building state capacity is a progressive step to reaching more democratic countries and societies.

The relation between the two main variables has been strong since the first regression⁴. The results have been significant, for the same reason, the use of controls is a robustness test to ensure that the results show the closest approximation of the real relation of the variables. After the inclusion of controls, the data shows that an increase in the O'Reilly & Murphy Fiscal State Capacity Index is related to an increase in V-dem's Electoral Democracy Index. However as mentioned before, there could be problems with simultaneity between the principal variables and the error term. In further research, this problem can be faced with the introduction of exogen factors that warranty causal effects.

When analyzing the interactions between the two principal variables, the inclusion of a dummy variable that defines a country as democratic or autocratic according to the score obtained in V-dem's Electoral Democracy Index brings another interesting interpretation. The relation between an increase in state capacity to an increase in democracy is stronger in democratic countries. However, it is also important to point out that for autocratic countries it is also beneficial to build state capacity. Mazzuca and Munk state that there could be two results to the increase of state capacity. One is the improvement of the autocrat's image that uses the

⁴ The regression with the level variables without any treatment is reported in Anexo D.

state resources to his/her benefit and the other is the democratic path of a stronger and more capable state. This study suggests that the second option is closer to the real nexus of the two variables. (2020).

Finally, this paper has mentioned that not only Latin America but also the world has gone through changes in the past. This is a snapshot of the region's reality between 1970 and 2015, as time keeps moving this work will help to analyze the appearance of new political actors that might have a different impact than the one found in the data. Further research is recommended in the future, in other regions and other time sections that could bring different perspectives on such important topic as the autocratization wave around the world.

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ANEXO A: VARIABLES STATISTICAL INFORMATION

	(1)	(2)	(3)	(4)	(5)
VARIABLES	N	mean	sd	min	max
EDI	782	0.518	0.265	0.0710	0.912
Natural Resources (% GDP)	782	0.0356	0.0349	0.000228	0.190
State Capacity Index	747	0.0576	1.465	-3.578	3.286
Mortality Rate	782	7.498	2.778	3.758	19.31
Inflation	694	71.12	571.0	-0.860	11,750
Urban Population	782	62.57	15.99	28.90	95.05
Public Debt	762	55.63	91.15	3.890	2,093
GDP Variance Lag (1)	765	0.0365	0.0419	-0.265	0.182
EDI Differentiated	765	0.00916	0.0614	-0.402	0.641
State Capacity Differentiated	730	0.0324	0.230	-1.263	2.476
Urban Population Differentiated	765	0.502	0.284	0.0570	1.398
Dummy Democracy	782	0.578	0.494	0	1
State Capacity*Dummy Democracy	730	0.0186	0.157	-0.881	2.476
State Capacity ²	730	0.0536	0.330	0	6.133
Countries	17	17	17	17	17

ANEXO B: DESCRIPTION OF EACH VARIABLE

VARIABLES	Description	Source of information
EDI	Score obtained in the Electoral Democracy Index	V-DEM
Natural Resources (% GDP)	Total rents from natural resources (% of GDP)	World Bank Data
State Capacity Index	O'Reilly & Murphy Fiscal State Capacity Index	Quality of Government Institute at the University of Gothenburg
Mortality Rate	Number of deaths in a year, per 1000 inhabitants, estimated in the middle of the year.	World Bank Data
Inflation	Inflation, consumer prices (annual %)	World Bank Data
Urban Population	People living in urban areas as defined by national statistical offices	World Bank

	(% of the total)	
Public Debt	Public Debt as a percentage of the GDP	International Monetary Fund
GDP Variance Lag (1)	The annual percentage growth rate of GDP at market prices in local currency, at constant prices. The aggregates are expressed in United States dollars at constant 2010 prices.	World Bank
EDI Differentiated	The Electoral Democracy Index Differentiated by one period.	Own authorship, using EDI data
State Capacity Differentiated	O'Reilly & Murphy Fiscal State Capacity Index differentiated by one period.	Own authorship using World Bank Data
Urban Population Differentiated	People living in urban areas as defined by national statistical offices (% of the total) differentiated by one period.	Own authorship, using World Bank Data
Dummy Democracy	A dummy variable created based on the EDI score obtained by each country each year. A score higher than the region's mean of 0.518, is considered a democratic country, else is considered an autocratic country each year.	Own authorship, using EDI data.
State Capacity*Dummy Democracy	The interaction between being democratic or autocratic and the state capacity score	Own authorship, using Quality of Government Institute at the University of Gothenburg data.
State Capacity ²	Interaction of the variable of state capacity with itself.	Own authorship, using Quality of Government Institute at the University of Gothenburg data.
Country_id	The number is given to each of the 17 countries selected for this study.	V-DEM

ANEXO C: HAUSMAN TEST RESULTS

	Coefficients			
	(b)	(B)	(b-B)	sqrt(diag(V _b -V _B))
	fe2	re2	Difference	S.E.
State Capacity Differentiated	.1758163	.1772216	-.0014052	.0011074
Natural Resources (% GDP)	.06823	.0160168	.0522132	.0558363
GDP Lag (1)	.0840505	.0676013	.0164492	.0126319
Mortality Rate	.0005914	.0003492	.0002422	.0005488
Inflation	4.63e-06	5.14e-06	-5.09e-07	5.48e-07
Urban Population Differentiated	.0147832	.0103396	.0044436	.0046401
Public Debt	.0001242	.0000744	.0000498	.0000307

$$\begin{aligned} \chi^2(6) &= (b - B)'[(V_b - V_B)^{-1}](b - B) \\ &= 4.52 \end{aligned}$$

$$Prob > \chi^2 = 0.6064$$

Ho: Use Random effects if Prob>Chi² (> .05).

H1: Use fixed effects (< .05)

Therefore, the random effects model is selected as the base model.

ANEXO D: FIRST REGRESSION WITH LEVEL VARIABLES

Regressions per Variable (Not Robust) Fixed Effects

VARIABLES	(1) EDI	(2) EDI	(3) EDI	(4) EDI	(5) EDI	(6) EDI
State Capacity	0.243*** (0.0190)	0.248*** (0.00398)	0.248*** (0.00399)	0.241*** (0.00489)	0.242*** (0.00451)	0.245*** (0.00513)
Natural Resources (%GDP)		-0.0956 (0.147)	-0.152 (0.148)	-0.176 (0.148)	-0.189 (0.129)	-0.204 (0.130)
GDP Lag (1)			-0.0131 (0.0739)	-0.0185 (0.0738)	-0.0650 (0.0759)	-0.0868 (0.0779)
Mortality Rate				-0.00449** (0.00196)	-0.00641*** (0.00184)	-0.00756*** (0.00206)
Inflation					-2.63e-06 (6.36e-06)	-3.17e-06 (6.38e-06)
Urban Population						-0.000677 (0.000548)
Constant	0.494*** (0.0449)	0.495*** (0.00575)	0.498*** (0.00635)	0.532*** (0.0163)	0.561*** (0.0151)	0.612*** (0.0444)
Observations	901	901	884	884	743	743
R-squared		0.814	0.817	0.818	0.865	0.865
Number of country id	18	18	18	18	16	16

Robust standard errors in parentheses

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