09

EXOGENOUS ASSESSMENT OF INSTITUTIONAL CAPACITY IN TIMES OF CRISIS (COVID-19): RESILIENCE LOCAL GOVERNMENT[1]

EVALUACIÓN EXÓGENA DE LA CAPACIDAD INSTITUCIONAL EN TIEMPO DE CRISIS (COVID-19): RESILIENCIA GUBERNAMENTAL LOCAL

https://doi.org/10.22431/25005227.vol51n2.9

EXOGENOUS ASSESSMENT OF INSTITUTIONAL CAPACITY IN TIMES OF CRISIS (COVID-19): RESILIENCE LOCAL GOVERNMENT[1]

EVALUACIÓN EXÓGENA DE LA CAPACIDAD INSTITUCIONAL EN TIEMPO DE CRISIS (COVID-19): RESILIENCIA GUBERNAMENTAL LOCAL

Typology: Research article

How to cite this article
Sierra Hernández, J.J (2021). Exogenous assessment of institutional capacity in times of crisis (COVID-19): resilience local government. *Administración & Desarrollo, 51*(2), 209-233. https://doi.org/10.22431/25005227.vol51n2.9

Jeammy Julieth Sierra Hernández*

Abstract

Although there is a broad corpus respect to institutional capacity (IC) the evaluation of perspectives sectors impacted by the deficit or not of IC goes unnoticed, mainly in times of economic crisis such as that caused by Covid-19, where governance multilevel was decisive in reducing the effects of the pandemic. Thus, with a complementary instrument to the IC evaluation forms, in the economic and productive sector in the department of Tolima (Colombia) which evaluated exogenously the perception about IC subnational governments as from economic problems caused by COVID-19. Five (5) factors were adapted in the instrument. Content validity was tested through expert judgment, and construct validity through exploratory factor analysis. It has good content validity (CVC = 0.82) and internal consistency (Cronbach's alpha coefficient 0.921). It was identified in the perception of the IC that the Intergovernmental Relations and Co-responsibility dimension contributes 41.62% to the explained variance. Thus, when IC is evaluated, this dimension deserves a higher weighting than the other four; and it is that the imbalances in intergovernmental relations, especially due to the way in which functions are distributed, were decisive in the effectiveness of policies, that is, in achieving benefits that were supposed to be achieved in the midst of the pandemic.

Key words: municipal institutional capacity (MIC); institutional capabilities, COVID-19; crisis management; multilevel governance.

Resumen

Pese al amplio corpus de capacidad institucional (CI), en la evaluación de esta pasa desapercibida la perspectiva de sectores impactados por el déficit o no de la CI, especialmente en momentos de crisis económica como la ocasionada por la Covid-19, donde la gobernanza multinivel fue determinante para menguar efectos de la pandemia. Así, con un instrumento com-

[1] Article generated within the framework of project 65 of the ESAP 2020-2022 research call.

* Doctor (c) Modeling in Politics and Public Management, Master in Financial Administration, Actuary, Mathematics and Statistics. Professor at the Higher School of Public Administration- ESAP, University of Tolima and UNAD Florida (USA). Researcher and consultant in diagnosing public problems through data analytics. E-mail: jeammy.sierra@esap.edu.co

ISSN 0120-3754 | E-ISSN 2500-5227

plementario a los formularios de evaluación de CI, este trabajo evaluó exógenamente desde el sector económico y productivo en el Departamento del Tolima (Colombia) la percepción de la CI de los gobiernos subnacionales para enfrentar la problemática económica ocasionada por la COVID-19, para ello, se adaptaron cinco (5) factores en el instrumento. Se probó la validez de contenido mediante el juicio de expertos, y la validez de constructo a través del análisis factorial exploratorio. Se tiene buena validez de contenido (CVC = 0,82) y consistencia interna (coeficiente alfa de Cronbach 0,921). Se identificó en la percepción de la CI que la dimensión relaciones y corresponsabilidad intergubernamentales aporta un 41.62 % a la varianza explicada. Así, cuando se evalúe la CI, tal dimensión amerita una ponderación superior a las otras cuatro; y es que los desajustes en las relaciones intergubernamentales, en especial por la forma cómo se distribuyen funciones, fueron determinantes en la efectividad de las políticas, en la medida que permitió obtener beneficios que se suponían debían lograrse en medio de la pandemia.

Palabras clave: capacidad institucional municipal (CIM); capacidades institucionales, COVID-19, gestión de crisis, gobernanza multinivel.

INTRODUCTION

The perception of citizens is decisive in the governance process, especially in times of crisis such as those generated by SARS-CoV-2, which radiate all dimensions of human life, to the point of declaring as in the Colombian case "A State of Economic, Social and Ecological Emergency throughout the National territory" (Decree 417 of 2020, Art. 1). Given that governance is created when society accepts government decisions, generating legitimacy for the exercise of power.

The consequences caused by the COVID-19 strain not only translate into the loss of human lives but also into economic damage, as indicated by Capurro et al. (2020), with a fiscal deficit that was exacerbated (Camelo-Avedoy, 2020)and multiple geopolitical consequences (Tertrais, 2020). And in the face of a challenge such as dealing with COVID-19, central governments and even more local governments require the institutional capacity to be able to counteract these negative effects. And although the nuances of the concept of institutional capacity are multiple, since it has a wide range of works around its understanding and measurement, analytical and methodological conceptual reviews have been built, which in a large way allow us to recognize the differences and similarities of each position and take advantage of them for their evaluation (Baracat, 2019; González, 2021; Rosas, 2019).

A review of such theoretical contributions of the concept of capacity by Baracat (2019) identifies three types: political capacity, state capacity and institutional capacity. *The Political capacity* is analyzed by Baracat from Ainter and Pierre, conceived as that capacity and

ISSN 0120-3754 | E-ISSN 2500-5227

ability that governments have to make intelligent decisions. *State capacity* is referred to from Cingolani (2013, cited by Baracat, 2019) as "construction of a state apparatus for extracting resources from the population" (para. 17). And the *institutional capacity* evoked from Rosas (2019), which is called that ability that government institutions have to make improvements in the performance of their functions, giving a solution to the problems in order to achieve the objectives. This is evaluated from three levels, the first corresponds to the micro level that is the individual, the second is the meso level that corresponds to the organization and finally there is the macro level that is the institutional context.

Otherwise, for González (2021)it is mandatory as a starting point to differentiate between capacity and the notion of performance, since it is common to make them equivalent. However, the latter highlights the results of the government's actions in the society it manages. However, in accordance with the references raised by the author, it would not make sense to speak of institutional capacity separating it from its purposes or scope, that is, capacities must be strengthened based on the interests of public action, otherwise those capacities they would be underutilized.

The capacity must aim for the maximum social value, and as González (2021) points out, having the capacities is not equivalent to executing them or making use of them. In this sense, Rosas' approach of ¿capacity for what? this suggests an attitude of the State to create efficient and effective public policies, that is, capable of addressing the problem in question; effectiveness understood as the extent to which policies achieve the benefits they are supposed to achieve, plus any unanticipated secondary benefits. And the efficiency of public policies defined as the extent to which they keep costs low, especially monetary costs, total costs, or a relationship involving both benefits and costs (Peters et al., 2018; Nagel, 1986). Therefore, it is not possible to think of capacity without the effects it generates.

Precisely, a scenario that requires the evaluation of institutional capacity conceived as an aptitude to efficiently and effectively face government challenges, is the one produced by the pandemic generated by SARS-CoV-2, which brought along with the problem health a number of social and economic problems, a situation that encourages an exponential increase in institutional capacities at all state levels and with emphasis on the local level. And it is that the pandemic allowed subnational governments to demonstrate that it is necessary to transfer powers through decentralization, the assignment of powers, but even more so to recognize the need for capacities that allow them to take advantage of such powers to address the crisis that caused the pandemic.

Taking into account the above, this research aims to build an instrument that measures ca-

ISSN 0120-3754 | E-ISSN 2500-5227

pacity "from the outside" and that serves as a complement to others built that evaluate institutional capacity from the dimensions that are adopted, through a perspective of the concept of institutional capacity for resilience and transformative capacity of the State, and that is not limited, but incorporates the conception of Rosas (2019). It is about adapting important elements of the conceptual positions around institutional capacity, so that it converges in some key factors or dimensions to measure it, and diverges in others, the fact that institutional capacity does not fit exclusively as a response ability potential or from a retrospective look, but rather to rethink the institutional capacity that can address these two nuances. Institutional capacity that is proposed to be evaluated under the dimensions built from the theoretical references and conditioned in the work, such as: (1) institutional guidelines and rules; (2) organizational structure; (3) intergovernmental relations and co-responsibility"; (4) financial component and (5) integrity of public action. The assessment of institutional capacity is customary based on the judgment of experts and officials of the evaluated entity, but what other proposals do they present of In the methodology itself of this proposal, as a novel element, it incorporates the evaluation from the *citizen's perception,* where the evaluation by this last actor is not referred to in the different case studies addressed in the literature on institutional capacity measurement, but rather, it is analyzed as an externality to the capacity itself.

With this, it was desired to validate an instrument that measures citizen perception, from the adapted dimensions of institutional capacity precisely within the framework of the actions of local governments, to face the pandemic in the economic and social sphere. For this, an instrument was built and the questionnaire validation process was carried out in 7 municipalities of the Department of Tolima, namely: Ataco, Chaparral, Honda, Planadas, Rioblanco, San Sebastián de Mariquita and Villahermosa. The following hypotheses were formulated:

- **Hypothesis 1:** the tool proposed for the exogenous evaluation of the institutional capacity of the local governments of the Department of Tolima (Colombia) from the perspective of the economic sector has construct validity.

- **Hypothesis 2:** the percentage of explained variance of the valuation for the exogenous evaluation of institutional capacity of the local governments of the Department of Tolima (Colombia) from the perspective of the economic sector is concentrated in more than 70% in five (5) factors.

Government resilience

Management to face the economic crisis caused by COVID-19

The measurement of institutional capacity is inalienable to the effects that it produces, even more so when the current environment is characterized by deep structural transformations that permeate the different areas of society,

ISSN 0120-3754 | E-ISSN 2500-5227

such changes become increasingly complex, uncertain and conflictive; an altered and disturbed social order or the non-linearity of social change that converges in a chaotic state (Rebón , 2020 ; Rodríguez, 2016) . Disturbances such as those caused by COVID-19 confront a State in "policy suspension" (p. 86) and in some cases with resistance to changes that eludes action (Hunt, 2021), before one with government resilience - to attend, adapt and overcome the new challenges- through concrete measures and effective economic impact (Medir et al., 2017) . This potential for improvement and effectiveness in the response is correlated with the level of decentralization of public management and decision-making, although it is a conditioned relationship; because the purpose of local administrations is overshadowed if they do not have the state capacities that allow them to effectively assume the challenges that come with it (Grin & Abrucio, 2018).

Thus, the pandemic makes evident the need to empower local contexts. Precisely, in the process of counteracting the effects of this, there is a variety of contrasts with respect to the multilevel coordination of the government proposed by Navarro & Velasco (2022), since it is possible that in some cases the municipalities found their place to develop an autonomous and active role in the fight against the economic effects of the pandemic as indicated by the authors and, in others, not. In the midst of such a dilemma, "the height and intensity of the confrontations varied according to factors such as: the level of institutional capacity of the subnational government in question, political identification with the president, and the prospective political agenda of the mayors of large cities" (Rentería & Arellano -Gault , 2021, p. 168), with this, it is admissible that fiscal centralization could be one of the factors that hindered the leading role of those other local scenarios.

For Hussain et al (2021). Fiscal decentralization has a direct and indirect impact on the eradication of poverty and, in that order, it provides a more timely response to the crisis we are currently facing, which corresponds to both an economic and social crisis caused by COVID-19. Although opposite results may well be generated, as Grin and Abrucio (2018) point out, since there is no guarantee that the power conferred on the territorial entity endows it with a principle of responsibility and absolute commitment to local citizens.

Decentralization implies an alteration in shared competencies at different levels and, depending on other factors, can increase state capacities that are strengthened with internal resources that are decisive for crisis management. This internal ecosystem of the territorial entity: time, financial resources and personnel, generates marked differences in the results (Park et al. 2022). Now, from a theoretical approach that assumes institutional capacity with a broader spectrum than that irradiated by state capacity, decentralization and action to face the social and economic crisis caused by

ISSN 0120-3754 | E-ISSN 2500-5227

the pandemic, more than conferred powers, requires true capacity. institutional that allows it to meet the needs of the environment that has been affected socially and economically.

The pandemic: a test of institutional capacity

This work is approached from a perspective of the concept of institutional capacity for the resilience and transformative capacity of the State, and that incorporates the conception of Tobelem (1992, cited by González, 2021) referring to the *indicated capacity* and of Rosas (2019)who assumes the *capacity as process.* From the latter, the State can adapt to the external pressures that occur, equipping government agencies with skills to be able to solve problems, achieve objectives and improve the way in which functions are performed. (Organización de Naciones Unidas- ONU, 2009). Conceptions that for Gomes (2021)converge in the idea of a set of capacities necessary to achieve the institutional objective (Cingolani, 2013; Hartley & Zhang, 2016; Silva, 2015).

Following Rosas (2019), it is necessary to think not only of an evaluation from the administrative component, but also from the political one, where the macro level, beyond contemplating the inter-institutional relationship, captures the perception of the social actors regarding the institutional capacity they have. subnational governments in this context of attention to the social and economic emergency caused by the pandemic. Since the institutional capacity is consolidated for the subjects of law, under the imprint of providing them with those rights, *a sine qua non provision* would make sense of the powers granted to the different state agencies, and that ultimately are materialized by that human group that is part of the state apparatus.

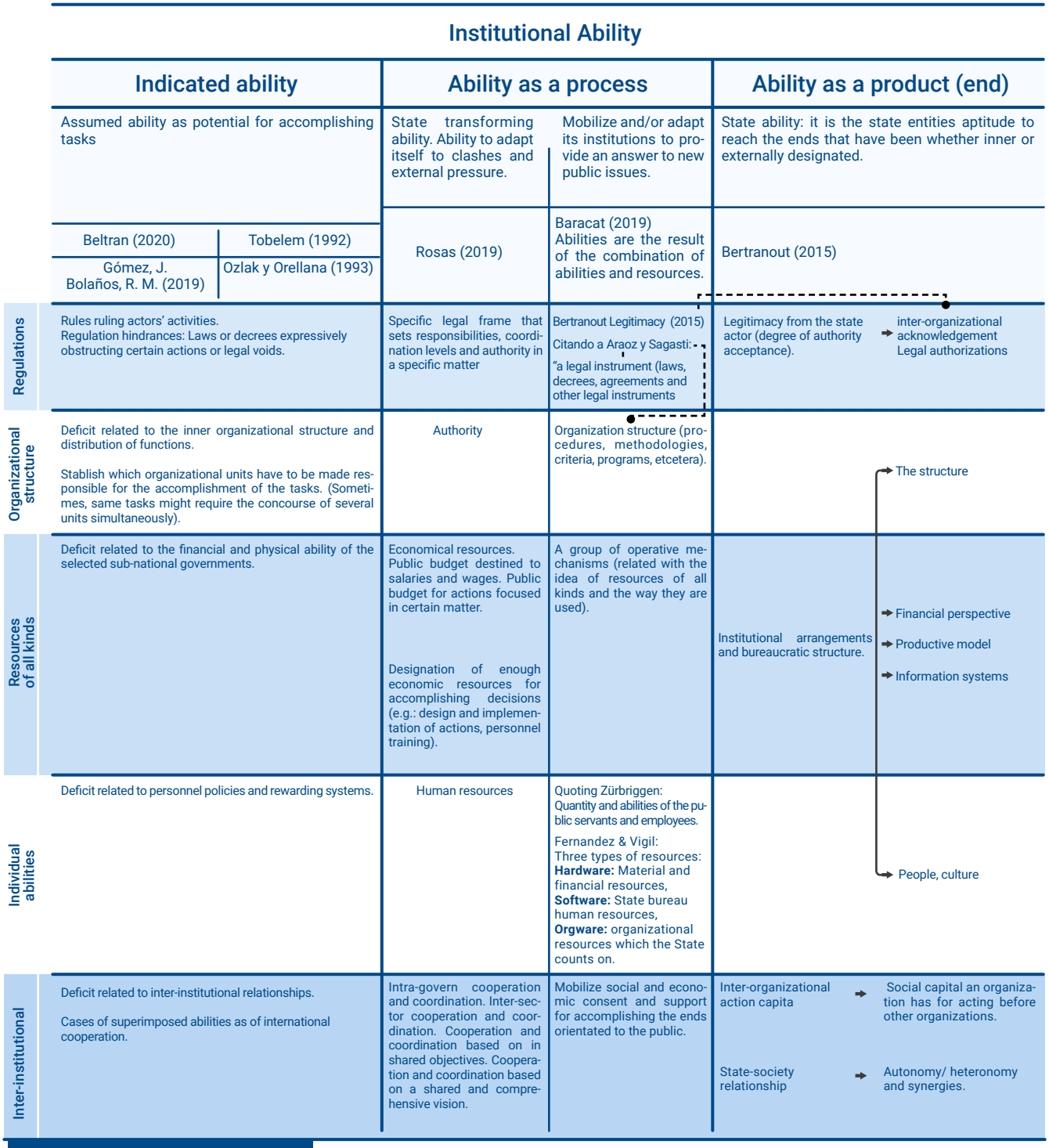
Theoretical Substrate of Institutional Capacity for the Measurement Instrument

Institutional capacity has adopted multiple conceptions, which are located at different levels, classified as: indicated or potential capacity (as proposed by Tobelem, 1992; Ozlak & Orellana, 1993); effective capacity, capacity as a product and capacity as processes (Rosas, 2019). Figure 1 analyzes some authors who reflect on the concept of institutional capacity, where an attempt was made to establish some associations between the dimensions or categories that each author proposes.

ISSN 0120-3754 | E-ISSN 2500-5227

Figure 1.

Referents of the concept of institutional capacity.



Source: own elaboration (2022).

ISSN 0120-3754 | E-ISSN 2500-5227

From this review, the following dimensions of institutional capacity were constructed: (1) institutional guidelines and rules; (2) organizational structure; (3) intergovernmental relations and co-responsibility; (4) financial component and (5) integrity of public action.

At this point, the objective of the research that seeks to build a proposal to evaluate the institutional capacity of local governments and establish relationships that lead to successful containment, mitigation and reactivation processes is resumed, for which the effect is important. of these actions in the citizenry, without ignoring that the efforts in the first instance were focused on seeing the pandemic as a public health problem, where the safeguarding of human life was the main objective. For this reason, the work focused on the economic effects. It is important to clarify that the research does not intend to reduce the evaluation of institutional capacity to the opinion of the community, but rather this document focuses on presenting institutional capacity with a capacity approach, for whom?

From the macro level of institutional capacity, these actions are related to interest groups, in this case the productive sectors and actors in the territorial entities analyzed in the Department of Tolima, Colombia (Roses, 2019, p. 98). In accordance with this, the evaluation instrument of this proposal is an input within the necessary battery of evaluation of institutional capacity.

Multilevel governance as a factor associated with municipal institutional capacity

Multilevel governance arouses a particular interest from the logic of distribution of powers and optional positions. There are those who understand it as the process of dispersion of authority away from the Nation State and between interdependent but autonomous authorities and non-public organizations located at different levels of government (Hooghe & Marks 2001, cited by Adam & Caponio, 2019, p. 27).

Miellet (2021)adheres to Scholten 's types of governance : (a) top-down (ie centralist); (b) (localist); (c) non- hierarchical (multilevel) and (d) "decoupled" relationships or dynamics, which mean different modes of government and set of interests between the levels of government (Sholten , 2013, cited by Miellet , 2021).

Centralist approaches present subnational governments subject to implementing the policies developed by the national government, thus generating a top-down intergovernmental relationship, that is, national governments have primacy in the development of policies, where the response of the State is dosed according to the same way that it is done in the central government, ignoring the particularities of the territories, and that more than empowering them, it seeks to legitimize the government of the day (Montecinos et al., 2019).

ISSN 0120-3754 | E-ISSN 2500-5227

Localist approaches refer to modes of governance in which their power is fractalized in local and/or regional governments through decentralization, unlike centralist approaches, they set the agenda and are not simply "policy followers".

Decoupling refers to modes of governance in which local governments follow a very different policymaking logic than their national counterparts, sometimes resulting in open conflict.

And finally, *multilevel governance MLG* (for its acronym in English "multi-*level governance"*) refers to a particular mode of governance that involves coordinated action between governmental levels, a recognition of the multilevel character of a problem, and to varying degrees, depoliticization and technocratic modes of cooperation (pp. 220 - 221).

Materials and methods

Population under study

- **Population.** It corresponds to the productive sector, which was defined for this study as the units in which some economic activity is carried out in commercial establishments located in some of the target municipalities, where not only the formal economic sector was analyzed but also the informal one.

- **Formal economic sector.** For this, the Open Data portal was consulted - which is the database of entrepreneurs in the jurisdiction of the Chamber of Commerce of Honda, Guaduas and North of Tolima from 2005 to 2019; Chamber of Commerce of the South of Tolima and Chamber of Commerce of Ibagué.

- **Informal economic sector.** Also considered for the study were companies that do not have commercial registration and that are considered not formalized, but carry out an economic activity, these being economic units, fixed and semi-fixed establishments, in addition to dwellings with economic activity (DANE, 2019).

- **Analysis unit.** The measurement of institutional capacity from the "social perception" of the actions of the local government managing to face the economic crisis that is being caused by the pandemic. The unit of analysis was the citizen in charge of the economic and productive unit that is part of the sector in the territorial entities of the Department of Tolima (Colombia) selected for the study.

Techniques and instruments

In this study, a factorial analysis was developed, using the Kaiser-Meyer- Olkin measure and the Bartlett sphericity test, which are used to evaluate the feasibility of the data. The determinant of the correlation matrix of the variables was calculated to examine the multicollinearity between the variables. And the Kaiser criterion was used to determine the number of factors to be extracted. The " promax " oblique rotation method was applied, which allows correlating the factors to minimize the number of variables that have high loads on each factor. Internal consistency was

ISSN 0120-3754 | E-ISSN 2500-5227

confirmed with Cronbach's alpha and composite reliability to test the accuracy of the instrument.

The aim was to systematically demonstrate the construction of a complementary instrument to the IC evaluation forms to measure it from the perspective of the economic sector of the municipalities under study in the Department of Tolima. This was carried out in four stages:

Stage 1. Systematic review

A systematic review was conducted using 'Prism Declaration 2020: an updated guideline for the publication of systematic reviews'. (The PRISMA 2020 statement: an updated guideline for reporting systematic reviews). Through it, the sources of information, the eligibility criteria, the search strategy and the selection process of the studies and material that would make up the theoretical body of this work were established. After that, a documentary analysis matrix was created that would allow contrasting the different selected studies.

Stage 2. Documentary segmentation

Analysis themes. Based on the literature review, the following themes were identified for analysis: (a) Political action, (b) Institutional capacity/deficit, (c) Multilevel governance/ Competences; (d) Crisis management/response to COVID-19; (e) Public policy with a COVID-19 focus; (f) Governance with a COVID-19 focus; (g) Public Policy Guidelines and (h) Development Planning.

Document analysis matrix. The documentary analysis was carried out according to these categories, for which a matrix was built in a spreadsheet. The verification criteria were a total of 14, among which nine are identifiers that facilitate their subsequent search through filters, likewise five analysis criteria were used, among which are: (1) Category (explained in the previous section), (2) Type of reference (journal article, thesis, technical report, among others); (3) keywords; (4) purpose of study/work; (5) Strategies, techniques and instruments used (interview, discussion group, ethnography, discourse analysis, focus group, journalistic analysis, among others).

Stage 3. Construction of the concept of institutional capacity and its dimensions

The different theoretical positions of institutional capacity were addressed, and the authors who indicated in detail the dimensions and variables for each of them were selected. The dimensions were adapted, leaving: (1) institutional guidelines and rules; (2) organizational structure; (3) intergovernmental relations and co-responsibility; (4) financial component and (5) integrity of public action.

Content validity. To carry out the content validity, the Content Validity Coefficient - CVC was used (Hernández-Nieto, 2002), allowing to evaluate the degree of agreement between the experts regarding the different items and the instrument generally used. In

ISSN 0120-3754 | E-ISSN 2500-5227

order to carry out this, the Likert-type scale was applied, which has five alternatives and the mean obtained in each of the items is calculated and, with the scores, the CVC and the error assigned to each element are calculated. P_{ei} (Product of biases) as stated in equations 1 and 2, respectively:

$$CVC_i = \frac{M_x}{V_{max}} \quad (1)$$

Where

M_x : corresponds to the average of the element in the score given by the experts

V_{max}: is the maximum score that the item could reach.

$$P_i = \frac{M_x}{V_{max}} \quad (2)$$

Where j is the number of participating experts.

Then the CVC is calculated by applying CVC = CVCi – Pei.

Stage 4. Factor analysis (AF)

In order to carry out the factor analysis, the SPSS software version 28.0 license granted by the Higher School of Public Administration -ESAP was used within the framework of the 2020-67 research project in the 2020-2022 research call.

Results

Content validity

Following the procedure indicated in the methodology, the judges assigned the corresponding scores to each item, with the final CVC score = 0.82.

Factor and Principal Components Analysis

As statistical methods, principal component analysis (PCA) and factor analysis (FA) do not represent an end in themselves, but rather a means to an end. Where it is sought to recognize the implicit structure in a data set with a significant number of variables, which allows analyzing the relationships that may exist between them (Tapia & García, 2019).

It is common to think that they are the same method, but their purpose differs. Performing principal component analysis seeks to make linear combinations of variables that make up a component, explaining the largest proportion of total variance of those variables. And the goal is to reduce variables to a smaller number of components or, in a dangerously simple way: to create factors that are the result of grouping variables. For its part, FA seeks that each variable is the result of a combination of factors, and its objective is to determine the correlations between the variables and is useful for understanding the constructs that underlie the data (Minitab, 2022). When questionnaires are designed, with the help of FA, irrelevant items can be removed from the final instrument.

ISSN 0120-3754 | E-ISSN 2500-5227

Verification criteria to do a factor analysis

Check table. Aincuru (2015) proposes an assessment tool as a filter to identify if it is possible to use factor analysis and thereby obtain reliable results with the instrument to be validated. The verification table was adapted and corresponds to a list of characteristics where the evaluator must assign 1 to the statement that best fits the reality of the data, repeating the process for each of the 10 criteria, as shown in Table 1.

Table1.

Factor analysis assessment.

No.	AF elements	AF penalizing elements	Points
1	The factorial analysis has been designed before data collection.	Yes	1
		No	
2	The sample has been checked.	he sample is too small to obtain stable correlations.	1
		Two groups of different factorial structure are assimilated in the same factorial calculation.	
3	The analysis provides for a sufficient number of analysis factors.	The design is simplified to the maximum so that the dimensions are few and easy to interpret.	1
		There are many dimensions.	
4	Relationship number of variables versus factors.	The factor must arise from one or two variables.	1
		There are more variables than factors.	
5	The variables have a good distribution and appropriate regression forms.	Adequate distribution (there are some extreme cases in the responses and bimodal distributions may occur).	1
		Very skewed distributions (on a test, items too easy or too difficult) and the results are loaded to one extreme.	
6	The variables are independent.	An item has a forced response (if a value is assigned to an item, a value must be associated with another variable).	1
		Two variables have the same value associated with an item.	
		A variable is the final combination of the others considered (for example, in partial and total scores).	
7	The variables are pure or simple.	The variables must imply a single factor and not measure more than one.	1
		They measure more than one factor.	

ISSN 0120-3754 | E-ISSN 2500-5227

No.	AF elements	AF penalizing elements	Points
8	The variables are different from each other.	The constructs have very different variables.	1
		The constructs have very similar variables, with low hierarchy (two similar items in their response or provide an alternative response).	
9	The proper rotation is chosen.	An unjustified degree of obliquity is allowed to obtain a simpler structure.	1
		The type of rotation is inappropriate.	
		There is no rotation.	
10	extracted is considered the general factor.		1

Source: the table contains the evaluation carried out using the Ainciburu checklist (2015).

The assessment given in Table 1 begins with the first verification criterion, and its score is based on a previous design of the instrument with the purpose of evaluating it through factor analysis and thereby recognizing the constructs that underlie the perception regarding to the IC of local governments to face the economic crisis generated by the pandemic. The second assessment (sample size) was achieved, since, although 95 subjects in charge of the productive economic units located in the municipalities under study were analyzed, the sample size can be corrected through the non-orthogonality of variables. The third and fourth scores are supported by the literature consulted, where the number of dimensions to evaluate IQ ranges from 3 to 6, with which the five dimensions selected is a consistent number. Similarly, for the subsequent evaluation items, a distribution without asymmetries was observed, since it is not evident that the responses are loaded at one end of the scale; the dependency of variables was corrected with the elimination of correlated items; and each item only contributes to one of the IQ dimensions, which are different from each other.

Steps in a Factor Analysis

There are three main steps to AF:

a) Evaluation of the adequacy of the data.

b) Factor extraction.

c) Rotation and interpretation of factors.

Factorability assessment

To measure factorability, the Kaiser-Meyer - Olkin test and Bartlett's sphericity were carried out, that is, to establish how suitable it is to carry out a factorial analysis with the items constructed to measure the perception of capacity that the institutions of the countries have. local governments to face the EC-COVID-19.

ISSN 0120-3754 | E-ISSN 2500-5227

When analyzing the contribution of each item to the common variance, the Kaiser-Meyer- Olkin test, known as KMO, and the Bartlett sphericity test were applied. The KMO test is a measure that has been designed to measure the suitability of the data to perform factor analysis, since it poses the null hypothesis Ho: The variables are orthogonal, that is, the correlation matrix is an identity matrix the which reveals that the variables are not related in themselves, therefore, they are not suitable for the detection of structures. Against the alternative hypothesis, H1: the variables are not orthogonal (Shrestha, 2021). The KMO generates an index that ranges between 0 and 1; the higher the level of the KMO index, the greater the contribution of the item to the joint variance of the data (Kaiser & Rice, 1974, cited by Ferrando et al., 2022). Although Shrestha, states that an AF should only be performed if the KMO is greater than 0.69, other authors point out that the measurement can be interpreted if the KMO is greater than 0.4. In this case the Shrestha referent was used.

The KMO index obtained was 0.834. This result validated the suitability of doing a factorial analysis since it presented a value very close to 1.0. The Bartlett test, on the other hand, operates in the opposite way, looking for the p - value to be less than a value established as a limit (in this case 0.05); here the result was close to zero, which confirmed the result of the KMO.

Eigenvalues and Total Variance Explained

The eigenvalues give the idea of whether it is worth using a combination of items to explain each factor, that is, how profitable it is to do this compared to working with a single item that measures that factor. Thus, Table 2 shows that a combination of items grouped into a single factor explained the IQ 8,739 times better than one (1) single item (the best of them). Therefore, all those factors whose eigenvalues were greater than 1 were taken, otherwise the principle of parsimony would be violated. Likewise, when analyzing the percentage of variance contribution, it is evident that the first five factors explain 71.21 %. The contribution of each factor to explain the construct, same contribution coming from the components with eigenvalues that are greater than 1.

ISSN 0120-3754 | E-ISSN 2500-5227

Table 2.

Eigenvalues and total explained variance.

Component	Initial eigenvalues		
	Total	variance %	% accumulated
1	8,739	37,995	37,995
2	2,849	12,388	50,384
3	1,965	8,542	58,926
4	1,443	6,272	65,198
5	1,384	6,016	71,214
6	0,966	4,200	75,414
.	.	.	.
.	.	.	.
.	.	.	.
23	0,077	0,333	100,00

Note: The eigenvalues taken are those greater than 1, in accordance with statistical theory.

Source: Own elaboration (2022).

Item removal

We proceeded to analyze whether eliminating an item would improve the contribution of the explained variance. The three items with the lowest value in the correlation matrix were identified to be eliminated, with this, the KMO improved a little as shown in Table 3. And the explained variance went from 71,214 to 75,099 as shown in Table 4.

Table 3.

KMO and Bartlett with item elimination.

KMO and Bartlett test		
Kaiser-Meyer- Olkin measure of sampling adequacy.		0,852
Bartlett's sphericity test.	Approx. Chi squared.	1412,195
	Degrees of freedom.	190
	p- value.	<,001

Source: Own elaboration (2022).

ISSN 0120-3754 | E-ISSN 2500-5227

Note: Si el tests KMO arroja un p-value menor que 0.05, el modelo factorial (o la extracción de los factores) en su conjunto es significativo, es decir, se acepta la hipótesis nula de que se puede aplicar el análisis factorial.

In the sub-examine the reagents were eliminated:

- Given the different mobility restriction measures (peak and identity card, curfews, among others) you can say that the income of your establishment.
- Considers that public officials are located according to their skills and qualities in the different units of the Mayor's Office.
- The articulation between the institutions that has taken place in the municipality to address the crisis generated by COVID-19 has been... (this is the item with other institutions other than those related, such as SENA, Chamber of Commerce, among others).

Table 4.

Eigenvalues and total variance explained with elimination of items.

Total explained variance									
Component	Initial eigenvalues			Sums of squared extraction loads			Sums of loads squared of rotation		
	Total	variance %	% accumulated	Total	variance %	% accumulated	Total	variance %	% accumulated
1	8,324	41,618	41,618	8,324	41,618	41,618	4,621	23,107	23,107
2	2,454	12,272	53,890	2,454	12,272	53,890	2,646	13,231	36,338
3	1,831	9,157	63,047	1,831	9,157	63,047	2,525	12,624	48,961
4	1,338	6,689	69,736	1,338	6,689	69,736	2,310	11,548	60,509
5	1,073	5,363	75,099	1,073	5,363	75,099	2,293	11,463	71,972
6	0,846	4,228	79,327	0,846	4,228	79,327	1,471	7,355	79,327

Note: Promax rotation was applied.

Source: Own elaboration (2022).

The Table 5 shows the correlation on the diagonal of the anti-image matrix, the communality after extraction, and the factor loading; also descriptive statistics such as means and deviations. The correlation indicates an adequate use of the sample design of each and every one of the items. The communalities reflect the common variation in the data structure after factor extraction. The factor loading values indicate the relationship of each variable with the underlying factors. The variables with large loads presented values > 0.40 and indicate that they are representative of the factor.

ISSN 0120-3754 | E-ISSN 2500-5227

Table 5.

Summary of factors related to the perception of IQ for CE -COVID-19.

Factor	Item	Correlation[a]	communality[b]	factor loading	Half	dev. Deviation
1. Institutional guidelines and rules	Municipal regulations are...	0,783	0,497	0,275	1,779	0,865
	The access.	0,806	0,891	1,012	1,358	0,600
	the effectiveness.	0,798	0,897	1,003	1,326	0,591
	diffusion and clarity.	0,877	0,629	0,609	1,526	0,666
2. Organizational structure	Capacity and suitability of local government staff.	0,864	0,805	0,881	1,705	0,727
	Attention of local government staff.	0,844	0,766	0,829	1,874	0,761
	Officials' powers are...	0,842	0,599	0,489	1,653	0,740
3. Intergovernmental relations and co-responsibility	mintick	0,884	0,878	0,966	1,379	0,655
	minwork	0,883	0,891	0,957	1,347	0,615
	NGOs	0,889	0,860	0,949	1,295	0,599
	SIGN	0,909	0,880	0,919	1,295	0,581
	Government of Tolima	0,86	0,510	0,528	1,737	0,866
	Chambers of Commerce	0,895	0,681	0,482	1,547	0,796
4. Financial component	Sufficiency of CE-COVID-19 staff	0,828	0,819	0,874	2,158	0,854
	Sufficiency dependencies CE-COVID-19	0,804	0,764	0,836	2,168	0,871
	Efficiency dependencies CE-COVID-19	0,898	0,709	0,705	1,684	0,640
	Articulation between institutions	0,786	0,656	0,581	1,716	0,724
5. Integrity of public action	Management of resources to face the EC-COVID-19	0,828	0,806	0,845	1,800	0,709
	Execution of resources for CE-COVID-19	0,816	0,800	0,800	1,821	0,799
	Selection of beneficiaries of the resources to face the EC-COVID-19	0,795	0,682	0,703	1,358	0,651

Nota: [a] Correlation of the anti-image matrix. [b] Communality after extraction.

Source: Own elaboration (2022).

ISSN 0120-3754 | E-ISSN 2500-5227

Factor 1 is labeled *institutional guidelines and rules,* which it contains four elements that measure the perception of the regulations issued by the local government to address the EC-COVID-19; as well as the access, effectiveness and dissemination of the guidelines established in the territory in order to face the economic impact. Its reagents have a correlation of 0.865; 0.600; 0.591 and 0.842 respectively. This component explains 9.1% of the total variance.

Factor 2 assigned as *organizational structure,* contains three reagents such as capacity, attention, suitability and skills of people linked to the local government. With which 5,363% of the total variance is explained. The correlation is 0.864; 0.844; 0.591 and 0.666 respectively. In addition, only with this factor, the IC could be measured 1,073 times better to attend to EC-COVID-19 in the territory than the best of the reagents formulated to measure that perception would do.

Factor 3 is labeled *Intergovernmental Relations and Co-responsibility,* of the five components it is the one with the lowest average scores, very close to an average score of 1; which suggests that there is a tendency to agree with a perception of low IQ of the local government to establish relationships that allow facing the crisis. Being significant that it contributes 41.618% to the total variance. This factor thus becomes a key element to analyze in what could be the efforts to strengthen IC to deal with crises.

Factor 4, called *Financial Component,* contributes 12,272% to the total variance. Together with intergovernmental relations, they explain more than half of the variance of the exogenous evaluation of the IQ construct, and its eigenvalue after component 3 is the second highest, since if the factor alone is used, IQ could be measured 2,454 times better. to address the CE-COVID-19 than, if we were to take a single item that tries to cover the broad concept of IC.

Factor 5 refers to the *Integrity of public action,* the three reagents are the selection of beneficiaries of the resources; management and execution of these to face the CE-COVID-19, with which 6,689% of the total variance is explained. In addition, only with this factor, the IC could be measured 1,338 times better to attend to the EC-COVID-19 in the territory, which justifies its use to represent said perception of IC. Since, following the principle of parsimony, this is a somewhat more complex model, but it explains IC better than just using a reagent that encompasses IC so broadly; running the risk of forgetting the different nuances and dimensions of this that are discussed here.

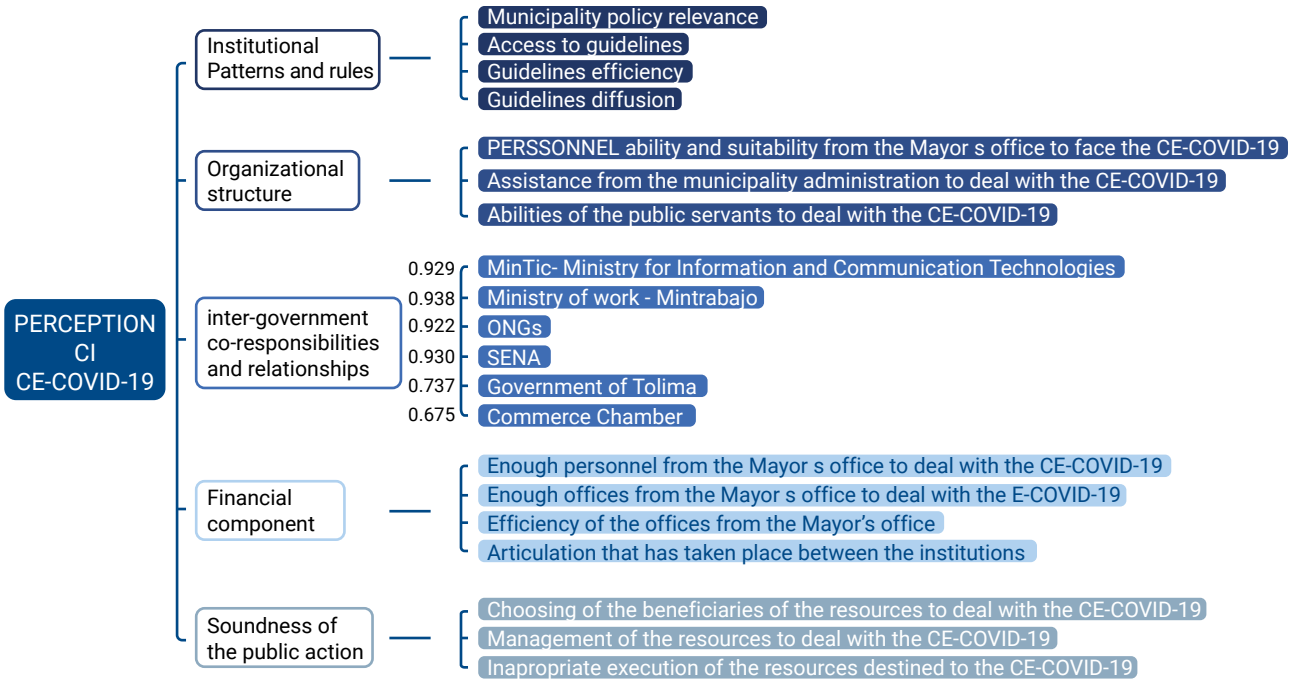
Internal consistency is confirmed by calculating Cronbach's Alpha to test instrument precision and reliability. The appropriate threshold value for Cronbach's alpha is that it should be > 0.7. Cronbach's alpha coefficient for the factors with full scale reliability is 0.921 > 0.7. shows that the variables exhibit a correlation with their component grouping and are therefore internally consistent.

ISSN 0120-3754 | E-ISSN 2500-5227

Finally, the CI perception to attend to the CE-COVID-19 from the exogenous evaluation of those in charge of the economic productive units in the municipalities under study allowed the construct to be consolidated, as can be seen in Figure 2.

Figure 2.

Perception of IC to attend to CE-COVID-19 in the territories of Tolima.



Source: own elaboration (2022).

CONCLUSIONS

The relevance of an exogenous evaluation

The evaluation of institutional capacity has been extended in its field as an internal evaluation of the entities under inspection, however, a more objective evaluation must contemplate not only a self-evaluation, but also assume both a co-evaluation and a hetero-evaluation - these two types- They can well be classified as exogenous evaluations, that is, external to the institution. But, the look of those for whom this institutional capacity of the evaluated entity is promoted is of special interest, since it endows it with a special price that is circumscribed in the concept of effectiveness of public policy, understood as the magnitude in which it generates a benefit. So, the perception of the beneficiaries of this institutional capacity is of great value to guide efforts on the right path, effectively generating the greatest benefits.

ISSN 0120-3754 | E-ISSN 2500-5227

Now, in the process of recognizing the perception of the level of resilience of the local governments of the population under study, it is necessary to consider that to a great extent the powers conferred to deal with the crisis per se, condition or generate effects on that assessment of institutional capacity, even more so when multilevel governance affects the perception of institutional capacity when considering those responsible for acting in the face of the crisis.

In this sense, selective attribution (biased assignment of responsibility) is more prominent in political systems where the lines of responsibility are darker compared to systems where the lines of responsibility are clearer (Page & Peshkopia, 2022). Thesis with which this work coincides, since people can adjust who they believe is responsible for the objective conditions related to the economic and social impact caused by COVID-19 based on their local government biases, under the condition that blurred lines of institutional responsibility. The institutional context makes it difficult to discern who is competent to meet the needs in the face of the crisis.

Therefore, in scenarios of uncertainty such as those that arose, the evaluation of government management in the exceptional optional framework is inescapable, not only of the government at the national level but also territorially, in which the need to incorporate elements of flexibility, glimpsing the relationship between coordination, concurrence and subsidiarity and the response capacity of the territorial entities.

Interest groups or *stakeholders*

Consistent with Rosas (2019), institutional capacity cannot be separated from the premise "capacity for what? and in that order an exogenous evaluation of the perception of institutional capacity is decisive, since it is not possible to limit the evaluation of capacity to that of the public administrative apparatus, "without considering the attributes or factors of the environment, for which the knowledge and analysis of institutional capacity is limiting" (Rosas, 2019, p. 86) since it is a social construction. "It is a space produced by the relationships of the actors located not only in the governmental sphere but also in society" (Rosas, 2019, p. 100).

Regarding the results of this study, it can be concluded that factor analysis is an appropriate approach to extract significant factors that explain the maximum variability of the group under study with regard to the exogenous evaluation of: institutional capacity of local governments to face the economic crisis generated by the pandemic. It is highlighted from the factorial analysis that, given the components identified, intergovernmental relations and the financial component, can be decisive in the exogenous evaluation, perceiving low or high institutional capacity depending on clearly identifiable actions by the *stakeholders*. Likewise, the strengthening of these components converges with the thesis that in times of crisis and intense turbulence, intergovernmental cooperation becomes imperative, and despite the fact that the areas that the pandemic

ISSN 0120-3754 | E-ISSN 2500-5227

has permeated are so many, enormous efforts are required in the context of the economic crisis. As Fernández et al. (2021)Regarding the statement by Brosio, Jiménez and Ruelas after the outbreak of this health crisis, "there is a need to strengthen coordination in intergovernmental fiscal systems and the role of intermediate and local governments to face the impact of the pandemic on the economy and the well-being of the poorest households" (p. 13).

The discussion on intergovernmental relations has been raised at different levels, on the one hand, from the institutional, analyzing the effectiveness of institutions to contribute to the objective of others, but also the degree of institutionalization of cooperation mechanisms, since in many cases there is no order that allows recognizing these relationships and the synergies that can be generated. In this sense, it is worth reflecting on the imbalances in intergovernmental relations, which in practice have suffered as many encounters as disagreements, especially due to the way in which functions are distributed and for which it must be remembered that the relations between the central government and subnational governments in daily practice tend to distance themselves from the duty of public management.

Finally, there are those who see the crisis as an enhancer for a greater relationship with the government, managing to reconstitute the fractured system of government relations, reestablishing the dialogue of the national government and in the territorial sphere (Ruiz, 2020).

REFERENCES

Adam, I. & Caponio, T. (2019). The Routledge handbook on the politics of migration in Europe Research on the multi-level governance of migration and migrant integration: Reversed pyramids. En *The Routledge handbook on the politics of migration in Europe, Abingdon* (págs. 26–37). Routledge: Centre Migration Policy. http://hdl.handle.net/1814/63706

Ainciburu, M. (2015). El análisis factorial en la investigación aplicada a fenómenos lingüísticos. *Revista Nebrija de Lingüística aplicada a la enseñanza de Lenguas*, (19), 94-97. https://www.nebrija.com/revista-linguistica/el-analisis-factorial-en-la-investigacion-aplicada-a-fenomenos-linguisticos.html

Baracat, A. (2019). Desarrollo de la capacidad institucional: un recorrido desde los orígenes de la capacidad política hacia el estudio de la capacidad analítica. *XIV Congreso español de la ciencia política y de la administración: Ciencia política en la nueva política* (págs. 1-10). Salamanca: Asociación Española de Política y de Administración. https://aecpa.es/es-es/desarrollo-de-la-capacidad-institucional-un-recorrido-desde-los-orige/congress-papers/2693/

Camelo-Avedoy, J. (2020). *La pandemia de COVID-19, una visión desde la Economía The COVID-19 pandemic, a view from the Economy.* Las ciencias sociales y humanidades.

ISSN 0120-3754 | E-ISSN 2500-5227

Capurro, A., Deagosto, G., Ithurralde, S. & Oddone, G. (2020). *Impacto Social y Económico de la COVID-19 y Opciones de Políticas en Uruguay.* PNUD.

Cingolani, L. (2013). The state of State capacity: a review of concepts, evidence and measures. *UNU-MERIT Working Paper* (31). https://ideas.repec.org/p/unm/unumer/2013053.html

DANE. (2019). *Censo Económico de Colombia*. DANE. https://www.dane.gov.co/index.php/estadisticas-por-tema/comercio-interno/censo-economico-de-colombia-documento-metodologico#censo-economico

Decreto 417 de 2020 [Presidencia de la República]. Por el cual se declara un Estado de Emergencia Económica, Social y Ecológica en todo el territorio Nacional. 17 de marzo de 2020.

Fernández, J., Blanco, Y., Cardarello, A. Cordero-Nieves, Y., Hernández, O., Mendoza, J., & Revenga, C. (2021). *Informe iberoamericano 2020 de relaciones intergubernamentales*. Red Iberoamericana sobre relaciones intergubernamentales, gobierno multinivel y procesos supraestatales.

Ferrando, P., Lorenzo, U., Hernández, A. & Muñiz, J. (2022). Decálogo para el Análisis Factorial de los Ítems de un Test. (U. Nebrija, Ed.) *Psicothema*, *34*(1), 7-17. doi:10.7334/psicothema2021.456

Gomes, D. (2021). El estado del arte de la capacidad institucional: una revisión sistemática de la literatura en portugués. *Cadernos EBAPE.BR, 19*(1), 165-189.

González, H. (2021). Capacidades: (otra vez) un análisis conceptual y metodológico. Intersticios sociale. *Intersticios Sociales, 21*(1), 9-43. http://www.scielo.org.mx/scielo.php?script=sci_ar

Grin, E. & Abrucio, F. (2018). Las capacidades estatales de los municipios brasileños en un contexto de descentralización de políticas. *Red de Revistas Científicas de América Latina y el caribe, España y Portugal,* (70), 93-126. https://www.redalyc.org/journal/3575/357559200004/357559200004.pdf

Hartley, K., & Zhang, J. (2016). Measuring Policy Capacity Through Governance Indices. *Policy Capacity and Governance: Studies in the Political Economy of Public Policy*, 67-97.

Hernández-Nieto, R. (2002). *Contributions To Statistical Analysis: The Coefficients of Proportional Variance, Content Validity and Kappa.* BookSurge Publishing.

Hunt, E. (2021). A novel (coronavirus) reading of Hobbes's Leviathan. *History of European Ideas*, *47*(1), 33-37. doi:10.1080/01916599.2020.1792059

ISSN 0120-3754 | E-ISSN 2500-5227

Hussain, S., Hali, S., Ahmad, R., Iqbal, S. & Iftikhar, H. (2021). Fiscal decentralization and poverty alleviation: A case study of pakistan. *Poverty and Public Policy, 13*(2), 139-154. doi:10.1002/pop4.304

Medir, L., Pano, E., Viñas, A. & Magre, J. (2017). Dealing with austerity: A case of local resilience in southern europe. *Local Government Studies, 43*(4), 621-644. doi:10.1080/03003930.2017.1310101

Miellet, S. (2021). Burden, benefit, gift or duty? Dutch mayors' framing of the multilevel governance of asylum in rural localities and cities in Zeeland. *Territory, Politics, Governance*, 1-20. doi:10.1080/21622671.2021.1999314

Minitab. (2022). *¿Qué diferencias hay entre el análisis de componentes principales y el análisis factorial?*. Soporte de Minitab 18. https://support.minitab.com/es-mx/minitab/18/help-and-how-to/modeling-statistics/multivariate/supporting-topics/principal-components-and-factor-analysis/differences-between-pca-and-factor-analysis/

Montecinos, E., Neira, V., Díaz, G. & Park, J. (20 de mayo de 2019). Gobernanza democrática, descentralización y territorio: análisis del plan Chiloé en Chile. *Andamios, 16*(41), 413-436. https://doi.org/10.29092/uacm.v16i41.753

Nagel, S. (1986). *Análisis de leyes, políticas y optimización.* Libros del quórum.

Navarro, C. & Velasco, F. (2022). From centralisation to new ways of multi-level coordination: Spain's intergovernmental response to the COVID-19 pandemic. *Local Government Studies,* 1-20. doi :10.1080/03003930.2022.2042683

Organización de Naciones Unidas- ONU. (2009). *Informe de desarrollo humano Jalisco 2009: Capacidades institucionales para el desarrollo humano local.* Programa de Naciones Unidas para el Desarrollo. https://hdr.undp.org/sites/default/files/idh_mexico_jalisco_2009.pdf

Organizacion Mundial del Turismo. (2021). *2020: analisis del daño.* Organizacion Mundial del Turismo. https://www.unwto.org/es/covid-19-y-sector-turistico-2020

Oszlak, O. & Orellano, E. (1993). *El análisis de la capacidad institucional: aplicación de la metodología SADCI*. Artículo inédito, Buenos Aires, Argentina.

Page, D. & Peshkopia, R. (2022). Blurring Lines of Responsibility: How Institutional Context Affects Citizen Biases Regarding Policy Problems. *Political Studies Review*, *20*(1), 148-157.

Park, S., Graham, M. & Foster, E. (2022). Improving local government resilience: Highlighting the role of internal resources in crisis management. *Sustainability (Switzerland), 14*(6), 3214. doi:10.3390/su14063214

Peters, B., Capano, G., Howlett, M., Mukherjee, I., Chou, M. & Ravinet, P. (2018). *Designing for policy effectiveness: defining and understanding a concept.* Cambridge University Press.

ISSN 0120-3754 | E-ISSN 2500-5227

Rebón, J. (2020). La no linealidad del cambio social. En *El futuro después del COVID-19* (pp. 89–96). Argentina Unida. https://www.argentina.gob.ar/sites/default/files/el_futuro_despues_del_covid-19.pdf

Rentería, C. & Arellano-Gault, D. (2021). The costs and benefits of duality: Colombia's decentralization and the response to the COVID-19 pandemic. *Revista de Administração Pública - RAP, 55*(1), 165-179. https://www.redalyc.org/comocitar.oa?id=241066211012

Rodríguez, C. (2016). La resiliencia como atributo gubernamental: una aproximación exploratoria. *Anales, 16*(1), 91-112. https://www.researchgate.net/publication/319177095_La_resiliencia_como_atributo_gubernam

Rosas, A. (2019). Capacidad institucional: revisión del concepto y ejes de análisis. *Documentos y Aportes en Administración Pública y Gestión Estatal- DAAPGE, 32*, 81-107. doi:org/10.14409/daapge.v19i32.8482

Ruiz. (2020). *Modernización Institucional y Crisis de la Democracia en América Latina La gestión en la nueva normalidad. [Transmisión en vivo]. Facebook.* https://www.facebook.com/265930180093232/videos/325419245536546/

Shrestha, N. (2021). Factor Analysis as a Tool for Survey Analysis. *American Journal of Applied Mathematics and Statistics, 9*(1), 4-11. doi:10.12691/ajams-9-1-2

Silva, A. (2015). Os estados no SUAS: uma análise da capacidade institucional dos governos estaduais na assistência social. *Revista de Administração Pública, 49*(5), 1167-1192.

Tapia, G. & García, J. (2019). Análisis Factorial y Componentes Principales: su uso para modelos macroeconométricos de la economía mexicana. *Economía y sociedad, 1*(10), 182-210.

Tertrais, B. (2020). *L'Épreuve de faiblesse Les conséquences géopolitiques du Coronavirus*. Editions Gallimard. https://tracts.gallimard.fr/fr/products/tracts-de-crise-n-62-l-epreuve-de-faiblesse

Tobelem, A. (1992). *Institutional capacity analysis and development system (ICADS)-operational manual* (No. 17573, pp. 1-0). The World Bank.

ISSN 0120-3754 | E-ISSN 2500-5227