



Universidad  
del Valle



Cuadernos de  
Administración

Journal of Management

Print ISSN: 0120-4645 / E-ISSN: 2256-5078 / Short name: cuad.adm.

Pages: e2412716 / Vol: 39 / Issue: 76 / May - Aug. 2023

Faculty of Administration Sciences / Universidad del Valle / Cali - Colombia

## Qualitative comparative analysis of success factors of rural property social management plans in Colombia in the formulation and implementation phases (2018-2021)

Análisis cualitativo comparativo de los factores de éxito de los planes de ordenamiento social de la propiedad rural en Colombia en las fases de formulación e implementación (2018-2021)

### <sup>1</sup> Ana Catalina Rodríguez Moreno<sup>ORCID</sup>

Professor, Universidad Nacional Abierta y a Distancia (UNAD), Bogotá, Colombia  
e-mail: [rodriguez.anacatalina@gmail.com](mailto:rodriguez.anacatalina@gmail.com)

### <sup>2</sup> Alejandro Hernández Badillo<sup>ORCID</sup>

Senior consultant, Mutual-Co, Bogotá, Colombia. e-mail: [alejandro.hernandezb@gmx.ch](mailto:alejandro.hernandezb@gmx.ch)

### <sup>3</sup> Luis Francisco Martínez Cortés<sup>ORCID</sup>

Specialized profesional, Observatorio Inmobiliario Catastral, Instituto Geográfico Agustín Codazzi (IGAC), Bogotá, Colombia. e-mail: [luisfran.martinezcortes@hotmail.com](mailto:luisfran.martinezcortes@hotmail.com)

---

Article of Scientific and Technological Research

Submitted: 28/01/2023

Reviewed: 04/05/2023

Accepted: 13/05/2023

Published: 15/09/2023

Thematic lines: Public Policies

JEL classification: H83, L32, L38, Q15

<https://doi.org/10.25100/cdea.v39i76.12716>

---

### Abstract

As a result of the signing of the Peace Agreement in 2016 and point one on Comprehensive Rural Reform, the Colombian government assumed the task of implementing a policy for the Social Use of Rural Property focused on extending to the rural population, legalization mechanisms in terms of access to land and formalization of rural property. Because of the development of this task, for the period 2018-2021, the authors present the main aspects of Qualitative Comparative Analysis (QCA) on the formulation and implementation of Rural Property Social Management Plans (POSPRs -Spanish acronym) as public policy instruments, in the framework of nine agreements concluded between the National Land Agency and its partners. The main objective is to find conditioning factors for successfully formulating and implementing the POSPR *methodological route*. To this end, the authors systematically identify and analyze variables present in the relationship between goals and results of an action plan and organize them as configurations of a plausibly causal nature. The study discusses concepts of rural development public policy. Among

---

<sup>1</sup> Bachelor of Arts in Political Science and Government, Universidad del Rosario, Colombia, Master of Arts in Cultural Studies, Pontificia Universidad Javeriana, Colombia.

<sup>2</sup> Bachelor of Arts in Government and International Relations, Universidad Externado de Colombia, Colombia, Master of Science in International Management, University of Applied Sciences Northwestern Switzerland (FHNW), Switzerland.

<sup>3</sup> Bachelor of Economics, Postgraduate Diploma in Finance, Universidad Pedagógica y Tecnológica de Colombia [UPTC], Colombia.

the empirical results, methodological development and participation of the community, together with access to operational inputs in the face of a favorable territorial context, are elements shaping the success of the POSPRs during 2018-2021. By using relatively novel analysis techniques and presenting details of their process, the study contributes to their dissemination in public administration research.

**Keywords:** Qualitative Comparative Analysis (QCA); Success conditioning factors; Public policy instruments; Social management of the rural property.

## Resumen

Producto de la firma del Acuerdo de Paz en 2016 y el punto uno sobre Reforma Rural Integral, el gobierno colombiano asumió la tarea de implementar una política de Ordenamiento Social de la Propiedad Rural enfocada en extender a la población rural mecanismos de legalización en materia de acceso a la tierra y formalización de la propiedad rural. Frente al desarrollo de esta tarea, para el periodo 2018-2021, los autores presentan los principales aspectos de un análisis cualitativo comparativo (QCA, por sus siglas en inglés) sobre la formulación e implementación de Planes de Ordenamiento Social de la Propiedad Rural (POSPR) en tanto instrumentos de política pública, en el marco de nueve convenios celebrados entre la Agencia Nacional de Tierras y sus socios. El principal objetivo es hallar condicionantes del éxito de la formulación e implementación de la ruta metodológica de los POSPR. Para ello, se identifican y analizan sistemáticamente variables presentes en la relación entre objetivos trazados y resultados de un plan de acción, y son organizadas como configuraciones de carácter plausiblemente causal. Se discuten conceptos sobre política pública de desarrollo rural. Entre los resultados empíricos se destaca que el desarrollo metodológico, la participación comunitaria, junto con el acceso a insumos operativos ante un contexto territorial favorable, son elementos configurativos del éxito de la ruta de POSPR en 2018-2021. Al utilizar técnicas de análisis novedosas y presentar detalles de su proceso, el estudio contribuye a divulgarlas al campo de investigación sobre la administración pública.

**Palabras Clave:** Análisis Comparativo Cualitativo QCA; Factores condicionantes de éxito; Instrumentos de política pública; Ordenamiento social de la propiedad rural.

## 1. Introduction

Since its creation in 2016, Colombia's National Land Agency (ANT -Spanish acronym) has been in charge of the Social Management of Rural Land Property (OSPR

-Spanish acronym) policy. This policy consists of a planning and management process by which the national government seeks to manage the occupation and use of rural land in the country, to promote access to rural land ownership and other forms of tenure, equitable distribution, and legal security, as well as production planning, management and financing of rural land, in favor of higher life quality for the population that inhabits it.

In the first quarter of 2021, the Rural Land Observatory (OTR -Spanish acronym)<sup>1</sup>, an agency administered by the ANT, undertook an inquiry about the main factors that influenced the success of the Rural Property Social Management Plans (POSPRs -Spanish acronym) implemented between 2018 and 2021. Here *success* is defined as the *degree to which the results obtained by the actions undertaken within the framework of an institutional action plan did (or did not) meet the objectives outlined, a relationship understood as mediated and conditioned by a set of identifiable variables.*

Thus, the research sought to respond to a concrete need for knowledge applicable to the executive management of the OSPR, originating in the work of staff involved in the formulation and field implementation phases of the POSPRs, following the so-called *methodological route* (or also, *POSPR route*), during the period under consideration. Such need was to establish with grounds what makes a plan more or less successful.

Identifying the conditioning elements for the success of the POSPRs was based on a systematic analysis of a body of documents produced by the primary institutional agents involved in formulating and implementing the plans. As detailed in the methodological chapter, in using the Qualitative Comparative Analysis (QCA) method, this body of documents made it possible to identify the main technical/technological, operational, administrative, economic, financial, social, geographic, and institutional aspects that were presumably determining factors for the success of the POSPR *methodological route*.

According to the structure that this route defines, the POSPRs are composed of three

<sup>1</sup> The Colombian government created the OTR in 2017 as one institutional requirement of the Peace Agreement (2016) to follow up on point one, titled *Towards a New Colombian Countryside: Comprehensive Rural Reform*.

**Table 1. Structure of the POSPR route**

		Phase	POSPR formulation	POSPR implementation	
<b>Focusing / Prioritising / Scheduling</b>	<b>Stage</b>		1. Operational POSPR	2. Field operation and consolidated POSPR	3. Single OSPR procedure
		<b>Component</b>	1.1 Preparation and territory characterization	2.1 Preparation	3.1 Assessment for inclusion in RESO (Spanish acronym for registration of property management subjects)
	1.2 Institutional, organizational, and community dialogue: information collection		2.2 Social outpost	3.2.1 Dossier verified	
				3.2.2 Legal-technical report	
	1.3 Operational POSPR: Building and presenting it to stakeholders		2.3 Property visit (direct / indirect) 1. Single form; 2. Plan; 3. Adjoining certificate; 4. Document accrediting applicant regarding property	3.3 Opening act notified / published	
	1.4 Operational POSPR approved		2.4 Preclassification	3.4 Agronomic component*	
	1.5 POSPR Feasible / Not feasible		2.5 Legal FISO (Spanish acronym for registration form for property management subjects)	3.5 Transfer deadline for oppositions	
			2.6 Routing	3.6 Public presentation of results	
		2.7 Validation	3.7 Legal-technical report*		
		2.8 POSPR consolidated	3.8 Closure act notified		
	3.8.1 Closure act registered				
Cross-cutting themes: participation, communication, support, backlog processing					
Cross-cutting approaches: differential approach, territorial approach, ethnic differential approach					
Monitoring and follow-up					
Source: Authors' own elaboration based on ANT (2021b)					

phases:

1. Formulation, where the process of preparing the ANT and securing information resources about the territory, the characterization of tenure, the definition of strategic activities aimed at identifying situations of legal insecurity, inequitable distribution of land and informality of rural property, and the development and approval of a POSPR (Resolution 740 of 2017, Article 3) takes place.
2. Implementation, which consists of the start-up of the Plan through the carrying out of the Single OSPR Procedure (*Procedimiento Único de OSPR*, in Spanish), which implies conducting a massive property sweep (*barrido predial masivo*, in Spanish) to subsequently and gradually initiate administrative actions and thus make

decisions by the ANT in terms of OSPR (Article 3).

3. Evaluation and maintenance comprise the strategies for monitoring and evaluating ANT's actions in targeted areas to achieve the objectives defined in the respective POSPR (Article 3).

Each phase comprises stages and parts, broken down into activities developed by the articulation between institutions (between ANT and the partners and operators) and within the institution itself<sup>2</sup>. This study deals with the first two phases. Table 1 illustrates in detail the methodological route associated with developing a standard POSPR.

For the POSPR route operation during the period in question, the Directorate of Social Property Management (DGOSP -Spanish acronym) entered into agreements with

<sup>2</sup> Between the Directorate of Social Property Management (DGOSP -Spanish acronym), and the sub-directorates of Land Access (DAT -Spanish acronym), Land Legal Management (DGJT -Spanish acronym), Operational Planning (SPO -Spanish acronym) and Land Information Systems (SSIT -Spanish acronym).

**Table 2. Case studies**

Cases (actors)	Partnerships	Locations
National Land Agency (ANT)	Operation of the DGOSP, the SPO, and the SSIT within the framework of all accords	26 municipalities with formulation and three under feasibility review
Adaptation Fund (FA)	Agreement 715 of 2017, signed between ANT and the Adaptation Fund	11 municipalities in La Mojana
Nuestra Tierra Próspera Program (PNTP) - Opción Legal Corporation (COL)	Memorandum of understanding (MoU) signed between ANT and USAID	Ten municipalities in Colombia
Nuestra Tierra Próspera Program (PNTP) - Intercultural Studies Institute (IEI)		
Food and Agriculture Organization of the United Nations (FAO)	Agreement 361 of 2016, signed between ANT and FAO	Four municipalities in Antioquia, 11 in La Mojana, and Ovejas municipality
	Agreement 1278 of 2019, signed between ANT and FAO	Three municipalities in Colombia
Valor +	Agreement 653 of 2017, signed between ANT and Valor +	Four municipalities in Antioquia
United Nations Development Programme (PNUD)	Agreement 951 of 2017, signed between ANT and PNUD	13 municipalities in northern Colombia
International Organization for Migration (IOM)	Agreement 986 of 2017, signed between ANT and IOM	Seven municipalities with formulation and 5 with implementation
Agustín Codazzi Geographic Institute (IGAC)	Agreement 844 of 2018, signed between ANT and IGAC	Four Valor+ municipalities; 13 UNDP municipalities; and seven IOM municipalities
	Inter-administrative contract No. 1173 of 2019 between ANT and IGAC	Eight municipalities in Colombia

Source: Authors' own elaboration based on primary sources.

several strategic partners to fulfill its OSPR obligations (DGOSP, 2021, p. 75).

This research focused on analyzing the experiences accumulated and documented by the ANT and some of these partners, derived from the execution of the accords then in force concerning the POSPRs (seven agreements, one inter-administrative contract, and one memorandum of understanding). Table 2 lists the nine cooperation scenarios the authors analyzed, each associated with an institutional actor and approached as a different case study.

Considering the analysis results of the nine cases (empirical basis), the researchers present only four throughout the text because of their association with the configuration of variables that showed the most significant impact on the success of the POSPR route.

The first case refers to the operation of the strategic partner Food and Agriculture Organization of the United Nations (FAO), based on two agreements signed with ANT to implement the land policy. Agreement 361, developed between October 2016 and March 2021 to formulate and implement joint actions in the rural territory seeking greater access to land, formalization of rural property, efficient land use, and legal security over property rights (DGOSP, 2020a) in four municipalities in Antioquia, eleven municipalities in La Mojana region, and the municipality of Ovejas (Sucre department). Moreover, agreement 1278 of 2019, developed between November 2019 and January 2022, for the legal and technical accompaniment in the massive property sweep for the OSPR in prioritized municipalities, within the framework of the DVGT<sup>3</sup> (ANT and FAO, 2019) in the municipalities of Ciénaga (Magdalena

<sup>3</sup> DVGT is the Spanish acronym for Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests.

department), Fonseca, and San Juan Del Cesar (La Guajira department).

The second case refers to the operation of the United Nations Development Programme (UNDP), based on agreement 951 of 2017, signed with the ANT to work jointly in the development of the formulation and implementation phases of POSPRs in the northern part of the country (SPO, 2020a).

As a result of the UNDP operation, POSPR was formulated and approved for 12 municipalities: Aracataca, Ciénaga (Magdalena department), Córdoba, El Guamo, San Jacinto, Zambrano (Bolívar department), Fonseca, San Juan del Cesar (La Guajira department), Montelíbano, Puerto Libertador, San José de Uré, and Valencia (Córdoba department). Furthermore, it advanced the implementation of the POSPR for Valencia (Córdoba department), El Guamo, and Córdoba (Bolívar department) (DGOSP, 2021).

The third and fourth cases refer to the operations executed by Opción Legal Corporation (COL -Spanish acronym) and the Intercultural Studies Institute (IEI - Spanish acronym) from Pontifical Javeriana University of Cali within the framework of the Memorandum of Understanding (MU) signed between the United States Agency for International Development (USAID) and the ANT to implement the multipurpose cadastre (CM) policy and ANT's OSPR processes, through the methodology defined by the government of Colombia (ANT and USAID, 2021). Accordingly, USAID's intervention area focused on the formulation and implementation phases of POSPR in Tumaco (Nariño department), Carmen de Bolívar (Bolívar department), Sardinata (Norte de Santander department), Fuente de Oro (Meta department), and Santander de Quilichao (Cauca department). And exclusively in the implementation phase in the municipalities of San Jacinto (Bolívar department), Cáceres (Antioquia department), Ataco and Chaparral (Tolima department), and Puerto Lleras (Meta department) (DGOSP, 2021).

As can be seen, the POSPR route deploys a series of institutional articulations for cooperation in formulating and implementing the OSPR instrument in Colombia. Both internal and external factors condition the elements present in the structure of

the POSPR route and the execution of the agreements, as well as their follow-up. This study identifies and analyzes such factors as a set of interlinkages in the context of each case.

Consequently, the authors sought to incorporate as many identifiable variables from the available sources as possible into the analysis, whose information was analyzed exhaustively before determining the primary variables, systematic analysis, and finding configurations with the support of the *fsQCA* software.

## 2. Theoretical framework

The first point of the 2016 Final Peace Agreement in Colombia (FPAC) refers to the Comprehensive Rural Reform (CRR), which aims at reversing the effects of the conflict and guaranteeing the sustainability of peace through development that improves the quality of life of the rural and vulnerable population and achieves regional integration of the areas most affected by the conflict and poverty (DNP, 2022). The notion of comprehensiveness related to rural reform refers to the evolution of concepts associated with agrarian reform (AR) modalities that have been at the center of theoretical discussions on the structural causes of conflict and rural development and have informed public policy prescriptions to influence these causes.

Agrarian reform involves reshaping the countryside or arable land, an agrarian structure composed of different factors and their interrelationships (Franco and de los Ríos, 2011, p. 95). In this way, AR serves as a mechanism with the capacity to affect the agrarian structure, which in turn is conceptualized as the distribution and order of the factors of production (human, material, and normative) as fundamental aspects of agrarian society in its various relationships (Franco and de los Ríos, 2011, p. 95-96).

Depending on its political and economic motivations, land reform relates to different aspects or focuses on other dimensions, with land redistribution, land restitution, tenure reform, and land administration reform standing out (Hull *et al.*, 2019). Reforms may combine two or more of these aspects, with Colombia's CRR being a case that, due to its

institutional features, would include all of these dimensions concerning rural land in the post-agreement stage.

The rural reform proposed in point one of the FPAC, *Towards a New Colombian Countryside*, is *comprehensive* under a holistic approach to AR that seeks to overcome the simple redistributive aspect of the traditional concept and its policy limitations to face a problem that has ceased to be agrarian to become a national problem (Machado, 2008, referenced by Franco and de los Ríos, 2011, p. 112). In effect, the concept of comprehensiveness points to the articulation of the mechanisms to affect the agrarian structure with the different elements of the context, framed in a national alliance for the elaboration of fair programs in land tenure, use, and access to land (Franco and de los Ríos, 2011, p. 114).

Therefore, CRR in Colombia emphasizes boosting rural development through programs “to improve productivity, promote access to land [e.g., by opening special credit lines], provide technical assistance and foster regional innovation” (Varela, 2019, p. 4-5), among others. Moreover, the FPAC adopts an idea of comprehensive development focused on territory, which translates into Development Programs with a Territorial Approach (PDET –Spanish acronym) and National Sectoral Plans for the CRR aimed at the country’s weakest regions in economic, institutional, and security terms, to promote their structural transformation (Procuraduría, 2020).

As can be seen, bringing the concepts that inform CRR in Colombia to light makes it possible to establish which assumptions about the relationships between population (human-social factor) and land (material-productive factor) and between these and state institutions (normative element) guide reformist public action. However, it is also necessary to understand how these concepts relate to the object of study of this research—the POSPRs in their formulation and implementation phases.

In this sense, the POSPRs are administrative instruments of the structural transformation mechanism that the FPAC expects the CRR to be for the territories

most affected by conflict and poverty. As tools of the CRR for the formalization of rural property by the National Land Agency, the POSPRs respond to a particular methodology of public intervention, namely, the model of massive property supply or sweep, which is massive in that it simultaneously attends to a plural number of cases in one same area, seeking to achieve economies of scale and comprehensive dissemination and legitimization of the activities among the community; it is also comprehensive and participatory (MADR, 2016). In other words, the property sweep consists of going property by property to collect all the information related to land tenure and resolve all the conflicts around it (Varón, 2017, p. 8).

The adoption of this model responds to the comprehensive nature of the rural reform – from its institutional dimension— and is justified by its economic and administrative advantages relative to its alternatives, such as the demand model, without excluding them. In general, redistributive reforms require high doses of political concentration and administrative capacity (Albertus, 2015), which helps to explain that simultaneously with the ANT, the Colombian government created the Rural Development Agency (ADR –Spanish acronym) and the Territorial Renewal Agency (ART –Spanish acronym) between 2015 and 2016. However, such capacity also means addressing coordination issues that can impede CRR progress, as multiple entities do not always align regarding objectives, modes of action, and leadership (ORRDPA, 2019; Varela, 2019).

In Colombia, the adoption of the supply model has been justified, on one part, by the expected impact of massive property formalization processes in improving the life quality of the population since “the worst levels of poverty and economic inequality in rural areas are related to the informal tenure of the most vulnerable groups” (Varela, 2019, p. 4); and on the other part, by the restrictive costs that the demand model commonly imposes on these population groups.

Given the above, the substantive discussion in this study concerns the success of the POSPRs for 2018-2021 as a necessary step to a more global debate on the success of the CRR policy. In this sense, the study

invites the community of experts and other interested parties to discuss the merits of the main OSPR instrument in the country, particularly under what contextual conditions it manages to fulfill its institutional purposes to a greater or lesser extent. Therefore, the researchers empirically analyzed the POSPRs as comparable cases in the light of a notion of success and (plausible) causal relationships between variables. The method chosen for this purpose (QCA) is not only advisable for studying public policies from this perspective but also relevant to the technical needs of government agencies in charge of OSPR, such as the ANT in Colombia.

### 3. Methodology

The authors based their choice of the QCA method on its methodological relevance in the study of public policies, especially in research contexts where the number of cases is limited or the type or quantity of data is not adequate for the use of tools typical of traditional statistical methods, where the sample size is mainly due to the interest of inferring characteristics of the population and of generalizing them to the universe.

In contrast to quantitative analysis techniques, QCA constructs theoretical samples –traditional in qualitative studies of cases potentially but also limitedly generalizable— and systematically analyzes information from diverse sources through logical and non-statistical procedures (Rosati and Chazarreta, 2017).

This research did not base the characterization of significant elements of conditioning success on the identification of a single or main causal factor but on the finding and analysis of the combination (configuration) of different conditions inherent to the specific context of the considered cases and, therefore, present during the formulation and implementation of the POSPRs by the agents involved.

QCA leverages the strengths of quantitative techniques in studying high-impact social

phenomena, transiently simplifying data, and using set theory and Boolean algebra to infer relationships between variables (Schneider and Wagemann, 2012). As a standard tool of the QCA model, this type of algebra allows identifying which of a series of identified conditioning factors (or independent variables) are associated with the presence of a given outcome (Rosati and Chazarreta, 2017, p. 2-3).

The methodological structure that guided the comparative qualitative analysis started with the construction of a data matrix, followed by the definition of a truth table and the reduction of the number of sufficient configurations through a process of logical minimization; lastly, the researchers found a minimum formula that synthesized the conditions that led to the result associated with the success of the POSPR route, according to the proposed definition of success.

Sources for the *data matrix* consisted of (1) analysis of the body of documents, (2) semi-structured surveys conducted with internal ANT agents and strategic partners, and (3) feedback from experts in the framework of a workshop. The systematization and analysis of the data in the matrix made it possible to define a list of the conditioning factors with the most significant presence among the cases under study.

The data matrix also identified 25 variables organized into seven dimensions: operational, technological, community, financial and accounting, relational, monitoring, and regulatory. This tool was the primary input to identify the determinants of the successful or unsuccessful results of the POSPR route and to define the conceptual framework and empirical basis from which to analyze them.

Upon consolidating the data matrix, the authors defined logical rules based on which to assign incidence scores to each condition concerning the case, reaching nine for the *successful* result in the POSPR route<sup>4</sup>.

As a result of the alignment between the ranking of conditions made by the experts

<sup>4</sup> In the operational dimension: (1) *methodological development*, (2) *operational inputs*, and (3) *legal and cadastral validation*. In the relational dimension: (4) *articulation*, and (5) *territorial context*. In the community dimension: (6) *community participation*. In the technological dimension: (7) *technological inputs*. In the financial and accounting dimension: (8) *resource execution*. And, in the normative dimension: (9) *normative inputs*.

during the workshop and the sum of the scores assigned to each stakeholder in the matrix, four of the original nine conditions were eliminated.

As a result of the reduction procedure, the researchers could conclude that there are five conditioning factors with the greatest (plausible) causal influence on the success of the POSPR route, namely: (1) methodological development, (2) operational inputs, (3) articulation, (4) territorial context, and (5) community participation.

The authors included this finding as new information in the configuration matrix, encompassing case studies and success factors, to calibrate the data before fully applying the qualitative comparative analysis model with the support of the *fsQCA* software.

The researchers calibrated by assigning membership scores to each condition that influenced the established outcome (success of the POSPR route). According to the possibilities and based on the standards for using the QCA model suggested by the specialized literature, the study's authors formulated the logical rules for translating the data into membership scores (Hirzalla, 2018a).

For this purpose, the authors chose the crisp-set mode of the model with the support of the *fsQCA* software<sup>5</sup> 3.0 version for *Windows* to structure the analysis based on dichotomous variables. Following this structure, values one (1) and zero (0) expressed the presence or absence of a condition in the outcome, considering that value *one* indicated the presence of the condition in the defined product.

After assigning dichotomous values to the conditioning factors in the calibration process, the researchers obtained the matrix of configurations (Table 3), giving rise to the truth table.

The influence analysis of qualitative variables or determinants of the outcome associated with the success of the POSPR route was possible thanks to this table which facilitated the comparative analysis

**Table 3. Configuration matrix**

Act_Conv	D_M	INS-OP	ART	C_T	PART
OIM	1	0	1	0	0
FAO	1	1	1	0	1
PNUD	1	1	1	1	1
PNTP-COL	1	1	0	0	1
PNTP-IEI	1	1	1	1	1
Valor+ e Idea	1	0	0	1	0
FA	1	0	0	1	1
ANT	1	1	1	0	0
IGAC	0	0	0	1	0

Source: Authors' own elaboration based on primary sources.

and identification of logical connections by grouping cases with the same combination of determinants (Rosati and Chazarreta, 2017).

At this stage, the processing by the *fsQCA* software in the crisp mode (based on dichotomous values) was straightforward. After loading and calibrating the configuration matrix, the software produced the truth table (Table 4), sorting the cases according to the possible combinations of conditions and distinguishing between the absent (0) and present (1) conditions.

**Table 4. Truth table**

D_M	INS-OP	ART	C_T	PART	No.	Ex_rPOSPR
1	1	1	1	1	2	1
1	0	1	0	0	1	1
1	1	0	0	1	1	1
1	1	1	0	1	1	1
1	0	0	1	1	1	1
1	1	1	0	1	1	0
0	0	0	1	1	1	0
1	0	0	1	1	1	0

Source: Authors' own elaboration based on *fsQCA* 3.0 software output.

The truth table analysis followed the principles of Boolean algebra, which expresses the presence or absence of a given

<sup>5</sup> Charles Ragin and Sean Davey created the *fsQCA* software in 2016 to streamline the overall QCA process. Among its virtues is facilitating the processing and organization of the data, whether the crisp-set or the fuzzy-set QCA variant is in use.



condition (variable) from the operations of addition and multiplication<sup>6</sup>.

Based on the operations, the QCA model presents the *equifinality principle*, according to which there can be different combinations, or configurations of conditions, leading to the same result. Accordingly, equifinality finds expression in the mix of Boolean multiplication and addition operations by linking different configurations through the logical operator “or” (sign “+”), as shown, for example, in the following expression:  $Z = A*B + A*\sim B + \sim A*B$ .

Since the greater the number of conditionals, the greater the possible number of combinations leading to the same result, the truth table goes through a process of *logical minimization*, which proposes to reduce the number of sufficient configurations (Pérez-Liñán, 2010, p. 138) from the factorization of conditions and configurations of causal patterns (Zamora, 2017, p. 25). By this process, the expression  $Z = A*B + A*\sim B + \sim A*B$  translates into the expression  $Z = A*B$ , which means that A and B are conditions that affect the result  $Z=1$ .

Thus, logical minimization made it possible to systematically compare the combinations of conditions scored in the truth table until the researchers found the so-called *minimum formula*, which provided a broader view regarding which absent and present conditions led to the result (Hirzalla, 2018b) for the general case of the POSPR route.

As a result of this minimization, the *fsQCA* software yielded the three possible solutions for the method: the *parsimonious solution*, which performs the logical minimization process taking into account all empirically observed causal configurations, plus all logically possible configurations; the *intermediate solution*, which results from minimizing according to the criterion of all empirically observed configurations, plus

some of the logically possible but unobserved configurations<sup>7</sup>; and the *complex solution*, the product of performing the minimization process based on the empirically observed configurations (Zamora, 2017, p. 25).

#### 4. Findings and discussion

For the analysis of results, the authors chose the intermediate solution based on the assumption that five conditioning factors must be present in the cases for the POSPR route to be successful. These were: the route’s *methodological development* (D\_M), the *operational inputs* (INS-OP), the intra and inter-institutional *articulation* (ART), optimal conditions of the *territorial context* where the institutional intervention is to be carried out (C\_T); and *community participation* (PART).

The QCA model yielded three configurations, or *recipes*, which influenced the success of the POSPR route (Table 5). This result showed two things: no single *condition* explained success on its own, and no single *configuration* of conditioners could explain the success of the POSPR route. This situation is known as *multiple-conjunctural causality* (Ragin, 1987).

**Table 5. Logical minimization**

Configuration	Crude coverage	Consistency
D_M*INS-OP*PART	0.6	1
D_M*C_T*PART	0.5	1
D_M*\sim INS-OP*ART*\sim C_T	0.1	1

Source: Authors’ own elaboration based on fsQCA 3.0 software output.

Of the three configurations associated with route success (Table 5), two exhibited values above 0.5, which showed that in cases where POSPRs were formulated and

<sup>6</sup> Boolean addition, represented by “+,” is equivalent to the inclusive disjunction “or” in propositional logic. Considering the dichotomous values related to the absence or presence of a condition in the result, this operator leads to the reading of the expression  $A+B=Z$  as if either variable A or B is present, that is, if at least one of them takes the value of 1, we obtain the result  $Z=1$ . On the other hand, Boolean multiplication, represented by “\*,” is equivalent to the conjunction “and.” According to this, the expression  $A*B=Z$  means that if A and B are present, i.e., if both take the value of 1, the result  $Z=1$  occurs. However, QCA recognizes cases or situations of equifinality and multiple causations where Z could occur even in the absence (“~”) of A or B (Rosati & Chazarreta, 2017, p. 5).

<sup>7</sup> Deciding which configurations are logically possible but not observed, which the factorization computation/analysis would include, is always a responsibility (for a theoretically informed task) of the researchers (Ariza & Gandini, 2015).

implemented, route success related to two combinations of conditioning factors:

1. Having methodological development (D\_M), access to operational inputs (INS-OP), and community participation (PART).

2. Having methodological development (D\_M), optimal territorial context (C\_T), and community participation (PART).

In the first configuration, D\_M\*INS-OP\*PART, the cases with membership or belonging scores greater than 0.5 were: FAO (1.1), UNDP (1.1), PNTP-COL (1.1), and PNTP-IEI (1.1). In the second configuration, D\_M\*C\_T\*PART, the cases with membership scores greater than 0.5 were: UNDP (1.1), PNTP-IEI (1.1), FA (1.1).

Next, we will describe the empirical elements that made it possible to characterize the belonging of each of the cases to the first configuration, this being the one that presented the series of conditioning factors with the most significant incidence on the success of the POSPR route; i.e., within its initial coverage, it was closer to the value of 1 (0.6, as shown in Table 5).

#### 4.1. Case of the operation carried out by partner FAO

In the FAO case, the study identified several elements of the conditioning factor associated with methodological development (D\_M): the need to simplify and make adjustments to the methodology, which, as stated in the 1278 agreement, will make it possible to increase yields in each of the municipalities and improve the project's cost-efficiency (DGOSP, 2020b).

In addition, challenges associated with the application of the indirect method due to delays in the reception of registry information (registry records and titles of the properties with Real Estate Registration Folio [FMI - Spanish acronym]) and the difficulty in consulting the FMI of the old system (DGOSP, 2020b).

As noted, the implementation phase depended on access to secondary information

such as complete municipal registry information, the physical identification of the property, information regarding the municipality's restrictions and conditions, and other preliminary information from different sources (Partner survey, 2021).

The partner's experience in this phase revealed the importance of the cartographic inputs having a good level of quality; for the use of orthophotographs, it was better to avoid applying this method in forested areas (Partner survey, 2021).

In the implementation phase, challenges associated with applying the direct method required designing effective instruments for collecting community information related to the reality of the land in the villages, provision of information by the communities, and follow-up and traceability of the data. Likewise, FAO identified the need that, before going to the field, doubts about how to measure specific types of land and about complex concepts such as land tenure should be clear when communicating them to the community (Partner survey, 2021).

Moreover, the information cross-checking process is a relevant factor due to the need to adequately triangulate information following the intervention processes within the operation (Partner Survey, 2021).

The second conditioning factor of the configuration in the FAO case, associated with the operational inputs (INS\_OP), was identified from the need in the implementation phase to access inputs such as information on tenure, security, conflicts, and conditions of access to land, the API<sup>8</sup> matrix, the municipality's informality index, the preliminary DTJs<sup>9</sup>, and information on land nature and other inputs associated with fieldwork, such as attendance forms, posters, appointments, computers, and tablets (Partner survey, 2021).

The third conditioning factor in the configuration, associated with community participation (PART), affected the route's success in the FAO case because the health crisis caused by COVID-19 paused the whole process in the field. Thus, the measures

<sup>8</sup> API is the Spanish acronym for Integrated Property Analysis Database.

<sup>9</sup> DTJs is the Spanish acronym for Technical Legal Diagnosis.

that affected mobility made it difficult to approach the communities, in addition to the fact that training, socialization, and FISO<sup>10</sup> activities could no longer be *massive*, which was a significant operational challenge for a project whose purpose is the massive property sweep (DGSP, 2020b).

#### 4.2. Case of the operation carried out by partner UNDP

Continuing with the description of the cases in light of the first configuration, under the methodological development condition (D\_M), three methodological adjustments had an impact on the success of the route operated by the UNDP partner: in 2018, the issuance of the Single Memorandum of Understanding (SMU), which led to simplifying the implementation phase; in 2019, new adjustments to the implementation phase; and, in 2020, following the issuance of the Agustín Codazzi Geographic Institute (IGAC) Resolution 388, the adaptation of the methodological tools to the new technical specifications for products generated by the cadastral training and updating processes with a multipurpose approach (SPO, 2020a).

As noted in the report of agreement 951, the delay in the issuance of the IGAC technical guidelines had a significant impact since only after the publication of these specifications was it possible to finalize the adjustments to the Single Cadastre Form and the methodology defined for property-to-property surveying (SPO, 2020a).

Other methodological challenges were related to the need for specific procedures for document management and evidence collection in the field and the need to adjust formats and validation requirements (SPO, 2020a).

Concerning the indirect method application, the convention report also pointed out, as a challenge, the delays in the delivery of registry information and the difficulty in consulting the IMFs of the old system (SPO, 2020a).

UNDP also noted that not having information associated with the delimitation

and definition of watercourses due to the regional autonomous corporations' low institutional and budgetary capacity (CARs -Spanish acronym) for defining these processes also affected the route's development. In response, engagement with the Ministry of Environment and the competent CARs to reach inter-institutional agreements occurred (SPO, 2020a).

In the case of UNDP, applying the direct method responded to the agreement's operational requirements. It became evident that in the absence of the cartographic input to be provided by the IGAC at the beginning of the operation, the partner decided to collect the land information through this method (SPO, 2020a).

The operational input conditioner (INS\_OP), second in the configuration, was identified based on the API matrix input, whose main weakness was associated with the difficulty of reflecting the alphanumeric and geographic information in an integrated way; and with registry, cadastral, and restrictive condition inputs (SPO, 2020a).

For the third conditioning factor of the configuration, community participation (PART), the authors established that the community manager's leadership had a significant impact on the development of the route, playing a decisive role in calling the community, managing the meeting place, publishing posters and disseminating BPM (SPO, 2020a). Accompaniment of managers facilitated approaching the families and more fluid communication, which helped the operators to guarantee the presence of the property owners at the time of the visit (SPO, 2020b). For this reason, among the recommendations was to maintain constant communication with the community manager from the social outpost until the beginning of the field visits (SPO, 2020b).

#### 4.3. Case of the operation carried out by COL (USAID's PNTF operator)

In the empirical basis of the first configuration, the operator identified that in the case of the COL operator, the methodological development (D\_M) in the

<sup>10</sup> FISO is the Spanish acronym for Registration Form for Property Management Subjects.

formulation phase depended on the correct application of the guidelines provided by the ANT, the unification of criteria, the completion of products in the established time, and the ANT's mission routes management (USAID partner survey, 2021).

In the implementation phase, the staff identified logistical operability associated, among other things, with designing an adequate schedule for the field intervention, as well as correct reception of the information obtained in the formulation phase, i.e., cartography, conflicts, and critical actors, as determining factors for success. Reports also showed that timely feedback on the objectives of the work plan and delivery of a scheme for information quality control and assurance played a significant role (USAID partner survey, 2021).

In the same phase, the correct triangulation of information collected in the field and institutional (cadastral and registry) information positively affected the development of the route (USAID partner survey, 2021).

Concerning the operational inputs (INS-OP), the COL operator identified the need for a volume of relevant secondary information (massive) of high quality, organized, and timely delivery to the partners in the formulation phase. As in previous cases, the inputs for identifying restrictions and constraints and analyzing and processing property type information (classification and legal links) were crucial for this phase (USAID partner survey, 2021).

In the implementation phase, we also established that the timely delivery of inputs, such as the updated API matrix and the DTJ, was essential for developing activities. Likewise, correct filling out the cadastre forms, identifying and reporting informalities, and calculating determinants expressly when official information with a higher level of detail was incorporated (USAID partner survey, 2021).

In the formulation phase, the community participation condition (PART) was fundamental for constructing social (rural property) cartography, thus allowing for the consolidation of primary information

and subsequent triangulation. This component depended directly on social management, community collaboration, adequate training of community leaders on the POSPR implementation project, and permanent dialogue with subjects of OSPR. Community participation was also reported as a condition for success, building trust with the community and having the interest of the community and the local administration (USAID partner survey, 2021).

In the implementation phase, both the creation of a network of community managers and the implementation of a community strengthening and awareness strategy promoted a direct dialogue with the communities, the owners' attention, and the interest of the community to be involved in the process (USAID partner survey, 2021).

#### *4.4. Case of the operation carried out by IEI (USAID's PNTF operator)*

The IEI operator identified the condition associated with methodological development (D\_M) based on the requirements for standardization, timely delivery of technical criteria (guidelines and instructions), and analysis of the presence of ethnic communities and illicit crops in the formulation phase (USAID partner survey, 2021).

During the information-gathering process, the operator pointed to institutional, organizational, and community support offered for the application of cartographic tools as a determining factor for success, as well as the opening of negotiation channels before the National Commission of Indigenous Territories (CNTI -Spanish acronym) for processes of prior consultation<sup>11</sup>. In the implementation phase, the IEI operator did identify another methodological development associated with the analysis of social mapping as necessary, but in terms of village clusters (USAID partner survey, 2021).

<sup>11</sup>According to the Interior Ministry, prior consultation is a fundamental right in the form of a procedure through which the State guarantees ethnic communities' representative authorities, participation, and access to information on projects, works, or activities that it intends to carry out in their

territory, provided that these are likely to affect them directly and specifically in their capacity as such authorities (MININ, n.d.).

In the formulation phase, the operational input condition (INS-OP), second in the configuration, was associated with access to all the information fields in the API matrix, mapping, counts, and the analysis of secondary information and information collected in the field. In this sense, one of the operator's strategies focused on balancing available information and requesting missing data from the relevant agencies (USAID partner survey, 2021).

Lastly, the community participation condition (PART) played an essential role in the formulation phase since elements such as community relations and the creation of previous spaces with the communities and organizations to establish timetables and actions impacted the route's success.

Creating social cartography and defining the actor's map depended on the participation of the different social actors associated with the process. Likewise, in the implementation phase, participation was fundamental for identifying territorial conflicts among rural communities (USAID partner survey, 2021).

## 5. Conclusions

As a result of having applied the crisp-set mode of qualitative comparative analysis on the development of the so-called POSPR *methodological route* in Colombia for the period 2018-2021, under scenarios of inter-institutional cooperation between ANT and its partners, it was possible to establish the set of main conditioning factors associated with the presence/absence of the dependent variable defined as success of the operation.

From the empirical analysis supported by the *fsQCA* software, it was possible to conclude that four out of nine cases fulfilled the characteristic of having the presence of the conditioning factors, i.e., methodological development (D\_M), operational inputs (INS-OP) and community participation (PART), identified as those with the most significant impact on the success of the POSPR route. These were the cases of partners FAO and

UNDP and PNTOP operators of partner USAID, i.e., COL and IEI.

The combination of the logical minimization process of the QCA model and that of qualitative description allowed a systematic presentation of the results, as well as a particularized analysis of the cases, preserving the analytical value of the complexity present in the relationship between the objectives outlined in the formulation phase and the results obtained by implementing the POSPRs.

Although the choice of the crisp analysis meant an effort to reduce the conditions to a binary assessment, the typologies, or configurations of conditioning factors, allow for a fascinating explanatory approach.

Among the conclusions drawn from the empirical evidence provided by this study, the following stand out:

- The presence of three combined conditions, i.e., methodological development, operational inputs, and community participation, directly impacts the success of the POSPR route, as observed.
- With the same consistency but at a lower level of coverage, the presence of the D\_M and PART conditions, tied to the territorial context (C\_T), can also explain the success of the POSPR route.
- The methodological development of the POSPR route responded to challenges that were impossible to forecast and to situations beyond their control –such as the arrival of a pandemic— as well as to the timing of the issuance of guidelines and technical specifications.
- The availability of information inputs (of all types, cadastral, technical-legal, and cartographic) with aspects of quality, collection, delivery, validation, and analysis represents a critical link for the route's success.
- Participation, marked by the right relationship with and training of community managers, was essential for success.

The authors could expand the list by focusing on specific aspects of the analysis

and its findings according to the interest or need to broaden the discussion from the technical level of POSPR management to the normative and prescriptive levels concerning the OSPR policy.

In the substantive discussion that inspires this study, it is possible to argue that proper analysis of the success of POSPRs as administrative instruments of CRR in Colombia needs to take the constraints associated with the technical and institutional capacity of the agents in charge, the characteristics of the territories, and the role of the target population into consideration. This study showed how a set of plausibly causal contextual factors, identified and analytically interrelated with the support of QCA, conditions the success of POSPRs. The method presented herein is currently quite accessible to researchers.

Indeed, the context in which the methodological route comes to life in the form of plans and field operations is multidimensional and, therefore, complex. Even though the territorial context (C\_T), if favorable, facilitates the success of the POSPRs, to value the merit of the instruments without recognizing the complexity that their formulation and implementation face in practice would imply an uninformed notion about their nature and demands, and therefore also about the challenges and opportunities that the CRR faces in meeting the FPAC commitments.

Other aspects enunciated in the theoretical framework on AR in general and CRR, in particular, were manifested during the empirical analysis of the POSRP route based on the chosen methodology.

The CRR, under its comprehensiveness, is projected as a national development policy. Hence, the OSPR policy and its administrative instruments must have an “integrated” character. Therefore, at the POSPR management level, the professional teams must be multidisciplinary and satisfy selection and learning processes for knowledge synthesis (holistic approach to CRR) and capacity building, including better coordination of intervention activities. In line with this argument, the findings of the QCA method revealed that having achieved an

adequate methodological development (D\_M) is a standard conditioner to the primary causal configurations of the success of the POSPR route.

While the supply or massive property sweep model adopted by the OSPR policy arguably has economic advantages, it is an intervention model susceptible to the degree of administrative capacity and quality of the resources available to the agents in charge. Empirically, this finds expression in the presence of the operational input conditioner (INS-OP) among the causal configurations of success. In general, being CRR a highly intensive policy in technical capacities, the future success of the POSPR methodological route requires a stable projection of resource investment.

In light of the results, it also became evident that together with the articulation of the institutions involved with the OSPR, the active role of the rural population as civil society highly interested in the success of the POSPRs is crucial to guarantee the success of the CRR in Colombia. Therefore, the institutional articulation must be strengthened outside the scope of the authorities since the expected condition for the main causal configurations of the route’s success during the period was community participation (PART) mediated by management leaders.

Therefore, the participatory spirit of the massive property sweep model adopted for formalizing property (a pillar of the CRR) is correct in its conception. Having empirically verified the indispensable role of community participation, the authors remark on the importance of public entities in charge of POSPR to avoid top-down (more authoritarian) approaches to the OSPR policy.

Lastly, by using a relatively novel method of analysis in public administration research and communicating its processes and results in detail, the authors have sought to contribute to improving the understanding of the formulation and implementation of OSPR policy instruments in Colombia and thus arouse interest among the research and civil servant community, so that the use of mixed techniques of great analytical scope such as QCA extends to studying public policies

in the field of integrated rural development, to improve the life quality of vulnerable populations.

## 6. Conflict of interest

The authors declare no conflict of interest.

## 7. Source of Financing

This research was sponsored by Colombia's Agencia Nacional de Tierras (ANT), and performed by the Observatorio de Tierras Rurales (OTR) research team.

## 8. References

- Agencia Nacional de Tierras (ANT). (2017). *Resolución 740 del 13 de junio de 2017*. Diario Oficial No. 50.265
- Agencia Nacional de Tierras (ANT). (2018). *Informe de empalme. Agencia Nacional de Tierras. Mayo 31 de 2018* [Unpublished report].
- Agencia Nacional de Tierras (ANT). (2021a). *Anexo 1. Documento ampliado proyecto de inversión (V7)* [Unpublished document].
- Agencia Nacional de Tierras (ANT). (2021b). *Ruta POSPR. Versión del 27 de agosto de 2021*. [Unpublished document].
- Agencia Nacional de Tierras (ANT) y Agencia de los Estados Unidos para el Desarrollo Internacional (USAID). (2021). *Memorando de entendimiento (MdE) para "Nuestra Tierra Próspera" Entre La Agencia de los Estados Unidos para el Desarrollo Internacional (USAID) y La Agencia Nacional de Tierras (ANT)* [Unpublished document].
- Agencia Nacional de Tierras (ANT) y Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO). (2019). *Convenio 1278 entre la Agencia Nacional de Tierras y la Organización de las Naciones Unidas para la Alimentación y la Agricultura*. [Unpublished document].
- Albertus, M. (2015). A Theory of Land Reform. In *Autocracy and Redistribution: The Politics of Land Reform* (pp. 60-111). Cambridge University Press.
- Ariza, M., Gandini, L. (2015). El análisis comparativo cualitativo como estrategia metodológica. In *Métodos Cualitativos y Su Aplicación Empírica. Por Los Caminos de la Investigación Sobre Migración Internacional* (pp. 497-537). Universidad Nacional Autónoma de México.
- Dirección de Gestión del Ordenamiento Social de la Propiedad (DGOSP). (2020a). *Informe convenio 361 de 2016 FAO y la ANT* [Unpublished report].
- Dirección de Gestión del Ordenamiento Social de la Propiedad (DGOSP). (2020b). *Informe convenio 1278 de 2016 FAO y la ANT* [Unpublished report].
- Dirección de Gestión del Ordenamiento Social de la Propiedad (DGOSP). (2021). *Cuarto informe de gestión trimestral 2020* [Unpublished report].
- Departamento Nacional de Planeación (DNP). (2022). *Plan Marco de Implementación del Acuerdo de Paz (P.M.I.)*. <https://portalterritorial.dnp.gov.co/PlanMarcoImplementacion/>
- Franco, A., De los Ríos, I. (2011). Reforma agraria en Colombia: evolución histórica del concepto. Hacia un enfoque integral actual, *Cuadernos de Desarrollo Rural*, 8(67), 93-119. <https://revistas.javeriana.edu.co/index.php/desarrolloRural/article/view/2006>
- Hirzalla, F. (2018a). *Calibration with quantitative, qualitative, and secondary data*. [video]. <https://coursera.org/share/d1fbd3b305e1f7f4b352592106de38cf>
- Hirzalla, F. (2018b). *QCA vs. other approaches*. [video]. <https://coursera.org/share/97b03a753fd59cdca6adb8c69d9f5308>
- Hull, S., Babalola, K., & Whittal, J. (2019). Theories of Land Reform and Their Impact on Land Reform Success in Southern Africa. *Land*, 8(172). <https://doi.org/10.3390/land8110172>
- Ministerio de Agricultura y Desarrollo Rural (MADR). (2016). *Guía de Formalización de la Propiedad Rural por Barrido Predial*. [https://www.minagricultura.gov.co/ministerio/direcciones/Documents/Guia\\_formalizacion\\_propiedad\\_rural.pdf](https://www.minagricultura.gov.co/ministerio/direcciones/Documents/Guia_formalizacion_propiedad_rural.pdf)
- Ministerio del Interior (MININ). (n.d). *¿Qué es la consulta previa?* <https://www.mininterior.gov.co/content/que-es-la-consulta-previa>
- Observatorio de Regulación y Restitución de Derechos de Propiedad Agraria (ORRDPA). (2019). *Institutional Maze: A critical review of land titling programs in Colombia, Half-Year Report*. <https://www.observatoriodetierras.org/wp-content/uploads/2019/12/Copia-de-Institutional-Maze-1.pdf>
- Pérez-Liñán, A. (2010). El método comparativo y el análisis de configuraciones causales. *Revista latinoamericana de política comparada*,

- 3(3), 125-148. [http://politicacomparada.com/ediciones\\_anteriores/Vol%203,%20Revista%20Lat.%20de%20Política%20Comparada.pdf](http://politicacomparada.com/ediciones_anteriores/Vol%203,%20Revista%20Lat.%20de%20Política%20Comparada.pdf)
- Procuraduría General de la Nación. (2020). *Segundo informe al Congreso sobre el estado de avance de la implementación del Acuerdo de Paz 2019-2020*. <https://iemp.gov.co/wp-content/uploads/2020/11/segundo-informe.pdf>
- Ragin, C. (1987). *The comparative method. Moving beyond qualitative and quantitative strategies*. University of California Press.
- Rosati, G., Chazarreta, A. (2017). El Qualitative Comparative Analysis (QCA) como herramienta analítica. Dos aplicaciones para el análisis de entrevistas. *Revista Latinoamericana de Metodología de las Ciencias Sociales*, 7(1). <https://doi.org/10.24215/18537863e018>
- Schneider & Wagemann (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139004244>
- Subdirección de Planeación Operativa (SPO). (2020a). *Informe convenio No. 951 de 2017* [Unpublished report]. ANT.
- Subdirección de Planeación Operativa (SPO). (2020b). *Informe de participación comunitaria en el marco del barrio predial masivo* [Unpublished report]. ANT.
- Varela, D. F. (2019). Rural Land Reforms in Colombia: Policy and Institutional Challenges for the New Administration. *Universitas*, (138). <https://doi.org/10.11144/Javeriana.vj138.rlrc>
- Varón, M. (2017). *Ordenamiento Social de la Propiedad Rural (OSPR): Kit de Ordenamiento Territorial, Versión 1.0. FONADE and RIMISP*. <https://portalterritorial.dnp.gov.co/KitOT/Content/uploads/Cartilla%20OSPR.pdf>
- Zamora Aviles, E. A. (2017). Contribuciones contemporáneas de metodologías cualitativas para el análisis de políticas públicas: Process Tracing y Qualitative Comparative Analysis. *Revista de Sociología e Política*, 26(67). <https://doi.org/10.1590/1678987318266702>

---

### How to cite this paper?

Rodríguez Moreno, A. C., Hernández Badillo, A., Martínez Cortés, L. F. (2023). Qualitative comparative analysis of success factors of rural property social management plans in Colombia in the formulation and implementation phases (2018-2021). *Cuadernos de Administración*, 39(76), e2412716. <https://doi.org/10.25100/cdea.v39i76.12716>

Cuadernos de Administración journal by Universidad del Valle is under licence Creative Commons Reconocimiento-NoComercial-SinObrasDerivadas 4.0. Based in <http://cuadernosdeadministracion.univalle.edu.co/>