# WELLSPRINGS OF BUREAUCRATIC COLLABORATION: IDENTITY, TRUST, AND AGENCY PERFORMANCE IN COLOMBIA

A Dissertation

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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May 2021

Major Subject: Political Science

# ABSTRACT

The literature on collaborative public management has focused on studying how public servants create collaborative structures in their workplaces to achieve organizational goals. The emphasis of these studies has been on the analysis of whole-network level analysis and inter-organizational collaboration. Much less emphasis has been placed on studying bureaucrats' behavior in the subfield of inter-personal collaboration. While we know collaboration takes place, our understanding of why bureaucrats engage in collaborative behavior in the first place and how it affects policy performance is lacking. I analyze how bureaucrats' collaboration is initiated and sustained (at the micro-level) and how bureaucrats' collaboration affects performance (at the macro-level) through three interrelated contributions based on a multi-method research design.

The dissertation evidence comes from the Colombian case. The high levels of bureaucrats' professionalization and public organizations' complexity make this case theoretically meaningful. There is also significant variation at the individual level and at the regional level that allows testing the dissertation's hypotheses.

The multi-method research design includes the creation of novel datasets based on an original conjoint survey experiment, survey data, and original interviews conducted on Colombian bureaucrats in 2019 and 2020. Additionally, the project used preexisting datasets based on perceptions from 37,000 public employees and datasets with organizational performance measures such as fiscal performance and education in Colombia between 2013 to 2018.

The dissertation findings show that some social identities explain the origins of collaboration among bureaucrats and that managers' efforts to foster collaboration positively impact agency performance. Specifically, managerial actions that promote collaboration through teamwork activities predict higher levels of organizational performance. At the individual level, collaboration occurs when bureaucrats share some social identities (such as having attended the same university, have the same profession, and were born in the same city), and collaboration is sustained when bureaucrats build trust and reciprocity.

The research contributes to the literature on collaborative management in a comparative context by testing conceptual and empirical implications of inter-personal collaboration based on a multi-method approach. It also offers practical strategies to managers who seek to improve policy performance by fostering collaboration among employees.

# DEDICATION

This dissertation is dedicated to God for the inspiration and consciousness in this process, to my Mom for her constant support, and to Joaquin for his love and patience during this adventure.

This work is also dedicated to each of the 946 public employees in Colombia who participated in this study and to more than a million bureaucrats in this country who devote their lives to working for a better, equal, and peaceful country. Thanks for being humans, making mistakes, learning from those mistakes, and showing us the value of resilience, effort, and defense of public value and democracy.

# ACKNOWLEDGEMENTS

This dissertation would not have been possible without the advice, support, and affection of God, my family, boyfriend, friends, advisors, and colleagues. I would like to thank my Mom for her constant love, inspiring example, and efforts to make me the woman and scholar I am now. To Joaquin for the magic coincidence of meeting you during this journey. You are my soulmate, inspiration, and the best companion in this process. To Nico, my brother, for always keeping me aware of the joy of life and for all the wonderful time we spent together. To my dad and grandmothers for their guidance through their life experiences. Thanks to my uncle, aunts, cousins, friends, and colleagues in Colombia for their support.

To my friend Andrés for always making me aware of my potential and creating so many meaningful projects for our team and the country. I would like to thank Kostanca and Sam for their friendship and their unconditional help during all these years of the Ph.D. program. Thanks to Ministry of Science, Technology and Innovation of the Government of Colombia, and the Fulbright Commission in Colombia and the United States for the financial, professional, and personal support to achieve this dream. Without you all, the most challenging and wonderful experience of my life would not have been possible.

I would like to thank my committee chair, Maria Escobar-Lemmon, and my committee members, Guy Whitten, Manny Teodoro, Kenneth Meier, and Kirby Goidel, for their guidance and support throughout this amazing learning process and pushed me

to think about big questions and ideas. Special thanks go to Maria, who made this process possible with her advice and positive influence as the outstanding scholar and strong and achiever woman she is. Thanks to Guy, who encouraged me to come here, always offered me his invaluable advices, and motivated me to be an excellent researcher. Thanks to Misha for being such a supportive and caring coauthor and friend.

Thanks to Brenna for her support and patience and to my friends and colleagues and the department faculty and staff of the Political Science Department at Texas A&M University. Thanks to the Charles H. Gregory Class of '64 Graduate Strategic Fellowship from the College of Liberal Arts and the Melbern G. Glasscock Center for Humanities Research at Texas A&M University for the funding for my dissertation.

My appreciation also goes to Lorena Barberia and all the students and professors at IPSA Summer School, and colleagues in Universidad Tecnológica de Bolívar for all the opportunities created in my academic process.

Special gratitude to the 946 Colombian public employees who work at different public agencies in Cartagena, Medellín, Bucaramanga, Piedecuesta, Bogotá, San Vicente de Chucurí, Calí and Tuluá, and who participated in this study. Thanks for being generous with your time and knowledge during the interviews and surveys. Your perceptions, experiences, and opinions were a crucial input for this process of building knowledge. I hope to keep contributing to understanding and improving public employees' capacities and to foster the recognition of public service in Colombia and abroad.

I hope this study is helpful for everyone who wants to understand a little bit more about the nature of bureaucrats' behavior and who seek to improve their organizations. Thanks to the reader for your time and comments.

# CONTRIBUTORS AND FUNDING SOURCES

## Contributors

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The work conducted for the dissertation was completed by the student independently.

## Funding Sources

This work was made possible by the Charles H. Gregory Class of '64 Graduate Strategic Fellowship from College of Liberal Arts and the Glasscock Graduate Research Fellowship from the Melbern G. Glasscock Center for Humanities Research at Texas A&M University. Its contents are solely the responsibility of the author and do not necessarily represent the official views of the College of Liberal Arts and the Melbern G. Glasscock Center for Humanities Research. The project had approval from the Institutional Review Board of Texas A&M University. My doctoral studies were made possible through the support of a Fulbright Scholarship from the Government of Colombia (Ministry of Science, Technology and Innovation) and the Fulbright Commission in Colombia and the United States.

TABLE OF CONTENTS

Page

ABSTRACT ..... ii

DEDICATION ..... iv

ACKNOWLEDGEMENTS ..... v

CONTRIBUTORS AND FUNDING SOURCES ..... viii

TABLE OF CONTENTS ..... ix

LIST OF FIGURES ..... xii

LIST OF TABLES ..... xiii

1. INTRODUCTION ..... 1

2. DO COLLABORATIVE MANAGEMENT ACTIONS LEAD TO BETTER ORGANIZATIONAL OUTCOMES? ..... 13

2.1. Introduction ..... 13
2.2. The puzzle: Organizational performance and collaborative public management ..... 16
2.2.1. Organizational performance ..... 16
2.2.2. Collaborative public management ..... 18
2.2.3. Organizational behavior: Teamwork ..... 20
2.3. Theory: Inter – personal collaboration and trust as explanatory variables of organizational performance ..... 22
2.4. Data and methods ..... 25
2.5. Findings ..... 31
2.5.1. Robustness checks ..... 34
2.5.2. Is trust mediating the effect of teamwork on performance? ..... 35
2.6. Conclusions ..... 38

3. WHY DO BUREAUCRATS WORK TOGETHER? INDIVIDUAL-LEVEL EXPLANATIONS OF COLLABORATION IN THE PUBLIC SERVICE ..... 41

3.1. Introduction ..... 41
3.2. Individual-level explanations of bureaucrats' collaboration ..... 44
3.2.1. Understanding bureaucratic behavior from evolutionary perspectives ..... 44

3.2.2. Social Identities in the context of Public Administration....46
3.2.3. Sustaining collaboration over time: Trust and reciprocity....48
3.3. Theory: The importance of social identities, trust, and reciprocity in collaboration processes....49
3.4. Data and methods....53
3.4.1. Research design....53
3.4.2. Data collection....54
3.4.3. Data analysis....56
3.5. Results: Collaboration is activated when bureaucrats have had common experiences....59
3.5.1. Salient social identities for collaboration: Professionally based identities....59
3.5.2. Common experience as a significant predictor of bureaucrats working together....62
3.5.3. Trust and reciprocity as the way to keep collaboration over time....70
3.6. Conclusions....72

4. WHERE HAVE I SEEN YOU BEFORE? EFFECT OF COMMON EXPERIENCES ON COLLABORATION AMONG BUREAUCRATS....76

4.1. Introduction....76
4.2. Bounded rationality and cognitive bias: an approach to bureaucrats' behavior....79
4.3. In-group bias....81
4.4. Theory: Common experiences as a source of in-group bias that impacts collaboration....85
4.5. Research Design....89
4.5.1. Case selection....96
4.6. Results....98
4.7. Conclusion....105
4.8. Implications for Public Administration Practice....106

5. CONCLUSIONS....109

5.1. Causes and consequences of bureaucrats' collaboration....109
5.2. Future directions....115
5.2.1. Inter-personal collaboration as a promising area of study in Public Administration....116
5.2.2. Practical implications: Management strategies to increase inter-personal collaboration....117

REFERENCES....123

6. APPENDIX A....145

6.1. Descriptive statistics....145
6.2. Robustness checks with alternative dependent variables....146

6.3. Models with standardized independent variable (teamwork) .....147

7. APPENDIX B .....148

7.1. Descriptive statistics Case Study Cartagena .....148
7.2. Logistic regression models –Survey DANE 2017 (All country) .....152
7.3. Logistic regression models –Survey DANE 2017 (Except Bogota).....153
7.4. Explicit factors of why people work with each other.....154
7.5. Bureaucrats recommendations for improving organizations .....158

8. APPENDIX C .....161

8.1. Descriptive statistics.....161

LIST OF FIGURES

Page

Figure 1-1 Objectives of the dissertation ..... 5

Figure 2-1 Expectations of the chapter ..... 24

Figure 2-2 Predicted values Fiscal Performance Index ..... 34

Figure 2-3 Predicted values Education ..... 34

Figure 3-1 Theoretical model ..... 49

Figure 3-2 Saliency of social identities ..... 60

Figure 3-3 Frequencies of salient social identities ..... 61

Figure 3-4 Panoramic view of San Felipe Fortress (right) and Aquarela building (left) in Cartagena (source: Colprensa) ..... 66

Figure 3-5 Odds ratio of Logistic regression models – Perceptions of cooperation with local agencies among bureaucrats ..... 70

Figure 4-1 Example of profile comparison in Spanish (included in the experiment) ..... 93

Figure 4-2 Example of profile comparison in English (translated) ..... 94

Figure 4-3 Distribution of observations in the sample ..... 97

Figure 4-4 Odds ratio conjoint experiment results for general analysis ..... 102

Figure 4-5 Odds ratio conjoint experiment results for social identities ..... 105

LIST OF TABLES

Page

Table 2-1 Effects of teamwork on fiscal performance and education.....33

Table 2-2 Mediation analysis.....37

Table 4-1 Attributes and options in the conjoint experiment.....91

Table 4-2 Conjoint experiment results for general analysis by territory.....101

Table 4-3 Conjoint experiment results for social identities analysis by territory .....104

# 1. INTRODUCTION

*"The role of the individual in collaborations has largely been given short shrift in the public management literature. Much of the published research is on networks of organizations, with little mention of the fact that although organizations and jurisdictions collaborate, it is always in the form of individuals"* – O'Leary & Vij (2012, 514)

I have engraved in my memory the images of public officials in Colombia sharing their knowledge in coffee shops, calling for help to a colleague in a distant office or resolving citizens' requests working with others in their same workstation (many times bureaucrats had to share computers, desks, and chairs with each other due to the scarcity of resources). For almost seven years, I worked with the Colombian Government, and I had the mission to build polycentric governance for peace-building policies in Colombia (my home country). This task allowed me to discover most regions of this country. The violence, poverty, inequality, and institutional weakness were highly visible in municipalities like Buenaventura, Tumaco, Quibdo, and several places in Colombia. Despite the existence of financial and human resources scarcity across the country, these images of bureaucrats working together and solving problems are imprinted in my mind.

The motivation for this work is to understand what can explain the existence of collaborative behaviors among public officials in different regions of Colombia, even under unfavorable material conditions. Because many times these bureaucrats incurred costs for helping each other, the willingness to help others cannot be fully explained by

the standard rational choice theory. Therefore, what initiates collaboration is an interesting puzzle to approach from other concepts such as bounded rationality and cognitive biases rooted in disciplines like behavioral sciences and social psychology. This work seeks to provide new qualitative and quantitative evidence to the unresolved question of what causes collaboration between public employees. Additionally, it is unknown the impact of managers' strategies to foster collaboration on performance measures.

The study of bureaucratic behavior matters in public administration because the role of bureaucrats is crucial for the successful delivery of government services across countries. Public workers like teachers, social workers, police officers, and other public servants share the responsibility to provide benefits and sanctions directly to citizens (Lipski 2010). In a country such as Colombia facing a transition from the civil war to peace, public employees are sometimes the only way of state presence in distant territories. More broadly, in developing and developed countries, bureaucrats play an essential role in delivering policies that may transform critical social problems.

In general, public employees do not act alone to provide these services. Bureaucrats operate in collaborative settings every day by interacting with other public servants within and outside their agencies. Some of these settings operate as well-defined and established networks of collaboration. Other efforts are more spontaneous individual initiatives that take place to accomplish daily tasks at the workplace. Although bureaucracies are embedded in hierarchical organizations, collaboration creates horizontal structures of relations where public employees deal with internal and external actors by

interacting with a broad range of individuals from public, private, and non-profit sectors (Meier and O'Toole 2005).

In the context of the public administration literature, collaborative actions enable the provision of specific public goods and services without the need to create additional services or governmental structures (Thurmaier & Wood 2002). At the inter-personal level, collaboration is a way to tackle collective action problems where individuals would be better off cooperating, but fail to do so because of conflicting interests that discourage joint action.

The literature on collaborative public management has consolidated itself as the strand of research in public administration that addresses how collaboration operates in multiorganizational arrangements (McGuire 2006). As its name indicates, most of the work in this research area focuses on public managers as the organizational leaders who command efforts towards goals. However, collaboration occurs in contexts where multiple actors from different ranks (not only managers) might participate in the collaborative actions.

In general, few studies analyze inter-personal collaboration and the effects of these dynamics on organizational performance. Critically, the literature currently fails to determine whether collaboration among bureaucrats improves policy performance (by which I mean the extent to which policy's goals and objectives are realized) at the local level. While we know collaboration takes place, our understanding of why bureaucrats engage in collaborative behavior in the first place and how it is sustained over time is lacking. The dissertation builds on the literature on collaborative public management and

networking to ask and answer the following question: *How is bureaucrats' collaboration initiated and sustained (at the micro-level), and how does bureaucrats' collaboration affect performance (at the macro-level)?*

I argue that inter-personal collaborative interactions can shape organizational goals. Consequently, it is crucial to understand how these interactions can be activated and what their implications are. The emphasis of collaborative public management studies has been on the analysis of collaboration through networks and agencies. The dissertation advances the less developed literature on inter-personal collaboration through three interrelated contributions based on a multi-method research design.

The multi-method strategy achieves two specific objectives: 1) Identify the effect of collaborative public management on organizational performance; 2) Establish the characteristics that affect bureaucratic collaboration.

The first chapter tests the aggregate consequences of collaboration, demonstrating that the existence of collaborative management actions impacts organizational performance. However, these findings only measure the effect of collaborative management actions at the aggregate level. The next two chapters allow me to identify how collaboration is activated in the first place. In the second chapter, I hypothesize that initial collaboration occurs when bureaucrats share culturally-based identities (gender and ethnicity), professionally-based identities (profession, common experience, and job status), and/or geographically-based identities (geographic jurisdiction). Collaboration is sustained when bureaucrats build trust and reciprocity based on their shared identities. The

third chapter builds on the second chapter to show that public servants who have common experiences are more likely to collaborate with each other.

Figure 1-1 shows the objectives of the dissertation graphically. The figure illustrates that collaboration promoted by management actions influences organizational performance. The figure also shows that social identities, trust, and reciprocity affect collaboration.

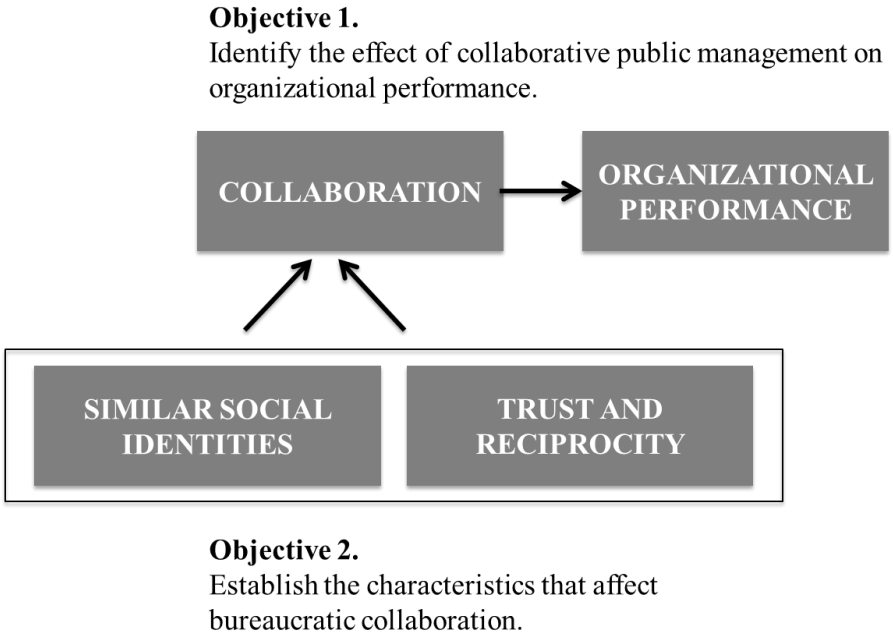


Figure 1-1 Objectives of the dissertation

One imperative first step to accomplish this dissertation's objectives is to offer a discussion and clarity about what is meant by "collaboration." Although there is an explosion of research on this area in recent years, the term "collaboration" still lacks a common definition.

It is essential to distinguish the differences between collaboration, coordination, and cooperation in public administration (O'Leary & Vij 2012). There are two main reasons why this dissertation uses the concept of collaboration instead of cooperation: First, "cooperation" and "coordination" are concepts that capture static conditions of human interactions at a single point in time (Gray 1989). Conversely, collaboration looks at the dynamic and evolutionary nature of work with others (O'Leary and Vij 2012), which is the approach this dissertation uses by looking at how individuals collaborate and sustain collaboration. Second, in "cooperation" and "coordination" relationships, "the joint action is less central to the organizational mission" (Selden, Sowa & Sandfort 2002). One of this dissertation's goals is to test the opposite: interpersonal interactions can affect organizational performance.

Besides the distinction between cooperation and collaboration, it is also essential to discuss the unit of analysis and dimensions of the term "collaboration." Scholars employ definitions of collaboration that emphasize different dimensions of collaboration, such as the actors or the preconditions, process, or outcomes of the relationship. Traditional definitions of collaboration define collaboration as the "process between interdependent organizational actors who negotiate the answers to shared concerns" (Gray 1989, 12) or "the joint activities where two or more agencies work together seeking to increase public value by their working together rather than separately" (Bardach 1998, 8). In general, most definitions of collaboration focus on the role of networks or inter-organizational arrangements.

For this dissertation, I build on assumptions about human nature behavior at the intra-personal and inter-personal level and adapt the concept of collaboration provided by Agranoff & McGuire (2003) to include elements related to inter-personal dynamics. From an inter-personal perspective, collaboration occurs when bureaucrats work together to achieve common goals.

Having clarified the concept of collaboration, these are the summaries for each chapter. The conclusion section of the dissertation reviews the main findings of each chapter and offers insights about potential areas of research and practical applications for future research.

First, Chapter 1 examines the effects of managerial actions that promote collaboration on organizational performance. I employ organizational performance measures such as fiscal performance and education in Colombia and perceptual data from 37,000 bureaucrats between 2013 to 2018. The results show that managerial actions that promote collaboration within teams in organizations predict higher organizational performance levels. Actions oriented toward collaboration enable bureaucrats to accomplish organization goals by increasing information exchange and producing internal collaborative structures.

Chapters 2 and 3 examine why public servants collaborate in the first place. In Chapter 2, I conduct a multi-method case study with 47 bureaucrats in Cartagena, Colombia tracking collaboration patterns in their daily routines using interviews and survey analysis. I find that initial collaboration occurs when bureaucrats share some social identities, and collaboration is sustained when bureaucrats build trust and reciprocity

based on these shared identities. Specifically, qualitative evidence shows that bureaucrats are more prone to collaborate with people they have a common experience with (work experience, academic trajectories, or training activities). Trust and reciprocity are also positively correlated with cooperation.

Chapter 3 expands upon the findings in Chapter 2 by providing a comprehensive overview and empirical test of why common experiences can shape collaborative bureaucratic behavior in a large-n analysis. Using a cognitive biases framework derived from behavioral sciences, I argue that common experiences make bureaucrats more likely to work collaboratively. Using a conjoint experiment conducted in Colombia with 899 public employees, I show that bureaucrats are more prone to work with coworkers that have attended the same university, have the same profession, and were born in the same city. By recognizing people from the same origin, professional background, or educational events, bureaucrats will be more likely to recognize familiarity with previous events and activate predispositions to collaborate with those coworkers.

The evidence for the three chapters of this dissertation comes from the Colombian case. This country has a total of 50 million people, and more than one million are public servants. There are theoretical and practical reasons why Colombia offers helpful conditions for testing each of the chapters' hypotheses.

First, bureaucrats and municipal government capacities are different in each of the 32 departments (provinces) and the Capital District of Bogota. Although there are high and low levels of capacities in these local governments, Colombia has generally moved

towards a more professional bureaucracy than other countries in Latin America[1]. According to official data from 2015, 13% of public employees have a bachelor's degree, and 18% have graduate studies (either specialization or master's degree)[2]. These percentages are even higher in large cities. Theoretically, "as public organizations become more professionalized, the impact of managers on performance will increase" (O'Toole & Meier 2015, 252). The high levels of professionalization of Colombian bureaucrats demand escalated levels of management skills. The Colombian case study exhibits enough variation to examine how managerial actions play a role in shaping performance outcomes and how middle and low-rank bureaucrats respond to those managerial actions.

Furthermore, Colombia has a high organizational complexity level, understood as a more dispersed and heterogeneous organizational environment (O'Toole & Meier 2015). In decentralized settings like the Colombian public administration, managerial actions also matter for explaining organizational outcomes. This feature of Colombian bureaucracy is important for testing my arguments because managers play a role in improving organizational outcomes related to highly decentralized policies such as education, where there is a need for collaboration within agencies and between agencies.

Besides the interesting theoretical implications of higher levels of professionalization in public service and complexity on performance, there is also a significant variation at the individual-level in the country, which allows testing of the

[1] The average years of education of public employees in Latin America is 13.6 in 2012 and in Colombia is 15.3 (Gasparini et. al. 2015; Observatory of Labor 2013).
[2] Report is available here: https://www.funcionpublica.gov.co/documents/418537/506955/Cifras+Rendici%C3%B3n+de+Cuentas+2015.pdf/b4a58d34-f581-4333-8b53-4763dcdf6d3a

hypotheses rooted in a micro-level analysis. Specifically, the professional composition of public service is not homogenous. Overall, 31% of public servants are lawyers, 13% are engineers, 9% are accountants, and 5% are economists (SIGEP 2019). Regarding university education, Bogota, the country's capital, is where the two most important universities are located (Universidad de Los Andes and Universidad Nacional). Nevertheless, in recent years there has been a proliferation of new universities in the country. Some regional universities also have higher quality levels and are an important labor source for the local job market, including public service employment.

In terms of cultural characteristics, Indigenous, Afro-Colombian, white, and mestizo are the most prevalent ethnic groups in the country. According to the National Census in Colombia 2018, the indigenous population is 4% of the population, 7% perceived themselves as Afro-Colombian, and 87% are white or mestizo. Even though Afro-Colombian and Indigenous groups have their congressional seats, there are still challenges to guarantee representation of these groups in the public service. Regarding gender, 51% of public servants in Colombia are women, which shows progress in achieving equality in the labor market and consolidated gender equality policies. The fact that it is possible to observe different cultural characteristics and professional backgrounds in the country is an opportunity for testing the hypotheses of this research.

In practical and logistical terms, I drew upon different academic and professional networks in Colombia to implement the research design even with the difficulties imposed by the pandemic. These pre-existing contacts in the public service and local universities made it possible to conduct interviews and implement the conjoint experiment. These

strategies were funded through the Charles H. Gregory Class of ’64 Graduate Strategic Fellowship from the College of Liberal Arts and the Glasscock Graduate Research Fellowship from the Melbern G. Glasscock Center for Humanities Research at Texas A&M University.

Overall, this dissertation contributes to strengthening public administration and public policy by investigating the conditions under which collaboration begins and affects policy implementation. Moreover, the project emphasizes the important role of bureaucrats in improving the well-being of citizens. An implication of this research is that bureaucratic collaboration matters and can improve policy performance.

There are three specific contributions of this work: i) Provide a new way to conceptualize collaboration mechanisms in public bureaucracies and to test its effects on organizational performance reconciling top-down and bottom-up perspectives by studying simultaneously individual-level actions, interpersonal dynamics, and organizational outcomes; ii) Develop a multi-method approach to trace causes and consequences of bureaucrats’ collaboration, especially by focusing on social identities as predictors of bureaucrats’ behavior; iii) Identify practical implications and novel strategies (such as the popular “nudging” techniques in behavioral sciences) to deal with the cognitive bias that arises in bureaucrats' interactions.

In terms of practical implications and recommendations for public managers who wish to improve agency performance through collaborative actions, these are three main takeaways based on this dissertation’s findings: i) Fostering more connections and common experiences can be options to improve employees’ collaboration; ii) There are

practical techniques that managers can implement to reinforce a common meaning to public employees, and iii) Promoting intergroup contact activities is a source of collaboration and diversity in public organizations.

The dissertation also expands the research on collaborative management to a different context in Latin America, where research on collaborative public management is scarce. This comparative research design has the potential to be applied to other developing countries where there are several financial limitations but a diverse public service.

Ultimately, this dissertation offers evidence-based knowledge and novel datasets to improve public service delivery based on understanding employees' interactions. Inter-personal dynamics as a source of organizational change is a novel approach to address the challenge of having better public agencies and interventions. Citizens around the world benefit when public employees collaborate. Therefore, the analysis of the implications of bureaucrats' collaboration at the macro and micro level is an essential step towards a broader and comprehensive subfield of collaborative public management.

# 2. DO COLLABORATIVE MANAGEMENT ACTIONS LEAD TO BETTER ORGANIZATIONAL OUTCOMES?

## 2.1. Introduction

From South America to South Asia and Africa, weak institutions that fail to accomplish policy goals contribute to lower quality governance and weakened legitimacy (Fukuyama 2017; Acemoglu et al. 2014; Englebert 2002). Scholars have analyzed the critical role that public organizations have to achieve these institutional outcomes by carrying out goals in the policy implementation process (Kelly & Witko 2012) and the different strategies organizations use to improve their performance.

In this context, although collaboration is a popular topic in management, scholars still know little about the effect of managers' actions that promote collaboration on performance. The chapter addresses the research question: How do management actions that promote collaboration between bureaucrats at the inter-personal level affect organizational performance?

Performance is not only conditional on organizational structures themselves but also on the actions of bureaucrats as the agents that produce and co-produce the organizations' dynamics and outcomes. The role of bureaucrats as agents that contribute to achieving policy goals is crucial for successfully delivering government services across the country. Based on the finding that most of the literature suggests that collaboration is beneficial for performance, we should expect that everyone should be collaborating all the time if benefits are greater than the costs. The fact that bureaucrats do not collaborate and the

question about what happens to organizations in the presence of collaboration motivates this chapter.

The analysis of actors' intentional behavior and performance goals should consider bureaucrats' position in different levels of the organizations. Numerous studies have shown the important function of managers in fostering changes within and outside the organization. Managers are in charge of planning and implementing policies (Lee et al. 2020; Riccucci et al. 2004; Ridder et al. 2006; Goggin 1987), and some of these actions involve intentional cooperative efforts within the agency that enable the achievement of organization goals.

The chapter expects that managers' actions that encourage teamwork activities encourage people to collaborate with each other. These dynamics allow positive interactions of trust and collaboration among coworkers because it creates an environment with less uncertain expectations about coworkers' behavior. Existing literature on trust and public management describes trust from an individual (Ruscio 1996) and inter-organizational level (Weiss 2017). Still, there is less work in comparative contexts that study collaboration and trust as effects of managerial actions and as causes of better organizational performance.

The theoretical expectation is that management actions that encourage people to work together facilitate achieving organizational goals. Collaboration and trust as outcomes of management actions reduce information asymmetries and create a positive environment for anticipating other people's behavior and working together towards different goals.

The chapter uses two sources of information: regional-level data with fiscal information and policy outcomes data from departments to measure the dependent variables, and a survey of Colombian bureaucrats from department-level agencies to measure the independent variable of teamwork. Because of its variation in bureaucrats' capacities and regional performance, Colombia as a case study is a valid scenario for testing managers' collaborative actions as a potential predictor of organizational performance.

The findings show that managerial actions such as teamwork activities increase organizational performance. Since these managerial actions are intended to promote collaboration, teamwork activities are significant and positive predictors of higher organizational performance levels.

One of the chapter's significant contributions is to expand the research on collaborative management to a different context in a developing country in Latin America. This comparative approach contributes to strengthening public administration by investigating the conditions under which managerial actions affect outcomes in public organizations. It also sheds light on the importance of investigating bureaucratic dynamics within agencies to boost performance and achieve policy goals. The possibility of reconciling top-down and bottom-up perspectives by simultaneously studying managerial individual-level efforts, interpersonal dynamics, and organizational outcomes is an innovative approach to address the problem of how to foster policy performance.

The next section of the chapter lays out the relevant literature on organizational performance and collaborative public management. The third section presents the theory

related to inter–personal collaboration and trust as explanatory organizational performance variables. The fourth section discusses the data, the variables selected for the analysis, and the empirical model. Following a linear regression analysis, the fifth section introduces the findings of the model. The last section summarizes the results and discusses their implications.

## 2.2. The puzzle: Organizational performance and collaborative public management

This chapter builds on the literature on organizational performance, collaborative public management, and organizational behavior. I discuss in this section these approaches to the problem of collaboration in the public sector. In general, public management scholars have focused more on inter-organizational collaboration and institutional collective action. Much less attention is given to teamwork and group dynamics of inter-personal collaboration inside bureaucracies.

### 2.2.1. Organizational performance

Good organizational performance is pivotal in contemporary public management. Performance, however, is not only a concept, but it is an agenda of change and improvement in organizations (Van Dooren et al. 2015, 13).

Organizations are a fundamental unit in the policy process since they transform resources and processes necessary to attain certain goals. Therefore, this study analyzes performance in organizations because they connect individual efforts with aggregate outcomes. Performance is an important concept in organizational theory (Shenhav, Shrum

and Alon 1994, Walker 2006). The most basic form of performance focuses attention on tasks being carried out by agents (Dubnick 2005, 392, Lewis 2015).

The “goal model” approach in organizational effectiveness theories considers that organizations are rational sets of arrangements oriented toward achieving goals (Etzioni 1960). Other scholars argue that performance should also be tied to quality or improvement of the provision of service. Performance is about "value-added" to most of the resources available (O'Toole and Meier's 1999, 508, Meier et al. 2000).

Consequently, performance analysis can include both the organization's achievements and the quality of the actions being performed (Dubnick 2005). A common conclusion in the literature is that multiple aspects of public management contribute in a variety of ways to public services performance (Favero, Meier & O’Toole 2016; Boyne et al. 2006; O’Toole and Meier 2011). There are some limited performance measures, such as perception measures of managers and bureaucrats themselves. Self-reported measures can induce common source bias (because variables are from the same survey instrument) and can generate spurious correlations (Meier & O’Toole 2012).

It is also common to use archival measures of performance, particularly those related to public records. These organizational performance measures include both financial and non-financial indicators capable of assessing the degree to which organizational goals have been accomplished (Kaplan and Norton, 1992). Therefore, indicators such as fiscal performance and provision of services may adequately capture organizational performance.

Besides the discussion about organizational performance measurement, studies in public administration have different frameworks to analyze performance based on the unit of analysis (Van Dooren et al. 2015, 3). Most studies have focused on the importance of organizational structures for the achievement of results, and there is less research about the actions of bureaucrats. However, agents' actions produce organizations' dynamics that matter for performance. Then, performance goals are also conditional on actors' intentional behavior at different levels of the organizations. When analyzing both organizational structures and bureaucrats' actions, performance may produce sustainable results. At the individual level, bureaucrats, especially managers, determine the extent to which programs can be carried out in public administration (Wimpy, Jackson & Meier 2017).

### 2.2.2. Collaborative public management

Previous studies support the argument that managerial actions impact higher performance levels (Andrews & Boyne 2010; Ingraham, Sowa, & Moynihan 2004). High-quality managers have also been linked to collaborative initiatives initiation (Mitchell et al., 2015; O'Leary, Choi, & Gerard, 2012). Part of these managerial initiatives is observed within the organization itself. Internal benefits from managers' strategies are associated with reinforcing organizational abilities and public employees' integration (Moynihan & Ingraham 2004).

In public administration, the connection between performance and bureaucrats' actions has been analyzed in numerous collaborative public management studies (Kim

2004; Moynihan & Pandey 2010; Destler 2017; Audenaert et al. 2019). The collaboration and networks literature is extensive and primarily can be divided into three strands: whole-network level analysis, inter-organizational collaboration (e.g., cross-sector collaboration, collaboration among organizations or units of organizations), and individuals' collaborative behavior such as inter-personal collaboration.

A great deal of the work in the study of public management has focused on the first two strands (Favero, Meier, and O'Toole 2016). This work has analyzed how managers shape networks and how these networks produce better outcomes. Additionally, there have been numerous analyses about other aspects of externally oriented management efforts in inter-organizational and intergovernmental collaboration (Agranoff 2007; Andrews et al. 2010; Jacobson, Palus, and Bowling 2010; Walker et al. 2007).

In intergovernmental collaboration, the arrangements include institutionalizing new rules, procedures, and structures to govern inter-organizational relationships; making joint decisions about fiscal and personnel management; solving problems that cannot be solved by single organizations within the existing informational, financial, time, and market constraints; and creating new public value or making a joint discovery (Amirkhanyan 2009; Bazzoli et al. 1997; McGuire 2006; Thomson 2001; Thomson and Perry 2006).

Network theory has analyzed how actors become involved in joint information events and activities and engage in information sharing (Agranoff 2003). Similarly, collaborative public management has studied higher level, formal institutional arrangement, and networks and specific activities pursued by public managers (Bingham and O'Leary 2006; Amirkhanyan 2009).

For the present study, I build on inter-personal collaboration literature to define "collaborative management actions" as the specific activities pursued by public managers seeking to achieve organizational goals through encouraging interactions among autonomous actors. The expected outcome of these activities is the emergence of collaboration and trust, defined as the "processes in which autonomous actors create rules and structures governing their relationships and ways to act (…) involving shared norms and mutually beneficial interactions" (Thomson 2001, 10).

The emergence of collaboration and trust among agents is a trigger for expanding common interests, new commitments to governance initiatives, and administrative support (Stone 2000, Zaheer et al. 1998). When personal relationships are developed in an organization, some psychological contracts can be created and act as a substitute for legal contracts. These informal understandings and commitments can be sustained over time (Thompson & Perry 2006; Ring & Van de Ven 1994). Nevertheless, there is less work on the study of the effect of these inter-personal dynamics on organizational performance.

### 2.2.3. Organizational behavior: Teamwork

I analyze teamwork activities promoted by managers as expressions of collaborative management. The literature on organizational behavior prefers to use the concept of "teamwork" instead of "groupwork" because groups become teams when they develop a sense of shared responsibility. Teamwork activities refer to those "interactions of individuals who work as a team pooling together their resources in terms of knowledge, abilities, and experience to reach a common goal" (Benevene et al. 2011). Research in the

field of management has shown that teamwork promotes higher-quality decisions and innovation and better financial performance (Mathieu et al. 2008). Thus, internal teamwork in an organization has been recognized as a tool for reaching goals by encouraging individuals' cooperation.

Organizational behavior has been studied by different approaches that range from personnel psychology to organization theories. According to models in psychology, the establishment of groups can increase both productivity and job satisfaction (Campion, M.A., Medsker, G.J. and Higgs, A.C., 1993).

In general, most of this literature has pointed out the positive effects for individual factors such as satisfaction and productivity. It has been less studied the implications of teamwork on the effectiveness of the group itself. Some studies have found that working together can create interdependence that leads to increased coordination of activities, allowing teams to reap the benefits of sharing information and becoming familiar with the tasks the organization has to achieve (Courtright, et al. 2015).

Other studies also support the argument that interdependence is a central result of teamwork activities. The individuals who participate in teamwork strategies see themselves as a social entity, interdependent because of their tasks as members of a group (Guzzo & Dickson 1996). These entities are complex and adaptive systems embedded in organizations and perform tasks over time (Ilgen 1999).

In terms of performance, meta-analyses show that more cohesive groups generally tend to be more productive (Kerr & Tindale 2004). However, besides productiveness, the existent literature does not reflect the effects of teamwork activities and interpersonal

processes on aggregate outcomes at the organizational level, such as performance in the public sector.

### 2.3. Theory: Inter – personal collaboration and trust as explanatory variables of organizational performance

By focusing on inter-personal collaboration as the under-studied type of collaboration, my proposed theory advances understanding how bureaucrats' dynamics produce positive effects on the implementation of policies. I suggest that interpersonal interactions that result from teamwork activities create bonds among public servants resulting in collaboration and trust. Based on an understanding of these interactions' micro foundations, the interdependent dynamics of collaboration and trust affect performance at the organizational level.

Trust and collaboration can be the articulating elements between collaborative management actions and organizational performance. Managers' strategies to increase collaboration can be crucial for organizational performance. People involved in teamwork activities tend to create trust and collaboration as a consequence of having more interactions. The literature argues that more contact points in public servants' networks can increase trust (McGuire 2006). Precisely, strategic teamwork can promote more contact points by bringing together employees to accomplish a common goal. Teamwork activities encourage the creation of formal and informal communication channels through technology or face-to-face interactions. I argue that those dynamics positively affect

performance because trust and collaboration mitigate the traditional collective action problems.

An integrative climate where public servants trust one another is likely to facilitate performance for two main reasons: reciprocity and sustained learning processes based on an open process of exchanging information and reducing information asymmetries.

In a context with higher trust levels, bureaucrats will invest more in one another, trying to engage in reciprocity (Carlin and Love 2013). Since trust and collaboration are grounded in the positive expectation about the behavior of those who participate in a collaboration initiative (Ferguson and Stoutland 1999), public servants adapt their behavior based on their expectations of the behavior of others (Grimmelikhuijsen et al. 2017).

Similarly, when people trust, they usually are more open to new ideas for improving individual and organizational performance. The possibility of exchanging new ideas and more information increases the levels of complete information or transparency in agencies, which facilitates trust-building processes (Kanagaretnam et al. 2010).

Overall, trust and collaboration lower the impact of information asymmetries (Miller & Whitford 2002) and facilitate agreements between actors. The reduction of opportunistic behavior, and hence transaction costs of exchange, result in more efficient governance (Bromiley and Cummings 1995; Leonardi, Nanetti & Putnam 2001). Specifically, some “features of social organization, such as trust, norms, and networks, can improve the efficiency of society by facilitating coordinated actions” (Leonardi, Nanetti & Putnam 2001,167).

The increased interaction that is encouraged in teamwork activities enables bureaucrats to open communication and exchange information. Shared knowledge and information increase the probability that bureaucrats can be more willing to take first towards working together and common goal achievement.

These internal collaborative structures not only reduce information asymmetries and create an organizational climate that facilitates the achievement of goals, but collaborative practices can also be reproduced outside the organization, making interactions with outside actors more collaborative.

The theoretical contribution of this chapter is to test empirically whether these dynamics of collaboration and trust that result from collaborative management actions affect organization performance. Figure 2-1 shows the theoretical expectation of the chapter.

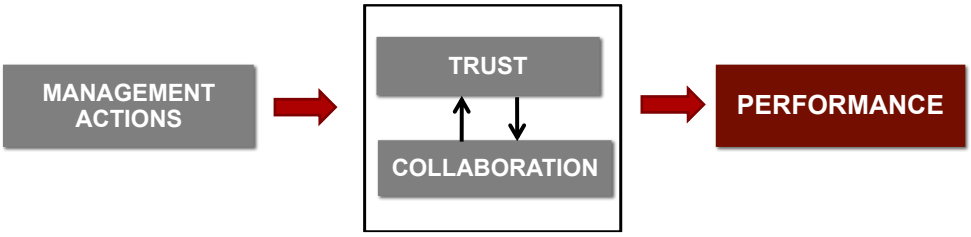


Figure 2-1 Expectations of the chapter

The hypothesis of this chapter is:

*H1: The existence of collaborative management actions in public organizations has a positive effect on organizational performance.*

## 2.4. Data and methods

Colombia as a case study offers useful conditions for testing the hypotheses. The country has more than one million public servants (the country has 50 million people). Bureaucrats and municipal government capacities are different in each of the 32 departments (provinces) and the capital District of Bogota. The Colombian context is a relevant case study because "as public organizations become more professionalized, the impact of managers on performance will increase" (O'Toole & Meier 2015, 252). Given that public service in the country is highly professionalized, it is theoretically meaningful to analyze the effects of managerial actions on performance.

The country also has a high level of organizational complexity, understood as a more dispersed and heterogeneous organizational environment (O'Toole & Meier 2015), which allows for testing the hypotheses that managerial actions matter. I expect that the higher level of professionalization in public service, the variation of bureaucrats' capacities, and the complexity of the environmental context in Colombia will enable me to more robustly test the effects of managerial actions on performance and offer more accurate conclusions.

The data used to test the possible effects of management actions on organizational performance are from two sources. The analysis of performance outcomes is based on aggregate data from all 32 regional governments in Colombia (Departments). The dataset was created using National Planning Department reports (DNP in Spanish) and the Ministries of Education, Health, and other public agencies in Colombia. The indicators include information about fiscal performance and public services such as education, health, and others for each of the departments in the country from 2013 to 2018. The

measurement of the independent variable (teamwork activities) is from the National Survey of Institutional Performance (encompassing bureaucrats at sub-national levels) that is conducted by the National Department of Statistics of Colombia (DANE in Spanish) between 2013 and 2018. This dataset includes perceptions from public employees that work for different public agencies at the department-level in Colombia (N = 37,779).

The aggregated data from departments include fiscal indicators such as fiscal performance, saving capacity, transfers budget, budget execution in programs, health coverage, net coverage of education, poverty incidence, coverage in aqueduct and sewage, and GDP for each department, among other variables. For perceptual data, the respondents were chosen randomly in all the 32 departments and Bogota by DANE to participate in the Survey. This survey includes items measuring perceptions about several factors like management actions that promote teamwork strategies, administrative capacities, budget availability, evaluation and control, planning factors, perceptions about clientelism, among other variables.

It is important to clarify that a department is a territorial unit comprised of municipalities and headed by a Governor whose administrative structure is called "Departamentos." "Departamentos" are autonomous entities that implement some national policies and determine guidelines for developing social and economic policy in their territories. According to the Colombian Constitution of 1991 (article 298), the department coordinates actions among municipalities and promotes cooperation between municipalities and the national level. The analysis is then based on "Departamentos" as

intermediate territorial units between the national and municipal levels (a similar unit would be states for the United States or provinces for other Latin American countries).

### *Dependent variables: Fiscal performance and education as measures of organizational performance*

The theoretical expectations of this chapter is that actions oriented to collaboration enable bureaucrats to direct their efforts toward determining how best to reach mutually beneficial solutions and accomplish goals. The goals include the possibility of being more efficient in spending resources, increasing their sources of revenues, and achieving specific policy goals. Organizational performance represents a broader concept that, in addition to financial performance, also includes indicators about specific policy outcomes that reach beyond financial quantification (Richard et al., 2009).

This chapter uses two measures of organizational performance based on official records. One of them is fiscal performance as a measure of how well the organization is accomplishing its internal financial goals. The fiscal performance variable is an index that combines six different items: Self-financing capacity of operating expenses, debt service support, dependence on transfers from the Nation and Royalties, generation of own revenues, the magnitude of investment in programs, and saving capacity. These variables are standard measures in the literature on fiscal performance and public administration (Melkers and Willoughby 2005; Ho 2018).

The fiscal performance index was approved by the Law 617 of 2000 to measure the performance of local governments in Colombia. It includes variables that account for the

level of fiscal viability, the capacity to generate their own revenues and support the debt, investment levels in programs, and management capacity to save money and release surpluses for current and future investments. The logic behind the index is to have sufficient resources to sustain local governments' operation as a measure of performance. Performance here is the ability to generate own resources, limit the amount of debt, and plan the investments well.

Besides legal basis, the indicator is a valid way to measure performance if we look at overspending and implementation performance literature. Consistent with arguments in those areas of research, performance measures in the public service should capture the link between allocating financial resources to provide services and the capacity to cut expenditures and save money that guarantees financial solvency (Norman 1986).

Similarly, if managers would like to increase organizational performance, they should pursue both the long-term goals of the organization and operational activities that facilitate the achievement of these goals (Andrews et al. 2012). For instance, saving capacity is the pattern among some public organizations in response to fiscal tightening, but also the necessity to save financial resources to pursue broader goals. Then, indicators that measure both long-term goals and operational actions are a measure of performance (Andrews et al. 2012) as they reflect strategic management in public organizations in a context that changes rapidly.

The second measure is related to policy outcomes. The dependent variable is net education coverage measured as the percentage of students enrolled in the educational system. The educational system in Colombia is complex. The nation, the departments, and

the municipalities have different responsibilities based on the law and concurrency in providing the service to ensure educational coverage and quality. The municipality is supposed to be the government level that is in charge of the provision of education. However, this responsibility is conditional on whether the municipal authority is certified or not. Certified municipalities have the technical, administrative, and financial capacity to administer the educational system autonomously. In case they do not have these capacities, the department is the one that should administer, coordinate and manage education policies. Since 94% of municipalities are not certified in Colombia (Moreno & Rojas 2017), the departments manage the administration of the education system in most municipalities in practical terms.

In these two measures, bureaucrats' actions affect outcomes both at the internal and external levels. At the internal level, the results reflect processes within the organization that affect its financial performance, and at the external level, because the education measure shows how policy goals are achieved.

One of the potential obstacles for positive organizational outcomes is an insufficient level of agreement and collaboration among coworkers, which makes it difficult to implement policies. Then, these two variables reflect the potential effects of collaboration on fiscal performance and policy goals.

### *Independent variable: Collaborative management actions*

Collaborative management actions refer to the specific activities pursued by public managers seeking to achieve organizational goals through collaboration. The DANE

survey includes a question where bureaucrats self-report the actions that managers have done to promote collaboration. In particular, the survey includes a question related to promoting teamwork activities in the last year. The existence of teamwork activities has been identified as keys to collaborative effectiveness (Getha-Taylor 2008). The specific question is: "*In the last 12 months, managers in your organization have promoted teamwork*".

Since the unit of analysis is the department, teamwork has been calculated as the average of individual responses for each year and each department. After this, I created an ordinal variable using quartiles (1-4) because of the skewed distribution of this variable. This process also facilitates ranking the local governments depending on their value of average teamwork. A value of 4 in this variable means that a department is in the top quartile of the distribution, and a value of 1 means a department is in the bottom quartile. To check this variable's robustness, I also run models with a standardized teamwork variable (z-scores), making it easier to interpret the regression analysis results (see Appendix A).

The models use teamwork as a lagged independent variable because we can expect that effect of teamwork activities impact the outcomes that are reported in a subsequent year.

***Control variables***

To isolate the relationship between teamwork and performance, the empirical models control for other organizational factors such as total revenue and total

expenditures. Additionally, the model includes attributes from departments that might affect performance, such as GDP, poverty incidence, level of transfers, and population.

The models are estimated with a linear regression model with a lagged independent variable, year fixed effects for six years, and robust standard errors[3]. The quantities of interest are predicted values. For this analysis, I use average percentages of responses for each variable at the individual level for the teamwork variable merged with aggregated data for performance variables (for each year and department).

Descriptive statistics of datasets are included in Appendix A. An average department has a score of 70.74 (scale 1-100) in the fiscal performance index[4], a net education coverage of 83%, and 81.86% of public employees agree that managers have promoted teamwork activities in the last 12 months.

## 2.5. Findings

Results show that collaborative management initiatives such as teamwork strategies in public organizations are significant and positive predictors of organizational performance. Table 2-1 shows the results from OLS regression models from Colombian departments between 2013-2018. Following this chapter's expectations, the findings in

[3] Models using panel data that include lagged variables with fixed effects offers protection against bias resulting from reverse causality (Leszczensky & Wolbring 2019).

[4] The fiscal performance index comprises six different items: Self-financing capacity of operating expenses, debt service support, dependence on transfers from the Nation and Royalties, generation of own revenues, magnitude of investment in programs and saving capacity. The measure captures the type of use of resources of local governments (departmental and municipal agencies). The index ranges from 0-100, and it allows cities and departments to be classified in five categories: low, medium-low, medium, medium-high and high level of performance. The average for Colombian municipalities is 51.6 and for departments is 60.6.

model 1 indicate that teamwork activities increase fiscal performance. Substantively, an increase from one quartile to the one above in teamwork raises the level of fiscal performance by 1.48 points (scale 0-100). Similarly, an increase of a unit of teamwork also increases the net education coverage by 2.58% (scale 0-100%).

Given that collaborative strategies such as teamwork reduce information asymmetries and reach mutually beneficial solutions, it is reasonable to think that collaboration allows bureaucrats to overcome some of the administrative or logistics problems of program implementation and facilitate spending money and creating strategies of fiscal efficiency.

From a broader perspective, agencies with teamwork dynamics can enhance the achievement of outcomes that impact policies as well. Model 2 shows that the result of collaboration promoted by managers also positively affects goal achievement in education. Specifically, the existence of teamwork in organizations increases net education coverage.

Collaborative management can impact not only organizations' internal performance but also in terms of public policies. Education as a public good results from joint responsibility and concurrence between departmental and municipal authorities. Given that most municipalities do not have all the capacities to implement educational policies themselves, the departments are responsible for ensuring both the implementation of resources and educational achievement through increased coverage. Collaborative management within departments facilitates the exchange of information, trust, and collaborative practices that radiate departmental policy objectives.

In model 1, the model's R-squared is 0.41, then approximately less than half of the observed variation can be explained by the model's inputs. For model 2, the explained variance in the dependent variable that independent variables explained collectively is almost 25%. Model 1 and 2 were estimated with year fixed effects and robust standard errors. Results are similar in models with standardized lagged teamwork variable (See Appendix A).

Table 2-1 Effects of teamwork on fiscal performance and education

| | (1)<br>Fiscal Performance Index | (2)<br>Net education coverage |
|---|---|---|
| Teamwork Lagged | 1.486** | 2.584*** |
| | (2.82) | (4.13) |
| Population | 0.00000371** | -0.00000659** |
| | (3.37) | (-3.24) |
| Total Revenue | 0.00000111 | -0.00000479 |
| | (0.33) | (-1.27) |
| Total Expenditures | 0.000000246 | 0.00000632 |
| | (0.07) | (1.63) |
| GDP Department | -1.447* | 2.026* |
| | (-2.61) | (1.99) |
| Poverty incidence | -0.271*** | -0.0411 |
| | (-3.51) | (-0.62) |
| Transfers | -0.00000441 | 0.0000128* |
| | (-0.92) | (2.42) |
| _cons | 75.77*** | 76.04*** |
| | (26.69) | (19.67) |
| *N* | 115 | 115 |

### 2.5.1. Robustness checks

In terms of post estimation strategies, I generate predicted values of both dependent variables to see how well the model predicts performance outcomes. The Y-axis (observed data) and x-axis (predicted data) in Figure 2-2 and Figure 2-3 show predicted values vs. observed data of both dependent variables. We should expect a 45-degree pattern in the data, and then the models seem to do a good job in predicting values for the dependent variables.

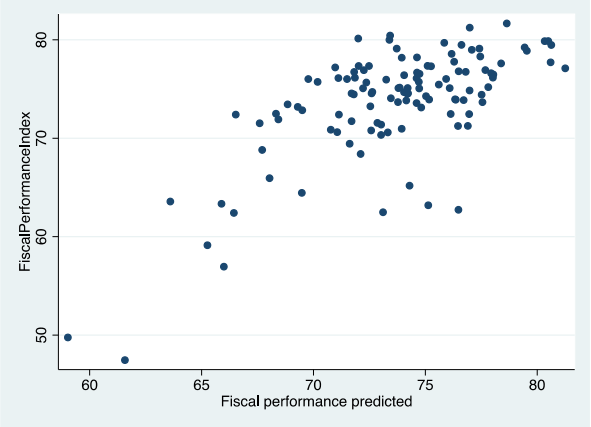


Figure 2-2 Predicted values Fiscal Performance Index

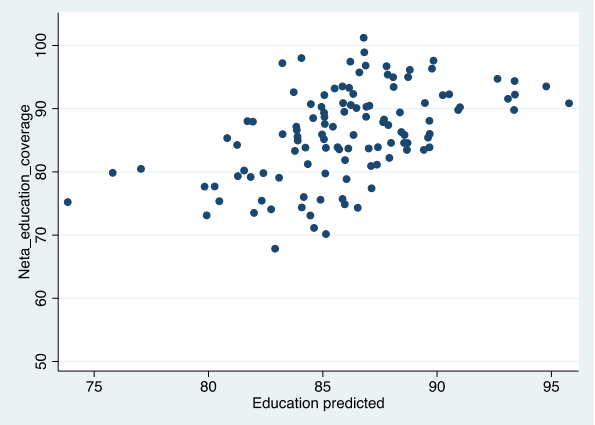


Figure 2-3 Predicted values Education

To check the findings' robustness, I run the analysis with other public services as dependent variables. Results are not significant when results depend exclusively on the role of municipalities by themselves. That is the case of public services such as vaccination, infant mortality, and sewage, which are primarily the responsibility of municipalities. As opposed to education, in these policies, the department does not have a concurrent and subsidiary role with municipalities. For each of the models that include these other policies as dependent variables, teamwork's coefficients are not significant. These results are included in Appendix A.

### 2.5.2. Is trust mediating the effect of teamwork on performance?

Results from the previous section show that teamwork activities affect organizational performance. One analytic challenge for this theory is that trust, therefore collaboration, exists independent of managerial action. In other words, it might be the case that there is some baseline level of trust before managers do anything. In this case, the pre-existing level of trust will drive collaboration regardless of management actions. I use a mediation analysis to disentangle these two different causal mechanisms.

The purpose of the mediation analysis is to identify the extent to which an independent variable influences the outcome through a third variable (MacKinnon and Fairchild 2009). If there is a mediation effect of trust, we can assume that the existence of collaborative management actions can only affect performance through an increase or decrease of trust levels. The survey dataset on bureaucrats' perceptions has a question on

promotion on trust: “The organization has mechanisms to promote relationships between employees that are based on trust and respect.” This question partially reflects the extent to which there are institutional mechanisms to promote trust and respect. However, it does not necessarily reflect the actual level of trust in the organization. I use this variable as a mediator between teamwork and organization performance in the mediation analysis.

Table 2-2 presents the mediation analysis results for education as the dependent variable and perceptions that “the organization has mechanisms that promote trust and respect” as the mediator variable. This analysis follows the method described in Imai, Keele, and Tingley (2010), aimed to measure the sensitivity of causal mediation effects with a minimum requirement of assumptions and a Quasi-Bayesian approximation based on 1000 simulations. Findings in model 1 show that management actions positively impact bureaucrats’ perception that there are mechanisms through which the agency fosters trust. On the other hand, model 2 suggests that the perceptions that there are mechanisms that promote trust do not positively affect performance. Teamwork, on the other hand, still has a significant and positive effect on better outcomes.

Table 2-2 Mediation analysis

| | *Model 1* | | *Model 2* | |
|---|---|---|---|---|
| | *DV: Trust* | | *DV: Education* | |
| | *Coef.* | *(SE)* | *Coef.* | *(SE)* |
| Trust | | | −1.138 | (13.73) |
| Teamwork | 0.880*** | (0.05) | 23.51* | (13.93) |
| Population | 3.969 | (1.32) | −3.30* | (1.88) |
| Total Revenue | −4.879 | (3.13) | −4.12 | (4.52) |
| Total Expenditures | 4.589 | (3.27) | 9.39** | (4.70) |
| GDP | −0.001 | (0.01) | 0.567 | (0.91) |
| Poverty Incidence | −0.000 | (0.07) | -0.031 | (0.71) |
| Constant | 0.142*** | (0.00) | 65.87*** | (7.02) |
| Observations | 115 | | 115 | |
| $R^2$ | 0.761 | | 0.201 | |

*Note*: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$ (two-tailed), robust standard errors in parentheses

Although the mediation analysis is a helpful approach to test the separate causal effects of collaborative management actions and trust on performance, this preliminary exercise has several limitations. First, the selected mediator does not measure trust among public employees, but the strategies that the organization has defined as ways to increase both trust and respect. This indicator of institutional mechanisms for trust might not capture all of the indirect effects of the causal pathway. Unfortunately, the dataset on survey data does not include measures to test actual trust's potential indirect effects.

Second, the sample size might not be necessary for adequate power in single-mediator models. This literature recommends at least four hundred or more observations to achieve adequate power when testing for mediation (Fritz & MacKinnon 2007). Additionally, the number of observations in the data is less than the number of simulations,

which does not allow to identify the Average Causal Mediation Effects (ACME), direct and indirect effects. Although this mediation analysis is limited, it shows the consistent effect of teamwork on performance and the necessity of improved measures of trust in organizations.

## 2.6. Conclusions

This chapter asks the question of whether management actions that promote collaboration among coworkers affect organizational outcomes. The chapter expected that collaborative management – expressed as teamwork activities – has a positive and significant effect on higher performance levels.

Consistent with the hypotheses, the empirical analysis of Colombian' evidence shows that managerial actions that promote teamwork activities predict higher organizational performance levels measured as fiscal performance and outcomes in a specific policy such as education. This chapter contributes to the literature on collaborative management by providing evidence about the link between collaborative management actions and organizational performance based on a subnational comparative analysis.

Agencies that promote teamwork strategies can enhance collaboration and trust-building processes among coworkers in the organization. Understanding the causes and consequences of interpersonal relations in public organizations contributes to the literature on inter-personal collaboration. By introducing the study of the nature of collaboration and trust in human interactions, we can understand how managers' actions not only affect the cooperation between organizations but within the organization itself.

An internal process where coworkers are encouraged to work together increases sharing information among them and reduces previous information asymmetries, which can foster collaboration and trust-building processes. Creating this atmosphere of collaboration facilitates the achievement of goals and can be extended to a better implementation of policies.

The literature on collaborative public management can benefit from a deep understanding of why managers' actions that promote trust and collaboration matter for organizational performance. The findings highlight the importance of studies that address individual and social attributes that can improve policy performance. Then, this chapter bridges the gap between top-down and bottom-up approaches by analyzing both the ability of decision-makers to promote actions (top-down) and the importance of collaboration and trust-building processes in policy delivery.

The analysis of organizational dynamics in the public sector is a promising endeavor for a deep understanding of how organizations work and can be improved. Further statistical analysis can address some of the study's obstacles, such as limited measures of collaboration and interpersonal trust and information about the motivations of managers' collaborative actions. New research can also explore the micro-foundations of bureaucrats' collaboration and how this factor can make the achievement of goals easier in daily interactions in public agencies.

Additional qualitative and quantitative analysis can also observe causal pathways in specific case studies to understand the interactions between aggregate conditions and individual attributes under which collaboration and trust occur. This extension can also

address how collaboration and trust are created and sustained within the organization and across organizations in other contexts and countries with different public service structures.

For scholars and practitioners in public administration, it would be helpful to explore new social infrastructure designs that combine managers' intentional efforts and solid informal institutions based on collaboration and trust in organizations that seek to achieve their mandates and functions in society.

# 3. WHY DO BUREAUCRATS WORK TOGETHER? INDIVIDUAL-LEVEL EXPLANATIONS OF COLLABORATION IN THE PUBLIC SERVICE

*"Cooperation can emerge from small clusters of discriminating individuals, as long as these individuals have even a small proportion of their interactions with each other. If nice strategies (never the first to defect) come to be adopted, then those individuals can afford to be generous in dealing with any others."*

Robert Axelrod, The Evolution of Cooperation (1984)

*"With this little group of eight that I always work with, we have a chat on WhatsApp, we always get together and study the problems we have. We call ourselves the Justice League. Most of us have been together for twenty years. Most of us graduated from the University of Cartagena."*

Public employee, Cartagena – Colombia (2019)

## 3.1. Introduction

The study of collaboration is widespread in both social and natural sciences (e.g., Axelrod & Hamilton 1981; Sachs et al. 2004; West et al. 2007; Frederickson 2013). The question asking why bureaucrats collaborate is not exclusive to the Public Administration field. Asking why bureaucrats collaborate is a question about why humans collaborate in the first place. Collaboration poses an evolutionary puzzle: An individual pays a cost to help other individuals, but other individuals are better off not reciprocating or cheating

(Shou 2015). In general, the prosocial behavior of collaboration is costly because of the complex interaction between individual preferences and social incentives.

We know collaboration takes place and can play a significant role in achieving policy goals (Ostrom 1990). However, our understanding of why bureaucrats engage in collaborative behavior in the first place and how this collaboration is sustained over time is lacking. Given bureaucrats are major implementers of public policy, understanding how they collaborate gives further insight into how and why policy goals are achieved. Furthermore, this is a crucial problem to solve because strengthening governments and public officials' capacities is widely praised as leading to better governance and development (Cingolani 2019, Van Noort 2018, Terman & Feiock 2015). In general, it has been promoted as an effective way to improve the provision of public goods around the world.

This chapter asks the following question: *Why do bureaucrats collaborate in the first place, and how is this collaboration sustained over time?* To answer this question, I hypothesize that initial collaboration occurs when bureaucrats share culturally-based identities (gender and ethnicity), professionally based identities (profession, common experience, and job status), and/or geographically based identities (geographic jurisdiction). Collaboration is sustained when bureaucrats have built trust and reciprocity based on their shared identities.

The chapter hypothesizes that social identities should affect collaboration because they serve as a cognitive heuristic for bureaucrats' behavior. The study tests the initial dispositions toward collaboration, specifically "pro-cooperation" mechanisms (a concept

used in evolutionary psychology) in terms of social identities and how trust and reciprocity sustain collaboration over time. I present the evidence from a multi-method case study with bureaucrats in Colombia.

Colombia is an interesting case for testing social identities and reciprocity as potential predictors of bureaucrats' collaboration. Colombia has more than 50 million people and 1.2 million public employees. Factors that might affect social identities are not uniformly distributed in the country. Bureaucrats and municipal government capacities are different in each of the 32 departments (provinces) and the capital District Bogota. I expect that this variation will enable us to test the theory and offer more accurate conclusions more robustly.

Furthermore, Colombia is a less likely place to find collaboration, given its long history of political turmoil, historical violence, and war. This history is particularly poignant in Cartagena, making this case a hard test for the proposed theory. This hard test is beneficial for the theory-building process. The original contribution of this chapter is explaining how pro-collaboration mechanisms such as social identities and trust and reciprocity predict collaboration among public servants.

By looking at how public employees interact with each other in their workplace through a social identity lens, the chapter contributes to public administration research and practice in two ways. First, by conceptualizing collaboration mechanisms and testing their empirical causes, I provide new evidence of the importance of social identities, trust, and reciprocity for the field. Secondly, identifying recommendations for bureaucrats' collaboration can strengthen bureaucrats' role in terms of how they interact and achieve

goals together. The findings suggest that an initial step to building collaboration is for employees to participate in common activities together. These experiences will help them learn to collaborate and be able to collaborate more later. Learnings from this chapter can be used in the Public Sector through different strategies such as classes or training workshops for bureaucrats oriented to sensitize them about the relevance of trust-building and sources of diversity in the workplace environment.

### 3.2. Individual-level explanations of bureaucrats' collaboration

I build the conceptual framework of this chapter on the literature on evolutionary approaches to bureaucrats' behavior (e.g., West et al. 2007; Sachs et al. 2004; Axelrod 1984), social identity theory (e.g., Tajfel 1978; Norgaard 2018), and social capital in the context of public service (e.g., Scott 2019; Miller & Whitford 2002; Grimmelikhuijsen et al. 2017). Based on an evolutionary understanding of bureaucratic behavior, I argue that bureaucrats' collaborative behavior is activated through different types of social identities. After the collaboration initiates, these processes are sustained over time in the presence of trust and reciprocity.

#### 3.2.1. Understanding bureaucratic behavior from evolutionary perspectives

Bureaucratic behavior has been analyzed from three main perspectives: rational choice, bounded rationality, and recent perspectives on evolutionary psychology and behavioral sciences. In general, the study of bureaucratic behavior has leaned heavily on rational choice theories and game-theoretical models, such as the Prisoner's Dilemma that

have represented the problem(s) of cooperation in social dilemmas. A second standard theory for explaining bureaucrats' behavior is bounded rationality, and more recently, evolutionary approaches to understanding behavioral motivation are consolidating as more complete frameworks in Public Administration (Smith & Renfro 2019).

The classic rational perspective of human nature is limited by the existence of cognitive dissonances and emotional traits in humans. Bounded rationality has expanded rational choice assumptions by introducing the importance of emotions and saying that behavior also responds to task environment (Simon 2013).

However, these theories do not explain where preference comes from and why people want to be rational. Evolutionary models suggest that there are no fixed preferences for all situations. Instead, humans have evolved behavioral predispositions that are sensitive to the environment and other individuals. The evolutionary framework builds on human psychology to describe that people perceive the social costs of their actions (Smith and Renfro 2019, 175).

Public Administration can benefit from explanations grounded in these evolutionary approaches of human collaboration. The concept of collaboration in this chapter builds on Collaborative Public Management literature and the evolutionary basis of human collaboration. By collaboration, I mean the process when bureaucrats work together to achieve common goals (Agranoff & McGuire 2003; O'Leary & Vij 2012).

In general, people are more likely to collaborate when they expect their own behavior to be rewarded with others' good behavior (Axelrod 1984). Axelrod's classic "The Evolution of Cooperation" has emphasized that "what makes it possible for

cooperation to emerge is the fact that players might meet again" (Axelrod 1984, 12). This statement means that continuing interaction is crucial for reciprocity to be stable.

However, there is less literature on how people are willing to engage in a collaboration strategy instead of defection in the first move. In other words, if we want to explain how reciprocity is possible, we should study first how the initial interaction between agents started.

The literature from Evolutionary Biology and Social Psychology has identified two "pro-cooperation mechanisms" that encourage people to work together: i) Partner choice where in the first round of any game the cooperator "recognizes" and "chooses" cooperative instead of cheating partners to interact with, and ii) partner fidelity feedback where individuals are associated for an extended series of exchanges that last long enough that feedback operates (West et al. 2007; Sachs et al. 2004; Nowak 2006; Lehmann & Keller 2006). Thus, this chapter's main argument is based on these two pro-cooperation mechanisms and how we can understand them in the logic of public service: Social identities and trust and reciprocity.

### 3.2.2. Social Identities in the context of Public Administration

A behavioral approach of social identities as triggers of collaboration can be beneficial to public administration. I argue that social identities are predictors of collaboration as they act as informational shortcuts for engaging in collaborative strategies.

I define social identities as the heuristics that help rational decision-making processes in a context with limited information (Kahneman et al. 1982; Lupia 1994; Lupia and McCubbins 1998; Tajfel 1978). Some of these identities are labels such as "sex or skin color" that are part of social structures. They give rise to stereotypes, which allow a player to begin an interaction with expectations those others "will behave like others who share these same characteristics" (Axelrod 1984, 146).

The literature has commonly referred to social identities as those that are manifest and active. Under this category, people identify and classify themselves as part of one group or another. However, social identities can also be latent to the extent that people do not recognize themselves as members of a group but have a latent identity that may (or may not) become active under some specific circumstances (Becker and Geer 1960).

For Public Administration, a strong sense of belongingness to a certain group might drive bureaucrats' attitudes, feelings, and orientation to the provision of public services (Huddy, Mason, & Aarøe, 2015; Norgaard 2018). The relationship between personal, professional, and organizational identities and bureaucratic behavior has been studied extensively (Hoff, 2000; Teodoro 2014). In some cases, when behavior norms come into conflict, professional identities usually win (Freidson, 2001). In other cases, individuals bring personal dispositions that are not influenced by organizational culture or profession (Oberfield 2014).

### 3.2.3. Sustaining collaboration over time: Trust and reciprocity

The second pro-cooperation mechanism is related to trust and reciprocity. The extended series of exchanges can be stabilized in a ‘‘pattern of mutually contingent exchange’’ (Gouldner 1960, 161). This exchange should provide mutual gains to the cooperators to be sustainable over time. Reciprocal collaboration strategies are also seen as ways in which individuals engage in an implied social contract to help others, except that others will later do the same for them (Scott 2019).

A collaboration strategy can be formed in a small cluster of individuals as long as the shadow of the future exists (Axelrod 1984). When these interactions occur, trust arises as a consequence of people getting involved in collaborative strategies. Other authors have described how trust-building processes are both the outcome and also the cause of these interactions prolonged in time (Carlin and Love 2013). It seems that trust and reciprocity are endogenous processes that reinforce each other.

In particular, the literature on Collaborative Public Management has shown that trust is essential for agents because it is a predictor of perceived organizational support, lowered turnover intention, and greater affective commitment (Ferres et al. 2004). Public servants that trust in each other adapt their behavior on the basis of their expectations of the behavior of others (Grimmelikhuijsen et al. 2017). However, there is relatively little evidence regarding how bureaucrats entice others to participate in collaborative ventures based on their social identities' initial activation.

### 3.3. Theory: The importance of social identities, trust, and reciprocity in collaboration processes

The theoretical contribution of this project is to explore the behavioral mechanisms underlying the processes of collaboration among bureaucrats by testing the microfoundations of social identities at the workplace.

I argue that social identities should affect collaboration because they serve as a cognitive heuristic for bureaucrats' behavior. I will test the initial dispositions toward collaboration, specifically the "pro-cooperation" mechanisms of evolutionary perspectives, by testing the two mechanisms described above: social identities and trust and reciprocity (see Figure 3-1).

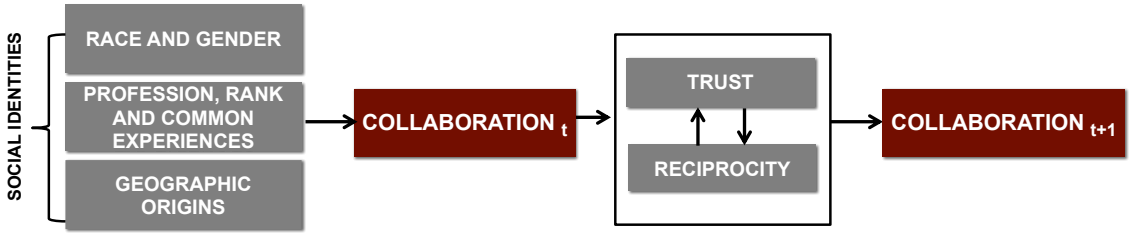


Figure 3-1 Theoretical model

Regarding the first mechanism, collaboration is promoted through active recognition by an individual. My theoretical expectation is that the process of selection of partners is conditional on sharing identity factors. Social identity shows that individuals take behavioral cues from the norms or stereotypes of the group they belong (Scott 2019). I expect that collaboration is more likely to occur when an individual recognizes another individual as part of his/her same social identity at a particular time (time *t* in Figure 3-1).

People can perceive themselves as actual or symbolic members of a social identity category at a conscious or unconscious level.

If a bureaucrat identifies with another bureaucrat, she is more confident that the other person will collaborate and reciprocate her behavior by collaborating in future interactions. The presence of identity in decision-making can reduce transaction costs and facilitate interaction because individuals can anticipate others' behaviors. Then, social identities provide an informational advantage because it reduces collaboration costs and reduces the uncertainty of defection in reciprocating interactions in the future. The first expectation of the chapter is:

*H1: Bureaucrats will be more likely to collaborate with each other when they share social identities*

I propose that identity factors can be based on intrinsic shared cultural characteristics such as gender and ethnicity, social and geographic proximity.

The first set of identities is related to "culturally based identities," which are the traditional expectations that a shared gender and ethnicity leads to more collaboration (Nicholson-Crotty et al. 2019; Rudman & Goodwin 2004, Riccucci et al. 2014, 2016; Theobald & Haider-Markel 2009; Van Ryzin et al. 2017).

In a second category called "professionally-based identities," I explore the classic explanations about profession similarity and other situational factors such as relative status and position in a hierarchy as sources of behavioral expectations of others (Thimm et al. 2003). I argue that common experiences are also a predictor of collaboration. The pre-

existing networks and connections individuals have from a previous shared experience contribute to a higher likelihood of collaboration in the present. This proposal goes beyond the traditional Public Administration approaches that only refer to specific occupations as predictors of common rules and social norms (Aschhoff and Vogel 2019). This chapter argues that individuals also acquire specific skills and training in other settings such as workshops, university background, and previous administrations' previous appointments. In all these cases, bureaucrats had the chance to meet other bureaucrats and start creating trust, social bonds, and networks.

Finally, a third category refers to "geographically-based identities" where individuals are more prone to collaborate with each other because of common origins. A shared identity based on territoriality (geography or physical space) is related to the fact that neighbors tend to interact more. Additionally, neighbors and common region background can even provide a role model (Axelrod 1984; Rustagi and Veronesi 2016; Apicella et al. 2012).

The three hypotheses that resulted from these three categories of social identities are:

*H1a: A bureaucrat is more likely to collaborate with a bureaucrat of the same gender or ethnicity (Culturally-based identities)*

*H1b: A bureaucrat is more likely to collaborate with a bureaucrat with a shared professional background, common experience, or job status (Professionally-based identities)*

*H1c: A bureaucrat is more likely to collaborate with a bureaucrat in the same geographic jurisdiction (Geographically-based identities)*

As shown in Figure 3-1, once the recognition of shared identity factors activates a cultural, professional, or geographic mechanism, the individual can choose whether to collaborate with the other individual, building trust and partner fidelity feedback or reciprocity. Despite the existence of short-run cheating incentives, people can establish a stable evolutionary outcome by having reciprocal collaboration.

Where individuals prove to be successful at collaboration, they built trust processes and, it is more likely that these bureaucrats work together for an extended series of exchanges (*t+1* in Figure 3-1). This behavioral assumption leads to the second hypothesis: *H2: Bureaucrats' collaboration is sustained over time with trust-building processes and reciprocal collaboration of other bureaucrats*

This hypothesis complements the explanations based on the social identities of the first hypothesis. In other words, I will test whether people collaborate in the first place because they share certain social identities (time *t*) and then continue the collaboration process (time *t+1*) because they have trust and other bureaucrats reinforce informal contract through reciprocal collaborative behavior.

## 3.4. Data and methods

### 3.4.1. Research design

The research design is based on a multi-method approach to measuring social identities, trust, and reciprocity. I test the hypotheses in public employees in Colombia by using an integrative multi-method design with both qualitative and quantitative evidence. Specifically, the interviews were conducted in Cartagena, and the survey is nation-wide. This type of mixed design provides compelling strategies for linking qualitative and quantitative components of a single question while "also enhancing the quality of causal inferences" (Seawright 2016, 42). The project had approval from the Institutional Review Board of Texas A&M University.

I use a pre-existing dataset containing survey responses from more than 5,000 bureaucrats in Colombia in 2017. The data were collected in a National Survey of Institutional Performance (encompassing bureaucrats at the national and sub-national levels) conducted by the National Department of Statistics of Colombia (DANE in Spanish). The quantitative data allow for testing the second hypothesis.

Data on social identities and collaboration are drawn from an original set of interviews conducted in July 2019 with bureaucrats at the sub-national level in Cartagena complemented by a survey. I use these qualitative data for testing the two hypotheses.

In terms of case selection, the interviews were conducted with public employees from Cartagena. While Cartagena shows one of the highest tax revenues' annual growth rates due to industry and tourism, it is also on the top rank of poverty and inequality with

insufficient improvements in its social indicators (Acosta 2012). The city has a broad spectrum of ethnic groups. A third of the population identifies themselves as afro descendants, and there are other minority ethnic groups (adding to less than 1% of the population) such as "palenqueros," "raizales," gypsies, and indigenous.

Despite Cartagena's popularity because of its culture and history, political instability has been a constant in Cartagena's politics in the last years. The city has had 11 mayors in 8 years (2012-2019) due to arrests and corruption. Cartagena is an ideal case study because its governance crisis should produce lower collaboration levels among local bureaucrats, making it a hard test for my theory. In such a turbulent environment, public sector employees may be demoralized and uncertain about their future. In this context, it would be very reasonable for employees not to want to collaborate for two reasons: a crisis like this might provoke a lack of leadership with the direction of the administration uncertain, and also, they might not want to be accused of political corruption themselves.

### 3.4.2. Data collection

I conducted 47 in-depth interviews with bureaucrats in 22 agencies.[5] These agencies represent all sectors in Cartagena's administration: Internal Affairs, Planning, General Secretary, Environmental issues, Citizens' Participation, Culture, Social Affairs,

[5] The agencies are: Local mayors, Files and Correspondence, Department of Health, Traffic and Transportation, Treasury, Public Environmental Agency, Government School, Police Inspectors, Institute of Heritage and Culture, Economic Development, Information and Technology, Legal Office, Citizens' Assistance, Internal Oversight Office, Poverty Reduction, Education, Citizens' Participation, Planning, Internal Affairs, General Secretary, Human Resources, and Infrastructure.

Treasury, Information and Technology, Mobility and Transportation, Infrastructure, Health, and Education.

The study's hypotheses draw a connection between public employees' social identities and their willingness to collaborate with one another. The disposition to collaborate is measured here in different ways. To unpack the logic of collaboration, I mainly rely on qualitative data from in-depth interviews. I used a semi-structured interview protocol (Miles & Huberman 1994, Pandey et al. 2007) to obtain an in-depth understanding of bureaucrats' interactions.

By using in-depth interviews, I was able to track collaboration patterns in bureaucrats' daily routines. Through an open-ended question format, I asked participants to describe daily life problems in their workplaces and explain how they were addressed. In their stories, it is possible to identify not only the way they solve the problems but who they work with within these processes. There is no activation of participants' awareness in terms of social identities during interviews. Qualitative information is the primary source of information for tracking causal pathways about collaboration. When asking respondents about their daily life routines in the interviews, I expect to isolate the social desirability bias of surveys better and capture in the person's story unconscious predispositions to work with a particular type of bureaucrats in the first place.

In terms of the quantitative analysis, the survey data at the national level was already collected, and it provides information for testing the second hypothesis about the effect of trust on collaboration. Unfortunately, this dataset has limitations because there are no questions in the survey that suitably ask about identities such as ethnicity and

profession or if collaboration occurs in the expectation that it will be repaid in the future. Then, testing how collaboration works at one moment (time *t*) and in the future (time *t+1*) mainly relies on qualitative data.

### 3.4.3. Data analysis

The interviews were recorded with the participants' consent and were transcribed. The interviews were coded in multiple rounds based on an open-coding technique (Emerson et al. 2011). The interview data were used for inferential purposes following a multiple rounds process of coding. The first-round identified the main causes and actors of daily collaboration actions in the bureaucrats' stories. A second-round validates the categories of social identities again in the transcripts and compares the pre-defined social identities of the hypotheses to the transcripts. A third-round categorizes whether the identities were salient or not, and whether they were implicit in bureaucrats' stories or they were mentioned in other parts of the interview as responses to explicit questions (see this distinction and evidence from explicit responses in Appendix B).

The interviewees were selected through purposive, non-random procedures designed to maximize variation according to sectors in Public Administration, gender, professional background, and rank and roles in the organization (top, middle and street-level bureaucrats). These interviews provided critical information for the identification of causal pathways of social identities as predictors for collaboration. The only variable that does not have high variation is the place of birth because 64% of the individuals are from

Cartagena, and 15% are from another city in Bolivar (the department where Cartagena is located).

At the end of the interview, respondents were asked to complete a survey. The survey is a complementary way to track the effect of social identities and other attitudes on collaboration's predispositions. The number of observations is limited to determine robust quantitative inferences (n = 47), but it allowed testing the validity of questions applied in this project's future extensions. The survey was administered in person via a paper questionnaire.

The interviews sample captured a broad cross-section of the Public Employees population regarding gender, age, rank, and professional background (Descriptive summaries of the data are reported in Appendix B.

Formally, collaboration is a function of social identities and reciprocity mechanisms. The dependent variable of interest is *collaboration with other bureaucrats in the same organization or outside the organization*. The key independent variables investigated here are *social identities* and *trust and reciprocity.* Key controls include organizational variables and personal information, including personality traits, which are potential confounders that affect both levels of collaboration and how social identities are shaped.

In terms of the large-n quantitative dataset, the dependent variable is measured through an organizational measure of collaborative culture based on the National Survey of Institutional Performance conducted by the National Department of Statistics of Colombia every year. This survey is representative of bureaucrats that work at the

department level in Colombia. The question, in particular, is: *"With regard to the management of Governor and the team in the Department, it can be affirmed that it has promoted cooperation: Among the municipal / local authorities of the Department / Between National and the municipal / local authorities of the Department"*.

The survey included a measure of trust as an independent variable with the question: *"The organization has mechanisms to promote relationships between employees that are based on trust and respect."* The survey includes individual factors that can shape the disposition towards collaboration, such as rank in the organization, years in the organization, sex, education, region, and happiness levels. Finally, the survey includes measures of the organizations' perceived capacities in terms of goals accomplishment, budget execution, level of administrative organization, availability of human and financial resources, among other.

I recognize the limitations of the dataset since it clearly does not measure the employees' collaborative with other employees or the actual levels of trust, but rather their impression about management fostering collaboration and trust. Unfortunately, there are no available data on bureaucrats' collaborative attitudes and behavior, and levels of trust or reciprocity that allow testing the hypotheses with more accuracy using quantitative data exclusively. Therefore, I also use evidence from the interviews to identify trust and reciprocity patterns.

I also recognize the potential common source bias that resulted from using the same perceptual data for both dependent and independent variables (Meier & O'Toole

2013). However, the analysis of the effect of trust on collaboration is not only based on survey data but also qualitative data.

## 3.5. Results: Collaboration is activated when bureaucrats have had common experiences

### 3.5.1. Salient social identities for collaboration: Professionally based identities

Based on qualitative evidence and regarding the first hypothesis, two main findings need to be highlighted: some of the classic social identities appear to be not as important as usual. Factors such as gender and ethnicity do not seem to explain why people collaborate with another. On the other hand, bureaucrats are more prone to collaborate with other people that they have met before.

In Figure 3-2, responses were classified into the categories: not salient and salient. Not salient means that a specific social identity was not identified in the participant's story as a mechanism that conditioned collaboration. Gender, ethnicity, and geographic background are not mentioned in most participants' stories.

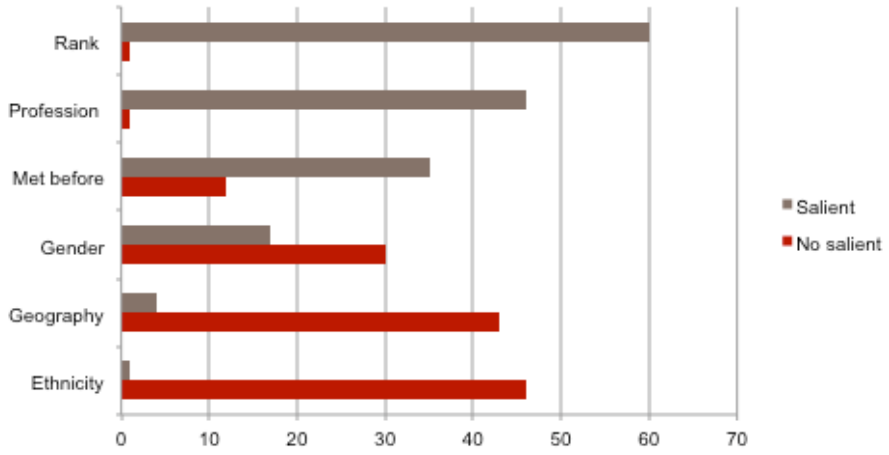


Figure 3-2 Saliency of social identities

Figure 3-3 shows the frequencies of those variables that were salient in the stories: this means that the variables were identified as causes of collaboration in individuals' stories[6]. The figure shows how many interviewees do collaborate with people they have met before, same the rank in the organization, or have the same profession. Having met before is a common characteristic mentioned in the stories. The profession's variable was created by matching the interviewee's profession, and the profession of the person she describes is collaborating with. The findings show that people prefer working with bureaucrats from other professions.

[6] Besides the identification of salient characteristics in public employees' stories, the research design also included a question in the interviews where they were asked about why they collaborate with some people and not others. The results show differences between what they recognize as important characteristics explicitly and the analysis of their stories. To prevent bias, this question that elicited the recognition of causes of collaboration was asked at the end of the interview. These results are included in Appendix B.

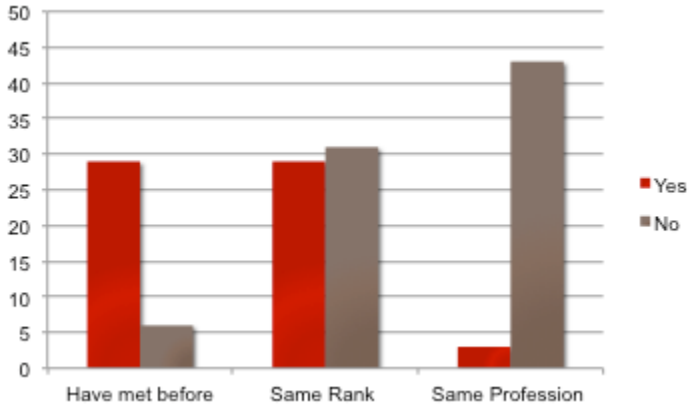


Figure 3-3 Frequencies of salient social identities

Ethnicity is not mentioned or discussed in any of the interviews, and few people only mention gender and geographic origins. The null finding of the variable related to geographic origins might be due to a lack of variation related to this variable in the sample because most of the interviewees were born in Cartagena or any municipality near to it.

In terms of professional characteristics, the organization's rank or position is not a relevant attribute for collaboration in the workplace environment. This means that people work with coworkers regardless of whether or not they share the same job position. Besides the advantages of building knowledge with bureaucrats from other professions, there are organizational constrains for hiring and have a large staff. Therefore, it makes sense that public employees work with different professional backgrounds in multidisciplinary environments. One of them says: “my co-workers are completely different, I work in Finance, they are lawyers, here everyone has to work with everyone.”

### 3.5.2. Common experience as a significant predictor of bureaucrats working together

The feature that is constantly observed in public employees' implicit stories of collaboration is related to common experiences with those they collaborate with. Common experience means that they had worked with bureaucrats in the past in a different organization, worked before in a different area of the same organization, studied the same university, or attended a training experience such as an intensive workshop or training course.

Common experience as a significant predictor for bureaucrats' collaboration expands the existing literature about why bureaucrats work among them. The analysis shows that it is not the profession that counts (Teodoro 2014), but the experience itself of interacting in the past.

The examination of the distinct forms of common experience shows that most bureaucrats (20 out of 35 responses) have met in previous administrations. The 35 responses correspond to those public employees' stories where common experiences were a salient variable. Having gone to the same university or participating in a training course or workshop is also a common observable path in bureaucrats' professional trajectories (10 out of 35 responses). In a smaller proportion, some participants (5 out of 35 responses) indicated they had met their coworkers in other positions during the same administration in Cartagena.

The interviewees have described the administrations of former mayor Judith Pinedo (2008-2011) and former Governor of Bolivar Juan Carlos Gossain (2012–2015) as those scenarios where bureaucrats met each other and established sustainable networks. One of the bureaucrats argued that there was a drastic internal transformation when Pinedo was in office. He says that the change started by hiring people from "the private sector that had added a very executive, managerial style to the mayor's office that had never had it before and that allowed many processes to be strengthened." Across different offices in the administration, people started to interact around common projects such as SIGOB (standardized system of correspondence). A team of 25 people was formed as her close advisors' group. After working with her in the mayor's office, most of them have kept up their interactions. One of them noted that "they have been partners in other administrations. We have been good friends since we met each other". The same situation has occurred with those who worked with former governor Gossain because most of them have met again in new positions in the Cartagena district.

One of the main advantages of knowing someone from previous administrations is that bureaucrats avoid spending time and effort finding who might help them because they already know who is more likely to collaborate with them. A female worker says that in most situations, she prefers to find someone that she already knew because "that link of previous work experience makes it easier to find answers."

The pre-existing networks are built not only in previous interactions, but in encounters among bureaucrats in the same administration. An employee says that "by coincidence, I have been in other areas of the administration, and I always have people

with whom I have a very good relationship so I almost always have someone that can help me. I always say to myself, oh in the Secretary of Finance I know this person so it is always good to keep that communication alive."

*A specific example of collaboration: Aquarela Case*

In terms of common academic experiences, there are some cases where people met before when pursuing their bachelor's or master's degrees. For example, among the public employees that work in Cartagena, there is a group of police inspectors who met back in the university and establish a solid network of collaboration that has lasted for years. In the interview, one of them commented:

> "With this little group of eight that I always work with, we have a chat on WhatsApp, we always get together and study the problems we have. We call ourselves the *Justice League*. Most of us have been together for twenty years. Most of us graduated from the University of Cartagena. A new member of the group was my student, she is from that university, and now she is in the position that I used to have. We build a lot of empathy with her and with everyone. When one of us has a difficult case to solve, we help her or him".

It is also interesting to identify how the group organized outside of formal channels and how they helped each other in this group. For instance, after the approval of Law 1801/2016, police inspectors have more functions than regular police officers. They are in

charge of urban control in topics such as public space, environmental issues, and security, among others. This regulation gives the Police new tools and power to improve citizen security and recuperate the public space. In a city of Cartagena that is rapidly expanding, inspectors must check building permits and have the power to suspend construction.

One of the most controversial cases has been the case of Aquarela, a private housing project for 3000 people. During its construction, the General Attorney of Colombia and the UN agency for the cultural organization (UNESCO) warned about the risk of this building to protect the city's cultural heritage. The risk is because the tower of Aquarela is located less than 200 meters from "Castillo de San Felipe," a military fortress of the 16th century (see Figure 3-4). According to local and international regulations, there cannot be buildings over five floors in the zone of influence of cultural heritage. The first tower of the project was already completed when these warnings appeared. If Colombia does not take action before 2021, Cartagena will be in danger of losing its UNESCO Heritage declaration[7].

[7] https://colombiareports.com/colombia-vows-action-to-prevent-cartagena-losing-unesco-world-heritage-status/

Figure 3-4 Panoramic view of San Felipe Fortress (right) and Aquarela building (left) in Cartagena (source: Colprensa[8])

The case has triggered a storm of indignant protest in national and local media because of the curator's alleged misconduct that issued the permit to allow construction of the buildings in the first place. This situation has been one of the most challenging cases for Police Inspectors in the city. Precisely, the student of the Police Inspector that was interviewed had to deal with this case:

> "The woman I told you was my student, she became famous because of that Aquarela case, the one that affected the San Felipe Fortress. We all wrote the document where she stopped the building. We got together every night at 6 pm. There were several nights when we discussed legal concepts, each one contributing ideas. This is a historic case because nobody thought that the inspector could change the history. Judges now have said that the work of the Inspector was great.

[8] https://caracol.com.co/emisora/2020/07/10/cartagena/1594344751_322908.html

> We were so happy, and we felt satisfied that our group works so well. The inspector was so thankful that she cried because she had so much stress, she got calls from Bogota and had to attend every public hearing on this case. She was not alone, we took turns to accompany her. In the second audience, someone asked me who I was, and I said I am also Police Inspector and I am here supporting my colleague. That process made us more together because of the pressure on my friend, that was too hard for her, even the UN was involved"

The pattern of collaboration, in this case, is remarkable. The constant and repeated interactions among the members of this group provide evidence not only of the importance of common background but also the role that trust and reciprocity play to make collaboration sustainable and beneficial for everyone inside the group. It should be emphasized that collaboration here is not being forced on them from above, and it did not arise in the course of just doing the work. Only one person (out of 46) said that the reason for collaborating with someone is because there is a formal role or someone asks her to do it. This dynamic of collaboration seems to be founded on a strong network of solidarity. People get together to help solve problems even if they do not have to and regardless of formal roles or mandates. In the case of Aquarella, police inspectors even spent time from their personal and family time to help each other.

The solidarity of this group has also opened doors to work with top-level public officials in the city. The interviewee says:

> "Dr. Pedrito (*mayor of Cartagena*) and us, I think we work well because he studied with most of Police Inspectors, and he actually was Inspector at one point, and well, he was in the first year of Law School, and I was in the second year, so we were very close. Now, we text him, and he has the courtesy to respond to our messages, he always says, it is ok, I will help you all"

Having studied together as an opportunity to create collaboration networks is not the only situation where public employees have created bonds with other coworkers. Some of them have had training experiences in the past. More specifically, they mention professional workshops where they learned skills and met new people. The qualitative evidence allowed identifying the same professional training situations, such as one conducted with USAID support in 2004. When commenting about whom she prefers to work with, a respondent noted:

> "I met them since 2004 because I was lucky to have the chance to participate in this USAID training in Standard Internal Control Model (MECI in Spanish)…since then, although we had different jobs in the Mayor's Office, I have been interacting with my colleagues very often. We were trained in these planning things, they needed people that were leaders, so they selected us. We were twenty-one people, some of us are still active in public administration, and we are five that are leaders, and the others contribute to the administration in one way or another. We keep talking".

A different respondent mentioned the same training experience. He says:

> "I work with planning, citizen service office, internal control, because we have a process, for instance, they are people who I met in the control workshop, and we have been in the new model of planning, and we know how to do things, and they have the capacity of join forces and do things. That workshop was in 2004 if I recall…you attend those things and start the articulation with people. Out of the twenty-one people that attended, maybe I am wrong, we are fifteen that are still in public administration, the other came from other cities and attended the course and left, or they had a contract to provide specific and temporary services. In this group, we are five that we do like a social activity, this means we are very active, and we give talks to the other members, and we talk about how things are going"

Based on the qualitative evidence, it was possible to identify the intersectionality of some attributes within the category of professionally-based identities. For instance, some people went to the same university and worked at the same agency in a particular administration. However, there is not much information about the intersectionality of social identities across categories (for instance, intersectionality between gender, race, and common experience). This is because people did not identify some categories (as race and gender) as salient or a potential social desirability bias due to potential perceptions that those categories are sensitive in their context. An alternative explanation is that some attributes, such as geographic origins, were relatively homogeneous in the sample.

### 3.5.3. Trust and reciprocity as the way to keep collaboration over time

The first way to approach the second hypothesis of the study is through quantitative data on bureaucrats' perceptions based on responses of more than 5,000 bureaucrats in Colombia in 2017. Figure 3-5 shows the estimates of odds ratio calculated in logistic regression models.

The results suggest that a higher level of trust is a significant and positive predictor of bureaucrats' perception of collaboration with local agencies and national agencies. Full models are shown in Appendix B.

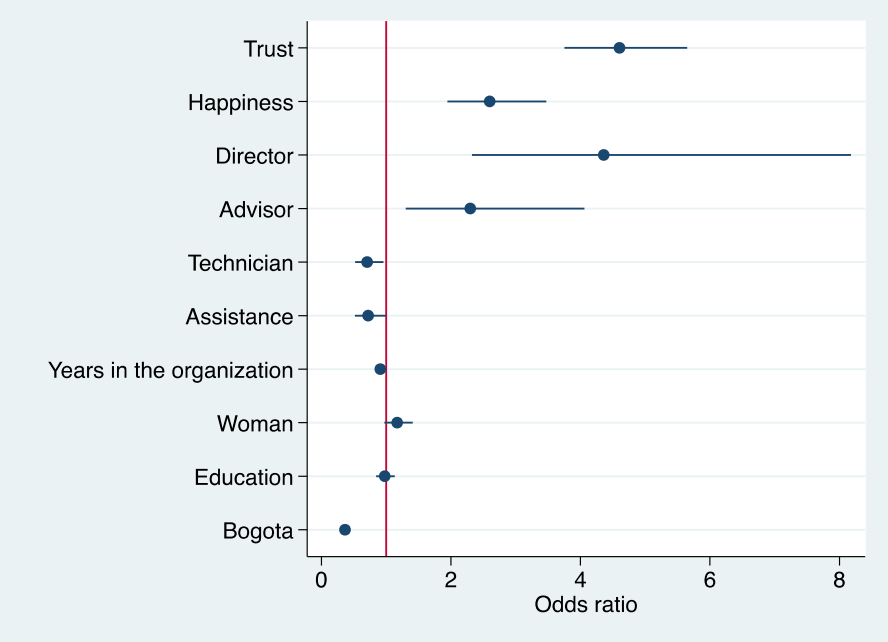


Figure 3-5 Odds ratio of Logistic regression models – Perceptions of cooperation with local agencies among bureaucrats

Since 27.5% of the individuals of the sample are from the capital of the country Bogota, I estimated additional models using a dataset that excludes Bogota (See Table B-

3 in Appendix B) and including fixed effects by department (a fixed effect for Bogota in the model of Table B-2 in Appendix B also captured that effect of Bogota). This model's results are similar and also show that trust is a strong predictor of collaboration in a positive relationship.

Nevertheless, the information collected in this survey does not capture reciprocity over time. The survey data have causality concerns because trust is explaining collaboration, but this result might be endogenous. The qualitative data provides additional information that disentangles the effect of trust on collaboration alleviating these concerns.

From the qualitative evidence previously introduced, we know that public servants define the common professional background as a source of contacts and friends that provide information over time. Besides this, it is necessary to spend some time and effort cultivating contacts and friendships in public service. The outcome of these processes is the creation of solid trust relationships and reciprocity exchanges.

The way that bureaucrats cultivate their relationships in the case study is related to successful, shared accomplishments at work and informal interactions inside and outside the workplace. One of them said:

> "There is a camaraderie, and that has created a pleasant atmosphere. I help them, they help me. We watch futbol together, we make sports bets, we work [together] all day, but regardless of that people want to be here".

These common spaces are both physical (watching fútbol or attending a birthday party for someone's daughter) and virtual (mostly via WhatsApp chats). The trust argument is so strong that even when people leave their job, they keep in touch outside the organization and even when they live in other cities: "with that person we ended up being friends, we met there, and we ended up being friends. Every time I go to Bogotá, we always meet for lunch, and I already have three years of being outside [of Bogota]".

In line with the proposed theory, repeated interactions strengthen trust, and this is an explanatory factor of why people establish long-term relations.

### 3.6. Conclusions

The chapter introduces a theory based on social identities, trust, and reciprocity, explaining variation in collaborative patterns in public service. In the case of bureaucrats, social identities help them engage in collaborative strategies with less uncertainty and be confident that the other public servant will collaborate and reciprocate in future interactions.

Another contribution of the study is the empirical testing of assumptions of bureaucrats' behavior and social identities in a context where collaboration is hard to achieve because of corruption and institutional weakness. This case study provides critical insights for other developing countries that also face political challenges and contexts that seek to improve the public sector, human resources, and public management.

The findings from Colombia's case study suggest that some social identities, trust, and reciprocity are positively correlated to collaboration. Based on the evidence, the

emergence of collaboration processes is not conditional on a superior officer's order. These dynamics are founded on strong networks of solidarity where people get together to help solve problems even if it is not part of their responsibilities. There is no evidence that shows that there is obligation-based collaboration instead of voluntary-based collaboration. In some cases, public servants collaborate, even taking some costs of collaboration.

Consistent with the first hypothesis, bureaucrats are more likely to collaborate with each other when they share social identities. Based on the qualitative evidence, professionally based identities seem to explain predispositions to collaboration in this case study. Specifically, bureaucrats are more prone to collaborate with other people they have met before in the university, previous appointments in other administrations, or other past activities or training. Thus, common experience appears to have a key role in determining collaboration.

Other social identities such as gender and ethnicity do not seem to explain why people collaborate with each other. This finding is based on the qualitative evidence. It might be the case that there are organizational or cultural attributes that shape gender and ethnicity and make these variables unobservable. However, in the Aquarela case, it is remarkable that the “Justice League” for instance, has female leaders in what is a traditional male-dominated institution such as the police.

In line with the second hypothesis, trust and reciprocity are variables that help understand how collaboration can be sustained over time. Both reciprocity and trust-building processes seem to be endogenously created and maintain over time. Further

research can expand the effect of social identities on collaboration by exploring some aspects that are limitations of this study, such as the limited number of observations. Additionally, although there is no evidence that the observed collaborative dynamics are obligation-based collaboration, new studies can actively and explicitly explore voluntary collaboration through specific research strategies that allow people to show their voluntary preferences. Given the methodological difficulties in eliciting these preferences, an experiment can be an appropriate way to address this issue using tasks requiring bureaucratic decisions about voluntary collaboration.

In line with Axelrod's classic statements, this chapter finds that the very possibility of achieving stable mutual collaboration depends upon there being a good chance of a continuing interaction, such as the interactions among bureaucrats in Cartagena. By tracking the past of those interactions, we can see that having a common experience is the source of repeated interactions in the future.

Bureaucrats recognize the potential of common experiences when making recommendations. Promoting training classes, sessions, or workshops might allow people to improve their skills. A female respondent described that activities such as "integration dynamics" [team building exercises] that encourage interaction and work team are beneficial for collaboration:

> "It might be useful to have group dynamics where people can share things. What other things do you do, what do you like, what do you enjoy, this is how you start to break the ice that is there…I connect, and then I am more open, and the knowledge can enter. Many times, people do not approach others because they do

not know that person or I am scared of talking to her. With so many government changes, people need to be helped in those interactions and those integrations, and we need spaces for that".

It was possible to recognize in bureaucrats' stories the potential impact of these actions on their individual and collective performance in the long term. These recommendations point out encouragement of connections in a non-clientelistic way, but in developing meeting spaces through training, team building strategies, and other activities that help to solve job-related problems. A meaningful way to encourage collaboration in public service is to arrange that bureaucrats interact in different scenarios. It would be ideal if activities also include that they meet each other again and be able to recognize each other from the past.

Making interactions more durable has been one of the classic recommendations for keeping collaboration sustainable (Axelrod 1984). In these settings, it seems that encouraging trust and reciprocity over time makes the long-term incentive for collaboration greater than the short-term incentive for defection. Taking care about each other and having socialization strategies in the organization might facilitate the evolution of collaboration in public organizations.

# 4. WHERE HAVE I SEEN YOU BEFORE? EFFECT OF COMMON EXPERIENCES ON COLLABORATION AMONG BUREAUCRATS

## 4.1. Introduction

Collaboration means to work together to achieve common goals (Agranoff & McGuire 2003). The literature on collaborative public management has focused on studying how this theoretical concept works in practice by analyzing the collaborative structures that public servants create in their workplaces to achieve organizational goals. The emphasis of these studies has been on the analysis of whole-network level analysis and inter-organizational collaboration. These two perspectives seek to understand the collaboration between units within organizations or agencies between levels of government. Much less emphasis has been placed on studying bureaucrats' behavior in the subfield of inter-personal collaboration and in the micro-foundations of bureaucrats' disposition to collaborate.

By micro-foundations, I mean the explanations based on psychological processes within or between individuals, which also affects meso (e.g., organizations) and macro (e.g., institutions) levels of society (Klein and Kozlowski 2000). Dahl highlighted that public administration must be based on an "understanding of man's behavior." Therefore, public administration should work closely with fields that focus on human behavior, including psychology and sociology (Grimmelikhuijsen et al. 2017).

A vital part of the exploration of human behavior in public administration has been analyzing certain cognitive biases that shape the decisions that bureaucrats make in their

work environment. As they must make decisions every day that involve both individual and collective efforts, it is essential to understand how individual bureaucrats form preferences. Behavioral sciences suggest that public servants' decisions may be systematically biased under certain conditions, conflicting with what rational choice models argue about rational agents (Bernoulli 1954).

Psychological theories that explain individual cognitive biases are particularly useful when describing the conditions where collaboration starts (Grimmelikhuijsen et al. 2017). Nevertheless, most behavioral public administration studies tend to focus on few cognitive limitations in public servants (Baekgaard 2017; Olsen 2017; Andersen & Hjortskov, 2015), such as framing, loss aversion (Battaglio et al. 2019), anchoring, status quo (Belle et al. 2018), bandwagoning, decoy options (Cantarelli et al. 2020) and halo effects (Belle et al. 2017). There are multiple types of cognitive biases related to public employees' limited abilities to remember things, act fast, handle information overload, and find meaning from experiences and people. These studies have been mainly related to cognitive biases in strategic decision-making at the managerial level (Roberts & Wernstedt 2019; Das & Teng 1999).

Since cognitive biases systematically affect bureaucratic decisions, it is necessary to analyze the cognitive mechanisms that activate collaboration moving beyond traditional models of full rationality in decision making. This chapter’s literature review on cognitive bias in inter-personal bureaucratic collaboration reveals a lack of exploration into why people collaborate with each other based on understanding the cognitive limitations and inner motivations behind those dynamics.

In this chapter, I use a conjoint experiment that tests the importance of common experiences as a source of meaning in bureaucrats' interactions and resultant collaborative decision making. By common experience, I mean the junctures in place or time that create memories and a sense of meaning to those who have them. These junctures may be due to different events that include similar professional, educational, or life experiences. The research question of this chapter is: Do common experiences predict bureaucrats' collaboration?

My empirical expectation is that similar events in the past (by chance or decision) shape experiences that ultimately increase the probability that officials decide to collaborate with others who have been exposed to these similar experiences. The ultimate explanation for these behaviors is the existence of cognitive biases associated with in-group bias.

In the first section, I explore explanations about bureaucrats' behavior based on bounded rationality and cognitive bias. Secondly, I explain in-group bias and common experiences as a source of in-group bias explaining collaboration effects. I then describe the research design of the conjoint experiment, present results, and discuss how in-group bias and common experiences might be considered while studying inter-personal collaboration.

This chapter's contribution is to offer theoretical insights and valuable empirical evidence for collaborative public management and behavioral public administration. The experimental evidence expands the study of a broader range of meaningful social identities that accurately portray human behavior (Thaler & Ganser 2015) and the predispositions

of public servants in the context of public organizations. I envision this chapter as a starting point for a dialogue about the role of a behavioral approach within collaborative studies and public administration scholarship and the practical implications and novel activities (such as the popular “nudging” strategies in behavioral sciences) to deal with the cognitive bias that arises in bureaucrats' interactions.

### 4.2. Bounded rationality and cognitive bias: an approach to bureaucrats' behavior

Perspectives on evolutionary psychology and behavioral sciences explain bureaucrats' behavior based on the limitations of human cognition. These approaches have built on the existence of the homo sapiens, endowed with bounded rationality. The Nobel Prize Winner Herbert Simon (1956) created the concept of bounded rationality to show how individuals cannot make optimal choices in predictable ways. Before studying human behavior from bounded rationality, the models based on expected utility in rational theory were the dominant paradigm to describe decision making. The core assumptions of the expected utility theory are a comprehensive knowledge of the environment, individuals' ability to organize preferences, and the selection of optimal solutions (Bernoulli 1954).

What rational choice models do not address are the cognitive biases that arise when individuals make optimal decisions. More broadly, biases result from three significant types of heuristics: representativeness, availability, and adjustment and anchoring (Tversky and Kahneman 1974; Das & Teng 1999). *Representativeness* refers to the tendency to "imagine that what we see or will see is typical of what can occur," *availability* is the condition where individuals imagine "what could happen based on similar past

situations" (Hogarth 1980, 217 in Das & Teng 1999), and *anchoring* is the tendency to decide based on initial assessment, but not enough adjustment in the future. Each of these heuristics results in potential bias.

Simon argues that public organizations can deal with this situation by employing "debiasing" techniques or procedures that compensate for employees' inability to compute in a complex work environment. These computational problems are overcome through heuristics. Nevertheless, these heuristics (Kahneman, 2011; Tversky & Kahneman, 1974) also have systematic errors, which can be predicted under certain conditions (Ariely, 2010; Gardner, 2009). Understanding that biases exist and can be intervened has led to a boom in studies on nudging theories in the public sector (Thaler, 2015). Nudging theories seek to explain how to alter people's behavior without changing their economic incentives (Thaler & Sunstein 2008), such as positive reinforcement and indirect suggestions.

In Public Administration, the study of cognitive biases has been related to understanding their effects on managerial decision-making processes and performance (Bechger, Maris, and Hsiao 2010; Jacobs and Kozlowski 1985; Cornelissen and Werner 2014; Belle et al. 2017). These biases affect how managers process information from the external environment. The literature has described biases as factors such as ideology, personal interests, and professions that shape how managers behave (Keiser 2011; Workman, Jones and Jochim 2010). In practical terms, this means bureaucrats can respond differently to the same information based on their own biases (Goggin et al. 1990).

In general, behavioral public administration studies have applied behavioral micro-foundations based on psychology to the transformation of bureaucrats' attitudes and

behavior. Still, research is scarce on understanding how cognitive bias operates in the context of bureaucratic collaboration. Exploring how cognitive biases affect public workers is essential to understand the causes and consequences of systematic biases that may affect collaboration.

The following section explains the bias that I test empirically: in-group bias is the underlying mechanism that explains why common experiences activate public servants' collaboration.

### 4.3. In-group bias

In-group bias is the cognitive tendency to give preferential treatment to those who belong to the same group. This bias is also known as in-group favoritism. Research on in-group bias has shown that group membership affects the perception of those people who are part of a particular group even if they are part of that group at an unconscious level (Hewstone et al. 2002). In-group bias is part of a subcategory of biases described in the Cognitive Bias Codex (Benson 2019) as those that help people give meaning to decisions relying on a limited set of information.

The most prominent theory that explains the causes of in-group bias is the social identity theory, which posits that identities are social categories that make individuals feel positive about themselves compared to other groups (Turner & Oakes 1986; Tajfel et al. 1979). Billig and Tajfel demonstrated that categories operate in the same way when people decide what group they want to belong to or are randomly assigned to a group (1973). Therefore, it is essential to understand that people can be assigned to these categories

either by decision or by random assignment. Thus, in-group bias is something that can be sharped and used or broken down by managers as needed.

The cognitive associations that appear after repeated exposure are crystallized in stereotypes (Devine, 1989). The stereotypes are internalized passively and can act in automatic responses to social dilemmas (Rydell & McConnell, 2006). Individuals utilize stereotypes to fill informational gaps by attributing to a group of people certain qualities without having a lot of information. A negative consequence of this fact is the appearance of in-group favoritism that, from a radical perspective, can result in discrimination attitudes (Gaertner et al. 2016). Therefore, in-group bias goes beyond kindness to the in-group members as it can spill over into harm towards the out-group members. Neuroimaging evidence shows that people that face decisions related to who to work with have a neural activity that correlates differently to in-group and out-group members (Dunbar 2011, Molenberghs 2013). In particular, the activation of the medial prefrontal cortex when there are social categorization problems indicates that in-group favoritism exists at the brain level and shapes "social identities" as attributes that we derive from belonging to a specific group.

Besides in-group bias, three streams of Social Psychology literature predict the expectations that common experiences influence collaboration: the familiarity hypothesis's explanations, the common in-group model, and the contact hypothesis. Research on this topic shows that individuals create more emotional bonds with the groups they are familiar with (Molenberghs & Morrison, 2014). This situation is due to the activation of the ventral medial prefrontal cortex, a region associated with self-referential

processing (Northoff et al., 2006). From an evolutionary perspective, this social categorization allows efficient functioning because the ability to sort people into a smaller number of categories is a spontaneous and minimum effort task for humans (Gaertner et al., 2016).

All these hypotheses and models refer to the fact that categorization often occurs when people feel that they have physical similarity, proximity, or shared fate with other individuals (Campbell, 1958). In some way, in-group biases are connected to *availability* bias. Individuals act using information from similar past situations because people make decisions based on past information or perceptions about events or people that have particular meanings for them.

When public servants feel proximity to their colleagues, there are evaluative biases where they tend to attribute more positive characteristics to in-group members than out-group members. In this context, individuals argue that out-group members are responsible for adverse outcomes and in-group members receive more credit for positive effects than deserved.

Another effect is interaction biases (Brewer 2001) that result in greater collaboration with in-group members. In their seminal work about in-group bias and cooperative behavior, Ruffle and Sosis found that Israeli kibbutz members cooperate more with members of their kibbutz than with city residents (2006). The common experience of being part of some collectivity or group (like the kibbutz) gives people a sense of membership that allows people to have more positive thoughts, feelings, and behaviors by belonging to the group.

The expectation in these settings is that all group members share those attitudes and behavioral dispositions, anticipating successful cooperation strategies in the future. Like other social identities, there is an expectation of reciprocity when memberships are activated, which increases the likelihood of cooperation. Additionally, in-group favoritism may trigger discriminatory actions that result in lower collaboration towards people who do not belong to the same group (Weeks et al. 2017).

Although research on in-group biases has been broad across fields, studies that explore cognitive biases in bureaucracies are more recent and scarcer. A systematic review conducted by Battaglio et al. (2019) showed that research in public administration falls into the categories of accessibility, loss aversion, and overconfidence/optimism. Scholars in the field have explored the unconscious bias that explains how representation occurs (Akram 2018; Raaphorst & Groenevel 2019). Previous research in public administration has focused on studying three central identities—race, ethnicity, and gender—tied to immutable and visible demographic characteristics (Meier and Morton 2015; Close et al. 2009; Thielemann and Stewart 1996). Besides this general approach from the literature on representative bureaucracies, there is less work exploring cognitive in-group bias and its consequences on public servants' interpersonal collaboration. There is also a lack of research on identities that are not a consequence of gender and/or ethnicity but on other identity sources such as having similar life experiences.

### 4.4. Theory: Common experiences as a source of in-group bias that impacts collaboration

Based on behavioral sciences literature, including psychology and neurosciences, I argue that common experiences allow people to have positive attitudes and behaviors of people in their same group, leading to positive interactions and the anticipation of successful collaborative strategies at different points in time. Common experiences store information that acts as cues when they make decisions. Common experiences are junctions of place or time that give meaning to human experiences through events such as attending the same university, having the same profession, or being born in the same city. They can be a result of random chance or deliberate choice.

This chapter argues that the significance of common experiences does not depend on whether people decide on them or not because neural correlations that are involved in the formation of preferences can be explicit and implicit (Molenberghs 2013). This means that identities can be activated through self-identification with a specific profession or graduated from certain universities and through an unconscious process where people have stored information in their brains derived from having a common experience.

A common experience is not assumed as a source of self-referred explicit group membership in this last case. Still, it is a latent identity that can be activated in the future. For instance, it is possible to observe people who feel stronger bonds with their professions and even introduce themselves as lawyers, engineers, etc. That might not be the case for all professions, some places of origin, or universities. Still, there is always the chance that they are activated when they encounter someone who comes from the same place or has

the same profession, especially if that individual introduces or presents themselves in that way, thereby making the identity salient.

In general, common experiences give meaning to people. For instance, some universities' attendance is connoted by multiple symbols or events that remain in the memory of those students who have gone through the same process. Rituals, symbols, and places (e.g., rings for graduation, fraternities, etc.) shape students' common identities. Similar dynamics are found in professional and geographically-based identities. In all these examples, events resulted in memories whose activation trigger positive or negative feelings towards the members of the same category or group.

Another way through which in-group bias is activated is by using language that facilitates bureaucrats' cooperation. Common jargon and symbols shared by the same profession or a shared place of origin might trigger feelings of familiarity because positive stimuli are perceived as familiar (Housley et al. 2010), generating positive perceptions of the in-group member.

In-group bias operates in the same way if people decide to belong to some groups or if people end up being part of those groups by random assignment. Because they are all common experiences, they shape that sense of belongingness no matter whether they are aware of it. One of Billig & Tajfel's (1973) main findings is that people are willing to help members of their in-group regardless of why that group was formed in the first place.

Like all cognitive biases, in-group bias happens without people realizing it. Having an in-group to belong to gives rise to "group heuristics," which is the expectation of

reciprocity from in-group members, but not necessarily out-group members (Ruffle & Sosis 2006).

Previous research in Public Administration has identified that people who belong to the same professions make systematic reasoning errors that bias decisions, such as medical doctors (Blumenthal-Barby & Krieger 2015) or judges (Guthrie, Rachlinski, & Wistrich 2001). Other studies have investigated how bureaucrats' location may affect their behavior (Kaufman 1960 in Keiser 2011) because of ideological attributes of specific territories (Gimpel and Schuknecht 2004 in Keiser 2011).

I argue that identities are also constructed around individuals' common professional and educational experiences, such as studying in the same universities, having the same professions, or coming from the same place of origin.

Therefore, this chapter expands these findings from cognitive research applying them to understanding bureaucrats' behavior. As mentioned before, profession, place of birth, and education are examples that we use to categorize people as belonging either to the in-group or out-group (Molenberghs 2013). Therefore, through categorization processes, bureaucrats (as humans in general) create automatic representations of the people belonging to a particular label creating inclusiveness of members in that group. Those feelings activate dispositions to collaborate with people within those cognitive boundaries.

Then, in-group favoritism is caused by the activation of these dispositions and the positive feelings we have due to our identification (active or latent) with social groups. The assumption that public employees will collaborate based on the same experiences is also supported by the familiarity hypothesis (Fox & Levav 2000; Huddy & Virtanen

1995), which has been tested in social psychology, demonstrating people's variation's judgment is based on the level of familiarity. In bureaucrats' minds, this skewed attention results in biases where collaboration with people who remind them of familiar events is judged more favorably.

I expected a public employee in the sample to behave in a more collaborative way when she is exposed to another public employee who has common experiences. Bureaucrats store information based on their common experiences, which acts as a cue in decision making. In general, previous contact conditions between coworkers create and internalizes supportive norms that motivate group objectives (Meyer-Sahling et al. 2020) and make collaboration more likely. I thus hypothesize:

*H1: Public servants that have common experiences are more likely to collaborate with each other*

The effect of in-group bias on collaboration means preference to work with certain people and not with others. In this chapter, I look only at the question of who they prefer to work, and not who they do not prefer to work with.

One important caveat here is that the neural correlates involved in perceiving others are also influenced by the cultural environment (Singelis et al. 1995; Molenberghs 2013). This means that the effect of common experiences as a source of in-group bias can be exacerbated in contexts with excessive nationalism or regionalism, for instance. When dealing with negative attitudes toward other individuals, in some places, it might be more acceptable than in others to discriminate based on place of origin, profession, or

educational experiences. By contrast, social norms in other contexts might favor favoritism in allocating benefits to some group members. Cultural norms might then reinforce or diminish the effect of common experiences as a source of in-group bias, therefore affecting its impact on bureaucrats' collaboration.

### 4.5. Research Design

I test the hypothesis using a conjoint experiment and a survey applied to 899 public employees who work in 9 large (more than 200,000 inhabitants) and small (less than 200,000) cities in Colombia. Previous research in collaborative public management has studied the problem of collaboration, relying on the study of post-collaboration performance metrics and network analysis. Scholars have identified methodological weaknesses related to the study of collaboration in public administration, which are "weak empirical validation and a greater reliance on the anecdotal description" (O'Leary & Vij 2012, 517). Additionally, there are problems related to the unit of analysis. The high variation at the individual level in the conjoint experiment allows me to address some of these methodological challenges.

First, this methodologic strategy compares the effects of multiple social identities based on the individual potential behavior as the unit of analysis. Although there is less research on inter-personal collaboration, capturing interpersonal interactions through the experiment seems appropriate for identifying bureaucrats' dispositions. The treatment is applied to people in different municipalities, and I can attribute the accounting of unobserved variation to this random assignment.

The conjoint experiment asks respondents to choose between two profiles reflecting randomly assigned values (Hainmueller et al. 2014). These attributes are related to social identities based on cultural traits (gender and ethnicity) and identities based on common experiences (university, profession, and place of birth). Public employees were asked which of the two coworkers they would like to work with to solve a common problem in their job.

The experiment follows a design where bureaucrats have to make decisions in four forced-choice subsequent rounds. Each round has two profiles where they chose between "public servant 1" and "public servant 2". A total of 899 participated in the study. Since each participant had 8 potential profiles, there were 7,192 profiles in the analysis. I randomized the values of five attributes of these two hypothetical public employees: gender, ethnicity, profession, university, and birthplace. Table 4-1 lists the options for each attribute. The statistical power of the experiment is 90%[9].

[9] Statistical power here is defined as the "probability to detect a non-zero population effect for a binary hypothesis" (Stefaneli and Lukac 2020, 11). Its calculation is based on the sample size, number of tasks performed by a respondent, the number of values in an attribute and the size of the measure effect.

Table 4-1 Attributes and options in the conjoint experiment

| **Attribute** | **Options** |
|---|---|
| Gender | - Woman<br>- Man |
| Ethnicity | - Afro-Colombian<br>- Indigenous<br>- White or mestizo |
| Profession | - Lawyer<br>- Engineer<br>- Accountant<br>- Economist |
| University | - Universidad de los Andes<br>- Universidad Nacional<br>- Main regional public university<br>- Main regional private university |
| Place of birth | - Bogotá<br>- Venezuela<br>- Regional capital<br>- The second-largest regional city |

The category of gender has two possibilities: men and women. For ethnicity, the categories selected are "indigenous, Afro-Colombian, white or mestizo.[10]" For choosing the options for the common experiences' values, I identify the most salient and

[10] Indigenous, Afro-Colombian, white and mestizo are the most prevalent ethnic groups in the country. According to the National Census in Colombia 2018, indigenous population is 4% of the population, 7% perceived themselves as Afro-Colombian and 87% are white or mestizo.

representative set of possibilities, seeking to match bureaucrats' profiles in the sample with the demographics of bureaucrats' population in Colombia. Based on a study of the job market in Colombia (SIGEP 2019), the professions with more representation in public service are lawyers (31%), engineers (13%), accountants (9%), and economists (5%). These four alternatives were the selected options for that category "professions."

In terms of universities, four options were fully randomized. Two of those options are Universidad de los Andes and Universidad Nacional, the most prestigious private and public universities in Colombia, and where most public servants attend college. The other two options changed depending on the region getting a balance between private and public universities. For instance, for public employees in Cartagena, the possibilities were Universidad de Cartagena (public) and Universidad Tecnológica de Bolivar (private). The attribute of having attended the same university was coded for both the undergraduate level and graduate level. The expectation is that at both levels of education (undergraduate and graduate), having gone to the same university creates similar experiences (e.g., symbols) and opportunities (e.g., networks).

Lastly, for the place of origin, the constant options were Bogotá (the capital of the country and where the highest number of bureaucrats are), Venezuela (as part of a separate project about bureaucrats' attitudes towards migration), and two cities of the region (the local capital and another small size city). To assess the impact of common experiences, it was necessary to link public servants' biographical details to the conjoint experiment's potential profiles. The online survey platform (Qualtrics) allows me to randomly assign attributes into the survey version that correspond to the region that person is living in.

Figure 4-1 shows a typical profile comparison from the conjoint experiment applied in Medellín (this profile is the one included in the experiment in Spanish. See Figure 4-2 for the translated version). The question asked is: "*Think about the most common problem that comes your way. Use the information in the table below to decide who you would prefer to work with to solve the problem. Without having more information, which of the two types of employees would you rather work with to solve that problem?*" The table includes attributes related to ethnicity, gender, place of birth, profession, and university.

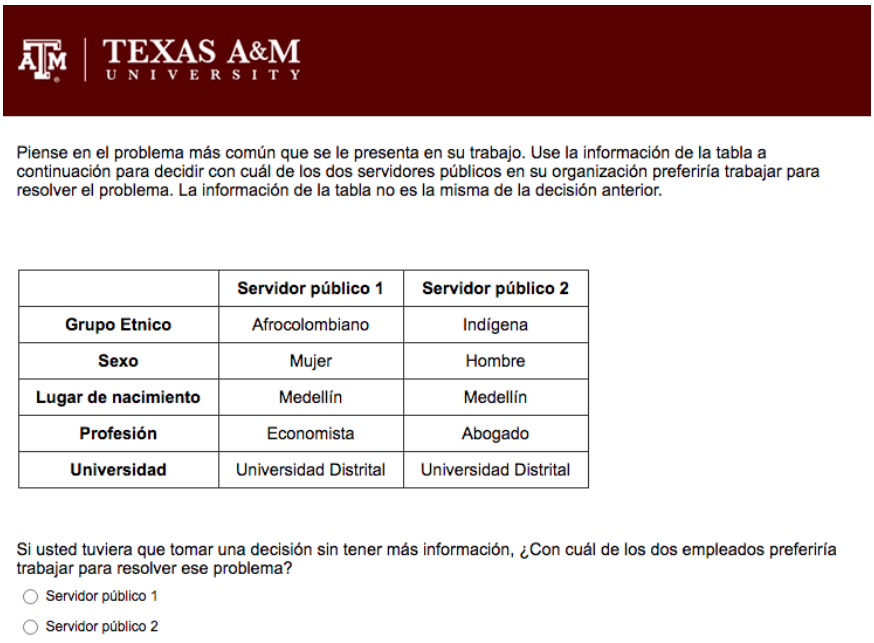


Figure 4-1 Example of profile comparison in Spanish (included in the experiment)

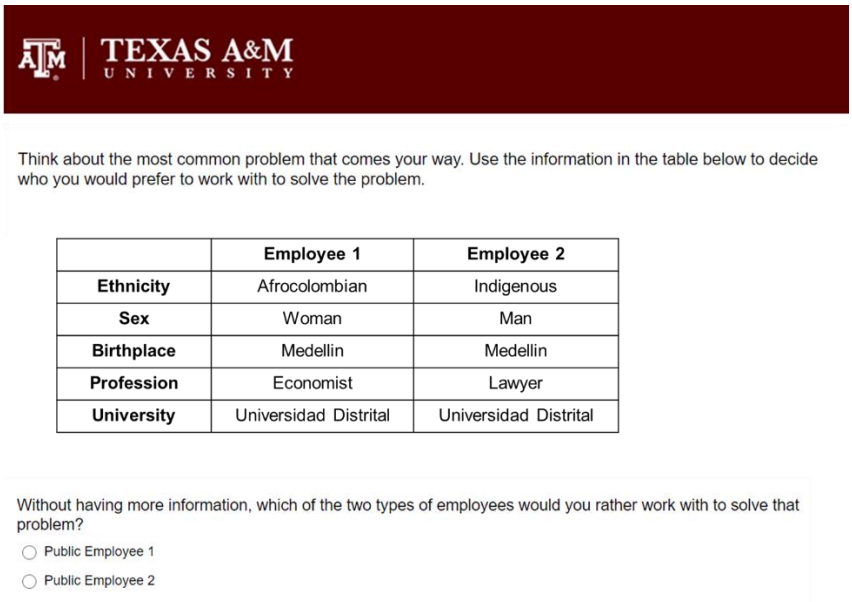


Figure 4-2 Example of profile comparison in English (translated)

The random assignment of attribute values in conjoint experiments addresses concerns about reverse causality and omitted variable bias, which is a challenge in observational studies (Meyer-Sahling et al. 2020). There were no assigned weights to attributes; then, each value has an equal probability of appearing in the profiles. The design also randomizes the order of the attributes in the profiles for each respondent. The multiple randomization process is a valid strategy to address potential violations of the equal randomization assumption and mitigate choice order effects (Strezhnev, et al. 2013).

In studies based on survey strategies, it is also quite common to have social desirability bias because respondents might feel pressured to respond in a way that will be view favorable by others. Although social desirability is not entirely eliminated, this issue

is mitigated in the conjoint experiment because public servants do not need to reveal the reasons why they pick one or another option.

Another advantage of these designs is the possibility of assessing different attributes simultaneously, offering more realism in the elicitation of preferences as they involve trade-offs between characteristics (Hainmueller et al. 2014). Although the experiment is itself a hypothetical collaboration decision, there is some evidence that findings from conjoint experiments are consistent with real-world behavior (Hainmueller et al. 2015). In this case, it is also feasible that bureaucrats face situations in their daily life like the ones described in the experiment's tasks.

A potential weakness of the conjoint design is the low probability that individuals in the sample have interacted with the hypothetical colleagues' profiles. However, the attributes were draft based on actual characteristics of the universe of bureaucrats in Colombia.

After responding to the questions of the conjoint experiment, participants filled out a survey. It measured subjects' perceptions about collaboration in their workplace, social capital, technology, gender perceptions, and sociodemographic characteristics such as gender, educational background, profession, place of birth, years in the organization, rank, and other variables.

I pre-tested the instrument in July 2019 with public employees in Cartagena, Colombia. The adjustments based on pretest results make the instrument more valid and reliable because the instrument's final version has a more accurate definition of attributes that are consistent with public employees' sociodemographic characteristics. Also, in the

pretest, I measured the level of understanding of instructions of the tasks that were included in the conjoint experiment.

### 4.5.1. Case selection

To assess the hypothesis, it is necessary to have a sample with enough variation for meaningful comparisons between social identities. Therefore, I conducted a large individual-level study in Colombia. A case study based on Colombian data has the advantage of giving continuity to two previous studies of a broader research project that explored the consequences of inter-personal collaboration and its causes based on a mixed-method research design (chapters two and three).

I applied the instruments to local governments that vary in culture, socioeconomic development, and bureaucrats' professional background. This methodological strategy is appropriate to observe whether findings of the effects of common experiences travel to diverse cultural and socioeconomic contexts. The country has more than 50 million people and 1.9 million public employees from all professional backgrounds and cultural traits, which maximizes the required variation expected from the sample. On the other hand, all regions in the same country enable meaningful inferences with comparable units because the same legislation rules all local governments in Colombia for hiring public employees.

Figure 4-3 shows the number of observations in each city in Colombia (the name in parenthesis are the department's names or provinces where the towns are located). The surveys in Medellín (84 surveys) were applied in the Secretary of Education and Participation. In Cartagena, 229 employees participated from different agencies. Three municipalities from Secretaries of Social Integration of Santander are represented

(Bucaramanga, the regional capital, Piedecuesta, and San Vícente) with 123 surveys. A total number of 385 public employees that live in Bogota participated in the study. Out of this number, 205 work in the Secretary of Transport and Mobility, and 180 work in the Procurator Office at the national level. There are no observations from regions in the south because those areas are mainly the country's jungle area.

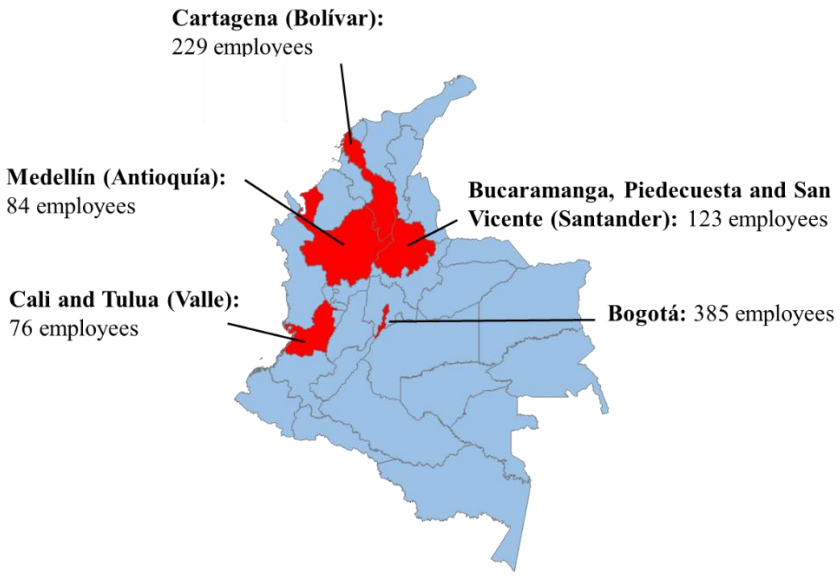


Figure 4-3 Distribution of observations in the sample

The public servants that participated in the study are comparable across local governments. All of them are public employees across different ranks and types of

contracts[11]. Most importantly, they have diverse professional and educational trajectories. The surveys were online via Qualtrics based on massive email distribution from Human Resources offices in each agency. In each local government, I got authorization for applying the study from Secretaries or top-level managers that were contacted through local contacts in each region.

On average, 57% of the sample are women, the average number of children is 1.3, 81% have a bachelor degree, technical education degree, or higher, 40% have a stable contract (career), and 66% are at the professional or technician level in the organization. Survey sample demographics can be found in Appendix C.

### 4.6. Results

The chapter estimates linear probability models (LPM) with standard errors clustered by respondent. The dependent variable is the decision of collaboration, and the independent variables are the varied values of the four attributes. The randomized conjoint analysis is a robust experimental design that helps decompose composite treatment effects (Hainmueller et al. 2014). Further, the conjoint analysis helps identify causal effects of

[11] The decree 785 of 2005 established the classification of the hierarchical levels (rank position) of public employees based on their competencies and the nature of their functions. Specifically, there are five categories: Director or manager, advisor, professional, technician and assistance level.
Regarding type of contract, the Colombian Constitution of 1991 defined "public employees" as all the individuals who work in public agencies. Depending on the temporary nature of their work, they can be permanent career public employees (those employees who have stable contracts), free appointment (those who are appointed and removed at discretion of their bosses) and provisional (those employees who held the job just temporarily until the vacancy is formally filled). There is a four category of public employees that are called "contractors". Law 80 of 1993 defined that contractors are those individuals who perform specific technical tasks and who do not have a labor relationship with the state, which means that they do not have health insurance or other benefits. Approximately 45% of all public employees are contractors (Fasecolda 2018).

different components of treatments in survey experiments. In this case, this tool allows me to estimate the relative influence of an attribute related to common experiences on the choice of who to collaborate with.

The findings here are based on two analyses. First, I analyze the effects of each of the attributes on a public employee's probability of being selected. The second round of analyses explicitly tests the hypothesis related to common experiences. It assesses whether public servants recognizing common experiences in another bureaucrat are more likely to collaborate with that person. For this part of the analysis, new variables matched the social identity attributes of the conjoint and the respondent's characteristics using the sociodemographic information provided in the survey.

Table 4-2 shows the regression results of the analysis of all attributes. The estimates in this model represent the average marginal component effects (AMCE) of each attribute. The substantive meaning of AMCEs in the conjoint experiment is the differences in the likelihood that an employee would prefer to work with a coworker with specific attributes relative to baseline values. Findings show the differences between the total effects and effects by region to illustrate how most of the results are constant across regions and do not depend on any particular regional distinctive feature.

Figure 4-4 shows the analysis of the potential outcomes with treatment profiles. This figure reveals that some professions, sex, ethnic group, birthplace, and university attributes are significant predictors of collaboration. Overall, public employees prefer to collaborate with bureaucrats born in the same region, went to public universities, are women, and are Afro-Colombian.

Regarding professional background, respondents are less likely to work with engineers, accountants, and economists. However, this result is conditional on the specific region. For instance, public servants in some regions prefer to work with lawyers, but this result is barely significant at p=0.089.

On the other hand, respondents are more likely to collaborate with bureaucrats from public universities than private universities. This result is constant across regions except for Bogotá and Valle. Santander is the only department where individuals are more prone to work with coworkers who have studied in universities from the same region.

In terms of place of birth, the likelihood to collaborate increases when a respondent recognizes that a public employee profile was born in the same region. Across all regions, hypothetical profiles from Bogotá or Venezuela are less likely to be picked.

The results suggest that the effects of social identity attributes are context-specific and that regional cultural norms can reinforce some identities' impact. For instance, in Cartagena and Valle, where there are more afro-descendants in the population, bureaucrats are more likely to work with people from this ethnic group. In Santander, a region with cultural traits and traditions that value women's role in society ("matriarcado"), public employees prefer to work with women. The results around common experiences seem to be more homogeneous across regions than gender and ethnicity.

Table 4-2 Conjoint experiment results for general analysis by territory

| | | All sample | Bogota | Medellín | Cartagena | Santander | Valle |
|---|---|---|---|---|---|---|---|
| **Attribute** | **Option** | **Estimate** | **Estimate** | **Estimate** | **Estimate** | **Estimate** | **Estimate** |
| ***Profession*** | *Lawyer* | 0.051 (0.098) | 0.209* (0.123) | -0.079 (0.272) | 0.336* (0.172) | 0.363* (0.209) | 0.519* (0.300) |
| | *Engineer* | -0.212** (0.096) | -0.028 (0.129) | 0.013 (0.298) | -0.243 (0.156) | 0.252 (0.217) | 0.385 (0.321) |
| | *Accountant* | -0.494*** (0.095) | -0.430*** (0.123) | -0.344 (0.218) | -0.160 (0.157) | -0.132 (0.191) | -0.034 (0.322) |
| ***University*** | *Public* | 0.228*** (0.058) | 0.087 (0.091) | 0.360* (0.190) | 0.307* (0.119) | 0.456*** (0.157) | 0.224 (0.212) |
| | *In the same region* | 0.052 (0.050) | Omitted | 0.121 (0.199) | 0.086 (0.107) | 0.323** (0.141) | -0.204 (0.191) |
| ***Birthplace*** | *Same region* | 0.232*** (0.064) | -0.178 (0.114) | 0.258 (0.202) | 0.736*** (0.139) | 0.082 (0.332) | 0.048 (0.257) |
| | *Venezuela* | -0.824*** (0.080) | -0.917*** (0.113) | -0.891*** (0.289) | -0.421* (0.164) | -0.763** (0.358) | -1.456*** (0.252) |
| | *Bogota* | -0.222*** (0.067) | 0.277** (0.112) | Omitted | Omitted | -0.656* (0.347) | -0.717*** (0.253) |
| ***Gender*** | *Woman* | 0.198*** (0.055) | 0.137 (0.083) | 0.203 (0.178) | 0.174 (0.109) | 0.445*** (0.162) | 0.132 (0.189) |
| ***Ethnicity*** | *Afrocolombian* | 0.184*** (0.065) | 0.132 (0.101) | -0.223 (0.231) | 0.391*** (0.134) | 0.072 (0.172) | 0.369* (0.221) |
| | *Indigenous* | 0.082 (0.066) | 0.070 (0.105) | -0.181 (0.204) | 0.136 (0.134) | 0.170 (0.173) | 0.064 (0.238) |
| ***No. conjoint observations*** | | 6,058 | 2,604 | 548 | 1,484 | 870 | 536 |

*Note*: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$, standard errors in parentheses

Omitted variables correspond to variables omitted in the models due to collinearity

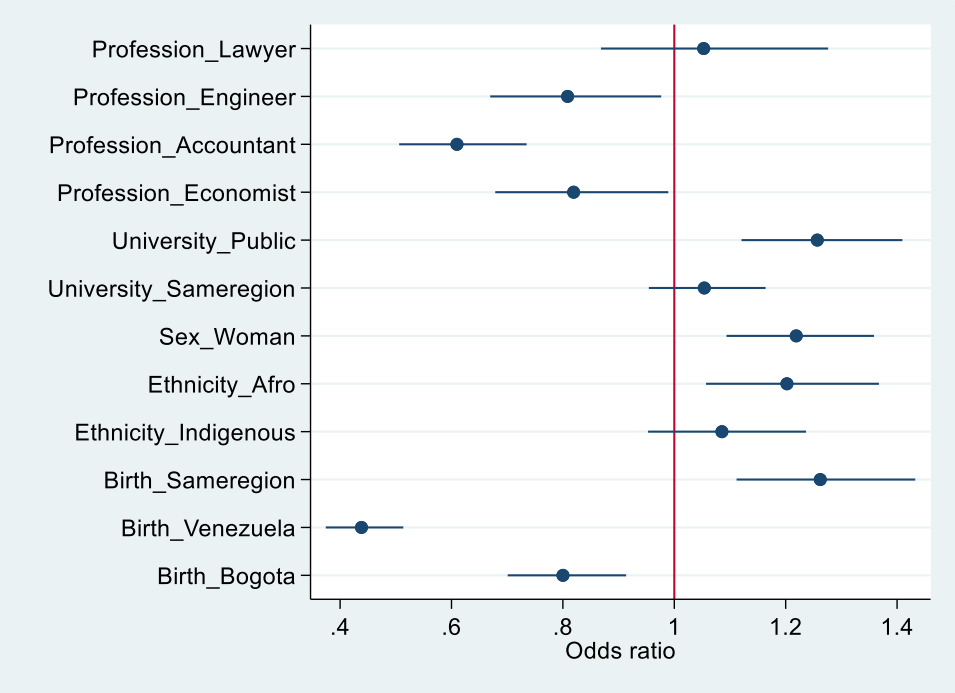


Figure 4-4 Odds ratio conjoint experiment results for general analysis

Table 4-3 presents the findings for the conjoint effects of having similar social identities by territory. To ease interpretation, Figure 4-5 compares the conjoint effects across social identities. Consistent with the chapter's hypothesis, I find that similar common experiences are positively associated with a greater collaboration level in public service. In other words, bureaucrats that identify a coworker with the same profession, have studied in the same university, or were born in the same city are more likely to work with that type of profile. These results are consistent across all regions, except for Medellín, where the profession is not significant. Similarly, people prefer to work with colleagues from the same ethnicity. The variable of gender, by contrast, is not significant.

The excluded category in the variable profession in Table 4-3 is “Economist”, in university is “Private”, in gender is “Woman” and in ethnicity is “White or mestizo”. I implemented a robustness check to enhance confidence in the validity of inferences. Specifically, I assessed whether potential discrimination attitudes might be influencing the decision-making processes in the experiments. I use the level of agreement with the statement, "in my office, men work better than women." Although this variable only evaluates gender discrimination, it is a symptom of a possible general level of discrimination. The variable has no effect on results.

Table 4-3 Conjoint experiment results for social identities analysis by territory

| | **All sample** | **Bogota** | **Medellín** | **Cartagena** | **Santander** | **Valle** |
|---|---|---|---|---|---|---|
| **Attribute** | **Estimate** | **Estimate** | **Estimate** | **Estimate** | **Estimate** | **Estimate** |
| ***Same profession*** | 0.631*** | 0.793*** | -0.308 | 0.350** | 0.559** | 0.875*** |
| | (0.086) | (0.124) | (0.462) | (0.177) | (0.235) | (0.218) |
| ***Same university*** | 0.447*** | 0.306* | 0.755** | 0.485*** | 0.368* | 1.417** |
| | (0.105) | (0.174) | (0.365) | (0.180) | (0.220) | (0.682) |
| ***Same birthplace*** | 0.510*** | 0.468*** | 0.831*** | -0.322 | 0.621*** | 0.596** |
| | (0.085) | (0.125) | (0.250) | (0.314) | (0.196) | (0.252) |
| ***Same gender*** | -0.079 | -0.014 | 0.145 | -0.164 | -0.107 | -0.277 |
| | (0.051) | (0.077) | (0.158) | (0.103) | (0.154) | (0.185) |
| ***Same ethnicity*** | 0.249** | 0.224 | -0.460 | 0.399*** | -0.806 | 0.225 |
| | (0.107) | (0.236) | (0.426) | (0.153) | (0.491) | (0.279) |
| ***No. conjoint observations*** | 6,058 | 2,604 | 548 | 1,484 | 870 | 536 |

*Note*: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$, standard errors in parentheses

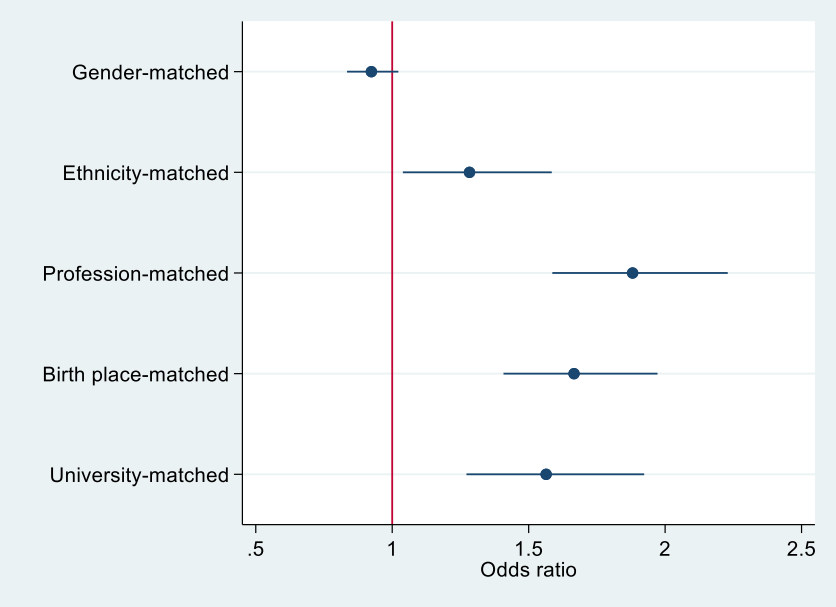


Figure 4-5 Odds ratio conjoint experiment results for social identities

## 4.7. Conclusion

This chapter builds on behavioral public administration and theories from psychology and neurosciences to explain collaborative behavior at the individual level. The study contributes to the literature on collaborative public management by providing the first experimental inter-personal collaboration test on public sector employees. Using a framework of cognitive biases, the conjoint experiment findings show that common experiences make bureaucrats more likely to work with coworkers that they perceive have those similar experiences.

Specifically, bureaucrats are more prone to work with others that have attended the same university, have the same profession, and were born in the same city. By recognizing people from the same origin, professional background, or educational events,

bureaucrats will be more likely to recognize familiarity with previous events and activate predispositions to collaborate with those individuals.

The in-group bias framework introduced in this chapter helps understand why common experiences are a helpful category to explain how people collaborate with others who belong to the same group. This chapter recognizes that environmental factors such as organizational structures and cultural context matter, but the emphasis is on analyzing individual attributes as an explanation for collaboration.

My goal was to make a twofold contribution to the advancement of research into collaborative public management. First, to the best of my knowledge, this is one of the first studies to investigate how cognitive biases based on common experiences affect the decisions made by public sector workers. Previous research has focused primarily on management decisions and the study of race, gender, and ethnicity. Second, I provided a novel methodological approach to testing the causal mechanism underlying bureaucrats' collaboration. The results of this chapter have relevant implications for public administration and management of public organizations.

### 4.8. Implications for Public Administration Practice

There are two main implications of this work on public administration practice. First, systematic cognitive biases in bureaucratic collaboration processes might result in outcomes that affect public administration. On the one hand, public employees' predispositions to prefer working with certain bureaucrats' profiles with common experiences can strengthen solidarity and collaboration networks that benefit public policy

outcomes. However, if cognitive biases are crystallized and internalized in stereotypes, public servants can exclude and discriminate those coworkers who they perceive do not belong or share their similar experiences.

Recent work in behavioral sciences has analyzed how these stereotypes can be deactivated in some way. In-group bias is a cognitive process that can be sharped and used by managers. Managers then should be aware of human nature's realities when designing human resources training or teamwork strategies. In particular, there are strategies to mitigate the impact of stereotypes on bureaucrats' collaboration and exacerbate a collaborative network's positive effects.

Some of these strategies are called "debiasing techniques," as mechanisms that public organizations can use to face cognitive limitations. Nudging represents viable tools for public managers interested in transform the negative consequences of social identities. The "nudge" concept is "the idea that bureaucrats can make minor changes to choice architecture to improve people's behavior" (Thaler & Sunstein 2009).

In this particular situation, managers can encourage face-to-face interaction between members of distinguishable groups to reduce prejudice. Intergroup contact is described in the literature as an effective tool for changing beliefs about the out-group. One practical example for managers is to invest in workshop or team building activities where employees across professions, subgroups, and ranks recognize the value of interdisciplinarity and diversity as essential assets for developing collaboration efforts.

Even if people do not belong to the same original social identity, managers can foster common experiences that shape common identities in the short and long term. All

the experiences that bring people together (workshops, seminars, teamwork activities, etc.) can result not only in strengthening skills and capacities but also in better conditions for bureaucrats' collaboration. No less important is that these efforts will also be vehicles towards a more inclusive and tolerant organizational environment.

Beyond the academic contribution, the chapter seeks to raise awareness among public managers and employees that human decisions can be influenced by some conscious and unconscious factors that sometimes are out of our control. However, managers can promote strategies that benefit from cognitive biases and reduce the impact of stereotypes resulting from these deviations from rational decision-making.

Future research is needed in related areas. First, scholars in the subfield of collaborative public management should engage in more experimental work and multi-method techniques that estimate the impact of cognitive biases in public administration in other countries and contexts. Additionally, a new analysis should include the importance of environmental factors such as the organization's culture and characteristics as variables that shape inter-personal collaboration.

Similarly, the field needs studies that test whether providing "debiasing techniques" may actually reduce the risk of stereotyping as a negative consequence in collaboration practices. In general, we need more research about how our human condition affects how public servants make judgments, create preferences, and behave in their organizations.

# 5. CONCLUSIONS

This dissertation builds on the collaborative public management and networking literature to explore the initial conditions that activate and sustain bureaucrats' collaboration. I also analyze how managers' actions that promote collaboration positively affect performance. In this chapter, I briefly summarize the main findings and contributions of each chapter to the study of the causes and consequences of bureaucrats' collaboration and offer ideas on areas of future research and practical takeaways for managers.

## 5.1. Causes and consequences of bureaucrats' collaboration

The role that bureaucrats' collaboration plays in achieving policy goals is an essential topic for academic research and policy intervention. The dissertation highlights the relevance of the inter-personal dimensions of collaboration. The interactions between public employees shape organizational goals, and in consequence, this work is a step towards understanding how collaboration begins and what its implications are. The dissertation assumes that collaboration can also arise from daily interactions between coworkers that can affect the organization's strategic goals. Though this dissertation considers bureaucrats' interpersonal relations as the central unit of analysis, it does not undervalue the importance of collaboration between agencies or consolidated networks.

The dissertation contributes to the less developed field of inter-personal collaboration through three interrelated contributions based on a multi-method research design with survey analysis, interviews, and a conjoint experiment. This research design

allowed me to accomplish the following two specific objectives: 1) Identify the effect of collaborative public management on organizational performance; 2) Establish the characteristics that affect bureaucratic collaboration.

Chapter 1 achieves the first specific objective by exploring teamwork activities as a strategy to promote inter-personal collaboration and performance. In particular, the chapter asked whether management actions that promote collaboration – expressed as teamwork activities – among coworkers affect organizational outcomes. In a quantitative analysis, I find that managerial actions that promote teamwork activities predict higher organizational performance levels measured as fiscal performance and outcomes in a specific policy such as education.

The first chapter also offers insights into how managers' actions can impact policy performance through teamwork activities. Teamwork strategies can enhance collaboration and trust-building processes among coworkers in the organization as they facilitate bureaucrats to work together, increase sharing of information among them, and reduce information asymmetries. These activities foster collaboration and trust-building processes, creating joint efforts for achieving organizations' goals.

The second objective of this dissertation was accomplished through Chapters 2 and 3. The second chapter analyzes the determinants of collaboration among public servants based on social identities, trust, and reciprocity. The results show that some social identities trigger bureaucrats to engage in collaborative strategies. After this initial collaborative move, bureaucrats keep collaborating when they are confident that the other

public servant will collaborate and reciprocate in future interactions. Therefore, trust and reciprocity are crucial components of keeping collaboration over time.

In Chapter 2, the qualitative evidence from bureaucrats in Cartagena showed that professionally based identities seem to explain predispositions to collaboration in this case study. Specifically, bureaucrats are more prone to collaborate with other people they have met before in university, previous appointments in other administrations, or other past activities or training. The interviews also show that gender and ethnicity do not seem to explain why people collaborate, at least in the selected case study.

The second chapter's analysis based on bureaucrats' perceptions and interviews showed that trust matters in collaboration processes. The qualitative evidence helped understand how public employees prefer to work with those who have proven to be successful cooperators in the past. Both reciprocity and trust-building processes seem to be endogenously created and maintain over time.

Building on the second chapter's findings about the significant effect of common experiences on collaboration, the third chapter explores the micro-foundations that explain collaborative behavior at the individual level using a conjoint experiment. The random assignment of attribute values in the conjoint experiment addresses some previous concerns about limitations of perceptual data in the previous chapters and, in general, the challenges of observational studies such as reverse causality and omitted variable bias.

The third chapter also includes a novel approach to explaining public employees' collaborative dispositions based on behavioral public administration and psychology and neurosciences theories. The framework of cognitive biases is particularly helpful to

understand why coworkers prefer to work with those they perceive have similar experiences. The in-group bias framework introduced in this chapter emphasizes the importance of individual attributes as an explanation for inter-personal dynamics such as collaboration. Recognizing familiar symbols and events when people identify others from the same origin, professional background, or educational events triggers collaboration.

In these three chapters, I have made three main contributions to the literature on collaborative public management: test implications of interpersonal collaboration on performance; develop a multi-method approach to study causes and consequences of interpersonal collaboration and expand the knowledge about this topic in a case study in Latin America.

1. **Test the conceptual and empirical implications of inter-personal collaboration on organizational performance.**

The dissertation provides a new way to conceptualize collaboration mechanisms in public bureaucracies. By recognizing the difficulty to measure the collaboration process, the three chapters use a definition of collaboration that connects the individual, interpersonal, and aggregate levels of analysis.

Much of the work on collaborative public management has not addressed the importance of studying the top-down and bottom-up perspectives of bureaucrats' collaboration. This dissertation is an effort to reconcile top-down and bottom-up approaches by simultaneously studying individual-level actions, interpersonal dynamics,

and organizational outcomes. Examining how micro-foundations of human behavior cause bureaucrats' interactions in the public service and at the same time affect policy outcomes is an interesting addition to the literature.

2. **Develop a multi-method approach that offers an adequate research strategy and deals with limitations in data about collaboration**

The multi-method research design includes strategies for dealing with a complex research problem. The methodology deals with the origins of collaboration at the individual and interpersonal level, but also with its effects. This dissertation is proof of the added value of multi-method approaches. On the one hand, the quantitative evidence in Chapter 1 offers an overall picture of the broader relationship between managers' efforts to promote collaboration and its effects on organizational performance and a specific policy. However, this analysis did not address the motivations and deep causes of why people decide to collaborate. As data were already collected by a different agency for the first chapter, the dataset has problems in terms of limited collaboration and interpersonal trust measures.

In Chapter 2, the qualitative evidence from interviews constitutes a valuable source of information to explore the linkages between micro and macro units of analysis and improve causal inferences' quality. Then, the dissertation depicts the causal pathway of bureaucrats' collaboration incorporating cues from different methodological strategies.

This mixed-methods approach of Chapter 2 strengthens the findings in Chapter 1 by providing a broader perspective of the causes of collaboration and not only its effects.

The third chapter explores the findings of common experiences as a source of collaboration. It uses a conjoint experiment as a way to address some concerns about causal inference. Also, more observations allow for testing the hypothesis more robustly. While the few observations in the interviews are a limitation for the statistical power, having deep interviews, as the ones presented in this dissertation, is crucial for understanding how collaboration operates in bureaucrats' minds. Conversely, the quantitative analysis allows to compare results between different regions and isolate the effect of the main predictors.

As another result of the process, the multi-method research design created novel datasets in 2019 and 2020 based on the conjoint experiment, survey data, and interviews. Additionally, the project compiled preexisting datasets based on bureaucrats' perceptions and organizational performance measures in Colombia between 2013 to 2018. All these datasets can be used for future research on collaboration or other topics.

### 3. Expand the knowledge about the conditions under which bureaucratic collaboration occurs in a developing country in Latin America

Most analyses of collaboration in public service have been conducted either in the United States or Europe. Although this study is only focused on one country in Latin America, it is an effort to expand research on the region using rigorous research methods.

Thinking about what social identities are salient in the Colombian context is an interesting academic and practical task for understanding public servants' specific dynamics in the region and other developing countries.

Similarly, enormous data collection efforts were needed to analyze specific public policies such as education. Through the data collection process, I learned how to gather data in countries like Colombia, where there are particular conditions of researching in a context with limitations in available data. On the other hand, the enthusiasm and commitment of the almost one thousand public employees who participated in the interviews and conjoint experiment revealed that the willingness to collaborate was not only an important finding of the statistical analysis but a fundamental building block in the process of conducting this project.

### 5.2. Future directions

This section presents the twofold contribution to the advancement of research into collaborative public management and to the practical strategies that can be designed based on the projects' findings.

### 5.2.1. Inter-personal collaboration as a promising area of study in Public Administration

The literature on collaborative public management can benefit from a deep understanding of why fostering inter-personal collaboration can explain organizational performance. As mentioned before, this project bridges the gap between top-down and bottom-up approaches by analyzing both the ability of decision-makers to promote actions and the importance of collaboration and trust-building processes in policy delivery. The findings highlight the importance of studying individual and social attributes in performance studies. Therefore, future strategies should consider both managers' actions and bureaucrats' interactions as organizational development sources.

The dissertation highlighted the importance of collaboration as a central element for improving agency performance. Therefore, the analysis focused on the positive effects of collaboration on organizational outcomes. New research in the future can explore what some authors have called the "dark side" of social capital (Portes & Landolt 1996) and analyze the negative consequences of building strong collaboration practices among bureaucrats in organizations. These adverse effects may appear as worst performance levels at the agency level or exclusion and segregation in bureaucratic interactions at the individual level due to in-group biases.

One of the strengths of this research is a large amount of individual variation in the datasets that were used for the analysis. Additional qualitative and quantitative analyses with the same datasets can observe the significance of individual variation as an

explanation for collaboration in the public service and environmental elements such as regional characteristics or organizational attributes.

The multi-method research design applied to other case studies can provide new insights about causal pathways in other contexts. It might be the case that interactions between aggregate conditions and individual attributes under which collaboration and trust occur are different in other contexts. My theory was applied to a highly professionalized bureaucratic body and decentralized case study in Colombia. Therefore, an extension of this project can test the scope conditions of the theory and address how collaboration operates across organizations in other decentralized and centralized countries with different public service structures and bureaucrats' professional profiles.

Further research can also expand how cognitive biases affect the decisions made by public sector workers regarding collaboration and the consequences of other biases such as representativeness, availability, and adjustment, and anchoring in decision-making processes.

### 5.2.2. Practical implications: Management strategies to increase inter-personal collaboration

It has been over four decades since Axelrod (1984) completed what is largely considered one of the most relevant articles in cooperative behavior literature. Yet this subject continues to remain an important area of interest even today. Notably, collaboration in public administration still has many unanswered questions. In particular,

this dissertation's results have relevant implications for public administration and management of public organizations.

This is the summary of the main takeaways for public managers:

1. **More connections and common experiences improve employees' collaboration.**

Findings from the second and third chapters show that having similar past experiences can increase the likelihood of collaboration among public servants. Additionally, bureaucrats themselves recognize the potential of common experiences when making recommendations about how to improve their organizations (see Appendix B).

Promoting training classes, sessions, or workshops might allow people not only to improve their skills, but also to have more connections with their coworkers that in the short and long-term improve the chances of collaborative actions among them. For example, a female respondent in Cartagena described that activities such as "integration dynamics" [team building exercises] that encourage interaction and work team are beneficial for collaboration:

> "It might be useful to have group dynamics where people can share things. What other things do you do, what do you like, what do you enjoy, this is how you start to break the ice that is there…I connect, and then I am more open, and the knowledge can enter. Many times, people do not approach others because they do not know that person or are scared of talking to her. With so many government

changes, people need to be helped in those interactions and those integrations, and we need spaces for that."

It was possible to recognize in bureaucrats' stories the potential impact of these actions on their individual and collective performance in the long term. A widespread belief among public employees is that public administration's improvement only requires more physical and financial resources. But, bureaucrats in the interview recognize that teamwork and other strategies for building connections with the other individuals also matter.

They suggest implementing meeting spaces through training, team building strategies, and other activities that help to solve job-related problems. Thus, a meaningful way to encourage collaboration in public service is to arrange for bureaucrats to interact in different scenarios. It would be ideal if activities also include that they meet each other again and be able to recognize each other from the past. These strategies can be implemented through different modalities, including short or long training sessions. They could even be activities done in-house in contexts with restricted mobility (such as the pandemic) or limited resources.

Making interactions more durable was one of Axelrod's classic recommendations for keeping collaboration sustainable (Axelrod 1984). Making the long-term incentive for collaboration greater than the short-term incentive for defection in these settings seems possible in contexts where managers and public servants, in general, encourage trust and

reciprocity over time. To take care of each other and have socialization strategies in the organization might facilitate the consolidation of collaboration in organizations.

### 2. Nudging strategies as practical techniques to reinforce a common meaning to public employees

A fundamental part of the causal mechanism that explains why common experiences predict collaboration is that these experiences give meaning to people. As mentioned in the dissertation, attending the same university, having the same profession, or coming from the same place is connoted by multiple symbols or events that remain in the memory of those who have gone through similar processes. The bias that is activated when this happens is related to the familiarity hypothesis and in-group bias.

Behavioral sciences have studied different ways in which public organizations can deal with these situations by employing "debiasing" techniques or procedures that compensate for individuals' inability to compute all the information in a complex work environment. These behavioral techniques will help to replace existing biases against collaboration by building new common experiences that create biases toward collaboration.

Therefore, strategies that expand the boundaries of familiarity in public servants' minds can help mitigate the exclusion or segregation that these biases (crystallized in stereotypes) can introduce in interactions. Additionally, these techniques can also boost common experiences' positive effect by strengthening the networks of solidarity, reciprocity, and collaboration that benefit public policy outcomes.

Recent work in behavioral sciences has analyzed how these stereotypes can be deactivated in some way. “Nudging” techniques represent alternative tools for public managers interested in transforming the negative consequences of social identities. As mentioned before, a "nudge" is "the idea that bureaucrats can make minor changes to choice architecture to improve people's behavior" (Thaler & Sunstein 2009).

For instance, reminders or small activities that emphasize that all employees in the organization belong to the same “big family” can expand that positive feeling associated with having something in common. Increasing face-to-face (or Zoom-to-Zoom nowadays) interactions between members of distinguishable groups can also reduce prejudice. Overall, this dissertation seeks to raise awareness among public managers and employees that our decisions can be influenced by some conscious and unconscious factors (biases). Biases are out of our control but can be recognized and intervened using new behavioral sciences and public administration developments.

### 3. Intergroup contact as a source of collaboration and diversity in public organizations

Intergroup strategies such as team building activities can improve the levels of trust and reciprocity in public organizations. Managers and practitioners can benefit from intergroup contact and strategies that include team building activities where employees across professions, subgroups, and ranks recognize each other beyond their perceived group affiliations. Even if people do not belong to the same original social identity,

managers can promote common experiences that shape common identities in the short and long term.

Furthermore, the sense of belongingness to a common experience, naturally produced by individuals' experiences or artificially created by managers through intra and intergroup activities, can strengthen diversity in public organizations. Bureaucrats that feel connected and are interdependent to each other can improve the coordination of activities and recognize their peers in a horizontal way.

The recognition of diversity is not only a discourse, but a practice. If people have increased interactions with open communication and information exchange, they might be able to recognize the added value of working with others and feeling comfortable working with them. Taking care of bureaucrats and recognizing their value as professionals and humans is an ethical and practical necessity that can be positive for both achieving common goals and creating a more inclusive and tolerant work atmosphere. Then, the value of interdisciplinarity and diversity are essential assets for developing collaboration efforts.

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# 6. APPENDIX A

## 6.1. Descriptive statistics

Table A-1 Descriptive statistics

| ***Variable*** | **N** | **Mean** | **Standard Deviation** | **Min** | **Max** |
|---|---|---|---|---|---|
| Fiscal Performance Index | 192 | 70.74 | 6.95 | 47.46 | 81.66 |
| Net education coverage | 192 | 83.04 | 10.18 | 54.83 | 100 |
| Health coverage | 192 | 1156385 | 1227627 | 29464 | 6263975 |
| Vaccination | 160 | 91.19 | 7.02 | 49.2 | 100 |
| Infant mortality | 160 | 17.34 | 9.11 | 7.19 | 63.05 |
| Sewage | 192 | 54.39 | 21.07 | 2.15 | 100 |
| Teamwork | 192 | 81.86 | 10.21 | 52.94 | 100 |
| Population | 192 | 1233996 | 1296550 | 26116 | 6407102 |
| Total revenues | 192 | 880974.7 | 715625.2 | 73064.43 | 4486726 |
| Total expenditures | 192 | 886106.6 | 729204.9 | 67957.39 | 4320537 |
| GDP department | 138 | 3.1018 | 3.2404 | 0.3830 | 14.58 |
| Poverty incidence | 138 | 36.0652 | 12.3190 | 14.7 | 65.9 |
| Transfers | 192 | 366171.2 | 264359.1 | 38183.79 | 1354203 |

6.2. Robustness checks with alternative dependent variables

Table A-2 Regression models with alternative dependent variables

| | (1)<br>Vaccination | (2)<br>Infant mortality<br>(under 5 years) | (3)<br>Sewage |
|---|---|---|---|
| Teamwork Lagged | 0.742 | -0.757 | 1.278 |
| | (1.22) | (-1.59) | (1.06) |
| Population | 0.00000439** | 0.000000580 | 0.00000996** |
| | (3.20) | (0.56) | (2.94) |
| Total Revenue | -0.00000337 | 0.00000149 | -0.00000763 |
| | (-1.06) | (0.56) | (-0.70) |
| Total Expenditures | 0.00000550 | 0.00000208 | 0.00000434 |
| | (1.67) | (0.77) | (0.41) |
| GDP Department | -1.328* | 0.280 | 0.315 |
| | (-2.14) | (0.49) | (0.20) |
| Poverty incidence | -0.0686 | 0.414*** | -0.0103 |
| | (-1.17) | (5.24) | (-0.08) |
| Transfers | -0.0000102 | -0.0000171*** | -0.0000482*** |
| | (-1.91) | (-4.83) | (-4.30) |
| _cons | 89.61*** | 3.979 | 72.46*** |
| | (22.79) | (1.53) | (9.19) |
| *N* | 92 | 92 | 115 |
| *R* | 0.1929 | 0.5988 | 0.3962 |

6.3. Models with standardized independent variable (teamwork)

Table A-3 Regression models with standardized independent variables

| | (1) Fiscal performance | (2) Education | (3) Vaccination | (4) Infant mortality (under 5 years) | (5) Sewage |
|---|---|---|---|---|---|
| Standardized lagged teamwork | 3.140*** | 3.621*** | 1.029 | -1.591 | 1.931 |
| | (3.83) | (4.78) | (1.13) | (-1.60) | (1.13) |
| Population | 0.00000377*** | -0.00000601** | 0.00000452** | 0.000000555 | 0.0000102** |
| | (4.10) | (-2.92) | (3.18) | (0.48) | (3.14) |
| Total Revenue | 0.00000146 | -0.00000457 | -0.00000319 | 0.00000129 | -0.00000749 |
| | (0.48) | (-1.20) | (-1.01) | (0.51) | (-0.70) |
| Total Expenditures | -0.000000271 | 0.00000609 | 0.00000531 | 0.00000238 | 0.00000418 |
| | (-0.09) | (1.58) | (1.64) | (0.91) | (0.40) |
| GDP Department | -1.338** | 1.823 | -1.362* | 0.213 | 0.244 |
| | (-3.01) | (1.81) | (-2.15) | (0.35) | (0.16) |
| Poverty incidence | -0.244*** | -0.0310 | -0.0623 | 0.398*** | -0.00236 |
| | (-3.63) | (-0.44) | (-1.04) | (5.66) | (-0.02) |
| Transfers | -0.00000563 | 0.0000112* | -0.0000107 | -0.0000164*** | -0.0000490** |
| | (-1.24) | (2.04) | (-1.97) | (-4.71) | (-4.40) |
| _cons | 76.01*** | 80.43*** | 90.75*** | 3.936 | 74.33*** |
| | (35.11) | (25.42) | (28.15) | (1.55) | (11.45) |
| *N* | 115 | 115 | 92 | 92 | 115 |

*t* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

# 7. APPENDIX B

## 7.1. Descriptive statistics Case Study Cartagena

Table B-1 Descriptive statistics

| Categorical Variables | Description | Count & Percentage |
|---|---|---|
| Sex | Sex | Man: 16 (34.0%)<br>Woman: 31 (66.0%) |
| Ethnicity | What is your ethnicity? | Afro-Colombian: 11 (23.9%)<br>Gypsy: 0 (0%)<br>Indigenous: 1 (2.1%)<br>Mestizo: 6 (13.0%)<br>White: 4 (8.7%)<br>None: 23 (50.0%)<br>Other: 1 (2.1%) |
| Marital status | Marital status | Single: 6 (12.8%)<br>Married: 28 (59.6%)<br>Free union: 9 (19.2%)<br>Separated: 1 (2.1%)<br>Divorced: 2 (4.3%)<br>Widowed: 1 (2.1%) |
| Place of birth | What is your place of birth (Municipality and Department) | Cartagena: 30 (63.8%)<br>Other cities in Bolivar: 7 (14.9%)<br>Atlántico: 3 (6.38%)<br>Antioquia: 2 (4.26%)<br>Bogotá: 1 (2.13%)<br>Guajira: 1 (2.13%)<br>Norte de Santander: 1 (2.13%)<br>Sucre: 2 (4.26%) |
| Job rank | In what category is your job? | Director: 9 (19.2%)<br>Advisor: 13 (27.7%)<br>Professional: 20 (42.5%)<br>Technician: 4 (8.5%)<br>Assistance: 1 (2.1%) |
| Type of contract | What is your type of contract? | Free appointment: 10 (21.3%)<br>Career service: 16 (34.0%)<br>Contractor: 12 (25.5%)<br>Temporary position: 9 (19.2%) |
| Profession | What is your Profession? | Lawyer: 19 (38%)<br>Engineer: 6 (12%)<br>Accountant: 2 (4%)<br>Business administrator: 7 (14%)<br>Public administrator: 2 (4%)<br>Architect: 1 (2%)<br>Economist: 5 (10%)<br>Political Scientist: 1 (2%)<br>Psychologist: 1 (2%)<br>Social worker: 6 (12%) |

Table B-1 Continued Descriptive statistics

| Categorical Variables | Description | Count & Percentage |
|---|---|---|
| University of degree | In which university did you obtain your degree? | Corp. Rafael Nuñez: 3 (6.4%)<br>Corp. Metropolitana Bogotá: 1 (2.1%)<br>ESAP: 1 (2.1%)<br>Los Libertadores: 1 (2.1%)<br>U. Tecnológica de Bolívar: 5 (10.7%)<br>Universidad de Cartagena: 18 (38.3%)<br>U. del Atlántico: 2 (4.3%)<br>U. Libre: 3 (6.4%)<br>U. Medellín: 1 (2.1%)<br>U. Simón Bolívar: 2 (4.3%)<br>U. de Los Andes: 2 (4.3%) |
| Political Party | Which Political party appeals to you most? | Centro Democrático: 5 (12.2%)<br>Partido Liberal: 4 (9.8%)<br>Partido Conservador: 6 (14.6%)<br>Partido Alianza Verde: 6 (14.6%)<br>Partido de la U: 2 (4.9%)<br>Cambio Radical: 2 (4.9%)<br>Polo Democrático: 1 (2.4%)<br>None: 13 (31.7%)<br>Other: 2 (4.9%) |
| Member of voluntary organization or association | Are you a member of any voluntary organization or association? | Yes: 18 (39.1%)<br>No: 28 (60.9%) |
| Name of voluntary organization | Which voluntary organization or association? | Union: 3 (6.4%)<br>Others: 44 (93.6%) |
| Training in the last year | In the last 12 months, did you receive any professional training in your workplace? | Yes: 19 (40.4%)<br>No: 28 (59.6%) |
| Cooperation pre-disposition | In this office I come to work and not to make friends | Agree: 13 (28.3%)<br>Disagree: 33 (71.7%) |
| Inter-personal Trust | Most people can be trusted | Agree: 26 (55.3%)<br>Disagree: 21 (44.7%) |
| Gender discrimination | In my office men work better than women | Agree: 2 (4.3%)<br>Disagree: 45 (95.7%) |
| Trust in Community | I trust in the people in my community | Agree: 39 (84.8%)<br>Disagree: 7 (15.2%) |
| Personality - Conscientiousness | It is easy for me to complete my tasks in a short time | Agree: 39 (83.0%)<br>Disagree: 8 (17.0%) |
| Personality - Extroversion | I feel comfortable around people | Agree: 46 (97.9%)<br>Disagree: 1 (2.1%) |
| Personality - Agreeableness | I feel sympathy for other people's emotions | Agree: 46 (97.9%)<br>Disagree: 1 (2.1%) |
| Personality - Neuroticism | I get stressed out easily | Agree: 2 (4.3%)<br>Disagree: 45 (95.7%) |
| Personality - Openness | I am fast at learning new tasks | Agree: 46 (97.9%)<br>Disagree: 1 (2.1%) |
| Trust at the organization | Relationships among the employees are based on trust | Agree: 31 (67.4%)<br>Disagree: 15 (32.6%) |

Table B-1 Continued Descriptive statistics

| **Categorical Variables** | **Description** | **Count & Percentage** |
|---|---|---|
| Goals accomplished | The goals and mission are accomplished | Agree: 30 (63.8%)<br>Disagree: 17 (36.2%) |
| Budget executed | The budget was executed according to what was planned | Agree: 22 (48.9%)<br>Disagree: 23 (51.1%) |
| Administrative organization | The administrative organization facilitated the fulfillment of the strategic objectives | Agree: 25 (55.6%)<br>Disagree: 20 (44.4%) |
| Enough permanent staff | The permanent staff was sufficient to carry out the tasks | Agree: 4 (8.5%)<br>Disagree: 43 (91.5%) |
| Enough budget | The budget was sufficient to fulfill the planned activities | Agree: 10 (22.2%)<br>Disagree: 35 (77.8%) |
| Cooperation within | There is cooperation between different areas | Agree: 31 (66.0%)<br>Disagree: 16 (34.0%) |
| Cooperation department | There is cooperation with other local authorities of the department | Agree: 38 (80.9%)<br>Disagree: 9 (19.1%) |
| Cooperation private sector | There is cooperation with the private sector and civil society | Agree: 35 (74.5%)<br>Disagree: 12 (25.5%) |
| Cooperation national level | There is cooperation with public agencies at the national level | Agree: 39 (84.8%)<br>Disagree: 7 (15.2%) |
| Clientelism | Hiring processes are based on political networks. | Agree: 30 (69.8%)<br>Disagree: 13 (30.2%) |
| Accountability | The strategy of accountability to citizens is implemented | Agree: 32 (69.6%)<br>Disagree: 14 (30.4%) |
| **Ordinal Variables** | **Description** | **Count** |
| Time in the organization | How long have you been working in <u>this</u> organization? | 1 month - 1 year: 4 (8.5%)<br>13 months - 6 years: 15 (32.0%)<br>7 to 11 years: 12 (25.6%)<br>12 to 16 years: 4 (8.5%)<br>More 16 years: 12 (25.5%) |
| Time in any organization | How long have you been working in <u>any</u> organization? | 1 month - 1 year: 0 (0%)<br>13 months - 6 years: 16 (34.8%)<br>7 to 11 years: 7 (15.2%)<br>12 to 16 years: 3 (6.5%)<br>More 16 years: 20 (43.5%) |
| Education | What is the highest educational degree you have obtained?<br>(other options omitted because no responses) | University with degree: 9 (19.2%)<br>Graduate without degree: 3 (6.3%)<br>Graduate with degree: 35 (74.5%) |
| Salary | What is your salary range monthly?<br>(lower options omitted because no responses) | 1 – 2 times minimum wage: 1 (2.1%)<br>3 – 5 times minimum wage: 23 (48.9%)<br>6 – 8 times minimum wage: 11 (23.4%)<br>More than 8 minimum wage: 12 (25.5%) |

Table B-1 Continued Descriptive statistics

| **Continuous Variables** | **Description** | **Mean (Standard Dev. in parenthesis)** |
|---|---|---|
| Children | Number of children | 1.87 (1.00) |
| Job Satisfaction | In a 10-point scale, how satisfied are you with your current job? (1= not satisfied at all; 10= completely satisfied) | 8.28 (2.00) |
| Life Satisfaction | How satisfied are you with your life? (1= not satisfied at all; 10= completely satisfied) | 9.28 (1.02) |

7.2. Logistic regression models –Survey DANE 2017 (All country)

Table B-2 Logistic regression models –Survey DANE 2017 (All country)

| ***Dependent Variable*** | **Cooperation within local admin** | **Cooperation with national level** |
|---|---|---|
| Trust | 1.5268*** | 1.4248*** |
| | (0.1042) | (0.1050) |
| Happiness in your job | 0.9552*** | 0.8962*** |
| | (0.1475) | (0.1493) |
| Years in the organization | -0.0940*** | -0.1052*** |
| | (0.0362) | (0.0359) |
| Education | -0.0217 | -0.0108 |
| | (0.0747) | (0.0733) |
| Woman | 0.1573* | 0.2140** |
| | (0.0949) | (0.0940) |
| Bogota | -1.0079*** | -0.9909*** |
| | (0.1007) | (0.1005) |
| Director | 1.4724*** | 1.0835*** |
| | (0.3209) | (0.2715) |
| Advisor | 0.8325*** | 1.0785*** |
| | (0.2904) | (0.3217) |
| Technician | -0.3481** | -0.4562*** |
| | (0.1560) | (0.1526) |
| Assistance | -0.3262* | -0.3643** |
| | (0.1688) | (0.1670) |
| Constant | 0.5761* | 0.6459* |
| | (0.3443) | (0.3395) |
| Number of Observations | 5,035 | 4,944 |
| Pseudo R2 | 0.1477 | 0.1335 |
| LR chi2 (16) | 543.14 | 488.89 |
| Log – likelihood | -1567.51 | -1586.93 |

Notes: Logistic regression model. * p < 0.10, ** p < 0.05, *** p < 0.01. Standard errors in parentheses below coefficients.

## 7.3. Logistic regression models –Survey DANE 2017 (Except Bogota)

Table B-3 Logistic regression models –Survey DANE 2017 (Except Bogota)

| ***Dependent Variable*** | **Cooperation within local admin** | **Cooperation with national level** |
|---|---|---|
| Trust | 1.5396*** | 1.4590*** |
| | (0.1381) | (0.1389) |
| Happiness in your job | 0.8950*** | 0.9451*** |
| | (0.1997) | (0.1988) |
| Years in the organization | -0.0790 | -0.0982** |
| | (0.0485) | (0.0479) |
| Education | -0.0240 | -0.0196 |
| | (0.0747) | (0.0911) |
| Woman | 0.1743 | 0.1926 |
| | (0.0949) | (0.1246) |
| Director | 1.2057*** | 0.9492** |
| | (0.4081) | (0.3664) |
| Advisor | 0.5115 | 0.8911** |
| | (0.3544) | (0.4090) |
| Technician | -0.5006*** | -0.5802*** |
| | (0.1843) | (0.1808) |
| Assistance | -0.4024* | -0.3167 |
| | (0.2149) | (0.2139) |
| Tolima | -1.9005*** | -1.3526** |
| | (0.5716) | (0.5907) |
| Putumayo | -2.5698*** | -2.2468** |
| | (0.5956) | (0.6034) |
| San Andres | -2.1785*** | -2.5499*** |
| | (0.5808) | (0.5733) |
| Boyaca | -2.0503*** | -1.8163*** |
| | (0.5632) | (0.5670) |
| Constant | 1.8023*** | 1.8066*** |
| | (0.6740) | (0.6710) |
| Number of Observations | 3,775 | 3,710 |
| Departments (Total in Colombia=32) | 30 | 30 |
| Pseudo R2 | 0.1743 | 0.1684 |
| LR chi2 (16) | 404.77 | 394.30 |
| Log – likelihood | -958.67 | -973.36 |

Notes: Logistic regression model. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors in parentheses below coefficients. Few departments with significant coefficients are shown.

7.4. Explicit factors of why people work with each other

The main categories of responses were analyzed based on the information described in the stories. In addition to these “implicit responses,” some questions asked bureaucrats directly about factors that contribute to cooperation. In the analysis, there are distinctions between the responses within the stories and responses that are explicitly elicited. In other words, when bureaucrats are asked about why do they work with someone, they mention other characteristics that are not necessarily related to what was observed in the interviews.

Figure B-1 shows the frequencies of the reasons why public employees work with each other. The blue area represents the reasons that were coded based on the participants’ stories (“implicit responses”). A total of 29.5% of the participants cooperate with people that have connections with them in the past. The second reason is related to have actual knowledge to solve problems.

Public employees tend to contact people in their offices to expect to know to solve problems. Although it is reasonable to think that people with more years in the organization will have more experience, this does not necessarily reflect their level of knowledge or willingness to cooperate. The interviewees' stories show that younger people tend to be more open, flexible, and cooperative, whereas older people have “bad habits that made them more inflexible to change.” In other words, “to change the mental chip of people with more years is hard.”

On the other hand, other respondents think that having knowledge makes people with more years in the organization desirable for cooperation. They know what to do, and they are good team members based on the "recognition of their expertise." This factor of years in the organization is also connected to the type of contract. Usually, people that have a long-term stable contract are the ones that have the knowledge to solve a wide variety of problems, continue the project and guarantee that outcomes will be realized. A female interviewee says: "I usually try to cooperate with plant personnel who are the ones that will continue. If I have to leave my job, they will move forward with processes".

These two factors seem to be not so important when we ask people why do they cooperate with each other, which is represented in red ("explicit responses"). In this case, 47.8% argue that they cooperate because of people's attitudes. This distance between "implicit" and "explicit" responses is an interesting insight and the reason why implicit interview methods are very important in exploring bureaucrats' motivations.

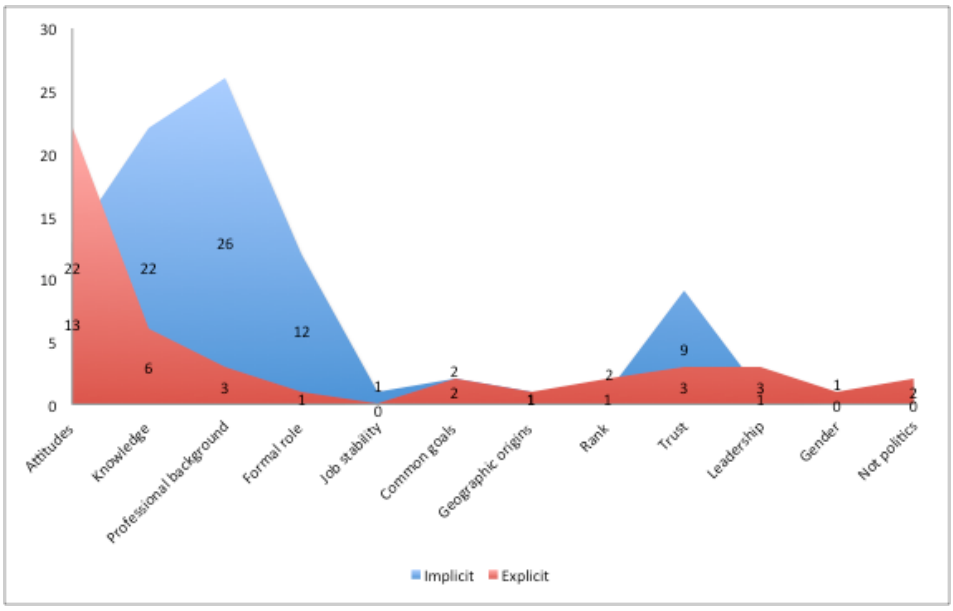


Figure B-1 Implicit and explicit social identities

The high percentage of explicit responses related to attitudes might be connected to people's trend to reveal their preferences in terms of the classic characteristics of good workers mainly analyzed in the literature on Public Service Motivation and potentially because of social desirability bias. Some of these features are "commitment," "sense of belonging," "readiness," "motivation," "being good people," "vocation," "hard work," "responsibility," among others.

"To be a public servant you need to be an excellent person," said one interviewee. Another employee described that she works with three people in their area, and they are "beautiful people, as human beings, wide, open, with the best disposition." It is common to observe that disposition, love public service, and sense of belongingness to the

organization are valued as critical individual reasons why people say they will cooperate with others.

Other factors such as leadership or politics are less often in people's stories. Precisely, people commented about the effect of political instability on their daily routines and work. Six out of ten people interviewed think that the change in mayors has affected their normal routines during the last years.

Finally, an element that was initially not considered in the project's design, but that was regularly cited, is related to the type of contract. Specifically, the Colombian Public Service has been transforming its hiring structure to reduce staff expenditures. One of the main strategies for achieving this goal is to have short-term contracts (no more than one year long) where people provide a particular service or do a specific activity. The problem is that these contracts are a source of instability in public hiring and a lack of continuity in public administration.

7.5. Bureaucrats recommendations for improving organizations

Public employees in Colombia were also asked about what factors would make working with others easy. Table B-4 shows that the main recommendations are better infrastructure (adequate office space, technology, paper, printers, transportation, etc.). A widespread belief among public employees is that public administration's improvement only requires more physical and financial resources.

Table B-4 Recommendations for public administration's improvement

| Recommendation | Frequencies |
|---|---|
| Infrastructure | 13 |
| Training and improvement of skills | 12 |
| Work team, communication, and interaction activities | 9 |
| Job stability - Type of contracts | 9 |
| Commitment and sense of belonging of employees | 8 |
| Good people, principles, and values | 8 |
| No politics in hiring - merit competition | 8 |
| Leadership | 5 |
| Administrative structure - clarity of roles | 4 |
| Recognition of employees | 2 |
| Articulation with universities | 1 |

Though the most common recommendation is related to the workplace's physical conditions, there are other suggestions related to improving human capital and the way

people interact. The main recommendation is to foster more connections and common experiences as options to improve employees' collaboration.

Promoting training classes, sessions, or workshops in the organization might allow people to improve their skills. A male interviewee says: "if we have trained personnel, with experience, in good academic standing and prepared for their roles, I think that is helpful for the organization."

A female respondent described that activities such as "integration dynamics" [team building exercises] that encourage interaction and work team are beneficial for cooperation:

> "It might be useful to have group dynamics where people can share things. What other things do you do, what do you like, what do you enjoy, this is how you start to break the ice that is there…I connect and then I am more open and the knowledge can enter. There are many times when people do not approach others because they do not know that person or I am scared of talking to her. With so many changes of government, that people need to be helped in those interactions and those integrations and we need spaces for that".

It was possible to recognize in bureaucrats' stories the potential impact of these actions on their individual and collective performance in the long term. Developing such social activities has a different meaning than other interpretations of how social networks are created and used in politics.

These recommendations point out encouragement of connections in a non-clientelistic way, but in developing meeting spaces through training, team building strategies, and other activities that help to solve job-related problems. The interviewees also emphasize how recruitment and hiring processes should be separated from local politics and clientelism networks.

# 8. APPENDIX C

## 8.1. Descriptive statistics

Table C-1 Descriptive statistics

| | **Sample** |
|---|---|
| Total number of respondents | 899 |
| Number of conjoint respondents | 727 |
| Woman | 57.02% |
| Afro-Colombians (self-identified) | 8.53% |
| Indigenous (self-identified) | 0.47% |
| White (self-identitied) | 1.10% |
| Mestizo (self-identified) | 6.64% |
| Lawyer | 23.3% |
| Engineer | 19.7% |
| Accountant | 6.28% |
| Economist | 5.09% |
| Universidad de los Andes | 2.58% |
| Universidad Nacional | 7.75% |
| Born in Bogotá | 24.31% |
| Born in Bucaramanga | 10.32% |
| Born in Piedecuesta | 0.63% |
| Born in San Vicente | 0.48% |
| Born in Cartagena | 18.57% |
| Born in Medellín | 3.97% |
| Born in Cali | 1.90% |

Table C-1 Continued. Descriptive statistics

| | **Sample** |
|---|---|
| Born in Tuluá | 4.44% |
| Born in Risaralda | 1.27% |
| Work in Bogotá | 42.83% |
| Work in Bucaramanga | 10.57% |
| Work in Piedecuesta | 1.67% |
| Work in San Vicente | 1.45% |
| Work in Cartagena | 25.47% |
| Work in Medellín | 9.34% |
| Work in Cali | 1.56% |
| Work in Tuluá | 6.90% |
| Work in Risaralda | 0.22% |
| Managers | 2.74% |
| Advisors | 11.59% |
| Professional | 50.72% |
| Technical | 14.81% |
| Assistance support | 20.13% |
| Mean age (in years) | 42.6 |
| Mean years in the organization (in years) | 5.65 |
| Mean years in any organization (in years) | 12.69 |
| Contractors (non-permanent contracts) | 38.29% |