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Petty corruption, administrative burden and information: experimental evidence from Burkina Faso

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Abstract

Petty corruption when facing low-level public officials is a common feature of the lives of many in developing countries. Individuals might agree to pay bribes because they are unaware of the official administrative procedures. This research tests whether providing information on daily administrative services in the form of a smartphone App reduces the need for bribes and the economic cost of bureaucratic transactions in Burkina Faso. The App, which includes documentation on administrative processes and fees, was randomly provided to a pool of interested candidates for 12 months. We measure whether the intervention improves experiences with administrative processes (e.g., duration of processes) and influences experiences of bribery among beneficiaries. To our knowledge, this study constitutes the first randomized evaluation of an intervention aiming at addressing petty corruption. It contributes to the literatures on bureaucracy, corruption, and digital interventions, and has implications regarding the use of information-based interventions for addressing bribery.

Keywords: Corruption; Bureaucracy; Digital interventions; Information; Randomized control trial; Burkina Faso

JEL codes: O1; D73; D8; C93; H83

Study pre-registration: The study has been pre-registered under the AEA RCT Registry; RCT ID: AEARCTR-0006543; <u>https://www.socialscienceregistry.org/trials/6543</u>

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Proposed timeline

The baseline data for this study was collected in November 2020 among participants recruited in October 2020. The intervention started in December 2020, after conducting the randomization, with provision of the App to the sample treatment group. The endline data for this study was collected in November/December 2021 by an independent data collection firm. The authors of the study do not have access to the endline data and will not receive access to the endline data (or any information regarding the data) until a final decision on this pre-results review (Stage 1) has been received. The blinding protocol has been carefully designed, and approved by *JDE*'s editor. The study could be completed shortly (less than 6 months) after access to the endline data has been granted to the authors.

Reporting checklist for Stage 1 submissions

Section	Item	Description and details to report	Reported?	Page(s)
Cover page (required)	Title	Informative title specifying the study design, population, and interventions	Yes	1
	Date of latest draft	Date of when the prospective review article was last edited.	Yes	1
	Study pre- registration status	Link, registration identifier and registry name (or intended registry if not yet registered)	Yes	1
	Keywords	Up to six keywords, to be used for indexing purposes.	Yes	1
	<u>JEL codes</u>	Up to six codes.	Yes	1
Abstract (<i>required</i>)	Abstract	Summarize research question, outcome variables, methodological framework and contribution in less than 150 words.	Yes	1
Timeline (required)	Expected completion date	Expected date for completion of the pre-specified research design.	Yes	2
Introduction	Background and relevance of the study	Brief overview of previous research, and relevance of the research question(s) for the field of economic development	Yes	6 and 8-9

	Research question(s)		Yes	7
	Basic methodological framework	Outline of the identification strategy in your study (experimental/non-experimental)	Yes	10
	Hypotheses	Pre-specified hypotheses to be tested in the study and reported as primary findings in the Stage 2 full manuscript	Yes	15-20
	Outcome variable(s)	Definition of the main outcome variable(s) and (if applicable) secondary outcome variable(s)	Yes	15-20
		Specification of how outcome(s) will be constructed from the dataset	Yes	15-20
	Intervention(s)	Details of the intervention (when, where, how, by whom)	Yes	11-13
		Number of treatment arms and whether they are exclusive or overlapping	Yes	11-13
		Randomization strategy	Yes	11-13
		Blinding strategy (if applicable)	Yes	2 and 23
		Instructions and supporting materials for administering the intervention	Yes	Appendix A
		Source(s) of exogenous variation	Yes	11-13
	Theory of change	How and why the intervention is predicted to lead to certain effects	Yes	13
	Sample	Specification of unit of analysis (individuals, organizations, countries, etc.)	Yes	16 and 22
		Data source(s)	Yes	22-24
		Projected sample size and statistical power calculations	Yes	21-22
	Variations from	Specification of the degree of attrition that may threaten the robustness of the study	Yes	23 and 29
Research design	sample	Strategies to deal with attrition, non-compliance with the assigned treatment, etc.	Yes	29

	Data collection and processing	Type of data, collection method/data source(s), and timeline for collection	Yes	22-23
		Rule for terminating data collection / stopping rule	NA	
		Data management plan	Yes	22
		Pilot data and experiments run in preparation of the Stage 1 submission	Yes	11-12 and Appendix C
Empirical analysis	Statistical method(s)	Main evaluation method(s) and underlying assumptions	Yes	26-29
		Rules for handling missing values	Yes	16 and 26-27
		Definition and rules for handling outliers	Yes	16-20
	Multiple hypothesis testing	Strategies to prevent false positives	Yes	29
	Heterogeneous effects	Anticipated heterogeneous effects and theoretical justification	Yes	30-32
	Statistical model	A functional (mathematical) form of the causal mechanism explored in the study	Yes	26-29
		Specification if regression model is linear, generalized linear, or other	Yes	26-29
		How will standard errors be calculated	Yes	27
Limitations and challenges	Challenges in the study implementation	Potential objective circumstances that might jeopardize the implementation of the proposed study design	Yes	23
Administrative information (<i>required</i>)	Ethics approval	Statement confirming that all necessary ethics approvals are in place.	Yes	77
	Funding	Funding sources in the suggested format	Yes	77
	Acknowledgments	List of (non-author) individuals who provided help to the research project.	Yes	77
Bibliography	Bibliography	References can be in any style or format as long as the style	Yes	36-40

		is consistent.		
Other items	Appendices	Tables and figures	Yes	41-50

1. Introduction

Corruption is harmful. It creates political, social, and economic distortions harming the public good.¹ Widespread, its economic magnitude is important, especially in low-income countries and in Sub-Saharan Africa (Svensson, 2005). Yet, corruption is persistent and self-reinforcing, making it difficult to alleviate (Mishra, 2006; Stephenson, 2020; Baez-Camargo et al., 2020; Ajzenman, 2021). To date, there is scare evidence of interventions that address corruption successfully (Svensson, 2005, Olken & Pande, 2007; Zaum et al., 2012; Fisman & Golden, 2017; Stahl et al, 2017). In addition, relatively little is known about the micro-level determinants of corruption, especially when it comes to petty corruption.

Petty corruption is a pervasive type of corruption that individuals encounter when they interact with low-level civil servants (Chêne, 2019).² It usually corresponds to demands of bribes (money, gifts, loans, services, favors, etc.) for the provision of goods and services that citizens are legally entitled to, such as getting a passport or a driving license. In many low-income settings, interactions with the administration and low-level public officials are plagued with requests for such illegal payments. Petty corruption operates as an additional tax constraining access to public services through costly, time-consuming, and inefficient processes and ultimately discouraging individuals to use them (Kaufmann et al., 2008). Importantly, it also affects trust in government, as interactions with low-level officials are often the only contact that individuals have with the state (Mauro, 1995; Gupta, 2012). While non-poor individuals are also affected, the consequences are greater for the poor (Gupta, 2012). They pay a higher share of their income in bribes (Kaufmann et al., 2008; Hunt & Laszlo, 2012) and encounter bribery more frequently, especially in Sub-Saharan Africa (Justesen & Bjørnskov, 2014; Peiffer & Rose, 2018). The roots of bribery are complex, ranging from persistent social norms (Paldam, 2001;

¹ Among others, correction affects negatively economics growth (Mauro, 1995; Méon & Sekkat, 2005), foreign direct investments (Wei, 2000), public investments (Del Monte & Papagni, 2001), firm growth (Fisman & Svensson, 2007) and public debt (Cooray et al., 2017). It also has adverse impacts on government spending in education and on schooling outcomes (Mauro, 1998; Reinikka & Svensson, 2004), inequality and poverty (Gupta et al, 2002; Gyimah-Brempong, 2002), political participation (Anderson & Tverdova, 2003; Clausen et al., 2011; Chong et al., 2015) and health (Holmberg & Rothstein, 2011). See Bardhan (1997) for a seminal discussion, and Fisman & Golden (2017) for a recent review and a discussion of anti-corruption interventions.

² Transparency International defines petty corruption as "everyday abuse of entrusted power by low- and mid-level public officials in their interactions with ordinary citizens, who often are trying to access basic goods or services in places like hospitals, schools, police departments and other agencies" (www.transparency.org/en/corruptionary/petty-corruption).

Baez-Camargo et al., 2020) to the low levels of income of government employees (Van Rijckeghem & Weder, 2001), and information asymmetry between government officials and citizens (Zaum et al., 2012). Thus, there is a clear connection between the bureaucratic process, which exerts power over citizens, and the opportunity for (and occurrence of) corruption (Leff, 1964; Bardhan, 1997; Gupta, 2012; Justesen & Bjørnskov, 2014).

This article aims at assessing the impact of an original anti-bribery intervention, which consists in providing information on administrative processes through a smartphone App. The App was designed to address petty corruption by allowing citizens to easily obtain accurate and relevant information on various administrative tasks, such as the location of the relevant administrative agency, legal fees, and required documents needed for the act. Through a randomized evaluation, we test whether information can successfully empower citizens and decrease bribery payments to public officials. We also ask whether the App intervention decreases the cost of interacting with the administration (time, direct costs, perceived difficulty etc.). Indeed, lack of transparency (because of complex or vague instructions) or hardly accessible information may limit one's ability to complete an administrative task. We assess whether the App benefits individuals receiving the App, but also whether there are spillovers to their network in terms of occurrence and amount of bribery and administrative burden reduction. We investigate this issue in the context of Burkina Faso, where petty corruption is commonplace.³

To measure the effect of the intervention, we randomly provided access to the App to a pool of interested participants. Information was collected on participants in November 2020 via a phone survey, prior to the beginning of the intervention. Follow-up information was collected 12 months later, giving treated participants the opportunity to interact with the App for almost a year. During each survey round, we recorded every administrative task performed by participants, either on their own behalf or to support someone else in their network.⁴ For each task, we collected information regarding bribery payments, time it took to obtain a record, direct and indirect costs, and various other aspects of the administrative process. By comparing

³ In 2019, 16% of public service users in the country declared paying a bribe in the previous 12 months (Pring & Vrushi, 2019).

⁴ As revealed by our qualitative fieldwork, the first source of knowledge about administrative processes is usually one's network (see Appendix C). Thus, the App may be used to support peers in completing administrative tasks. Some scholars have suggested network-based interventions for alleviating petty corruption, given the role of behavioral factors and social norms in generating and reinforcing corruption (Baez-Camargo et al., 2020).

individuals from the treatment and the control group at endline, we assess whether the App reduces bribe payments and improves experiences of administrative processes for the beneficiary and their network.

Information at baseline highlights the potential of the App. Among the 2,476 participants of the study, 62% have carried out at least one administrative procedure in the last 12 months (for themselves or a member of their household) and 37% have helped someone in their wider network to do so. In total, 74% of the sample have interacted with the administration in the past year. In this context, 21% of individuals reported bribe payments to government officials (by themselves or the individuals supported) and the average amount paid was 11,207 CFA for those who paid a bribe.⁵ In addition, 26% of the participants found it difficult or very difficult to perform an administrative task. Finally, 74.5% of individuals intended to take administrative steps in the next few months or to help someone from their network with an administrative process, suggesting enough interactions with public services to identify the potential effect of the App.

We contribute to the literature on corruption and, more specifically, on the link between information provision and petty corruption. From a principal-agent perspective, politicians or bureaucrats possess more information than citizens, creating opportunities for corruption. Curbing this asymmetry of information should reduce corruption by increasing accountability and transparency.⁶ Two potential mechanisms may explain this relationship (Winters et al., 2012). Increased information may first, favor the discovery of corrupt practices (monitoring) and second, enable the individual to more effectively respond to corrupt acts (punishment). Several studies in Brazil, India and other settings investigate this issue, focusing mostly on political corruption and voting behaviors/electoral outcomes (Ferraz & Finan, 2008; Vicente, 2013; Banerjee et al., 2014; Chong et al., 2014) or politicians' behaviors (Ferraz & Finan, 2011; Avis et al., 2018; Zamboni & Litschig, 2018; Banerjee et al., 2020). Some studies have also focused on bureaucrats' behavioral change (Olken, 2007; Peisakhin, 2012). In comparison, petty

⁵ About 22 USD or approximatively 50% of average monthly consumption (according to EHCVM 2018–19).

⁶ See for instance the corruption-reducing effects of a free press (Freil et al., 2007), of public disclosure laws (Djankov et al., 2010), and of the internet (Goel et al., 2011).

corruption from a citizen's point of view remains under-studied.⁷ To our knowledge, this article is the first randomized evaluation of an anti-bribery intervention aimed at addressing petty corruption.

This study also contributes to the general literature on administrative procedures. The costs of citizens' interactions with the state depend on the costs of accessing information (learning how to access services, eligibility criteria, etc.), the psychological toll (stress of dealing with administrative processes and government officials), and compliance costs (providing proof of documentation, completing forms, coping with discretionary demands) (Moynihan et al., 2015; see also Madsen et al., 2022, or Moynihan & Herd, 2023). This administrative burden affects citizens' success in accessing services and their perceptions of government. Some studies have investigated how government communication affects citizens' experience of the administrative burden and public program take-up (Finkelstein & Notowidigdo, 2019; Lopoo et al., 2020). However, little is known about how information dissemination may ease administrative tasks and favor their completion, particularly in developing countries.

Finally, we contribute to the literature on the effects of mobile Apps, and ICTs more generally, on development outcomes. ICTs have been presented as promising tools to address traditional market failures, and consequently development issues, in low and middle-income countries. By providing access to information, markets, finance, or services at low-cost, they may improve financial inclusion (Mbiti & Weil, 2015; Ahmad et al., 2020), rural and agricultural development (George et al., 2011; Ogutu et al., 2014), or health outcomes (Qiang et al., 2011). Whether they can address corruption and administrative burden in low income countries remains an open question (Chêne, 2019).⁸

There are several limitations to this study, particularly in terms of external validity. Indeed, the evaluation sample was drawn from potentially interested candidates recruited through different channels (e.g., through campus visits). As a result, our sample consists largely of young

⁷ Several lab experiments have also studied anti-corruption interventions, but evidence from field experiments is limited (Mugellini et al., 2021).

⁸ Several ICT tools have been promoted as a potentially effective tool for addressing corruption. In India, a crowdsourcing platform ("I paid a bribe") has been employed for reporting corruption cases, and replicated in other countries. The mechanism at play is different from the information-based intervention that we study. Besides, to our knowledge, the impact of ICT-based solutions for addressing corruption has not been measured yet (see for instance Kukutschka, 2016 or Mugellini et al., 2021).

individuals in urban centers who use a smartphone and are interested in the fight against corruption. It is not representative of Burkina Faso's general population. Results may not generalize if the intervention was to be scaled up or implemented in another setting.

The rest of the article is structured as follows. Section 2 describes the research design. In section 3, we summarize the data collection and processing. Section 4 outlines our empirical strategy and section 5 discusses how results will be presented and interpreted.

2. Research Design

Our research design consists of a randomized evaluation of the intervention provided to participants, based on data collected pre- and post-intervention. The next subsection presents the intervention, while the following subsection describes the hypotheses tested and the sample needed for the analysis. In doing so, we follow the research design specified in a pre-analysis plan registered in the AEA RCT Registry (RCT ID: AEARCTR-0006543).

2.1 An App to address petty corruption

Context

Efforts to combat corruption are relatively recent worldwide. Indeed, the "grease the wheels" hypothesis was commonly accepted until the mid-1960s, stating that corruption may help circumvent inefficient bureaucracy and regulations, (see Leff, 1964; Leys, 1965; Bardhan, 1997; Aidt, 2003). This trend reversed in the late 1990s with the multiplication of legislations and policies among international organizations and high-income country governments to curb corruption.⁹ These efforts, however, have largely focused on high-level corruption. More recently, the fight against corruption was addressed as part of SDG 16.5, which includes as an indicator the proportion of individuals who paid bribes to public officials. Based on the SDG progress data (from a household survey collected by UNODC in 140 countries), 22.3% of individuals paid a bribe to a public official in low-income countries in 2019 (ECOSOC, 2020).

⁹ See for instance the *Inter-American Convention against Corruption* (1996), the European Union's *Convention on the Fight against Corruption* (1997), or James D. Wolfensohn's speech at the 1996 Annual Meetings of the World Bank.

In Burkina Faso, bribery is an everyday experience. According to the latest Global Corruption Barometer for Africa, in 2019, 28% of the respondents from Burkina Faso thought corruption had increased in the previous 12 months and 27% thought that most or all local government officials are corrupt (Pring & Vrushi, 2019). Among respondents, 44% also declared that their government is doing a bad job of tackling corruption but 62% believed that ordinary citizens can make a difference in the fight against corruption. In addition, 16% of public service users paid a bribe in the previous 12 months. These observations inspired the design of a mobile phone application to mobilize civil society and give citizens the tools to promote transparency in common areas of public life, thereby alleviating petty corruption.

Intervention and randomization

The intervention studied in this paper consists in providing beneficiaries with a free smartphone App designed to help them with administrative tasks in Burkina Faso. The App functions as a 'pocket lawyer' and provides information on several administrative processes, such as obtaining a national identity card or a driving license. The information provided includes the location of the relevant administration where a given administrative process needs to be conducted, the required documents or paperwork, the duration required for the administrative process, and the monetary cost of the process (legal fees). The App is thereby meant to increase transparency in citizens' dealings with low-level public officials. The overarching objective is to reduce the cost of the administrative burden and to address petty corruption. The App gives information on the services provided by public institutions such as the municipality, the school, or the police station. It includes detailed information on how to obtain a birth certificate or a driving license, for instance. Appendix A provides a comprehensive list of the services provided by the App, and illustrates the interface of the App.

The App is provided by the Burkinabe start-up ONE, which developed and distributed it, with funding from the World Bank.¹⁰ The App is available for Android smartphones, which is the most used operating system in Burkina Faso, with an interface initially available in French. It was piloted in 2019, when the App was provided to 465 participants as part of a proof of concept

¹⁰ The App was developed as part of a broader anti-corruption initiative (3LC) through citizen engagement. ONE is considering its scale-up by providing the App for free on the Google Play Store upon completion of the study.

study.¹¹ Feedback was collected from ONE and from participants through a qualitative study led by the research team in the fall of 2020 to understand their perceptions of the App and improve its functioning. More information on the pilot and on the qualitative study can be found in Appendix C.

Following these preliminary studies and before this quantitative study started, the App's pilot version and implementation were revised to make the App more accessible. The App's interface was made available in local languages in addition to French and made fully operable through interactive voice responses, making it accessible to those who are less literate. ONE provided technical support to users in installing the App and conducted a social marketing campaign to stimulate its usage among participants. In addition, phone credit was provided to study participants with the aim of covering costs related to the download (500 CFA or 1 USD approximatively).

The intervention consists of providing access to the App to a random sample of individuals (the treatment group) among a set of potentially interested individuals. Potentially interested candidates were recruited by one of the following sources: i) users of a Facebook forum which had been animated by ONE on the topic of corruption in Burkina Faso; ii) other Facebook users that came across ONE's posts; iii) past participants of anti-corruption trainings that ONE had conducted among university students; and iv) additional outreach to students in universities. Interested individuals were invited to register through a WhatsApp or SMS message, providing their name and phone number. Those recruited through the universities channel could also write their contact information on a paper form instead. All interested participants were informed that they would enter a study and be allocated either to the treatment group (receiving the App now) or to the control group (allowed to receive the App upon conclusion of the study).

Interested participants recruited through these four channels constitute an initial pool of applicants of approximatively 3,000 individuals spread across all the 45 provinces of Burkina Faso.¹² Among these, 2,476 accepted to answer the baseline survey (see section 3), after which half of them were randomly allocated to the treatment group by the research team. The treatment

¹¹ These pilot participants were excluded from the quantitative study. They were not provided the App again and not part of the treatment or control groups. Basic data was collected from pilot participants and used for power calculations for this study.

¹² This resulted from the online recruitment means employed. However, almost half of the sample (47%) is found in Ouagadougou, the capital and largest city.

group received a link to download the App, technical support from ONE in doing so, and the small phone credit to cover the cost of the download. The other half constituted the control group, which did not receive any intervention. As such, the intervention follows a classic two arm, individually randomized design, with one treatment arm and one control arm. Randomization was conducted by the authors using a computer, at the individual level from the 2,476 individuals who answered the baseline survey. This resulted in 1,238 individuals being allocated to the treatment group and 1,238 to the control group. There are no clusters. Randomization was conducted after the baseline survey had been conducted, so that treatment status remained unknown at baseline to all participants and to the intervention and research teams.

For the duration of the study, the App could only be access through a personalized link, which was shared by ONE with participants of the treatment group via WhatsApp or SMS and linked to each participant's phone number (so that there exists only one account per person). The App was not available on the Google App store. Thus, the information and knowledge available through the App was only directly available to treated participants, although the App was entirely based on official information.¹³ Treated participants could share the information they accessed through the App with anybody, including neighbors, friends, and family. However, they were not able to share access to the App itself with anybody (given that access was on an individually restricted basis), which means that direct contamination of the research design is technically very unlikely.¹⁴

Theory of change

The intervention is based on the provision of information. By knowing the exact cost of administrative procedures, the App is expected to reduce the incidence and manifestations of

¹³ None of the information available in the App was cross-posted in the Facebook forum or used for any other anticorruption campaign. Thus, the App was a convenient way of accessing publicly available information. Control participants could have accessed official government websites to learn which documents and fees are required for what services. However, this of course represents a significant effort for individuals, which the App aims at alleviating. Qualitative fieldwork reveals that people's knowledge about administrative knowledge usually comes from word of mouth, based on other people's experience (see Appendix C). In practice, accessing official information through government websites appears very difficult for common citizens, if not impossible.

¹⁴ Participants could in theory share information with non-participants. However, given the scale of the intervention, contact between participants and non-participants is generally unlikely, and positive spillover effects not expected. Such spillover effects would constitute an attenuation effect (see section 4).

petty corruption. By increasing users' knowledge, it may also reduce financial and non-financial costs related to administrative procedures and reduce bribery. This in turn is expected to improve local level service delivery (although this research focuses on the direct experience of participants).

Interacting with the App is expected to improve users' knowledge of administrative procedures given the intuitive way in which information is presented in the App. It is available in local languages and through interactive voice responses. This means that the information is available to those who might not be able to access the information publicly available on government's websites, in administrative offices, and official documents because they are unable to read or unable to understand French (French remains the official language of the country).

The App may address bribery in several ways: (i) because beneficiaries know the exact financial cost of obtaining a document, they may avoid *faux frais* (illegitimate or inflated fee requests); (ii) by having the exact information on the process easily available, users may not feel the need to offer bribes to facilitate the administrative task; (iii) for the same reason, users may not have to rely on costly intermediaries – one channel through which bribes are oftentimes paid; (iv) empowered by their knowledge, users may be able to resist or negotiate bribery requests better.¹⁵

In addition, the App is thought to directly reduce financial and non-financial costs of administrative processes due to transportation, document provision, waiting times, or from other sources. Indeed, users may use the information provided by the App to visit the correct public service with the required documents, and avoid multiple visits. They may also be able to foster the process through negotiations with the public officers, as they would know the required documents and the official waiting time. As a result, beneficiaries may be better able to achieve their administrative requests, to obtain their documents faster, to visit administrations fewer times, and to travel shorter distances overall. In sum, the App is thought to reduce the resources spent on administrative procedures (e.g., travel costs), the time spent on procedures (travel time, but also waiting time), and to reduce stress related to administrative procedures. All this would potentially address the financial and non-financial costs of interacting with the local administration.

¹⁵ Bribe payment is often a negotiated process, in which information, self-confidence, and the ability to control the narrative often play an important role (see for instance Gupta, 2012).

Finally, in addition to using the App for an administrative process which individuals are conducting for themselves, they may also use the App to assist others in their network. Indeed, there is evidence that people rely heavily on their network when conducting administrative tasks in Burkina Faso (see note 4 and Appendix C for qualitative evidence, and section 3.2 for baseline descriptive statistics). If participants do use the App when supporting others, the channels described above may operate not only for the beneficiary of the intervention, but also for her network. Thus, we might expect similar effects for family members and friends of the treated individuals.¹⁶

Despite its potential, it is unclear if the App would work as expected in practice. Channels inhibiting the effect of the App include: (i) not using the App for various reasons (omission, lack of trust, connectivity, etc.); (ii) gaining little knowledge from the App because individuals may have other sources of information; (iii) not being able to leverage the official information when interacting with officials (because they would not follow official procedures, request bribery payments, etc.); (iv) not being interested in reducing bribery payments, for instance if individuals are willing to speed up administrative processes, bypass burdensome procedures or increase the likelihood of its success through bribery payments ('greasing the wheels' at the micro level; see Aidt, 2003). Thus, the actual effectiveness of the intervention remains an empirical question. The following subsection describes how we test the various hypotheses that emerge from the theory of change.

2.2 Is the App working? Testing the intervention effectiveness

Hypotheses

The first set of hypotheses (A) relates to the effect of the intervention on bribery. The second set of hypotheses (B) focuses more specifically on the cost and success of interacting with the administration. A third set of hypotheses (C) includes these two potential effects (bribery and administrative processes) for the network of the treated individual. We also describe secondary

¹⁶ We did not elicit information from friends or family members. Instead, we asked the individual directly if they helped anyone in performing administrative tasks (see section 3).

hypotheses (D and E) that relate to more specific costs and mechanisms.¹⁷ We explain how outcomes will be measured and variables constructed, linking each hypothesis to the questionnaire used during the baseline data collection and included in Appendix B (the data collection is presented in detail in section 3; the list of administrative tasks appears in Appendix D.). For each category of outcomes, the econometric analysis adjusts p-values using multiple hypotheses testing corrections to account for the fact that we consider multiple, closely related outcomes at once (see section 4.2).

Our main outcomes are constructed at the individual level. For the subset of those who have completed any administrative task, we also specify outcomes at the administrative task level, rather than the individual, allowing us to consider several administrative tasks per person (instead of average values) and to control for the type of administrative task conducted (see section 4.2). Except if indicated otherwise, missing values are treated as 0. Continuous variables not in log are winsorized at the 99th percentile to deal with potential outliers. Baseline descriptive statistics are provided in section 3.2.

• Hypothesis A: the intervention decreases bribery payments

To test this hypothesis, we measure outcomes related to bribery in various manners.

i. Occurrence of bribery payments (any payment, 0/1 indicator). We test the hypothesis that the intervention will decrease the likelihood of paying any bribery payment. To measure this, we construct an indicator variable taking a value 1 if the individual has paid any sort of bribe in the last 12 months from the administrative roster (which includes all administrative procedures conducted during this period; question 4.1.j in the questionnaire) or from a direct question (4.3b in the questionnaire). This includes bribes of any nature, even those without a clear monetary equivalent (which can be the case for a service or other favors).

ii. Total amount of bribery payments (log, CFA).¹⁸ We test the hypothesis that the intervention will decrease the overall amount of bribes paid. To measure this, we construct the total amount

¹⁷ In this section, we follow hypotheses specified in our pre-analysis plan (PAP) available on the AEA RCT Registry (RCT ID: AEARCTR-0006543). As a measure of parsimony and to simplify the interpretation of the results, we removed one hypothesis from the PAP, "Category F: combined outcomes for oneself and network". This hypothesis included pooled values from the two rosters of administrative tasks (for oneself and for the network). We now focus on the same outcomes, but treat the two rosters separately in the five other hypotheses (A to E).

¹⁸ Null values will be converted to 1 for log calculations. Note: CFA values are large (1 USD = 500 CFA approximately).

of bribes paid aggregated from the administrative task roster and from the direct question (questionnaire: 4.1.m and 4.3d respectively). For bribes in kind, individuals are asked to estimate the monetary equivalent in CFA when possible.

iii. Total amount paid to the administration per task (log, CFA). This total amount paid includes all fees paid, whether legitimate or not. When individuals have engaged in several administrative processes over the last 12 months, we take the average amount. We test the hypothesis that the intervention will decrease total payments per task because beneficiaries will be more likely to pay the legal fees only (if any fee exists). Although discussion of bribery payments is not particularly sensitive in the Burkinabe context, asking indirectly about bribery by measuring total amounts paid may yield more accurate information on the amount of bribes. For example, individuals might not categorize some payments as bribes, might not be aware of paying an additional amount, or might not feel entirely comfortable revealing the amount of bribe payments. We measure the average amount paid by task, aggregated from the roster of administrative tasks (4.1.h in the questionnaire).

• Hypothesis B: the intervention improves the interaction with the administration

To test this hypothesis, we measure the effect of the intervention on a series of outcomes related to administrative processes.

i. Administrative tasks succeeded (number). We test the hypothesis that the intervention will increase the number of administrative tasks completed successfully by counting administrative tasks completed by the individual from the roster of administrative tasks (4.1.g in the questionnaire).¹⁹

ii. Time to complete administrative tasks (days). We test the hypothesis that the intervention will reduce the overall time needed to complete administrative tasks. We measure the number of days to complete tasks from the roster of administrative tasks (4.1.a and 4.1.c.b in the questionnaire). When individuals have engaged in several administrative processes over the last 12 months, we take the average number of days over all tasks completed.

¹⁹ Outliers are unlikely given that respondents had to answer a series of question for each administrative task mentioned. At baseline, the maximum number of administrative task started is five, for two individuals.

iii. Number of visits to the administration per task (number). We test the hypothesis that the intervention will decrease the required number of visits for completing an administrative task. We measure the average number of visits for completing a task started, aggregated from the roster of administrative tasks (4.1.d in the questionnaire). When individuals have engaged in several administrative processes over the last 12 months, we take the average number of visits.

iv. Difficulty to achieve the administrative task (self-assessed). We test the hypothesis that the intervention will make beneficiaries perceive administrative tasks as easier. We will measure the subjective ease of completing administrative tasks. The variable used will be a numerical scale of 1 to 4 based on question 4.1.p in the questionnaire. When individuals have engaged in several administrative processes over the last 12 months, we take the average difficulty.

• Hypothesis C: the intervention has spillovers for the beneficiary's network

To test this hypothesis, we asked sampled individuals about people they helped to perform administrative tasks in the last 12 months. We measure outcomes related to bribery and administrative tasks among people helped. Note that we did not interview those in the network of a given sampled individual; instead, we asked an individual information about the administrative process in which they assisted others.

i. Support of other individuals for administrative tasks (number of tasks). We test the hypothesis that individuals benefiting from the intervention will be in a better position to help their relatives perform administrative tasks. We count the total number of tasks recorded in the roster of administrative tasks on behalf of others (4.2. in the questionnaire).

ii. Administrative tasks succeeded by relatives supported (number). We test the hypothesis that the intervention will increase the number of administrative tasks completed with success for relatives of the App beneficiary. To measure this outcome, we count administrative tasks succeeded by others from the roster of tasks supported by the individual (4.2.b1. in the questionnaire).

iii. Bribery payments by relatives supported (any payment, 0/1 indicator). We test the hypothesis that the intervention will decrease the likelihood of paying any bribery payment for relatives assisted by the individual. To measure this, we construct an indicator variable equal to 1 if the individual declared that the person assisted paid any sort of bribe during the procedure, from the

administrative roster of tasks supported by the individual. (4.2.f. in the questionnaire). This includes bribes of any nature, including those without monetary equivalent.

iv. Total bribery amount paid by relatives supported (log, CFA). We test the hypothesis that the intervention will decrease the overall amount of bribes paid by relatives helped by the individual. To measure this, we construct the total amount of bribes paid aggregated from the administrative roster of tasks supported by the individual (4.2.g. in the questionnaire). For bribes in nature, individuals are asked to estimate the monetary equivalent in CFA when possible.

v. Time to complete administrative tasks by relatives supported (days). We test the hypothesis that the intervention will reduce the overall time needed to complete administrative tasks for people supported by the beneficiary of the intervention. We measure the number of days to complete tasks from the roster of administrative tasks of the network for tasks that have been completed (4.2.d. in the questionnaire). When individuals have supported others in several administrative processes over the last 12 months, we take the average number of days over all tasks.

• Hypothesis D: the intervention affects the modalities of bribery

We test secondary hypotheses related to bribery to better understand the mechanisms through which the intervention does or does not affect bribery payments.

i. Occurrence of use of intermediary (any intermediary, 0/1 indicator). Intermediaries facilitate administrative processes and are often used to process bribe payments.²⁰ We test the hypothesis that the intervention will decrease the likelihood of using an intermediary for an administrative process. This variable is equal to 1 if the individual has used an intermediary at least once, as asked in the roster of administrative tasks (4.1.f modality 3 in the questionnaire).

ii. Initiative of bribery payments (any bribery payment initiated by the individual, 0/1 indicator). We will test whether individuals supported by the App are less likely to initiative a bribe

 $^{^{20}}$ This is one of the findings from the qualitative study (see Appendix C). At baseline, intermediaries were used in 101 interactions with the administration, and intermediaries were responsible for initiating the bribe request for 37% of the individuals who paid a bribe in the last 12 months.

themselves. This indicator will take a value 1 if the individual initiated any bribery payment, at least once, as asked in the roster of administrative tasks (4.1.n. in the questionnaire).²¹

iii. Bribes offered to speed up the process (any bribe to speed up the process, 0/1 indicator). We will test whether individuals supported by the App are less likely to offer a bribe to speed up the process. This may be affected by the knowledge offered by the App regarding the official duration of the process. This indicator will take a value 1 if the individual gave any bribe to speed up the process, as asked in the roster of administrative tasks (4.1.0. in the questionnaire).²²

• Hypothesis E: the intervention affects the modalities of the interaction with the administration

We test secondary hypotheses related to the interaction with the administration. These mechanisms would help us better understand outcomes related to the private cost of administrative processes, including bribery payments.

i. Total "other" costs per administrative tasks (log, CFA). This amount aggregates costs paid in transport, photocopies, etc. When individuals have engaged in several administrative processes over the last 12 months, we take the average amount. We test the hypothesis that the intervention will decrease this category of costs by avoiding unnecessary travel, provisions of documents, etc. We measure the average amount paid by task, aggregated from the roster of administrative tasks (4.1.i. in the questionnaire).

ii. Total distance travelled per task (log, km). We test the hypothesis that the intervention will prevent unnecessary visits to the administration. The total distance travelled is aggregated from the roster of administrative tasks (4.1.e times 4.1.d. in the questionnaire). When individuals have engaged in several administrative processes over the last 12 months, we take the average distance.²³

²¹ While discussing petty corruption is not a sensitive topic in this context, individuals receiving the intervention may be less likely to disclose initiating bribe payments themselves. However, there is no reason to expect a difference between treatment and control individuals, as they were all recruited among individuals interested in alleviating corruption. Besides, at baseline, 39% of the individuals who paid a bribe in the last 12 months had initiated the bribe offer.

 $^{^{22}}$ At baseline, 71% of the bribes offered were paid in order to speed up the process. This outcome relates to the "greasing wheel" hypothesis (see section 2.1).

²³ Null values will be converted to 0.1 prior to the log transformation.

iii. Support from others (any support, 0/1 indicator). We test whether the intervention decreases the need to be supported by others when interacting with the public services. This indicator takes the value 1 if the individual was helped by someone else (except intermediaries) in any of the administrative tasks completed, as indicated in the administrative roster (4.1.f. except modality 3 in the questionnaire).²⁴

iv. Feeling in control with respect to administrative tasks (index). We will test whether the intervention helps individuals feel more in control when they interact with the administration. This index is based on four questions of the endline questionnaire (4.3.ab1. to 4.3.ab4.) not included at baseline.²⁵

Sample and statistical power

We used data from the pilot test of the App (see section 3 and Appendix C) to calculate power for this individually randomized trial. The pilot data was collected using a different questionnaire. However, it includes information on the time spent to obtain a birth certificate (related to the outcomes tested for hypothesis A), and on the amount of bribes paid (related to hypothesis B). We used these variables for our power calculation to determine our sample size.

The power calculations were conducted using the *sampsi* command in Stata, for a power of 0.8, with one round of baseline data, a relatively low correlation between baseline and follow-up variables (0.3), and α of 0.1. We specified the usage of an Ancova methodology, consistent with our econometric approach (see section 4).

Using the time spent to obtain a birth certification, we obtain a sample size of 2,252 for a 0.1 s.d. drop in the time spent. This corresponds to a minimum detectable effect of a drop from an average of 8.8 days to obtain a birth certificate to 7.3 days (a reduction of 1.5 days). For observing a 0.1 s.d. change in the likelihood to pay bribes, we need a sample size of 2,234, and for a drop in the average bribe amount paid by 0.1 s.d., we need a sample size of 2,198.

²⁴ At baseline, support from others was used in 20% of the interactions with public services.

²⁵ The questions are about one's confidence in conducting administrative tasks; being worried about administrative tasks; feeing in control with respect to administrative tasks; feeling nervous or stressed about administrative tasks. People answer whether they fully disagree, somewhat disagree, somewhat agree or fully disagree. Each answer will be coded from 0 (most negative) to 3 (most positive), and aggregated in a sum to generate an index between 0 and 12.

The limiting factor for the actual sample size consisted in the number of potential participants that the implementation partner (ONE) could recruit for the intervention. Through various channels, ONE identified approximatively 3,000 participants who registered for a possible participation to the intervention, among which 2,476 accepted to answer the baseline phone survey (see section 2.1). This is slightly above the sample size required for identifying a relatively small, meaningful minimum detectable effect based on our power calculations.

3 Data

This research is based on a phone survey conducted pre- and post-intervention. The following subsections describe the data collection process, descriptive statistics, and balance tests from the baseline survey.

3.1 Data collection and processing

Baseline data was collected in November 2020.²⁶ Participants who registered for a possible participation in the experiment were contacted by telephone by a local survey firm. Of those, 2,476 individuals agreed to complete the baseline survey.²⁷ Baseline (and endline) data were collected using Survey CTO by the survey firm. Data was stored on a secure server, and accessible only to the research team. The baseline survey collected information on the socio-demographic background of the participant, connectivity (e.g., frequency of using the internet and network coverage at the participant's home), perception of the public administration and corruption in Burkina Faso, and a roster of administrative tasks for the respondent or household members (the full questionnaire is available in Appendix B).

²⁶ Pilot data was collected as part of the test of the App by a different team (see section 2). This data about a separate set of participants was not used for this study except for conducting power calculations prior to the baseline survey. Prior to the baseline data collection, we also hired a local researcher who conducted a short qualitative study using phone interviews with pilot participants (in a context of Covid-19 restrictions). The qualitative report was used to inform the design of the intervention and the research, and is available upon request. Appendix C provides a summary of main findings.

²⁷ The survey took about 20 minutes to complete. Enumerators had been advised to call each potential participant at least three times at different hours of the day to maximize response rates. Informed consent was obtained from all survey participants.

For the roster of administrative tasks, participants were asked which administrative task(s) they had undertaken in the last 12 months.²⁸ Everyday administrative tasks include items such as obtaining a birth certificate, enrolling a child in elementary school, or obtaining a national identity card. For each administrative task mentioned by the participant, a series of follow-up questions then ensued. These included questions on the duration and success of the process, how often and how far the individual had to travel to complete the process, how much the individual had to pay to complete the process and whether the individual encountered any bribery demands or had offered any bribes (monetary, gifts, and so on). The overall ease of the process is also assessed by the individual.

Another administrative roster was then conducted for any administrative task in which the respondent was involved to assist other individuals (e.g., friends or neighbors). This second roster was similar to the first roster, but included fewer details on issues which the respondent may not be able to answer accurately. The two rosters thus provide a comprehensive overview of everyday administrative tasks that Burkinabé face on a regular basis and which have oftentimes been subject to demands for bribes by low-ranking public officials.

Endline data was collected 12 months later in November 2021 by the same survey firm and team of enumerators. To date, the research team has not accessed the endline data. A blinding procedure was established prior to the endline data collection: research team members' access to the online servers was revoked, and the research team has not received any information regarding the data collection after it started. Instead, the research team hired a trusted consultant as a proxy, who followed and monitored the data collection process and received the final products (datasets and reports). The consultant guaranteed the overall quality of the data collection process without revealing information to the research team on, for example, attrition. The consultant is currently securely storing the endline data and will continue to do so until final completion of the stage 1 review process. The blinding strategy was made clear to all stakeholders of the intervention (e.g., ONE, funding agency, survey firm).²⁹ Finally, endline data

²⁸ Enumerators were advised not to offer any examples, but to choose the administrative tasks mentioned by the participant from a comprehensive list of the most common administrative tasks.

²⁹ Funding of the endline data was provided by a separate unit of the funding agency, for reasons independent from the research or publication strategy. This unit, entirely separated from the research team, was in charge of payment of the surveying firm. This contributed to ensuring the efficiency of the blinding strategy. Trust in the survey firm and the hired consultant was high, as the research team had experience working with both, and expected future

collection occurred after the pre-analysis planned was made public, which limited incentives for researchers to deviate from the blinding strategy.

Given the experience with the baseline survey, we expect few challenges during the endline survey. The organization conducting the intervention (ONE) has an established relationship with participants, and the intervention is light-touch. Attrition may occur in case participants change phone numbers, but alternative phone numbers were collected during the baseline survey. Finally, the survey is short (about 20 minutes) and can be conducted at a convenient time chosen by the interviewee, over the phone (in any location). If attrition is higher than expected (more than 10%), we would test whether attrition is significantly higher in either the treatment or the control groups. Section 4 describes how we will deal with differentiated attrition between treatment and control groups if needed.

3.2 Descriptive statistics and balance tests

This section presents descriptive statistics for all individuals (Tables 1, 2 and 3) and for the subsamples of individuals who conducted an administrative process (Table 4), paid a bribe (Table 5), supported someone from their network (Table 6), or supported someone from their network who paid a bribe (Table 7). For both the full sample (Tables 1 to 3) and conditional samples (Tables 4 to 7), the control and treatment groups are well balanced: very few variables are significantly different across groups, and the differences are of small magnitude.

Table 1 presents characteristics of individuals of the full sample and disaggregated by treatment status. The average age is low (26.1 years), and only 15% of individuals are married. Only 18% are women. The proportion of students is very high (62%), consistent with the recruitment method (see section 2). However, 50% of the sample has an "average" or "low" level of spoken French. Almost half of the sample (47%) lives in Ouagadougou, and only 1.6% of the sample lives in rural areas. As mentioned, the sample is not representative of the general population of Burkina Faso but may be representative of potential users of the App promoted by the intervention.

collaborations with both as well. The blinding procedure was discussed and approved by the editor of the *Journal of Development Economics*.

In terms of access to the technology, most participants used internet daily (69%), and almost all use Facebook (95%) in addition to another social media (the average number of social media used is 2.82). Internet quality is good for only 23% of the users. Only 17% of them perceive corruption as not frequent, and 75% think that corruption has increased (46%) or remained stable (23%) in 2020. Finally, 80% of the respondents perceive that administrative processes have become harder or much harder in 2020 compared to previous years.

Table 2 presents information from the administrative rosters. In the last 12 months, 62% of individuals had conducted an administrative task for themselves, and 37% had supported someone else. The average number of tasks performed for oneself was 0.94. The most common tasks performed were the request of a national ID card, a criminal record, a birth certificate, or the "certification" (*légalisation*) of an official document. In the whole sample, 18% of individuals paid at least one bribe. In addition, 6% of individuals assisted someone who paid a bribe during the administrative process (Table 3).

Table 4 provides information on individuals who conducted at least one administrative process (1,539 observations). On average, these individuals took 21.5 days to complete an administrative process. They had to visit public services more than once (2.5 times on average). The distance travelled is 5.8 km on average, consistent with a location in urban areas. Approximatively 22% of individuals received helped from someone else during the process, and 11% failed to complete a task. The direct cost of conducting a task is relatively high (approximatively 11,500 CFA, or 23 USD), and indirect costs lower (approximatively 3,500 CFA or 7 USD).³⁰ While 44% of the respondents found the process quite or very difficult, 20% found it very easy. In 12% of these administrative processes, the individual paid a bribe. For this subsample including all individuals who conducted at least one administrative task (not conditional on paying one bribe), the average amount paid was about 1,000 CFA during an administrative process, and 1,100 CFA in other situations (e.g., bribes requested from the police during traffic stops).

Table 5 focuses on the 189 individuals who paid a bribe during an administrative process in the last 12 months. For them, the total administrative cost is much higher (approximatively 34,500

³⁰ Direct costs represent approximatively 50% of the average monthly consumption in Burkina Faso based on EHCVM 2018–19 data.

CFA or 69 USD), and they paid 8,247 CFA in bribes (16 USD). About 41% of them initiated the bribe themselves, and 71% paid the bribe to speed up the process.

Table 6 shows information on the administrative processes in which the sampled individual assisted someone else (915 individuals). The individual supported is mostly a family member (43%) or a friend (51%), and the respondent went herself to the public service in 60% of the cases. Bribery payments occurred in 15% of the cases. However, direct costs reported when helping someone are similar (approximately 10,500 CFA) to those paid oneself. The amount of bribe payments is also similar (8,000 CFA approximately) for the subsample who stated that a bribe was paid by the person supported (Table 7).

4 Analysis

4.1 Econometric specifications

Our identification strategy relies on the randomized design, that is, access to the App is only provided to the treatment group. The main estimation consists in comparing outcomes for the treatment and the control group and will consist in intention to treat (ITT) estimations. However, the theory of change suggests that only *usage* of administrative services and/or of the App generates behavioral changes. To gain precision and estimate parameters of interest, secondary specifications will also estimate treatment effects for App users only, that is, treatment effects among individuals who engaged with the administration to conduct administrative tasks at least once. A last series of specifications will focus on people who opened the App at least once. We describe these three approaches here.

A. ITT: policy treatment on the whole sample

For each outcome, we will test the effect of being in the treatment group (i.e. being offered the possibility to download the App) on the outcomes of interest. Because not all individuals in the treatment group *downloaded*, *opened*, or *used* the App, this will generate "intention to treat" (ITT) estimates. These experimental estimates are conservative compared to the effect of the App on individuals who used it. However, they provide an estimation of the effect of a policy

consisting in offering a free App to individuals who expressed an initial interest in the product. For the ITT specification, we estimate the following cross-sectional model at endline (t_1) :

$$y_{i,t1} = \beta_0 + \beta_1 T_i + \beta_2 y_{i,t0} + \varepsilon_i \tag{1}$$

where *i* is the individual, T_i indicates the treatment status of the individual, and $y_{i,t0}$ is the value of the outcome of interest at baseline (see section 2.2). This is a widely used ANCOVA specification. It is preferred in this case because we expect a relatively small autocorrelation for most of our outcomes of interest, and therefore, controlling for outcome of interest at baseline increases precision (compared to a difference-in-difference specification; see McKenzie, 2012).³¹ For this specification, outcomes are all aggregated at the individual level (see section 2.2).

In addition to this base specification, we will perform robustness analyses adding control variables. Control variables may help increase precision. In addition, control variables may address potential remaining imbalance between treatment and control groups.

$$y_{i,t1} = \beta_0 + \beta_1 T_i + \beta_2 y_{i,t0} + \beta_k \mathbf{X}_{\mathbf{k},\mathbf{i},\mathbf{t0}} + \varepsilon_i$$
(2)

where $\mathbf{X}_{k,i}$ indicates *k* control variables at the individual level. \mathbf{X}_k includes indicators for the recruitment channel of participants (see section 2.1) and individual demographic characteristics such as age, language, and network quality.

B. ITT: policy treatment on the sample of administrative services users

This specification measures the effect of the policy treatment on the population of users of administrative services. Indeed, the theory of change suggests that, for the intervention to have an effect, mechanically, individuals must interact with the administration. Yet not all treated individuals conducted an administrative task in the past twelve months.³² We then estimate equations (1) and (2) among individuals who reported having engaged with the administration

³¹ Baseline values may not be strongly correlated with $y_{i,t1}$ for some variables if the administrative processes completed at t=0 are not the same as the processes at t=1. However, outcomes related to distance (and thus cost) and influenced by personality traits may be correlated over time. As noted, controlling for baseline outcomes increases precision.

³² Based on our baseline data, 62% of the individuals conducted at least one administrative process in the last 12 months, and 37% assisted someone else in conducting an administrative process (Table 2). In total, 74% of the sample either conducted an administrative process themselves or assisted someone else in the last 12 months. There is no significant difference between the treatment and the control group.

during the follow-up survey. In these specifications, outcomes are aggregated at the individual level as specified in section 2.2.

To complement this estimation, we also run a regression where the level of observation is the *administrative task*, rather than the *individual* (see section 3). This specification has several advantages. First, instead of considering only one process per person (or an average value for several processes), it increases the number of observations by potentially including several processes per individual. Second, and most importantly, it allows us to control for the type of administrative task performed. This potential gain of precision is important as some administrative tasks are expected to take more time, cost more, or be more susceptible to bribery payments. For example, obtaining a criminal record is less time consuming than obtaining a driver's license (10 vs 44 days on average). We estimate the following specification:

$$y_{i,j,t1} = \beta_0 + \beta_1 T_{i,t1} + \beta_k \mathbf{X}_{k,i,t0} + \beta_m \mathbf{X}_{m,i,j,t1} + \varepsilon_{i,j}$$
(3)

where *i* is an individual and *j* is an administrative task, and $\mathbf{X}_{\mathbf{k},\mathbf{i}}$ indicates *k* control variables at the individual level (baseline values) and $\mathbf{X}_{\mathbf{m},\mathbf{i},\mathbf{j}}$ *m* control variables at the administrative task level (at endline). Because the same individual *i* can conduct several administrative tasks *j*, standard errors are clustered at the individual level. This specification does not include baseline values for the dependent variable ($y_{i,t0}$ in (1)) because although we observe a panel of individuals (at baseline and endline), there is no panel equivalent for administrative tasks: an administrative process is performed only once. As in equation (2), $\mathbf{X}_{\mathbf{k}}$ includes indicators for the recruitment channel of participants and individual demographic characteristics such as age, language, and network quality. $\mathbf{X}_{\mathbf{m},\mathbf{i},\mathbf{j}}$ includes indicators for the type of administrative task conducted (e.g., obtaining a driver's license). Equation (3) is unbiased (experimentally) as long as the treatment does not affect the likelihood of engaging with the administration. This is a plausible assumption— interactions with the administration are mostly driven by the need to obtain a particular document— and a testable one with endline data.

C. Treatment effect on App users

This specification measures the effect of using the App for the whole sample. All individuals in the treatment group have received access to the App, but not all have installed it. The point estimates obtained through equations (1) to (3) will therefore be conservative. For this reason, we estimate the effect of using the App through an instrumental variable (IV) approach. For equation (2), we instrument App usage with the treatment variable and a series of covariates X_k . This gives us an estimate of the effect of using the App. Actual App usage can be obtained from administrative records from the implementing firm (ONE).³³ We estimate the following by two-stage least square:

$$y_{i,t1} = \beta_0 + \beta_1 \widehat{U}_{i,t1} + \beta_2 y_{i,t0} + \boldsymbol{\beta}_k \mathbf{X}_{k,i,t0} + \varepsilon_i$$
(4)

$$U_{i,t1} = \gamma_0 + \gamma_j Z_{j,i} + \gamma_k X_{k,i,t0} + \kappa_i$$
(5)

where $Z_{j,i}$ is a vector of instrumental variables. For these specifications, we generate the treatment variation $U_{i,t1}$ (App usage) either as a dummy variable (0/1, indicating that an individual has used the App at least once), or as a continuous variable (as the number of times that the individual used the App). Instruments include the random assignment to the treatment group and other determinants of App usage such as network quality in the individual's home area. We will test the strength and exogeneity of the instruments used.

4.2 Correcting for multiple hypotheses testing and attrition

For each category of outcomes specified in section 2.2, we correct p-values for multiple hypotheses testing. Specifically, we generate the Romano-Wolf stepdown adjusted p-values, controlling for the familywise error rate (FWER), which "seems the theoretically best option for FWER correction at the moment".³⁴

For this population recruited based on its interest in the intervention, we are not expecting a high level of attrition. An attrition level over 10% will be considered as concerning. We test whether attrition is substantial and different between the treatment and control group. If it is, we could employ the Kling and Liebman (2004) sensitivity bounds approach to correct for attrition. We

³³ While we also ask about App usage in the endline survey, the administrative data tracking actual behavior will be used for this specification.

³⁴ https://blogs.worldbank.org/impactevaluations/updated-overview-multiple-hypothesis-testing-commands-stata, July 20, 2021. Following McKenzie's recommendation, we will use the rwolf2 Stata command to generate corrected p-values.

would also explore alternative approaches to address attrition, for example, exploiting the number of calls needed to reach sampled individuals during the follow-up survey, if individuals in the treatment group are easier to reach.³⁵ According to Behaghel et al. (2015), this method provides sharper bounds than alternative nonparametric bounding approaches.

4.3 Heterogeneity

Finally, we conduct several heterogeneity analyses on sub-groups for which impacts are likely to differ. To limit the number of outcomes considered, we will focus our interpretation of the heterogeneity results on the ITT specification presented in equation (2) for the outcomes related to hypotheses A and B in section 2.2 (related to bribery payments and administrative processes) without control variables. Formally, our heterogeneity regression is conducted as:

$$y_{i,t1} = \beta_0 + \beta_1 T_i + \beta_2 S_i + \beta_3 T_i * S_i + \beta_4 y_{i,t0} + \beta_5 y_{i,t0} * S_i + \varepsilon_i$$
(4)

where S_i is an indicator that individual *i* belongs to a given category at baseline. β_3 will indicate the additional effect of the treatment for category S_i , (while β_1 indicates whether the impact of the App is significant for individuals who do not belong for category S_i). A joint test of significance of β_1 and β_3 will indicate whether the impact of the App is significant for individuals in S_i . Heterogeneity analyses are conducted for several meaningful categories of individuals described below.

• *Good internet quality*

Only 448 individuals, or 23% of our sample, have good or very good internet access. We expect stronger effects of the intervention on those who have good internet access. At the time of this research, the information available on the App could not be retrieved offline. Users thus need a functioning internet connection to be able to benefit from the App fully.

• Heavy social media users

³⁵ The number of attempts to reach an individual was recorded during the endline survey. This method cannot be employed if the number of calls used to reach an individual does not vary across treatment and control groups.

A vast majority of our sample uses WhatsApp and Facebook, and thus use two social media. We define *heavy social media users* as individuals using three or more social media. This corresponds to 53% of our sample. The expected effect of the App on heavy social media users is a priori unclear. On the one hand, we expect social media users to be heavier users of mobile technology in general, and therefore, to be more likely to have downloaded and used the App. Heavy social media users might also be more aware of corruption stories in Burkina Faso, as these tend to spread online, and might therefore be more sensitive to it than the average participant of this study. On the other hand, the App might offer less information to heavy social media users, who might already be able to access additional information through other social media channels.

Women

Only 435 individuals, or 18% of the respondents, are women. The intervention could be either more or less effective for women. Both men and women have the same legal rights when applying for administrative acts.³⁶ Nevertheless, we expect women to have less experience and exposure to applying for administrative acts in general. They are therefore less likely to be able to obtain the information on procedures and needed documents through their (likely gendered) networks. An information intervention might offer more information to women and empower them in their rights to obtain administrative acts. On the other hand, public service agents may also behave differently towards women, whether through discrimination, paternalistic behavior, or other means. As a result, women might not be able to leverage the information provided by the App effectively to improve their access to public services.

• University education

In our sample, 59% of individuals have reached university. The effects of the intervention may be less pronounced for those with more education. The App is not presenting new information– it is simply providing already existing information in a condensed and more easily accessible form. We expect those with university education to be able to access the information through other channels, either official communications (likely in French) or through better connected and informed networks, thereby reducing the value added of the App for this group.

³⁶ See for example « Décret no. 98-293 du 14 juillet 2018 instituant des titres de voyages, Art. 5; Procédures de demande de passeport » for passport procedures (World Bank, 2023).

• Fluency in French

Among individuals sampled, 48% state that their French is "excellent". The effects of the App may be either attenuated or reinforced for those who are less fluent in French. French remains the main administrative language, and many official documents, including information on administrative acts, might only be available in French. The App makes this information available in local languages and as interactive voice responses, therefore offering the strongest benefit if language skills had been a constraint. On the other hand, those fluent in French may be able to exploit the information provided by the App better during their interaction with public services (given that French is likely to be an asset in completing an administrative task), in which case the intervention would generate a greater impact.

• Living in Ouagadougou

Almost half of the sample (47%) lives in Ouagadougou, the capital and administrative center of the country. These individuals may have increased access to public services locally. At the same time, a large part of these individuals may be migrants, and may be required to travel long distances to their hometown to complete administrative tasks (such as those related to their ID, marital status, etc.). These two factors can play in opposite directions and make the App either more or less effective for individuals living in Ouagadougou.³⁷

Heterogeneity analysis tables are reported in a separate subsection of the results section (5.2), in which we discuss the policy implications of these analyses. They are meant to complement the main results.

5 Results

5.1 Main results

This section will present estimation results from specifications (1) to (4) for hypotheses A to E. For each hypothesis, discussed in turn, it will present two tables of two panels (for equations (1)

³⁷ Our pre-analysis plan indicated that we would consider heterogeneity by rural vs urban location. However, less than 2% of our sample was located in rural area. For this reason, we chose to focus on the difference between individuals living in Ouagadougou vs elsewhere.

and (2) and then (3) and (4)), for a total of ten tables.³⁸ The results will be discussed hypothesis by hypothesis, thus addressing various components of the theory of change.

Hypothesis A indicates whether the intervention fulfills its primary objective and addresses corruption. It relates to the theory that information asymmetries foster petty corruption, and that addressing these constraints on the user side is effective at reducing corruption occurrences and bribery amounts when interacting with government officials. If effective, it will be an important contribution to the economics literature. To our knowledge, this is the first randomized evaluation of an information intervention that aims at alleviating petty corruption. The policy implications are twofold: first, the results will speak to this specific intervention in a low-income, mostly urban setting characterized by relatively high levels of petty corruption. Second, results will indicate the potential of information-based interventions directed at users of public services – rather than coercive approaches or approaches directed at public agents. Thus, the answer to hypothesis A will inform the economics literature regarding the causes of corruption and the constraints that push individuals to pay bribes. An absence of impact, particularly among App users (specification 4), could indicate that the information-based approach may not be sufficient to address the root causes of petty corruption, and points towards a different set of constraints.

Hypothesis B relates to the secondary objectives of the intervention, which is to facilitate interactions with public services. It will indicate whether information constraints exist in the first place, and whether providing additional information reduces the financial and non-financial costs of interacting with public agents. As such, it will provide insights related to the direct effect of the App and to the mechanisms at play.

Hypothesis C extends the findings from the two previous hypotheses to the network of treated individuals, indicating whether the intervention generates spillover effects. Finally, hypotheses D and E provide insights on the mechanisms at play related to hypotheses A, B and C. These hypotheses have important policy implications for future anti-corruption interventions– for instance, whether the App affects the initiation of bribery requests from the intervention beneficiaries in any way. Section 5.2 will generate additional insights on the mechanisms at play.

³⁸ We also estimate equations (1) and (2) for the subsample of users of administrative services (see 4.1, B). We will present these five additional tables (one per hypothesis) in Appendix.

5.2 Heterogeneity results

This subsection will present results from the heterogeneity analysis based on six distinct characteristics (see 4.3) for two hypotheses (A and B). This will produce six tables of two panels (one table per characteristic, one panel per hypothesis). All results will be discussed in the main manuscript; however, some or all heterogeneity tables may be included in an online appendix, especially for dimensions across which the impact appears to be homogeneous.

The heterogeneity results will offer findings in terms of pathway and policy. First, they will generate insights regarding the mechanisms at play. Specifically, they will indicate whether the App works better when it addresses strong pre-existing constraints (related to language, education, gender, etc.) or whether it works better in contexts where individuals are already more empowered. Second, the heterogeneity results will speak to the implementation feasibility of future, similar interventions. If the App is effective for individuals with specific characteristics, they may be targeted as a priority, for example, with information campaign highlighting the existence of the App. Moreover, if the App is not effective on some subsamples, complementary or alternative interventions may be used to target these populations, for instance by focusing on addressing the specific constraints that they face.

Overall, the intervention will be presented as effective if it generates an effect in the main specifications (section 5.1). If it generates a significant impact only on specific subsamples, it will be discussed as ineffective, except on specific populations.

5.3 Cost-effectiveness

This subsection will describe the cost effectiveness of the intervention. App interventions are usually considered as relatively low-cost compared to other interventions. The development of the App, telephone credit to potential users, and technical support to users in the initial installation were all externally financed. Overall, the App development and support cost approximatively 80,000 USD. About half of that cost was spend on the development of the App and the other half on operational costs and the telephone credit provided to potential users to support the download of the App. In the cost effectiveness analysis, we will then proceed to contrast the cost of developing and operating the App with its benefit as estimated from this

present evaluation in terms of: i) the financial cost of interacting with public services, including changes in amount of bribes paid; ii) other benefits of the intervention, especially in terms of non-financial costs related to administrative processes.

This analysis will allow us to discuss the scalability of this type of intervention. Given the fixed costs and the variable costs of the intervention, would a program implementing it be cost-effective? If yes, what is the required scale? We will discuss the likelihood to reach a cost-effective scale in the context of Burkina Faso, where the use of smartphones remains relatively limited, and which adjustments would be needed for a successful scale-up. If the intervention is effective, the cost-effectiveness analysis can offer important insights for countries wishing to replicate the approach.

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7 Tables

· · · ·	(1)	(2)	(3)	(4)		
	All individuals	Control group	Treatment group	T-test p-value		
	Demogra	phic characterist	ics			
Age	26.1	26.0	26.3	-1.41		
Female individual	0.18	0.18	0.17	0.26		
Married	0.15	0.16	0.15	0.28		
Secondary education	0.38	0.38	0.38	-0.17		
Higher education	0.59	0.58	0.59	-0.12		
Occupation: student	0.62	0.61	0.63	-1.37		
Occupation: employee	0.15	0.16	0.15	0.45		
Occupation: self-	0.076	0.083	0.069	1.29		
Spoken French: average	0.49	0.49	0.49	0.28		
Spoken French: low	0.032	0.035	0.028	0.92		
Spoken More: excellent	0.42	0.42	0.42	-0.20		
Ouagadougou	0.47	0.48	0.47	0.64		
Bobodioulaso	0.098	0.095	0.10	-0.41		
Koudougou	0.24	0.24	0.24	-0.28		
Other city	0.18	0.18	0.18	0.05		
Village	0.016	0.014	0.018	-0.81		
Connectivity						
Number of years with cellphone	9.40	9.38	9.41	-0.17		
Uses internet daily	0.69	0.69	0.69	0.00		
Hours of internet per day	6.87	6.71	7.02	-1.04		

Table 1: Test of balance, individual characteristics

Number of social media	2.82	2.81	2.84	-0.68			
Uses Facebook	0.95	0.95	0.94	0.27			
Uses Instagram	0.35	0.34	0.35	-0.59			
Uses Twitter	0.17	0.17	0.17	0.00			
Internet quality: low	0.18	0.17	0.20	-1.80*			
Internet quality: average	0.58	0.58	0.57	0.69			
Internet quality: good	0.23	0.24	0.22	0.86			
Administration and corruption: perception							
Corruption very frequent	0.41	0.41	0.40	0.81			
Corruption quite	0.41	0.42	0.41	0.84			
Corruption not frequent	0.17	0.16	0.18	-1.98**			
Corruption increased in 2020	0.46	0.45	0.48	-1.41			
Corruption stable in 2020	0.23	0.25	0.22	1.60			
Corruption decreased in 2020	0.25	0.25	0.24	0.79			
Covid: admin processes	0.30	0.30	0.29	0.63			
Covid: admin processes	0.50	0.48	0.51	-1.30			
Covid: admin processes	0.21	0.22	0.20	0.89			
Identical or easier Covid: corruption increased	0.47	0.46	0.47	-0.20			
Observations	2476	1238	1238	2476			

Note: Descriptive statistics and balance, individual characteristics. Mean coefficients; *t* statistics in last column. * p < 0.1, ** p < 0.05, *** p < 0.01

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	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
	Processes	in the last 12 mon	ths	
Any admin process last 12 months (self)	0.62	0.63	0.62	0.62
Any admin process last	0.37	0.37	0.37	-0.04
Any admin process last 12 months (self or	0.74	0.75	0.73	0.96
Number of admin processes last 12 months	0.94	0.96	0.91	1.27
Number of admin processes last 12 months	0.48	0.47	0.49	-0.57
Process last 12mo: birth	0.10	0.11	0.093	1.40
Process last 12mo: birth	0.071	0.080	0.061	1.80^*
Process last 12mo: child	0.028	0.024	0.032	-1.10
Process last 12mo:	0.14	0.13	0.15	-0.81
Process last 12mo:	0.027	0.024	0.031	-0.98
Process last 12mo:	0.13	0.14	0.13	0.83
Process last 12mo: other	0.13	0.14	0.13	0.77
(c.g. leguisation)	Ec	conomic cost		
Time to complete admin process (days, cs 99p) (average)	13.4	13.5	13.2	0.23
Number visits for admin process (cs 99p)	1.53	1.55	1.50	0.74
Distance travelled for admin process (log km)	1.09	1.10	1.07	0.61
Failed to complete	0.070	0.064	0.077	-1.26
Received help from family or acquaintance	0.14	0.14	0.13	0.88

Table 2: Test of balance, administrative processes

(any)				
Received help from intermediary (any)	0.038	0.040	0.035	0.74
Direct cost admin process (CFA, cs 99p) (total)	7110.1	7139.6	7080.5	0.06
Indirect cost admin process (CFA, cs 99p)	2227.6	2071.9	2383.3	-1.20
Total cost admin process (CFA, cs 99p) (total)	9337.7	9211.5	9463.8	-0.22
Process very easy (any)	0.13	0.13	0.12	0.72
Process quite easy (any)	0.32	0.32	0.32	0.09
Process quite difficult	0.19	0.20	0.18	1.07
Process very difficult	0.080	0.077	0.083	-0.59
Difficulty of the process (1-4) (average)	2.30	2.30	2.31	-0.25
		Bribes		
Paid a bribe during admin process (=1) (any)	0.076	0.073	0.080	-0.68
Bribe amount during admin process (CFA, cs 99p) (total)	629.5	550.9	708.2	-1.05
Paid another bribe in last 12mo (=1)	0.12	0.12	0.13	-0.12
Other bribe payments in last 12 months (CFA, cs 99p)	953.4	1001.1	905.8	0.59
Paid any bribe in last 12 months (=1)	0.20	0.20	0.21	-0.49
Total bribe payments in last 12mo (CEA cs 99n)	1583.0	1551.9	1614.0	-0.26
Initiated bribe (any)	0.032	0.032	0.031	0.21
Gave bribe to speed up	0.055	0.058	0.051	0.77
Observations	2476	1238	1238	2476
	2 7 70	1230	1230	2770

Note: Descriptive statistics and balance, administrative processes. For variables from the roster of administrative tasks, we show the average value (average), the total value (total), or the occurrence (any) for each individual when they have engaged in several administrative tasks over the last 12 months. * p < 0.1, ** p < 0.05, *** p < 0.01

	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
Time to complete admin process (network)(days, cs 99p) (average)	3.54	3.23	3.85	-1.41
Succeeded in completing task (total)	0.37	0.36	0.37	-0.25
Helped a family member (any)	0.16	0.17	0.16	0.66
Helped a friend (any)	0.19	0.19	0.19	-0.26
Went to administration to help (network) (any)	0.22	0.22	0.22	-0.15
Paid a bribe (network) (any)	0.055	0.052	0.059	-0.79
Direct cost admin process (network)(CFA, cs 99p) (total)	3818.3	3199.9	4436.8	-1.32
Bribe amount (network)(CFA, cs 99p) (total)	432.1	379.5	484.8	-0.67
Observations	2440	1221	1219	2440

Table 3: Test of balance, administrative processes, network

Note: Descriptive statistics and balance, administrative processes in which the individual helped someone else from her network. We show the average value (average), the total value (total) or the occurrence (any) for each individual when they have supported someone in completing administrative tasks several times over the last 12 months.

	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
	Econor	nic cost		
Time to complete admin process (days, cs 99p) (average)	21.5	21.6	21.5	0.05
Number visits for admin process (cs 99p) (average)	2.46	2.48	2.44	0.45
Distance travelled for admin process (log km) (average)	1.75	1.76	1.74	0.26
Failed to complete admin process (any)	0.11	0.10	0.12	-1.42
Received help from family or acquaintance (any)	0.22	0.23	0.21	0.72
Received help from intermediary (any)	0.060	0.064	0.056	0.65
Direct cost admin process (CFA, cs 99p) (total)	11439.0	11375.6	11503.5	-0.09
Indirect cost admin process (CFA, cs 99p) (total)	3583.8	3301.1	3872.1	-1.42
Total cost admin process (CFA, cs 99p) (total)	15022.8	14676.8	15375.6	-0.40
Process very easy (any)	0.20	0.21	0.20	0.57
Process quite easy (any)	0.51	0.51	0.51	-0.29
Process quite difficult (any)	0.31	0.32	0.30	0.90
Process very difficult (any)	0.13	0.12	0.14	-0.76
Difficulty of the process (1-4) (average)	2.30	2.30	2.31	-0.25
	Bri	bes		
Paid a bribe during admin process (=1) (any)	0.12	0.12	0.13	-0.84
Bribe amount during admin process (CFA, cs 99p) (total)	1012.8	877.7	1150.5	-1.15
Paid another bribe in last 12mo (=1)	0.14	0.14	0.14	0.07
Other bribe payments in last 12	1115.7	1122.0	1109.3	0.06

Table 4: Test of balance, conditional on administrative processes

Observations	1539	777	762	1539
Gave bribe to speed up process (any)	0.088	0.093	0.083	0.69
Initiated bribe (any)	0.051	0.051	0.050	0.14
Total bribe payments in last 12mo (CFA, cs 99p)	2128.5	1999.7	2259.8	-0.74
Paid any bribe in last 12 months (=1)	0.23	0.22	0.24	-0.88
months (CFA, cs 99p)				

Note: Descriptive statistics and balance, administrative processes for the sample of individuals who have conducted at least one administrative process in the last 12 months. For variables from the roster of administrative tasks, we show the average value (average), the total value (total) or the occurrence (any) for each individual when they have engaged in several administrative tasks over the last 12 months.

Table 5:	Test of	balance.	conditional	on	bribery
					/

	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
Direct cost admin process (CFA, cs 99p) (total)	26909.3	27266.1	26584.8	0.11
Indirect cost admin process (CFA, cs 99p) (total)	7522.6	6894.2	8094.0	-0.72
Total cost admin process (CFA, cs 99p) (total)	34431.9	34160.3	34678.8	-0.07
Paid a bribe during admin process (=1) (any)	1	1	1	
Bribe amount during admin process (CFA, cs 99p) (total)	8247.1	7577.8	8855.6	-0.80
Paid another bribe in last 12mo (=1)	0.28	0.32	0.24	1.22
Other bribe payments in last 12 months (CFA, cs 99p)	2960.3	3311.1	2641.4	0.63
Paid any bribe in last 12 months (=1)	1	1	1	
Total bribe payments in last 12mo (CFA, cs 99p)	11207.4	10888.9	11497.0	-0.30
Initiated bribe (any)	0.41	0.44	0.38	0.84
Gave bribe to speed up process (any)	0.71	0.80	0.64	2.52**
Observations	189	90	99	189

Note: Descriptive statistics and balance, administrative processes for the sample of individuals who have paid at least one bribe during an administrative process (from the roster) in the last 12 months. We show the average value (average), the total value (total) or the occurrence (any) for each individual when they have engaged in several administrative tasks over the last 12 months.

	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
Time to complete admin process (network)(days, cs 99p) (average)	9.59	8.76	10.4	-1.54
Succeeded in completing task (total)	0.99	0.99	1	-0.42
Helped a family member (any)	0.43	0.45	0.42	0.83
Helped a friend (any)	0.51	0.51	0.52	-0.30
Went to administration to help (network) (any)	0.60	0.60	0.60	-0.16
Paid a bribe (network) (any)	0.15	0.14	0.16	-0.82
Direct cost admin process (network)(CFA, cs 99p) (total)	10332.5	8668.5	11992.9	-1.35
Bribe amount (network)(CFA, cs 99p) (total)	1169.4	1028.0	1310.5	-0.67
Observations	915	457	458	915

Table 6: Test of balance, administrative processes, conditional on supporting the network

Note: Descriptive statistics and balance, administrative processes in which the individual helped someone else from her network, conditional on having supported at least one person from the network. We show the average value (average), the total value (total) or the occurrence (any) for each individual when they have supported someone in completing administrative tasks several times over the last 12 months.

	(1)	(2)	(3)	(4)
	All individuals	Control group	Treatment group	T-test p-value
Time to complete admin process (network)(days, cs 99p) (average)	9.86	7.83	11.6	-1.27
Succeeded in completing task (total)	1.11	1.08	1.14	-0.62
Helped a family member (any)	0.38	0.34	0.41	-0.80
Helped a friend (any)	0.61	0.61	0.62	-0.08
Went to administration to help (network) (any)	0.59	0.56	0.62	-0.64
Paid a bribe (network) (any)	1	1	1	
Direct cost admin process (network)(CFA, cs 99p) (total)	24312.8	15356.3	32165.1	-1.63
Bribe amount (network)(CFA, cs 99p) (total)	7810.2	7340.6	8221.9	-0.35
Observations	137	64	73	137

Table 7: Test of balance, administrative processes, conditional on network paying a bribe

Note: Descriptive statistics and balance, administrative processes in which the individual helped someone else from her network, conditional on supporting someone who paid at least one bribe. We show the average value (average), the total value (total) or the occurrence (any) for each individual when they have supported someone in completing administrative tasks several times over the last 12 months.

8 Appendices

8.1 Appendix A

This section presents the App platform and the services it provides. The interface is shown in Figure A.1. The content is available in French or in a local language (Moré) (Figure A.2). An interactive voice response feature is available.



Figure A.1: App main interface Figure A.2: language choice interface

Individuals can either select the category of administrative process they are interested in or go directly to the list of procedures in the second tab (Figure A.3). Through these categories or going directly to the "Procedure" tab (Figure A.4), users can choose the document or administrative process needed. They can obtain details on a given administrative process, such as obtaining a national ID card (Figures A.5 and A.6). The App provides the location of the administration that delivers the ID card, the documents required to obtain it, and the cost (2,500 CFA in this example). It also indicates the processing time (3 to 21 days for the ID card, depending on the location). It provides additional, precise information (e.g., regarding the provision of a receipt, the need to take fingerprints, contact of the public services, etc.).

Applicati	on citoyenne	۹	6	
	CATEGORIE PROCEDURE ACTU. FORUM			
	Famille Acte de naissance, Acte de mariage, Acte de décès			
	Education Attestation d'inscription, certificat de scolarité			
X	Transport Carte grise, permis de conduire, carte de transport			
	Commerce Carte de commerçant, Certificat de salubrité, Autorisation d'ouverture de restaurant et débit d'alcool		C	
-	Justice		Sig	naler

Figure A.3: procedure categories.



Figure A.4: procedures

Résumé de : Carte d'Identité Nationale (CNIB) Lieu Les commissariats de police ou l'Office Nationale de l'Identification (ONI). Pièces à fournir La somme de 2500 fcfa Pour les Burkinabè nés au Burkina Faso : Une copie de l'acte de naissance Un formulaire de demande de carte nationale d'identité (fourni par l'administration) à remplir Pour les Burkinabè nés à l'extérieur du Burkina Faso : Une copie de l'acte de naissance Une copie du certificat de nationalité burkinabé Un formulaire de demande de carte nationale d'identité (fourni par l'administration) à remplir. Pour les femmes désirant porter le nom de leur époux, veuillez joindre une copie de l'acte de mariage. Pour certaines professions un document justificatif (commerçant, médecin, magistrat, ...) est exigé.

72h minimum si vous habitez les villes de Ouagadougou et Bobo-Dioulasso

DEMARRER LA PROCEDURE

Figure A.5: summary for national ID card (1/2)



Figure A.6: summary for national ID card (2/2)

ă



Figure A.7: information on public services

Finally, part of the App was interactive. ONE provided regular thoughts and pieces of information regarding corruption and related topics (Figure A.8). It also included a discussion forum, where users could post about their experience with petty corruption (Figure A.9). Users also had the opportunity to report experiences with corruption through the App (Figure A.10), although this did not have a direct effect (such as filing a complaint to the police).

Application citoyenne				۹	₽ <mark>∧</mark>	:
	CATEGORIE PROCEDURE	ACTU. FORUM				
Je suis engagé contre la corruption 01 Fev. 2021						
La corruption continue de prendre de plus en plus de pla l'état de corruption dans notre très cher continent : https://www.com/action.com/action/acti	ace en Afrique et cela s://afrique.le360.ma/	n'est pas prêt d maroc-algerie	le s'améliorer. L'article . Voir plus	e qui suit résume par	faiteme	ent
)		≪ 2		
Je suis engagé contre la corruption 01 Fev. 2021						
Saviez-vous que tous les Burkinabés, même ceux qui so pièces requises pour ce cas de figure .	nt nés à l'extérieur, oi	nt droit à leur CN	NIB? Découvrez dans	l'Application Citoyer	ine les	
				\$		
Je suis engagé contre la corruption 29 Jan. 2021					4	a
Nous nous plaignons toujours du sous-développement e	et de la pauvreté en A	frique en oublia	nt que la gangrène m	ême se trouve dans	nos	naler

Figure A.8: animation by ONE through the App

← Forum				
2021-04-04 21:31:21				
le pouvoir en place est compl	ice			
	0 Réaction		Kéagir Réagir	
Noufou 2021-04-11 23:14:05				:
vraiment, je n'arrive pas à com non te cache derrière un mur	nprendre nos police car si tu dis que tu es ou une maison,et en plus s'il t'arrête au lier	sorti pour le stop,tu dois qu'à m u de demande tes p Voir plus	ême sortir ou t'arrêter à côté du stop et	
	0 Réaction		🥎 Réagir	
Abdoul Rachid				:
la vieille du pac on m'a arrête	la nuit disant que je n'ai pas allumé mon fa	are alors que c'était bien allumé	ils m'ont fait payé six mille	
	0 Réaction		🦾 Réagir	
			E	

Figure A.9: discussion forum

← Signalement			
Vous avez été victime d'un acte de corruption? Signaler ici (Le signalement est anonyme sauf si vous décidez de le publier également sur le forum)			
Selectionnez l'agent concerné			
Combien avez-vous payé ?			
Où est-ce que ça s'est passé ?			
Qu'est ce qui s'est passé ?			

ENVOYER

Figure A.10: reporting

8.2 Appendix B: baseline questionnaire

SURVEY STRUCTURE

COVER

No sub-sections, No rosters, Questions: 8, Static texts: 1.

1. CHARACTERISTICS OF THE SURVEY

No sub-sections, No rosters, Questions: 22, Variables: 1.

2. CONNECTIVITY

No sub-sections, No rosters, Questions: 7.

3. PERCEPTION OF THE ADMINISTRATION

No sub-sections, No rosters, Questions: 6.

4. ADMINISTRATIVE PROCESSES

Sub-sections: 3, Rosters: 2, Questions: 44.

END INTERVIEW

COVER

STATIC TEXT

Texte Introductif

Nous menons une enquête pour le projet intitulé "Les Citoyens Luttent Contre la Corruption en abrégé (3 LC)". Le projet est financé par la Banque Mondiale. Cette enquête vous permet d'exprimer votre opinion sur les faits et pratiques de corruption dans l'obtention d'actes administratifs. Nous vous informons que nous enregistrons les appels et les données pour des raisons pratiques, mais vos réponses seront gardées confidentielles et dépersonnalisées. Veuillez donc s'il vous plaît, vous mettre à l'aise pour nous dire ce que vous pensez vraiment en répondant à nos questions. Il vous faudra une dizaine de minutes pour l'entretien. Vous êtes totalement libres d'accepter ou de refuser de participer à ce sondage.

Nom et prénom de l'enquêteur	TEXT
id. Identifiant du repondant	NUMERIC: INTEGER
1.1.a1.Nom l'enquêté	TEXT
1.1.a2.Prénom de l'enquêté	TEXT
1.1.b1.Numéro de téléphone principale de l'enquêté	TEXT
1.1.b2.Deuxième numéro de téléphone de l'enquêté	TEXT
1.2.a. Campagne	TEXT
1.2.b.Canal d'inscription	ТЕХТ

1. CARACTÉRISTIQUES DE L'ENQUÊTÉ

	Heure debut. Enqueteur enregistrer l'heure de	DATE: CURRENT TIME	heureDebut
	1.3.a. Dans quelle province habitez-vous présentement ?	SINGLE-SELECT 31 O BALE (LES) 32 O BANWA (LES) 13 O KOSSI 15 O MOUHOUN 40 O NAYALA 27 O SOUROU 06 O COMOE 38 O LERABA 11 O KADIOGO 04 O BOULGOU 36 O KOULPELGO 14 O KOURITENGA 01 O BAM 17 O NAMENTENGA 23 O SANMATENGA 05 O BOULKIEMDE And 29 other symbols [1]	Q13a
V1 M1	1.3,b.Dans quelle ville/village habitez-vous présentement ? //Si la ville est OuagadOugOu self==1? //AlOrs la prOvin ce dOit etre Q13a==11: //Si la ville est BObO-DiOulassO self==2? //AlOrs la prOvince dOit etre Q13a==10: //Si la ville est OuahigOuya self== <u>And 153 other symbols [1]</u> Attention!!! La ville ne correspond pas à la province.	SINGLE-SELECT 01 O Ouagadougou 02 O Bobo-Dioulasso 03 O Ouahigouya 04 O Koudougou 05 O Autre ville 06 O Autre village	Q13b
	1.4.Sexe	SINGLE-SELECT 01 O Masculin 02 O Féminin	Q14
I W1	1.5.Année de naissance?	NUMERIC: INTEGER	
M1	<pre>Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alors inscrire le code -7777 // année de naissance cOmprise entre 1922 et l'année en cOurs self.InRange(1922,2002) // Ou "ne sait p as" self==-99999 // Ou "ne se prOnOnce pas" self== -7777 La valeur renseignée semble peu probable. Veuillez vérifier.</pre>		
	1.6.Quel est votre statut matrimonial ?	SINGLE-SELECT 0001 O Célibataire 0002 O Veuf/veuve 0003 O Divorcé(e) 0004 O Marié (e) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q16

	1.7.a.Combien de personnes [Femmes-0-17 ans au plus] font parties de votre ménage ?	NUMERIC: INTEGER	Q17a
I W1 M1	Enqueteur, dire au repondant que: "Votre menage est l'ensemble des personnes avec qui vous vivez et partagez le meme repas" Si "ne sait pas" alors inscrire le code -9999 SI "ne se prononce pas" alors And 23 other symbols [1] // NOmbre de personnes self.InRange(0,20) // 0 u "ne sait pas" self==-9999 // 0u "ne se prononce pas" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier.		
I	1.7.b.Combien de personnes [Femmes-18 ans et plus] font parties de votre ménage?		Q17b
W1	Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777		
M1 V2	<pre>// NOmbre de personnes self.InRange(0,20) // 0 u "ne sait pas" self==-9999 // 0u "ne se prononce pas" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier. //si la parconne anguatée est une forme et à au moine de </pre>		
M2	Attention!!! La personne enquetée est une femme et a au moins de Attention!!! La personne enquetée est une femme et a au moins de Attention!!! La personne enquetée est une femme et a au moins de 18 ans,		
	Le nombre de Femmes de 18 ans et plus dans le menage doit etre positif.		
l W1	1.7.c.Combien de personnes [Hommes-0-17 ans au plus] font parties de votre ménage ?		Q17c
M1	Si "ne sait pas" alo <u>rs ins</u> crire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777		
	<pre>// NOmbre de persOnnes self.InRange(0,20) // 0 u "ne sait pas" self==-9999 // Ou "ne se prOnOnce pas" self==-7777</pre>		
	La valeur renseignée semble peu probable. Veuillez vérifier.		·
ı W1	1,7.d.Combien de personnes [Hommes-18 ans et plus] font parties de votre ménage ?	NUMERIC: INTEGER	Q17d
M1 V2 M2 V3	Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 // Nombre de personnes self.InRange(0,20) // O u "ne sait pas" self==-9999 // Ou "ne se prononce pas" self==-7777		
MЗ	La valeur renseignée semble peu probable. Veuillez vérifier. NbreMembreMenage>0		
\/4	Attention!!! Il n'est pas possible d'avoir aucun membre dans le Menage //Si la persOnne enquetée est un hOmme et à au mOins de		
M4	18 ans alOrs Q14==1 && Q15 >=18? // Le nOmbre d'h Ommes de 18 ans et plus dans le menage dOit etre pOsitif self>0: //TOut autre cas es And 11 other symbols [3]		
	Attention!!! La personne enguetée est un homme et a au moins de 18 a ns, Le nombre d'hommes de 18 ans et plus dans le menage doit etre p ositif.		
	Attention!!! Il ne peut y avoir un menage sans adulte (Personnes d'au moins 18 ans).		
	VARIABLE	DOUBLE	NbreMembreMenage
	Q17a+Q17b+Q17c+Q17d		

	1.8.Quelle est votre occupation principale ?	SINGLE-SELECT 0001 Indépendant 0002 Salarié 0003 Éleveur 0004 Agriculteur 0005 Artisan 0006 Employeur 0007 Apprentis 008 Chômeur/quête d'emploi 009 Retraité 0010 Ménagèr/e 0011 Élève/ Étudiant 0012 Commerçant 0013 Autres (A préciser) -9999 Ne sait pas (Ne pas lire) -7777 Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q18
E	1.8.Autre (A préciser)	TEXT	Q18_Autre
E	1.9 Quelle est le dernier cycle que vous avez fréquente?	SINGLE-SELECT 0001 O Primaire 0002 O Secondaire 0003 O Supérieur 0004 O Aucun 0005 O Autres -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q19
	1.9.Autres (A préciser)	TEXT	Q19_Autre
	Q1.10.a. Quel est votre niveau de français parlé ?	SINGLE-SELECT 0001 O Excellent 0002 O Moyen 0003 O Faible 0004 O Aucun -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q110a
	Q1.10.b. Quel est votre niveau de français écrit ?	SINGLE-SELECT 0001 O Excellent 0002 O Moyen 0003 O Faible 0004 O Aucun -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q110b

Q1.10.c. Quel est votre niveau de mooré parlé ?	SINGLE-SELECT 0001 O Excellent 0002 O Moyen 0003 O Faible 0004 O Aucun -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q110C
Q1.10.d. Quel est votre niveau de mooré écrit ?	SINGLE-SELECT 0001 O Excellent 0002 O Moyen 0003 O Faible 0004 O Aucun -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne yeut pas repondre (Ne pas lire)	Q110d
Q1.11.a.Parlez-vous une autre langue principalement?	SINGLE-SELECT 01 O Fulfuldé 02 O Gourmatchema 03 O Bobo 04 O Senoufo 05 O Lobiri 06 O San/samo 07 O Dagari 08 O Français 09 O Lélé/Nuni/Kassena 10 O Bissa 11 O Bwamu 42O.Autres 13 O Je ne parle aucune autre langue	Q111a
E Q1.11.a.Autre (A préciser)	ТЕХТ	Qllla_Autre
Q1111.b. Quel est votre niveau de %Q111a% parlé Q111a!=13 E	SINGLE-SELECT 0001 O Excellent 0002 O Moyen 0003 O Faible 0004 Aucun -9999 Ne sait pas (Ne pas lire) -7777 Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q111b
Q1.11.c. Quel est votre niveau de %Q111a% ecrit ?	MULTI-SELECT 0001 Excellent 0002 Moyen 0003 Faible 0004 Aucun -9999 Ne sait pas (Ne pas lire) -7777 Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q111C

2. CONNECTIVITÉ

	2.1.Possédez-vous un téléphone personnel?	SINGLE-SELECT 0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q21
l W1	2.2.Depuis quelle année avez-yous commencé à utiliser un téléphone portable Si ne sait pas alors inscrire le code 9999 // année de possession portable Comprise entre 1990 et 1		Q22
M1	"ne sait pas" self==-9999 // Ou "ne se prOnOnCe p as" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier.		
I V1 M1	2.3.Quels sont les réseaux sociaux que fréquentez ? Enqueteur! Lire les reponses et cocher les options qui s'appliquent //Si la reponse Ne fréquente pas les Réseaux SOCiaux==8 est seleCtiOnnée self.COntains(8)? //AlOrs auCune autre reponse ne devrait etre ChOisie !self.COntainsAny(1,2,3, 4,5,6,7): //tout autre Cas est And 10 other symbols [4] Attention! L'option Ne fréquente pas les Réseaux Sociaux==8 ne peut e tre choisie avec une autre reponse.	MULTLSELECT 01 Facebook 02 Whatsapp 03 Telegram 04 Instagram 05 Twitter 06 Linkedin 07 Autre 08 Ne fréquente pas les Réseaux Sociaux	Q23
	2.3.Autre (A préciser)	TEXT Q	23_Autre
	Q23.COntains(7)		
V1 M1	2.4.Combien de jours par semaine vous connectez-vous à internet ? Inscrire 7 si tous les jours Si ne sait pas alors inscrire le code 9999 // self.InRange(0,7) // Ou "ne sait pas" self ==-9999 // Ou "ne se prononce pas" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier.	NUMERIC: INTEGER	Q24
E V1 M1	2.5.En moyenne, combien d'heure passez-vous sur internet les jours où vous vous connectez Inscrire 24 si connecté à tout moment Inscrire 1 moins d'une heure Si ne sait pas alors inscrire le code 9999 Q24>0 // self.InRange(0,24) // Ou "ne sait pas" sel f==-9999 // Ou "ne se prononce pas" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier.	NUMERIC: INTEGER	Q25
	2.6.Quelle est la qualité de la couverture internet de votre localité?	SINGLE-SELECT 0003 O Excellente qualité 0002 O Bonne qualité 0001 O Moyenne qualité 0000 O Mauvaise qualité -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q26

3. PERCEPTION DE L'ADMINISTRATION

I

3.1.A votre avis, quelle est la tendance des pratiques de corruption au Burkina Faso ces dernières années ?	SINGLE-SELECT 0001 O Très courant 0002 O Assez courant 0003 O Peu courant 0004 O Très peu courant -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q31
3.2.Comparativement à l'année précédente, comment appréciez-vous cette année l'évolution de la corruption au Burkina Faso ?	SINGLE-SELECT 0001 O Augmenté beaucoup 0002 O Augmenté un peu 0003 O Resté stable 0004 O Reculé un peu 0005 O Reculé beaucoup -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q32
3.3. Trouvez-vous que les démarches administratives sont plus difficiles/faciles au Burkina Faso depuis le début de l'épidémie de Covid-19 ? Enqueteur, lire les options de réponses	SINGLE-SELECT 0000 O Beaucoup plus difficiles 0001 O Un peu plus difficiles 0002 O Identiques 0003 O Un peu plus faciles 0004 O Beaucoup plus faciles -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q33
3.4.Trouvez-vous que la corruption a augmenté/Diminué/Restée identique au Burkina Faso depuis le début de l'épidémie de Covid-19 ?	SINGLE-SELECT 0000 O Beaucoup plus augmenté 0001 O Un peu plus augmenté 0002 O Identique 0003 O Un peu plus dimunié 0004 O Beaucoup plus dimunié -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q34

4. DÉMARCHES ADMINISTRATIVES

4.1. Démarches administratives pour le repondant ou un membre de son ménage

I V1 M1	4.1.Au cours des 12 derniers mois, quelles demarches administratives avez-vous interprises pour vous ou un membre de votre menage? Enqueteurl NE PAS LIRE les options de reponses et cocher les options de repondant cite lui meme? (/Si la reponse AuCune démarche pour moi ou un membre de mon ménage==36 est selectionnée self.contains(37)? //Alo ra auCune autre reponse ne devrait etre choisie lself.contains(37)? //Alo ra auCune démarche pour moi ou un membre de mon ntainsAny(1,2,3,4,5,6,7,8,9,10 And 112 other symbols [5] Attende :: Option Aucune démarche pour moi reponse:	MULTI-SELECT 01 L'acte de naissance (Mairie) 02 Le jugement supplétif d'acte de naissance (Mairie) 03 L'extrait d'acte de naissance (Mairie) 04 L'extrait du jugement supplétif d'actes de naissance (Mairie) 05 L'inscription d'un enfant à l'ecole primaire (l'école) 06 La consultation néo natale 07 L'acte pour l'accouchement 08 L'acte pour l'accouchement 09 L'acte pour l'accouchement 01 L'acte pour l'accouchement 08 La carte d'identité burkinabé 09 Le passeport (Police Nationale) 10 L'autorisation de couper et/ou de ramasser du bois mort pour des besoins ; (Service de l'environnement et du cadre de vie) 11 Le certificat de décès (Mairie) 12 Le jugement supplétif de décès (Mairie) 13 Le livret de famille (Mairie) 14 Le certificat de mariage (Mairie) 15 L'acte de mariage (Mairie) 16 L'extrait d'acte de mariage<	Q41
	4.1.Autres (A préciser)	ТЕХТ	Q41_Autre
E	 Q41. COntains (36) 4. DÉMARCHES ADMINISTRATIVES Postar: DÉMARCHES ADMINISTRATIVES POUR LE REPONDANT 	OU UN MEMBRE DU MENACE	
	generated by multi-select question Q41	demarChes	AdminMenage

E // !Q41.COntains(37)

4.1.a. Quand avez-vous commencé la démarche ?	DATE	241a
Enquêteur : Si avant la première quizaine, prendre le jour 1 du mois Si après I la première quizaine, prendre le jour 15 du mois.		-

	4.1.b.A quelle date êtes-vous parvenu à déposer tous les documents ?	DATE Q41b
I V1 M1	Enquêteur : Si avant la première quizaine, prendre le jour 1 du mois Si après la première quizaine, prendre le jour 15 du mois. self>=Q41a	
IVIT	Attention III La date doit etre anterieure ou egale à la date de debut de la demarche	
	4.1.c.a.La démarche a-t-elle abouti?	SINGLE-SELECT Q41Ca 0001 O 0002 O 9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)
I	4.1.c.b.Quand la démarche a-t-elle abouti?	DATE Q41Cb
W1 M1	Réception du document Enquêteur : Si avant la première quizaine, pre ndre le jour 1 du mois Si après la première quizaine, prendre le jour 15 du mois.	
V2 M2	self>=Q41b & Q41Ca==1 Attention!!!! La date doit etre antérieure ou égale à la date de debut de la demarche et à la date de depot des documents	
	Attention!!! La date doit-etre dans les douze (12) derniers mois	
I W1	4.1.d. Combien de fois avez-vous visité cette administration ou d'autres administrations au total pour cette démarche ? (inclure tout déplacement)	NUMERIC: INTEGER
M1	Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777	
I	$f=-9999 \mid \mid // \dots$ Ou "ne se prononce pas" sel $f=-7777$ La valeur renseignée semble peu probable. Veuillez vérifier.	
W1 M1	4.1.e.Distance (en KM) du domicile parcourue à chaque fois ? (si différentes distances, indiquer la plus grande)	NUMERIC: INTEGER Q41e
	Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 // self.InRange(0,400) // Ou "ne sait pas" self== -9999 // Ou "ne se prOnOnCe pas" self==-7777 La valeur renseignée semble peu probable. Veuillez vérifier.	
E	4.1.f. Avez-vous fait appel à quelqu'un pour recevoir de l'aide ?	SINGLE-SELECT Q41f 0000 O Non 0001 O Oui-Ami ou famille 0002 O Oui-Connaissance d'un ami ou famille 0003 O Oui-Intermédiaire qui vous a sollicité 0004 O Oui-Autre (précisez) <u>9999 O. Ne sait pas (Ne pas lire)</u> -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)
	4.1.f.Autres (A préciser)	TEXT Q41f_Autre

	4.1.g.La démarche fut-elle un succès ?	SINGLE-SELECT 0001 O Oui 0002 O Non 0003 O Autre (précisez) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q41g
E	4.1.g.Autres (A préciser)	TEXT	Q41g_Autre
I	4.1.h.Combien avez-vous payé pour obtenir le document / le but de la démarche au total ?		
W1 M1	Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoi r unquement le « prix normal ») Si "ne sait pas" alors inscrire le code - 9999 Si "ne se prononce pas" alors inscrire le code -77 <u>And 2 other symbols [2]</u> //L'On vérifie que le mOntant renseigné est un multiple de 5 \$multipleDe5 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez vérifier.		
I	4,1.i.Autres frais légitimes (exemple : transport, photocopies, etc.)		Q41i
W1 M1	Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoi r uniquement le « prix normal ») Si "ne sait pas" alors inscrire le code - 9999 Si "ne se prononce pas" alors inscrire le code -77 And 2 other symbols [3] //L' On vérifie que le mOntant renseigné est un multiple de 5 \$multipleDe5 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez vérifier.		
E	4,1.j.Avez-vous personnellement donné une ou plusieurs rétributions en échange du service ? (inclure les cadeaux de remerciement, etc.)	SINGLE-SELECT 0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q41j
	4.1.k.A qui avez-vous donné cette rétribution ?	SINGLE-SELECT 0001 O Agent 0002 O Intermédiaire	Q41k
E		0003 O Autre (précisez) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut	<u>-</u>
E	41 k Autres (A préciser)	pas répondre (Ne pas lire)	041k Autre
	Q41k==3		g i i k_indere
	4.1.1. Qu'avez-vous exactement offert?	SINGLE-SELECT 0001 O Argent 0002 O Repas/Boisson offert 0003 O Cadeau offerte 0004 O Promesse de sortie 0005 O Autre (précisez) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q411

	4.1.i.Autres (A préciser)	ТЕХТ	Q411_Autre
E	Q411==5		<u>-</u>
I V1 M1	 4.1.m.Si possible, quel est le montant approximatif de ce que vous avez offert? Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoi r uniquement le « prix normal ») Inscrire -8888 si Non applicable Si "ne sait pas" alors inscrire le code -9999 Si "ne se pronon And 36 other symbols [4] Q41j==1 && Q411!=4 //L' On vérifie que le montant renseigné est un multiple de 5 \$multipleDe5 self==-8888 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez vérifier. 	NUMERIC: INTEGER	Q41m
E	4.1.n. Au cas où vous avez offert une (plusieurs) retribution(s) au cours de cette année (2020), dites-si vous avez vous-même pris les devants pour proposer cette (ces) rétribution(s) à l'agent public ou si c'est lui qui vous l'a (les a) demandée(s) ?	SINGLE-SELECT 0001 O Moi-même 0002 O Agent public 0003 O Intermédiaire 0004 O Autres (A préciser) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q41n
I	4.1.n.Autres (A préciser)	TEXT	Q41n_Autre
Ē	4,1.o. Pourquoi avez-vous offert une (ou plusieurs) retributions ? Enqueteur!!! Lire les options de reponse Q41j==1	SINGLE-SELECT 0001 O Pour avoir le droit au service 0002 O Pour accélérer la demande 0003 O Pour avoir le droit au service sans faire la procédure habituelle (par exemple : des pièces manquantes), 0004 O Autre (précisez) -9999 O Ne sait pas (Ne pas lire) -7777. O. Ne se prononce pas/Ne veut pas répondre (Ne pas lire)	Q410
	4.1.o.Autres (A préciser)	TEXT	Q410_Autre
	4.1.p. Au final, pensez-vous que cette demarche a été facile/difficile?	SINGLE-SELECT 0001 O Très facile 0002 O Assez facile 0003 O Assez difficile 0004 O Très difficile -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q41p
	4.1.q.Quand vous avez fait cette démarche, vous êtes-vous senti à l'aise et confiant que vous possediez toutes les informations nécessaires ?	SINGLE-SELECT 0001 O Très à l'aise 0002 O Assez à l'aise 0003 O Pas très à l'aise 0004 O Pas du tout à l'aise -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q41q

 4.2.Au cours des 12 derniers mois, pour quelles demarches administratives avez-yous aide quelqu'un hors de votre ménage (ami, famille, autre)? Enqueteur! NE PAS LIRE les options de reponses et cocher le que le repondant cite lui meme //Si la repOnse AuCune démarChe pour quelqu'un on ménage (ami, famille, autre)==29 est selectif.cOntains(37)? //AlOrs auCune autre repOnse ne etre Choisie !self.ContainsAny (And 132 other symbol) M1 Attention! L'option Aucune démarche pour quelqu'un hors de n (ami, famille, autre)==37 ne peut etre choisie avec une autre reponse ne (ami, famille, autre)==37 ne peut etre choisie avec une autre reponse aucune démarche pour quelqu'un hors de n (ami, famille, autre)==37 ne peut etre choisie avec une autre reponse avec une avec un	MULTI-SELECT 1 L'acte de naissance (Mairie) 2 Le jugement supplétif d'acte de naissance (Mairie) 2 Le jugement supplétif 3 l'extrait d'acte de naissance (Mairie) 3 l'extrait du jugement supplétif 4 d'actes de naissance (Mairie) 5 l'inscription d'un enfant à 1 'ecole primaire (l'ecole) 6 a consultation neo natale 1 'acte pour l'accouchement 1 'acte acte d'identité burkinabé 1 L'autorisation de couper et/ou 1 Le certificat de décès (Mairie) 1 Le certificat de décès (Mairie) 1 Le certificat de décès (Mairie) 1 Le certificat de mariage 1 Le certificat de mariage 1 L'acte de mariage (Mairie) 1 L'acte de mariage (Mairie) 1 L'acte de mariage (Mairie) 1 L'extrait d'acte de mariage 1 Mairie) 1 And Dother symbols [4]	Q42
4.2.Autres (A préciser)	TEXT	Q42_Autre
E		
4. DÉMARCHES ADMINISTRATIVES Roster: DÉMARCHES ADMINISTRATIVES PERSONN generated by multi-select guestion 042	ES HORS MENAGE	HOrsMenage

E // !Q42.COntains(37)

4.2.a.De qui s'agit-il ?	SINGLE-SELECT 01 O Famille 02 O Ami 03 O Collègue 04 O Autre (précisez)	Q42a
4.2.a. Autres (A préciser)	TEXT	Q42a_Autre
E 242a==4		

	4.2.b1.Cette personne a-t-elle réussi dans sa démarche?	SINGLE-SELECT 0001 O Oui 0002 O Non 0003 O Autre (précisez) -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q42b1
E	4.2.b1.Autres (A préciser)	TEXT	Q42b1_Autre
	4.2.b2.Est-ce sa démarche a abouti ?	SINGLE-SELECT 0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q42b2
	4.2.c.Nature de l'aide (cochez plusieurs si pertinent) :	MULTERELECT 01 Conseil 02 Information 03 Déplacement avec la personne 04 Négociation / discussions / etc. avec l'administration 05 Autre (précisez)	Q42C
E	4.2.c.Autres (A préciser) Q42C.COntains(5)	TEXT	Q42C_Autre
I E W1 M1	4.2.d.Combien de temps (en JOURS) la demarche a pris entre le début et son aboutissement ? Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 Q42b2==1 (self<365 && self>0) self==-9999 self==-7777 Attention!!! La durée ne doit pas excéder 356 JOURS		Q42d
I W1 M1	4.2.e.Combien la personne a-t-elle payé ? Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 //L'On vérifie que le mOntant renseigné est un multiple de 5 \$multipleDe5 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez vérifier.		Q42e
	4.2.f.La personne a-t-elle donné une ou plusieurs rétributions en échange du service ?	SINGLE-SELECT 0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q42f

I E W1 M1	 4.2.g. Si possible, quel est le montant approximatif de ce que la personne a offert? Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 Q42f==1 //L' On vérifie que le montant renseigné est un multiple de 5 \$multipleDe5 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez verifier. 4. DÉMARCHES ADMINISTRATIVES 4.3. DÉMARCHES ADMINISTRATIVES 4.3.a. Comptez-vous faire des démarches 	NUMERIC: INTEGER	Q42g
	administratives dans les prochains mois ou aider un proche dans ses démarches ?	0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	
E	4.3.b. Au cours des 12 derniers mois, avez-vous dù payer d'autres retributions / pots-de-vin auprès d'autres services de l'Etat ?	SINGLE-SELECT 0001 O Oui 0002 O Non -9999 O Ne sait pas (Ne pas lire) -7777 O Ne se prononce pas/Ne veut pas repondre (Ne pas lire)	Q43b
	4.3.c. Si oui, lesquels? Q43b==1	MULTICELECT O1 Circulation routière O2 Inscription durant les rentrées Scolaires O3 Obtention de médicaments gratuits dans les centres de Santé publics O4 Paiement de pension de retraite O5 Décisions de justice O6 Paiement de pension des retraités O7 Etablissement d'actes administratifs O8 Soumission aux offres de marchés publics O9 Demande d'audience avec les autorités publiques O1 Obtention d'emploi dans les administrations publiques O1 Autres (à préciser)	Q43C
E	4.3.c.Autres (A préciser)	ТЕХТ	Q43C_Autre
-	Q43C.COntains(11)		
E W1 M1	4.3.d.Combien avez-vous payé au total ? Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alo rs inscrire le code -7777 Q43b==1 //L'On vérifie que le mOntant renseigné est un multiple de 5 \$multipleDe5 Le montant renseigné ne s'apparente pas à un montant en FCFA car n' est pas un multiple de 5. Veuillez vérifier.	NUMERIC: INTEGER	Q43d

FIN ENTRETIEN

STATIC TEXT

ENQUÊTEUR LIRE : Merci beaucoup pour votre participation à cette enquête!

Au cas où vous aurez besoin d'informations additionnelles sur le projet "Les Citoyens Luttent Contre la Corruption", veuillez contacter le numéro 54 24 40 40 ou le numéro 71 91 91 24

Heure fin. Enqueteur enregistrer l'heure de fin de l'enquête	DATE: CURRENT TIME	heureFin
Statut de l'enquete	 SINGLE-SELECT O Totalement réalisée O Partiellement réalisée O Non réalisée : Décroche mais demande de rappeler. O Non réalisée : Décroché mais pas disponible. O Non réalisée : Décroché par une autre personne qui ne connais pas le répondant. O Non réalisée : Personne n'a répondu au téléphone. O Non réalisée : Numéro ne fonctionnant pas. O Non réalisée : Refus. Non réalisée : Autre (préciser). 	StatutEnquete
Autre_Statut de l'enquete	TEXT	StatutEnquete_Autre
StatutEnquete==97	0	
Langue principale de conduite de l'interview dans le menage	SINGE-SELECT 01 Moore 02 Dioula 03 Fulfuldé 04 Gourmatchema 05 Bobo 06 Senoufo 07 Lobiri 08 San/samo 09 Dagari 10 Français 11 Lélé/Nuni/Kassena 12 Bissa 13 Bwamu 14 Autres	languePrinCipale
Autre_Langue principale	TEXT	languePrinCipale_Autre
languePrinCipale==14		
APPENDIX B — INSTRUCTIONS

- (1) Q17a: 1.7.a.Combien de personnes [Femmes-0-17 ans au plus] font parties de votre ménage ? Enqueteur, dire au repondant que: "Votre menage est l'ensemble des personnes avec qui vous vivez et partagez le meme repas" Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alors inscrire le code -7777
- [2] Q41h: 4.1.h.Combien avez-vous payé pour obtenir le document / le but de la démarche au total ? Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoir uniquement le « prix normal ») Si "ne sait pas" alors inscrire le code - 9999 Si "ne se prononce pas" alors inscrire le code - 7777
- [3] Q41i: 4.1.i.Autres frais légitimes (exemple : transport, photocopies, etc.) Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoir uniquement le « prix normal ») Si "ne sait pas" alors inscrire le code - 9999 Si "ne se prononce pas" alors inscrire le code - 7777
- [4] Q41m: 4.1.m.Si possible, quel est le montant approximatif de ce que vous avez offert? Enqueteur! Demandez ici d'inclure tous les couts (on ne veut pas savoir uniquement le « prix normal ») Inscrire -8888 si Non applicable Si "ne sait pas" alors inscrire le code -9999 Si "ne se prononce pas" alors inscrire le code -7777

APPENDIX C — CATEGORIES

[1] Q13a: 1.3.a. Dans quelle province habitez-vous présentement ?

Categories: 31: BALE (LES), 32: BANWA (LES), 13: KOSSI, 15: MOUHOUN, 40: NAYALA, 27: SOUROU, 6: COMOE, 38: LERABA, 11: KADIOGO, 4: BOULGOU, 36: KOULPELGO, 14: KOURITENGA, 1: BAM, 17: NAMENTENGA, 23: SANMATENGA, 5: BOULKIEMDE, 22: SANGUIE, 25: SISSILI, 44: ZI RO, 2: BAZEGA, 16: NAHOURI, 30: ZOUNDWEOGO, 8: GNAGNA, 9: GOURMA, 34: KOMONDJARI, 35: KOMPIENGA, 28: TAPOA, 10: HOUET, 12: K ENEDOUGOU, 42: TUY, 39: LOROUM, 20: PASSORE, 29: YATENGA, 45: ZONDOMA, 7: GANZOURGOU, 37: KOURWEOGO, 18: OUBRITENGA, 19: OUDALAN, 24: SENO, 26: SOUM, 43: YAGHA, 3: BOUGOURIBA, 33: IOBA, 41: NOUMBIEL, 20: DONI 21:PONI

[2] Q35: 3.5. Pouvez-vous donner trois (03) actes qui, à votre avis, sont les plus sujets à corruption ?

Categories: 1:Acte de naissance (mairie), 2:Actes de décès (mairie), 3:Livret de famille (mairie), 4:Actes de mariage (mairie), 5:Autorisations professionnelles (ex : ouverture débit de boisson), 6:Autres actes de mairie, 7:Inscription à l'école primaire, 8:Maternité, 9:CNIB (ONI), 10:Pa sseport (police nationale), 11:Services environmentaux (ex : autorisation couper bois mort), 12:Actes de propriété terrienne (service des Doma ines), 13:Certificat de nationalité (Tribunal), 14:Casier judiciaire (Tribunal), 15:Autres actes de tribunal, 16:Autres (précisez), -9999:Ne sait p as (Ne pas lire), -7777: Ne se prononce pas/Ne veut pas repondre (Ne pas lire)

(3) Q41: 4.1.Au cours des 12 derniers mois, quelles démarches administratives avez-vous entreprises pour vous ou un membre de votre ménage? Categories: 1: L'acte de naissance (Mairie), 2: Le jugement supplétif d'acte de naissance (Mairie), 3: L'extrait d'acte de naissance (Mairie), 4: L'ex trait du jugement supplétif d'actes de naissance (Mairie), 5: L'inscription d'un enfant à l'école primaire (l'école), 6: La consultation néo natale (Ma ternité), 7: L'acte pour l'accouchement d'une femme (Maternité), 8: La carte d'identité burkinabé (ONI), 9: Le passeport (Police Nationale), 10: L' autorisation de couper et/ou de ramasser du bois mort pour des besoins; (Service de l'environnement et du cadre de vie), 11: Le certificat de dé cès (Mairie), 12: Le jugement supplétif de décès (Mairie), 13: Le livret de famille (Mairie), 14: Le certificat de mariage (Mairie), 15: L'acte de mariage (Mairie), 16: L'extrait d'acte de mariage (Mairie), 15: L'acte de mariage (Mairie), 16: L'extrait d'acte de mariage (Mairie), 12: Le et de famille (Mairie), 14: Le certificat de vie (Mairie), 15: L'acte de mariage (Mairie), 16: L'extrait d'acte de mariage (Mairie), 12: Le certificat de résidence (Mairie), 19: Le certificat de vie (Mairie), 19: L'autorisation d'occupation du domaine publique (Mairie), 20: L'autorisation d'ouverture de débit de boisson (Mairie), 21: L'autorisation d'ouverture d'un restaur ant (Mairie), 22: Le certificat de salubrité (Mairie), 23: Le certificat d'hérédité (Mairie), 24: Le certificat de propriétaire terrien (le service des Do maines), 25: Le certificat d'individualité (Tribunal), 27: Le casier judiciaire (Tribunal), 28: Le guichet uni que du foncier, 29: La visite technique des véhicules, 30: Le dédouanement des véhicules (Motos et voitures), 31: La carte grise(Motos et voitur es), 32: Les duplicatas, 33: Le fret, 34: Le permis de conduire (renouvellement et remplacement), 35: L'attestation du BAC, 36: Autre (précisez), 37: Aucune démarche pour moi ou un membre de mon ménage mon ménage

(4) Q42: 4.2.Au cours des 12 derniers mois, pour quelles démarches administratives avez-vous aidé quelqu'un hors de votre ménage (ami, famille, autre)? Categories: 1: L'acte de naissance (Mairie), 2: Le jugement supplétif d'acte de naissance (Mairie), 3: L'extrait d'acte de naissance (Mairie), 4: L'ex trait du jugement supplétif d'actes de naissance (Mairie), 5: L'inscription d'un enfant à l'école primaire (l'école), 6: La consultation néo natale (Ma ternité), 7: L'acte pour l'accouchement d'une femme (Maternité), 8: La carte d'identité burkinabé (ONI), 9: Le passeport (Police Nationale), 10: L' autorisation de couper et/ou de ramasser du bois mort pour des besoins ; (Service de l'environnement et du cadre de vie), 11: Le certificat de dé cès (Mairie), 12: Le jugement supplétif de décès (Mairie), 13: Le livret de famille (Mairie), 14: Le certificat de mariage (Mairie), 15: L'acte de mar iage (Mairie), 16: L'extrait d'acte de mariage (Mairie), 15: L'acte de mariage (Mairie), 16: L'extrait d'acte de mariage (Mairie), 17: Le certificat de résidence (Mairie), 19: Le certificat de vie (Mairie), 19: L'autorisation d' occupation du domaine publique (Mairie), 20: L'autorisation d'ouverture de débit de boisson (Mairie), 21: L'autorisation d'ouverture d'un restaur ant (Mairie), 22: Le certificat de salubrité (Mairie), 23: Le certificat d'hérédité (Mairie), 24: Le certificat de propriétaire terrien (le service des Do maines), 25: Le certificat d'individualité (Tribunal), 27: Le casier judiciaire (Tribunal), 28: Le guichet uni que du foncier, 29: La visite technique des véhicules, 30: Le dédouanement des véhicules (Motos et voitures), 31: La carte grise(Motos et voitur es), 32: Les duplicatas, 33: Le fret, 34: Le permis de conduire (renouvellement et remplacement), 35: L'attestation du BAC, 36: Autre (précisez), 37: Aucune démarche pour moi ou un membre de mon ménage mon ménage

8.3 Appendix C: Summary of the pilot and qualitative research

In 2019, the App was provided to 465 participants as a proof of concept. Participants were randomly selected among those who expressed interest in the App on the Facebook forum '*je suis engagé contre la corruption*' ("I'm engaged against corruption"). Interested participants were asked to provide their name and mobile phone number and to complete a brief socio-economic profile. 465 randomly selected interested participants then received a message inviting them to test the App, as well as a link to download the pilot version of the App. The App developer team was able to track each phone number's usage of the App, that is, whether or not a phone number had downloaded the App, and when it was connecting to the App. This pilot served as a proof of concept and as an opportunity to gather basic data, including those we used for power calculations.

A qualitative study then took place in October 2020 to understand potential user's perceptions of the App's usefulness to improve its functioning. Given restrictions due to COVID-19, the qualitative interviews were conducted over the phone. Based on usage data of the App, potential pilot users were divided in three categories: i) those who only connected to the App once; ii) those who connected more than once; iii) those who were invited to download the App but never did so. Five persons per category were interviewed in fall 2020 by a local researcher, Nathalie Ouangraoua. The following summarizes the main findings from this qualitative study.

i) Where do people find information on the documents needed for administrative acts?

The best-known and most widespread sources of information are word of mouth. As one respondent put it: "People don't know what documents are needed for an administrative act, so they find out by word of mouth. If you know someone who has already done the act in question, you take their file. There's no information sheet specifying the necessary documents". For those who have nobody in their circle who has completed the specific act, they need to go to the department that is authorized to issue the act, where according to one respondent you have to "ask the agent there, or the people, the canvassers, or look on the notice board for information". In the absence of readily available information, people often engage intermediaries who they informally hire to support them in the administrative procedures "Birth certificates, CNIBs [IDs], permits, passports ... there are intermediaries, and we don't know what relationship they have with those who establish the acts. The canvassers [intermediaries] say they have to take money to motivate those who do the work."

ii) How can the App facilitate administrative processes?

Those who used the App attested to its usefulness in providing information on the procedures; legal prices; documents needed; deadlines; the location of the administration concerned; authenticity of information; and a way to avoid having to travel to obtain information on the procedure for drawing up documents. For example, one user explained "You're sitting at home or in the office and you need a birth certificate or a criminal record. With the App, it's easy to do this without having to go to your place of birth. Imagine if you're in ouaga [Ouagadougou] and you were born in bobo [Bobo-Dioulasso], you don't need to go anywhere; all you have to do is send the required documents".

iii) What are the barriers to using the App?

Interviews report that internet connection represents a barrier. An internet connection is needed to download and use the App, which implies connection costs and limits the possibility of access due to lack of connection. Interviewees also commented on the language of the App (French), which made it inaccessible to a large part of the population, who does not speak French or is illiterate. Finally, the App was only available for Android phones, limiting its potential.

Following this study, several tweaks were made to the App to make it more accessible. The App was made available in local languages in addition to French. It was further revised to be fully operable through interactive voice responses, making it accessible to those who are less literate. The App provider, ONE, provided technical support to users in installing the App and a social marketing campaign to stimulate its usage among participants. In addition, phone credit was provided to study participants with the aim of covering costs related to the download (500 CFA or 1 USD approximatively).

8.4 Appendix D: List of administrative processes available in the App (translation)

Act (responsible public service)

- 1. Birth certificate (City Hall)
- 2. Substitute birth certificate (City Hall)
- 3. Excerpt of birth certificate (City Hall)
- 4. Excerpt of supplementary birth certificate (City Hall)
- 5. Primary school registration (School)
- 6. Neonatal consultation (Maternity ward)
- 7. Deed of delivery (Maternity ward)
- 8. Burkinabe identity card (National Identification Office)
- 9. Passport (National Police)
- 10. Authorization to cut and/or collect dead wood for personal use (Environmental Service)
- 11. Death certificate (City Hall l)
- 12. Substitute death certificate (City Hall)
- 13. Family record book (City Hall)
- 14. Short marriage certificate (City Hall)
- 15. Marriage certificate (City Hall)
- 16. Excerpt of marriage certificate (City Hall)
- 17. Certificate of residence (City Hall)
- 18. Life certificate (City Hall)
- 19. Authorization to occupy public property (City Hall)
- 20. Authorization to open a bar (City Hall)
- 21. Authorization to open a restaurant (City Hall)
- 22. Health certificate (City Hall)
- 23. Certificate of inheritance (City Hall)
- 24. Landowner certificate (Land registry office)
- 25. Certificate of individual character (Court)
- 26. Certificate of nationality (Court)
- 27. Criminal record (Court)
- 28. One-stop land office
- 29. Technical inspection of vehicles
- 30. Vehicle customs clearance (motorcycles and cars)
- 31. Vehicle registration document (motorcycles and cars)
- 32. Duplicates
- 33. Freight
- 34. Driving license (renewal and replacement)
- 35. High school diploma
- 36. Other (specify)

9 Administrative information

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Institutional Review Board (ethics approval)

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Declaration of interest

The authors do not have any conflicts of interest.

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