

**THE *REAL* STATE:
INSIDE THE CONGO'S TRAFFIC POLICE AGENCY**

Supplemental Ethics Appendix

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1. Background to the Ethical Challenges Raised by the Study

The broader background of the Democratic Republic of the Congo's state at the time of our study is crucial to inform discussions about feasibility and about the ethics of experimentation and data collection. We thus begin with a description of the state in the Democratic Republic of the Congo (DRC). For more details, see Titeca and Malukisa (2018).

Since the late 1970s, processes of state disintegration in sub-Saharan Africa have strongly impacted the capacity of public administrations. Administrations have suffered from material and technical under-resourcing, organisational deficits and a lack of funds to pay its civil servants. Public services have been severely diminished (Bierschenk (2010b): 7-8, Bates (2008), Van de Walle (2001)). The working resources for civil servants seriously declined, civil servants had to "*fend for themselves*" by using their state position to secure other sources of revenue, a process which Blundo (2006): 805, describes as "*informal privatisation.*" These dual processes of disintegration and informal privatisation profoundly impacted the functioning of the state, leading to slow procedures and bottlenecks, opacity, various form of negotiation at all levels of the state's hierarchy, embezzlement with impunity and personalisation strategies (Blundo (2006): 806-815).

This was particularly intense in the DRC. First, the disintegration of the DRC state has resulted in practices of clientelism and patronage (Nzongola-Ntalaja, 1986, Schatzberg, 1991, Boyle, 1995, Lemarchand, 2001, Young and Turner, 1985, Zartman, 1995). The DRC is widely seen as the "*paradigm of informalisation and criminalisation of the state and the economy*" (Petit and Mutambwa, 2005), fuelled by over 30 years of patrimonialism under ex-President Mobutu and six years of civil war. Callaghy (1987) described the Congolese state as a "*lame Leviathan,*" which is simultaneously "*soft, yet highly coercive.*" It is weakened by patrimonialism and corruption "*such that the performance of key functions slowly declined and in some cases disappeared completely,*" but continues to be controlled through military and external influence.

This decline in governance had an impact on the behaviour and functioning of individual civil servants. Gould (1980): 69, described the situation of civil servants in the 70s as "*abject impoverishment ... Negligence of their social needs leaves them to their own devices.*" Ex-President Mobutu's famous quote "*Moto na moto abongisa*" or "*Let each*

person sort things out at his own level" had a marked impact on public administration and society at large – it was *"ironically"* reinterpreted in relation to Mobutu's kleptocratic behaviour, as an invitation for *"each and every one to steal at his own level of responsibility"* (Petit and Mutambwa, 2005: 482). In the words of Lemarchand (1988), what happened was a privatisation of state positions or the drawing of *"personal benefits ... from the appropriation of public office."* The state continued to hire civil servants but assumed that they would *"steal cleverly"* (Titeca and de Herdt, 2011).

Although the state budget eventually increased over the years through the renewed engagement of donors throughout the 2000s (Titeca and de Herdt, 2011), these practices remained, termed by (Bierschenk, 2010a): 114, the *"capacity of legal command."* Nzeza Bilakila (2004) calls this *"la coop"* or the *"Kinshasa bargain:"* an agreement between two or more parties that provides a return. It can be solicited by a beneficiary or imposed on a victim. Examples of these are various: a civil servant asking for *"something extra;"* someone trying to obtain a favour from a civil servant; negotiating a price with a trader or taxi, and so on. In this situation, *"all the state's usual attributes have been influenced by informal privatisation ... public officials – or those pretending to be – have taken over the customary functions and prerogatives of the state, selling their services to their 'customers' "* (Petit and Mutambwa, 2005): 467.

In this context, civil servants continue to compete for the most profitable position, where they have the best access to the opportunities for extraction from citizens. Administrations were transformed into *"parcels of power,"* in which *"each position in the administration provid[es] not only a wage, but also an opportunity for appropriation"* (De Herdt, 2015): 49. This aspect is particularly important when considering collaborations with civil servants. In many cases (and the degree depends on the specific agency), the main source of income for civil servant arises from appropriation opportunities and other advantages offered by their position, rather than the government wage itself, and their activities combine, and are often dominated by, activities that are not always socially beneficial.

In sum, while public administrations worldwide work with street-level civil bureaucrats and intermediaries, this process is particularly pronounced in the DRC, where individual relations are key in the provision of public services. As indicated above, these personal relations are largely monetized, and are based on the exchange of money.

Giving someone a position as a civil servant is largely beneficial due to the opportunities the position gives for appropriation activities, additional sources of income, the creation of new relationships and, in some cases, the opportunity to offer jobs. We can now discuss the ethics of the study in the context in which it was conducted.

2. Policy Equipoise

An ethical dilemma arises in a clinical trial when the researchers believe that the treatment is significantly outperforming the control or even that the treatment is clearly underperforming the control. Specifically, if one assumes that researchers have therapeutic obligations to their research participants, a normative dilemma would arise in clinical trials in that case, as researchers would be withholding a benefit known to be effective from the control group for the purposes of research.

The Ethics of Randomization of the Quota Reduction Level

The quota reduction experiment randomly allocates to given teams of agents-days the instruction for the commander to decrease the selected team of agents' quota level, and compensates the supervisors for the financial loss the quota reduction generates in their daily flow of income (see corresponding section in this appendix for a discussion of their compensation).

Defining the treatment's beneficiary population. In discussing whether randomization was ethical, we consider three sets of possible direct or indirect beneficiaries. The presence of possible externalities indeed expands the set of possible stakeholders impacted by the treatment. First, the direct beneficiaries are the agents, who are also the human subjects for this treatment as their response to the decrease of the quota is central to our study. Second, the supervisors in the police stations are also beneficiaries: had no additional compensation for the commanders been planned, the treatment would have unambiguously diminished their income and thus they are also directly affected by the treatment. Third, the drivers were also potentially impacted by the treatment, through the change in agent behavior.

Roll-out design implies no violation of treatment equipoise across subjects. Each team of agents of the study received the quota reduction treatment an equal number of days. This was a roll-out study design, where we randomized, within team of agents, the set

of days in which each team of agents would receive the quota level reduction. Stratifying randomization by each team of agents, we ensured that all teams of agents received the quota reduction treatment the same number of times over the study period. This ensures that the study did not create imbalance between teams of agents through randomization in their expected benefits.

The discussion on the ethics of randomization is thus confined to whether there are ethical issues in using randomization to assign whether a team of agents receives the quota reduction treatment *on a given day vs. on another* (randomization between present and future periods of the study's team of agents) or whether a certain team of agents vs. another is selected *on a given day, conditional on all receiving the treatment the same number of times*.

No equipoise within participants across days, nor within days between participants: clear benefits of the treatment. From the perspective of the agents, clearly, policy equipoise (within participants across days, within day between participants) for this treatment was violated. The research team was confident at the time of the study design that the quota exerted pressure on the agents, as it was a binding contract, hence a reduction of the quota would also correspond to an increase in their stock of available time (for leisure, or for income generation). Based on prior qualitative work (Baaz and Olsson, 2011, Titeca and Malukisa, 2014), the research team also expected the quota to expose the agents to higher risk, hence a decrease in the quota was unambiguously a benefit for the agents.

From the perspective of the supervisors, without appropriate compensation, there would also clearly not have been equipoise (within participants across days, within day between participants): the reduction in the quota would have resulted in a significant loss of income for the supervisors. However, to enable this experiment, we compensated the commanders for the loss created by our quota reduction. We first estimated the loss that would be generated by that decrease, and compensated supervisors accordingly. Therefore, policy equipoise was not violated considering the commanders: the quota reduction treatment did not have significant benefits or costs to the supervisors—although, on net, our intervention amounted to a decrease in commander effort, were such effort to be meaningful in profiting from the quota.

Finally, from the perspective of the drivers, policy equipoise was violated (within

intersection crossings and across days, within days between participants): we believed, at the time of the study, that the quota was a significant source of driver harassment, and had informal knowledge based on qualitative interviews that the pressure the quota created on the agents exposed drivers to potentially more time waste through harassment but also through accidents. Therefore, we expected that drivers transiting through treated intersections would enjoy a higher welfare.

With violation of policy equipoise, there are two necessary and sufficient conditions for ethical randomization: scarcity of the treatment, and that, *a priori*, there was no reasonable way to conclude that some participants had superior claims to receiving the treatment than other participants. We now analyze these two requirements for ethical randomization in the absence of equipoise.

Scarcity. There was unambiguously scarcity for the assignment of this treatment. The cost of the quota reduction treatment was significant, and included not just the value of the financial compensation to the supervisors for forgoing their main source of income (an average of 80 USD per supervisor for each day that one team of agents was assigned to receive a quota level reduction), but also the logistical costs of delivering the compensation, and to monitor its implementation. With the budget available for the study, any increase in the number of teams of agents who, in a given day, would have received the quota reduction treatment would have come at the expense of a lower magnitude of quota reduction in the future, or to other teams in the same or other days.

Symmetric claims to the treatment. All participants are selected from the same population. Since the quota reduction treatment was delivered in a roll-out design where each team of agents received it an equal number of times, the ethical question then is whether, in any given day, the research team was aware of any asymmetry that would warrant reallocating the quota reduction treatment across the days while violating randomization. They are the universe of agents in the battalion we could study, excluding those that we could not enroll in the study for security reasons (as described in the paper). At the time of the study, we had no specific knowledge about any team-day characteristic that would warrant a specific team-day receiving the treatment instead of another. There does not appear to be this asymmetry *ex-post* either. It is therefore reasonable to conclude that, given the information at hand at the time of the study, and that which could reasonably

be accessed, there was no asymmetry in the legal or moral claims to the treatment by specific days vs. others, within teams.

3. Role of Researchers With Respect to Implementation

The project was implemented by a research team consisting of networks of researchers from around the country and Kinshasa-based field researchers. The researchers had direct decision making power over whether and how to implement the randomly assigned interventions. Thus, the researchers can be considered “active.”

The disclosure given to participants, and the informed consent process for participation in each of the interventions is described in the IRB protocols, which were approved by the following three institutions: IRB approval for the data collection activities and the experimental interventions was obtained from the University of Antwerp Ethical Advice Commission Social and Human Sciences *SHW*₁₅₁₅, 05 May 2015; Harvard University, Committee on the Use of Human Subjects, Protocol IRB15-1973 (May 22nd 2015) and MOD15-1973-01 (June 5th 2015); University of Berkeley, Committee for Protection of Human Subjects, June 30th 2015, Protocol 2015-06-7686.

In addition to the consent information provided and approved in those research protocols, there are two important dimensions of the consent process for participation to discuss.

For the quota reduction treatment, only commanders were asked to consent (and compensated for the financial loss arising from the quota reduction). The commanders were informed that the quota reduction was part of a project which aimed to improve life conditions of police agents and that it would contribute to the dissertation of one of the co-authors in this paper (Albert Nkuku Malukisa). The student is a Congolese national, hence not his participation in the project did not give the impression that there were foreigners or aid agencies behind it. The agents themselves were not informed of the quota reduction intervention. The quota is part of their daily routine, and the level of the quota changes from day to day depending on considerations by the commander. Hence, from their perspective, there were simply some days with lower quotas than average.

4. Potential Harms From The Interventions

For all interventions, it was reasonable to assume at the time of the study that participation in the study, or in the treatments, would have no effect on future benefits. This problem may arise in contexts when NGOs or the government are deciding which village or community to target for reforms. Here we are talking about one of the two battalions of the city of Kinshasa, and reforms cannot discriminate between battalions – this would be politically untenable. Any future police reform was thus almost certain to affect the entire police agency of Kinshasa, so it would be implausible that such a reform would discriminate based off of whether police staff took part in our intervention. It was known to be implausible that future reforms would discriminate by whether participants took part in our interventions. Furthermore, we included all of the staff of one battalion, further reducing the risk that any authority or donor can decide to withdraw support to the police staff on the basis that they belong to one of two battalions of the city that took part in a study.

The remainder of the section focuses on the *direct* potential harms (that is, not arising from possible loss of future policy benefits) to participants from the interventions.

In selected days, commanders were asked to reduce the quota for selected teams of agents under their control in half. Hence, when a team has been selected for the quota reduction treatment, the commander informs the team of the modified quota level during his daily phone call.

a. Drivers and Agents

Possible Harms

A reasonable concern would be that, if our manipulation of the quota would have resulted in a higher quota, this might adversely affect the welfare of drivers. This is an important question, since the quota is a fundamentally extractive tool.

Strategies to Mitigate Possible Harms

At the start of the study, the research team was aware of qualitative evidence which suggested that the quota may be costly to drivers (Baaz and Olsson, 2011, Titeca and

Malukisa, 2014). We thus designed the treatment to encourage commanders to *reduce* the quota level, rather than *increase* it. As the quota system is an inherently extractive system, a reduction of the quota reduces these extractive pressures. And indeed, this intervention created a range of positive effects: by reducing the quota number, traffic jams and accidents were reduced, as shown by our quantitative analysis and confirmed through our qualitative interviews.

b. Police Station Commanders

Possible Harms

Reducing the quota of some intersections unambiguously reduced the unofficial income that the commanders could make each day. Without appropriate compensation, thus, this treatment would directly harm one subject population.

Strategies to Mitigate Possible Harms

To mitigate this certain harm, we compensated commanders using our best estimate of the amount of income they would lose. Prior to agreeing on the decrease, we asked commanders to approve or disapprove of the compensation plan for each time we would decrease the quota of a given team.

To determine the amount to be compensated, we estimated, at the start of the study, the revenues each commander made per driver escorted from a given intersection on average. In a first stage of the study that lasted 6 months, from January 2015 to June 2015, we did in depth qualitative work in the stations to estimate the loss. To prevent commanders from over-reporting their loss, which they would have had an incentive to do had they known about the experiment we intended to do, no one in our research team except two of the co-authors (the principal investigators) were aware of this intention during the period in which we estimated the commanders' corresponding earnings. We then designed the quota reduction plan, and sought the commanders' consent for our roll-out design with the compensation set on the basis of that estimate, for each day that the quota level was reduced.

c. Violation of Deontological Principles

Possible Violation of Deontological Principles

The research team disbursed cash to police commanders in a situation of general corruption. The main risk results from the fact that this cash may feed into a corrupt system, and hence contribute to it.

This concern is relatively weak for the following reasons. First, our intervention is based on, and builds on, existing anti-corruption interventions: it aims to understand if financial incentives reduce corruption. Its main novelty is that this intervention takes place at a higher level in the hierarchy, among the commanders supervising the agents. This level has been excluded from in anti-corruption interventions, and – as we argue – should be considered.

Second, the “quota system” is an extractive system at the heart of corruption: police officers need to confiscate a certain number of cars and send them to the police office. This number constitutes the “quota,” and puts pressure on both drivers and police officers. The amount of the financial intervention is based on an estimation of loss in illicit gains for commanders: during in-depth qualitative preparatory research in each station, we estimated per police station and per driver, the average revenue made by a commander through the “quota system.” Thus, our intervention amounts to a reduction in corruption, while also necessarily compensating the actors that allows us to reduce their main source of income, for the loss that our intervention causes them.

Third, our intervention amounts to us replacing this illicit income for the commanders with a “clean” source of income, that is, income not obtained through the extortion of drivers for questionable driving offences and based on whether they enjoy the protection of someone who can threaten the commander.

It remains possible, however, that engaging with commanders on the basis of an existing quota level amounted to a recognition of the legitimacy of said system. However, commanders do not need the approval of foreign researchers or of students in order to decide whether the system is legitimate or not. A huge number of actors form a part of, benefit from, and are aware of the system, and it is their participation and the reception of society at large that determines in this community whether the actors perceive the

system to be legitimate. Ascribing the power to legitimize or de-legitimize the system to these five researchers, especially as we are not working with the government, would hinge on an unrealistic understanding of the system and its relation to its social context.

Strategies to Mitigate Possible Deontological Violations

To mitigate these deontological risks, we applied the following strategies.

Strategy 1. We ensured that the compensation for the quota was presented as a compensation for the loss induced by efforts to decrease corruption. That is, commanders did not perceive that they were receiving payment for breaking the law, but instead it was made clear that the objective of the support we were able to provide was precisely to decrease the extent of corruption for some days in the system, and that this decrease created a cost to commanders that had to be compensated.

Strategy 2. We ensured that the compensation received by commanders was as close as possible to the loss created by the quota reduction. Since the amount of income commanders would have received from the quota was estimated to be the same as that they would obtain as compensation, this also ensured that our study did not amount to an increase in the unofficial income tied to corrupt practices.

Strategy 3. We ensured that the commanders did not receive any communication from the research team containing any approval of what (nor disapproval).

5. Data Collection: Possible Harms and Mitigation Strategy

In what follows, we analyze the risks created by data collection, and their mitigation strategies, separately for the human subjects and for the research staff.

A. Human Subjects

Possible Harms

We designed a system of observation in 2015 that relied on reports by 160 observers, who tracked the behavior and transactions of drivers and agents at the intersections they were deployed to, as well as the JPOs, the commanders, and FCA agents in police stations. The

behavior of individual agents (with regards to bribe-taking and their presence/absence) is recorded.

The aspects regarding the protection of human subjects privacy, confidentiality, risk-management and informed consent of human subjects are described in the IRB protocols associated to these study. These were reviewed, and approved by the University of Antwerp Ethical Advice Commission Social and Human Sciences *SHW*₁₅₁₅, 05 May 2015; Harvard University, Committee on the Use of Human Subjects, Protocol Number IRB15-1973 (May 22nd 2015) and MOD15-1973-01 (June 5th 2015); University of Berkeley, Committee for Protection of Human Subjects, June 30th 2015, Protocol Number 2015-06-7686.

To observe the behavior and bribes taken in the street by the agents, as well as properties of public service at the intersections, we worked with 30 observers and deployed them to each street intersection. At each intersection, for each team of agents allocated to that specific intersection, each day, two observers tracked the behavior of the two police agents that we randomly selected for observation for that day. From corners of the intersections where the street observers could not easily be seen, and surrounded by an array of economic actors of the intersections that made their presence non-intrusive (such as phone credit sellers and currency exchange), the street level observers recorded the following: bribe payments and escorts by the agents, the effort/absenteeism of the police agents and public service outcomes (in particular traffic jams).

We also purchased a seat in 10 minibuses. One data collector traveled in each minibus during the whole day across the study intersections to observe the properties of the agent-driver interactions.

We also record the quota scheme of the commander and the way in which it is impacted through our intervention through a number of data sources (documented below). We received permission from the police hierarchy in order to do so. We obtained this information from multiple sources. First, in each station we worked with the two corresponding Judicial Police Officers (JPOs). They reported data on the individual cars/drivers escorted into the police station (such as the length of the negotiation, bribe paid, and so on), as well on the daily quota. This part of the data collection was approved by their respective commanders, and did not result in any risk for the actors involved.

Second, in each station, we worked with the two corresponding Fine Collection Agency (FCA) agents to collect data on all the activities taking place in the police station. We obtained permission from the FCA hierarchy to collect these data. Third, when possible, an operations coordinator triangulated the JPO data with notebooks kept by the JPOs, in which they detailed incoming cars and revenue. While we had permission to consult these data, we did not have the permission to copy them. Fourth, the street-level assistants, whose role is described in detail in Section 3 of the paper and who have previously established trust relationships with the police, obtained information about the daily quota level directly from the agents every day. Fifth, the wage auditor, whose role is described in detail in Section 3 of the paper, independently obtained the quota level from the agents every day.

Harm 1. The street-level operation and the operations inside police stations could expose the agents and the police station staff to reputational risk if identifiable data was intercepted or confidentiality was breached.

Strategies to Mitigate Possible Harms

Strategy 1. Our observations of agent behavior in the street come from naturalistic observations of publicly observable behavior on which there can be no reasonable expectation of privacy. For this reason, agents did not require consent for this activity and were also originally not considered human subjects by the relevant ethical review board in the United States (although then, prior to the study, more protections were added). Furthermore, requiring consent could have jeopardized the validity of this study. The observers were non-intrusive, and were present at populated intersections taking notes of this publicly observable behavior.¹ We ensured that no agent was informed by our team, nor by any police authority, about the activities of street observers. One major was informed by the study's coordinator and gave his assent to this activity. This provided additional reassurance that the study was in compliance with the hierarchy of this organization. However, no-one in the police force was otherwise informed of the

¹In addition to this activity, we also asked agents to complete, in randomly selected days, a diary of their day at work. Soon after the start of the study we noted that, as expected, the self-reported data would be unusable, due to poor quality and poor writing. We received authorization from the battalion Colonel for this component of data collection, and obtained consent from the agents.

presence of non police observers at intersections, in the police stations, or in minibuses. Based on our contact with the battalion, we could confirm that no agent was ever aware that they were being monitored by observers in the street.

Strategy 2. The data were collected in a de-identified design: no link was maintained between the identity of the agents and the data used for analysis. This was the case for all research participants. This diminishes risks of confidentiality violations.

Strategy 3. Observations of behavior inside police stations come from two different sources.

The first is the police officers at the police station themselves reporting on their own behavior; the police officers are thus human subjects. For that task, they underwent informed consent at the start of the study described in the IRB protocols. We obtained authorization from the battalion's highest authority (the battalion's Colonel), as well as from each police station commander for the activities that involved direct engagement with his police staff.

The second is the fine collection agents inside the police station. They observed the behavior of the police officers and reported it in their notes. For this activity, no consent was sought from the police station officers, on two grounds. First, because their behavior was observable to any observer in the police station, including to the fine collection agents, who are not part of the corruption system. Discussions within the police station are held in the open, irrespective of whether an actor is participating in the process of unofficial extraction or not. No efforts are made to hide these conversations; which are considered standard and legitimate practices; part of the system of "Article 15" (the expression describing the collection of unofficial revenue dating back to a speech made by ex-President Mobutu in 1973). Second, seeking consent would have jeopardized the validity of the study, since it might have affected their behavior. The observation was considered to involve minimal risk given the de-identifying precautions in place.

Strategy 4. For all data collection operations, we de-identified the data, but we went a step further. Every single data collection tool was encrypted - including paper based surveys. In the paper-based surveys, codes were used for the various categories of actors (such as police officers, commanders, and so on), in order to allow for a maximum protection of the identity of the actors, and hence, making the data de-identified. The

transmission of the data was made through a password protected server, and the data was saved in a password protected folder at the University of California, Berkeley.

Strategy 5. We spent immense amounts of effort to ensure that the study was tailored to the cultural context and the norms of the relevant community. The research team spent 6 months preparing specifically for this study (and three years of prior qualitative work) to meticulously assess, for each aspect of our data collection, what was appropriate and what not. In that process, we discarded a significant number of research activities that some of the researchers were considering on grounds that they did not respect the way of living in this context.

B. Research Staff

The system of data collection posed a number of threats to the research staff that are specific to each study branch. In what follows, we describe those risks and how the design mitigated the risks a “naive” data collection design would have created. We separately analyze the risk to observers in the street and in minibuses, staff inside police stations, and supervisory research staff.

a. Street-Level Observers and Minibus Observers

Potential Harms

Harm 1. The 30 observers deployed to the intersections could be exposed, if detected, to the risk of being detained, arrested, or their participation could even constitute a risk to their physical integrity.

Strategies to Mitigate Potential Harms

Strategy 1. Rather than working with civilians to observe the agents, we worked with agents of the Kinshasa’s Division of Transports, with permission from their hierarchy. This agency, which is relatively innocuous, is external to the police networks (minimizing

risks of collusion with human subjects) but its agents were, at the time of the study, very much unoccupied, tending to other occupations to generate income.²

Working with these agents, supervised by someone in an intern position that we created inside the agency, and was approved by the agency (although we did not disclose the specifics of the information we were collecting to the top of the agency) ensured the observers' protection. Indeed, intersections are strategic locations where multiple state agencies operate, and suspicious activity can easily be subject to questioning. With this strategy, we ensured that observers, if questioned, had an official state state card that they could show, whose agency provided legitimacy to their mission at strategic intersections.

Strategy 2. The observers were randomly assigned to a different intersection each day. This kept them from being noticed—and hence both reduced the risk of the Hawthorne effect, as well as their personal risk. Moreover, the use of codes for the various categories, did not only serve to maximize the anonymity of the various research subjects, but also to protect the observers.

Strategy 3. We endowed the observers with a smart phone with the SurveyCTO application installed. This allowed them to blend in - among phone credit sellers, people exchanging currency, retailers of fruits and vegetables, simply hanging out and sometimes taking a break to chat on their phone - while instead writing down their observations.

Strategy 4. To protect the minibus observers, we paid the drivers for their seat, guaranteeing them a steady stream of payment with no hassle. In this way, the minibus observers also developed relations of trust with the minibus observers.

Urgency Protection Plan

In addition to strategies that reduce the likelihood of each harm, we also put in place an urgency protection plan in case the harms under consideration were realized.

²A general problem in the Congolese civil service, irrespective of the sector, are that a significant percentage of them are not on any salary lists - the so-called 'new units' (nouvelles unités). They earn their income through various ad-hoc activities - which supply bonuses - and hope to eventually become part of a salary list (Titeca and de Herdt, 2011). The agents we worked with were part of this category. We made sure that for the time they were engaged in this project in this project, their regular activities (and sources of income) were not affected.

If the observers were to run into problems, the research hierarchy would be informed, via the study coordinator. Based on relationships previously established by the coordinator, he would have the trust required to ensure that he could prevent any harm to be done to study personnel.

Over the course of the 33 days of research, this was only necessary two times. First, on the first day of implementation, notwithstanding the intensive and clear training of the observers, one observer who was too motivated to do a good job had literally been standing next to and following one police officer to observe their bribe-taking. The police agents wanted to take him to the police office, but let him go after (i) the coordinator called the Colonel, and (ii) the Colonel called the police agent and his commander. Second, after a few days, one minibus observer had been drinking, which caught the attention of an intelligence officer in the minibus. A meeting with the research coordinator cleared the issue and appeased any suspicion of improper behavior. We note that in those interactions, no bribe payment was made or necessary, because of the respectable position of the research coordinator in society, notably his prior high-level employment and his well-established status and legitimacy.

b. Staff Inside Police Stations

Possible Harms

We also worked with JPOs and non-police individuals (the FCAs) to collect data about themselves and non police data collectors inside police stations to collect data about the JPOs and about the FCAs.

Harm 1. Individuals whose illegal behavior is reported by JPOs could retaliate against the JPOs. We already discussed the above risks to JPO as human subjects. This risk is reduced by the fact that the JPOs are self reporting data on their own behavior rather than on the behavior of others. To the extent that anyone would be incriminated by their reports, it would be themselves. The JPOs also report on the behavior of the FCAs, whose behavior was all legal.

Harm 2. JPOs, if seen reporting on practices inside the police station by their commander could be accused of being disloyal, leading to retaliation. This risk was nonexistent, due to the mitigation strategy we describe below.

Harm 3. The non-police observers were reporting on illegal behavior by the JPOs, hence if they were caught, commanders could report them and, *ex-ante* it was reasonable to carefully analyze any type of retaliation that might have occurred. This could include physical harm, even if physical harm was deemed very unlikely due to the fact that it would be punishable by the national police—over which traffic police officers had little influence.

Strategies to Mitigate Possible Harms

Strategy 1. Prior to launching the JPO data collection activity, we sought to inform commanders of our proposed activity, and to obtain their consent. After six months of preparatory work involving multiple meetings with the Albert Malukisa Nkuku, who had a relationship with the police, the JPOs' activities were approved by the police station commander, the ultimate authority over their behavior, for each of the police stations in the study. Those in which the commander did not approve of the activities were dropped from the study.

Strategy 2. For the non-police observers (observers in the street and in the police stations), we designed a strategy to work with state officials rather than civilians. Rather than working with civilians observers inside police stations, which could have exposed them to suspicion, we worked with the two fine collection agents in each police station that were assigned to that police station. This ensured that their presence, and their access to conversations was not suspect. If commanders had power over the FCAs, could retaliate against the FCAs. However, this risk is limited due to the fact that police commanders have no power over the FCAs. The FCAs do not take part in the corruption system, and their work is allocated by the FCA, which is independent of the police.

Strategy 3. The fine collection agents we worked with entered the data on a blank sheet of paper, not a survey paper or a survey on a tablet. The choice of a piece of paper made its use innocuous inside the police station. Indeed, the FCAs have their own desk (note that police stations are generally small and are the size of a container), and also take notes as part of their work in various forms, such as paper booklets and blank sheets. This helped keep their operations undercover, protecting their physical integrity. All of

this was done with permission from the FCA hierarchy, and did not prevent the officers from doing their regular job.

Strategy 4. The project employed researchers whose job it was to supervise and monitor the fine collection agents. To obtain access by our supervisors inside the police stations, we worked with supervisors directly inside the fine collection agency, who would then regularly meet their staff around the police stations. The supervisors met the fine collection agents in the evenings predominantly outside the police stations.

c. Supervisory Research Staff

The research project also worked with the supervisors of the fine collection agents, the supervisors of the JPO officers, the supervisors of the street-level observers, the supervisors of minibus observers, the research coordinator in charge of the relationship with the police (one co-author), the research coordinator in charge of the data collection system (one co-author), and the foreign researchers (two co-authors).

Possible Harms

Harm 1. Any agent of the data collection system could be detected and perceived to operate under cover, raising suspicions regarding the data collection enterprise, triggering various forms of retaliation on members of the operation perceived to be responsible for the operation. Even if the likelihood of this harm is mitigated by the strategies we describe below, the consequences in case they were caught would be relatively limited and, had they been caught, would have likely amounted to them having to pay a small bribe. The reason for our confidence in the low harm is that prior qualitative research had already established the existence of the corruption system in the traffic police agency, and the actors of the system did not have an understanding of the distinction between quantitative studies and qualitative research, nor would they have noticed the magnitude of the operations we were conducting, by the fact that each operation was entirely independent and was managed through and entirely autonomous supervision structure.

Strategies to Mitigate Possible Harms

Strategy. Albert Malukisa Nkuku was the study coordinator. His status and network in this community were crucial in providing reassurance to all study personnel that, were any detainment to occur, there would be limited consequences. As described above, networks are central to someone's status and leverage in this context. In case any staff were to run into problems, the research hierarchy would be informed, via the coordinator. This system was set up to mitigate potential problems such as the questioning of the research staff. However, this was not necessary throughout the study

Strategy 3. Research supervisors were re-deployed daily across different locations of the staff they were supervising. This made their presence less regular, and thus made their activity seamless to the police agents operating in the street.

6. Financial and Reputational Conflicts of Interest

A. Possible Reputational Conflicts of Interest

There is one obvious source of concern for possible a conflict of interest risk in this study.

The publication of "negative" research results that would paint a picture of corruption as widespread and portray the agency as essentially organized to generate illegal revenue could in principle be perceived by the government, or by the agency's leadership, as an embarrassment. It could contribute to could further weaken the legitimacy of the state institutions and could make the authors of the study targets for retaliation for exposing illegal practices that co-exist with public goods provision that are likely inefficient. There is such an abundance of literature documenting the corruption of the Congolese state, hence, nuancing this risk.

This could have different implications for different authors of this paper.

For the Congolese researchers, retaliation could mean negative repercussions from the police (or other) authorities for publishing the study, and for having collaborated in whistleblowing a well-organized system that amounts to theft. Without specific whistleblower protections one could be concerned that the expectation of possible retaliation could have an impact on their neutrality, and thus, creating a conflict of interest that would reduce the credibility of the research (for their own protection).

For foreign researchers, the risks can be similar if they are allowed into the country as part of their ongoing research projects. However, the most likely risk, one that has been observed in the past for other researchers studying sensitive questions, is that they are banned from the country and are no longer able to obtain a visa.

For the two co-authors who were founding members of a non-profit research organization, retaliation could mean sanctions against the organization and its members, if the study is suspected of being politically motivated. One of the co-authors works at the Catholic University of the Congo, and another has ongoing institutional collaborations in place.

While the motivations for this study were entirely apolitical, it is reasonable to consider this risk as being a potential threat to the independence of the researchers. Thus, in what follows, we discuss the reasons why this threat is unfounded, and is disproved by the very results of our study.

B. Assessment of Risks of Possible Reputational Conflicts of Interest

In reality, reputational risks from publishing these results are very low for the following reasons (and if there were reputational risks, the scale of corruption revealed by this study, which is very large, would have to be interpreted as a lower bound of an even larger scale).

First, this form of corruption is well-known. These practices constitute an ‘open secret,’ in the sense that they have been often reported on, and also often published about – albeit with different methods. While this study is the first to quantify these dynamics, we are not the first to study them.

Second, the system had already been documented extensively in qualitative studies (see, for instance, Baaz and Olsson (2011), Titeca and Malukisa (2014)). We are not the first to document it, at least qualitatively. Second, and more specifically, one of the Congolese authors (Albert Malukisa Nkuku) did publish qualitative findings on this system both in his PhD (Malukisa 2017a) and in a range of articles (Malukisa 2017b, c). Also Titeca published a range of articles documenting the ways in which corruption is organised in Congo—none of these created a reputational cost.

Third, the study is about processes, not about specific personalities. The anonymity afforded by the project mitigates the potential risks of retaliation that could jeopardize academic independence.

Fourth, no actor whose behavior we portray, or who has any stake in this system, made any payment to any of the researchers of this study, nor to the research personnel. This ensured also that we had academic independence as we are not tied to a quid-pro-quo contract as is the case for privately funded research in some cases.

The lack of reputational conflict of interest is a main reason as to why (i) the study documents pervasive corruption, and (ii) the location is not anonymized, and why all authors, including the Congolese members of the team, freely chose to have their names associated with the public version of the paper.

7. Intellectual Freedom

This section is concerned with contractual limitations on the ability of the researchers to report the results of the study.

Who pays? The study was funded by the International Growth Center (IGC), the Private Enterprise Development in Low Income countries (PEDL), unrestricted faculty funding made available by the Haas School of Business at the University of California, Berkeley, and the Research Foundation - Flanders (FWO). IGC and PEDL were funded by the UK's FCDO (formerly known as DFIC). The researchers had unrestricted intellectual freedom to report the results of the study. All contracts with the funders and with the respective Universities protect academic independence.

Who authorizes? The battalion Colonel authorized the study as part of a longstanding relationship with one of the co-authors of the paper and did not expect results to be published in any particular tone. As indicated in the previous section, these practices are an open secret that are known to society, hence the leverage held by the Colonel and the agency over the content we publish was nonexistent.

8. Feedback to Participants or Communities

There are a number of stakeholders who can be considered when answering this question: the police agency staff, the general population (and in particular the drivers), the government, and the foreign aid agencies who play a central role in channeling resources through the state and in supporting reforms. In fact, up to a few months before our study, the FCDO (formerly called DFID) was supporting Kinshasa's police agency reforms, but stopped because the General of the police agency was suspected of using violent methods against street-kids, among other issues.

Regarding DFID-Kinshasa, one of the co-authors presented the results of the study at DFID's Kinshasa headquarters in 2016 to an audience including Congolese as well as British staff, all specialized in governance in the DRC. This ensured that one of the key decision makers in/around the DRC's government, and one of their main international donors, received information that could be useful for the specific way in which policies could be designed.

Regarding the general public, the agency and the government, there is currently a plan to organize a public presentation at the the Catholic University of Kinshasa in 2023. This has not happened by 2022, because the results of the study remained preliminary until this version was released. We plan to invite actors of the police agency and of the government. While the details of those practices are known to the government, albeit in an incomplete fashion, we believe it can be useful to inform all actors. While the behaviors we document are not technically legal, they are also not taboo, and we will destroy any identifier before proceeding with public presentations.

9. Foreseeable Misuse of Research Results

This is a study on the functioning and impact of practices that are technically not legal, a contentious topic. We have studied this issue as much as possible in an objective and non-normative manner. But, given the continuous nature of the issue, it could potentially be used in inappropriate ways. As an overall measure, the paper provides as nuanced as possible a description of the dynamics at stake; and by describing these, we hope to inform debate and policy.

That being said, the following actions could potentially be taken by the following actors.

First, international donors could decide to withhold aid to the Congolese police force, given the practices documented in this paper. This would be quite severe for a country partly dependent on foreign aid. However, this decision is quite unlikely. Indeed, the presence of these practices among the police is known in policy circles, and has been documented in previous studies (such as Baaz and Olsson (2011)). The contribution of this study is foremost academic, and to offer avenues for better influencing incentives of actors in the system. The descriptive results should not be surprising to Congolese expert implementers. Furthermore, the paper provides a nuanced picture, which does not suggest, or should not lead to, policy decisions such as aid cuts. On the contrary, it offers a path to carefully think about how to target the incentives of supervisors and also questions specific policies favoring others. Similar to our previous work, we intend to present the results of this research to international donors and the government together in the DRC, which should prevent misguided interpretations of the article.

Second, given that the article describes unofficial practices by police officials that are technically illegal, the article could hypothetically be used by Congolese political leaders to sanction the officials involved in this study. However, the authors have taken various measures to protect the identity of the actors involved: these are completely de-identified. The low risk to interested parties is reflected in the authors' unanimous decision to disclose their names, despite the fact that the study was not public for a number of years as a precaution. Furthermore, the government has been replaced since the study was implemented in 2015. With the associated change in personnel, the risk of retaliation is further diminished.

Overall, given that the most pessimistic interpretation of this study has already been made public by *The Economist* (Acland, 2018) and had no negative consequence as expected, we are confident that this article will only nuance the functioning of the system.

References

ACLAND, O. (2018): "Kinshasa's traffic police make 80% of their income "informally"," *The Economist*.

- BAAZ, M. E., AND O. OLSSON (2011): "Feeding the Horse: Unofficial Economic Activities within the Police Force," *African Security*, 4(4), 223–241.
- BATES, R. H. (2008): "The Logic of State Failure: Learning from Late-Century Africa," *Conflict Management and Peace Science*, 25(4), 297–314.
- BIERSCHENK, T. (2010a): "Review: Pierre Englebert, Africa: Unity, Sovereignty, and Sorrow (2009)," *Africa Spectrum*, 45(3), 161–165.
- (2010b): "States at Work in West Africa: Sedimentation, Fragmentation and Normative Double-Binds," .
- BLUNDO, G. (2006): "Dealing with the Local State: The Informal Privatization of Street-Level Bureaucracies in Senegal," *Development and Change*, 37(4), 799–819.
- BOYLE, P. M. (1995): "Michael G. Schatzberg. Mobutu or Chaos? The United States and Zaire, 1960-1990. Lanham, Maryland: University Press of America/Foreign Policy Institute, 1991. x 115 pp. Index. Notes. 32.50.Cloth.15.50. Paper.," *African Studies Review*, 38(1), 166–167.
- CALLAGHY, T. M. (1987): "The State as Lame Leviathan: The Patrimonial Administrative State in Africa," .
- DE HERDT, T., M. W. . M. (2015): "Vers la réalisation du droit à une éducation de qualité pour tous," in *Reinventing Order in the Congo: How People Respond to State Failure in Kinshasa*. UNICEF.
- GOULD, D. (1980): *Bureaucratic Corruption and Underdevelopment in the Third World: The Case of Zaire*, Pergamon General Psychology Series. Elsevier Science & Technology Books.
- LEMARCHAND, R. (1988): *The State, the Parallel Economy, and the Changing Structure of Patronage Systems*.
- LEMARCHAND, R. (2001): *The Democratic Republic of Congo: From Collapse to Potential Reconstruction*, Occasional paper. Centre of African Studies, University of Copenhagen.
- NZEZA BILAKILA, A. (2004): "The Kinshasa Bargain," in *Reinventing Order in the Congo: How People Respond to State Failure in Kinshasa*.
- NZONGOLA-NTALAJA, G. (1986): *The Crisis in Zaire: Myths and Realities*. Africa World Press.
- PETIT, P., AND G. MUTAMBWA (2005): "' La Crise ' : Lexicon and Ethos of the Second Economy in Lubumbashi," *Africa*, 75, 467–487.
- SCHATZBERG, M. (1991): *The Dialectics of Oppression in Zaire*, Midland books. Indiana University Press.
- TITECA, K., AND T. DE HERDT (2011): "Real governance beyond the 'failed state': Negotiating education in the Democratic Republic of the Congo," *African Affairs*, 110(439), 213–231.

- TITECA, K., AND A. MALUKISA (2014): “‘Real’ taxation practices among the traffic police,” *unpublished working paper*.
- (2018): “Market governance in Kinshasa: the competition for informal revenue through ‘connections’ (branchement),” *IOB Working Paper*.
- VAN DE WALLE, N. (2001): *African Economies and the Politics of Permanent Crisis, 1979–1999, Political Economy of Institutions and Decisions*. Cambridge University Press.
- YOUNG, C., AND T. TURNER (1985): *The Rise and Decline of the Zairian State*, UPCC book collections on Project MUSE.: History. University of Wisconsin Press.
- ZARTMAN, I. (1995): *Collapsed States: The Disintegration and Restoration of Legitimate Authority*. Lynne Rienner Publishers, Boulder, CO, USA.