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## Dishonesty in Developing Countries - What Can We Learn From Experiments?

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#### Abstract

This chapter reviews the recent literature on cheating and corruption to demonstrate the value that experimental methods hold for studying dishonesty in developing countries. Emphasizing the diversity of experimental methods, the chapter highlights the contributions of laboratory and field experiments to the measurement of cross-country differences and to the identification of select causes of corruption and c heating. This body of literature has provided evidence of the causal effect of social norms, institutions, group identity, and social status concerns. Moreover, the existing research has also delivered practical policy recommendations to ethics-related development problems.

**Keywords:** Dishonesty, corruption, developing countries, experiments

**JEL Codes:** C91, C92, C93, D73, H26, K42

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#### 1 Introduction

Dishonesty knows no other limits than those of the imagination of its perpetrators, so varied and rapidly adaptive are its forms. It ignores geographical, economic, and political boundaries, and few communities in the world can boast of being free of it. However, in this context, the developing world seems particularly vulnerable to the many dimensions of dishonest behavior (Bardhan, 1997; Rose-Ackerman, 1997; Olken and Pande, 2012). Over the past two decades, interest in dishonesty has generated an explosion of experimental research, focusing on the individual and collective determinants of cheating behavior (surveys include Irlenbusch and Villeval, 2015; Jacobsen et al., 2018; Abeler et al., 2019), corruption (Armantier and Boly, 2012; Burguet et al., 2018; Dimant and Tosato, 2018), and effective anticorruption regulatory measures (Abbink and Serra, 2012; Gans-Morse et al., 2018). While most studies have been conducted in developed countries with participants from Western cultural backgrounds, a number have provided major insights on dishonest behavior in developing countries. This chapter reviews the experimental studies on corruption and cheating behavior conducted in developing countries to show the value of these methods in exploring dishonesty in this context. By comparing the evidence collected in developing countries with that collected in the developed world, it can also identify the existence of universal and more specific determinants of dishonest behavior.

Most of the empirical literature on dishonesty in developing countries has focused on corruption. Corruption is defined as an illegal behavior that consists of accepting, giving, or requesting (in the case of extortion) gratification in exchange for a favor by people in positions of power such as politicians, police officers, or lawyers. Thus, corruption is associated with a dishonest use of public power, including the payment of bribes for procuring undue public contracts, buying votes, or, in the case of harassment bribes, access to passports, medication, or education. In addition to bribery, corruption includes clientelism and embezzlement, *i.e.*, the misappropriation of assets by the people to whom they are entrusted. Compared to the "hard corruption" that falls under crime laws, "soft corruption" (such as nepotism, cronyism, favoritism), is usually more difficult to regulate legally (Jiang and Wei, 2022).

The focus on corruption is not surprising, considering its estimated cost. The global cost of corruption represents roughly 5% of the global Gross Domestic Product and at least USD 2.6 trillion (World Economic Forum). This situation is even more dramatic in developing countries. The World Bank Institute estimates that 25% of African states' GDP is lost each year owing to corruption (Sequeira, 2012). A total of 27% of respondents to a survey conducted in 35 African countries reported that they had paid a bribe for services from public schools, public hospitals, utility services, or the police at least once in the previous year (10th Global Corruption Barometer – Africa 2019). This rate varies among sectors, from 10% for public schools to 52% for the police, and between countries, from 5% in Mauritius

to 80% in the DRC. A total of 54% citizens report paying bribes for common government services in India (Hardoon and Heinrich, 2013). Built on the perceptions of corruption in 180 countries on a 0-100 scale (from most corrupt to least country), the mean Corruption Perceptions Index from Transparency International for 2021 was 43, with large variations between regions (66 in Western Europe, but only 45 in Asia and the Pacific region, 43 in the Americas, 39 in Middle-East and North Africa, and 32 in Sub-Saharan Africa).

Such widespread dishonesty in developing countries induces inefficiencies and impedes investment, growth, and development (Mauro, 1995; Bardhan, 1997; Aidt, 2009; Olken and Pande, 2012). By increasing the cost of access to education, justice, or medication, corruption distorts the allocation of resources, with negative externalities for the formation of human capital. For example, Reinikka and Svensson (2004) estimated that schools in Uganda received only 13% of the grants from a government program intended for them in the 1990s. In an experiment run in India, Bertrand et al. (2007) found that compared to a control group, driver's license applicants who were randomly offered a bonus for obtaining a license quickly were more willing to pay intermediaries to obtain their license and were less qualified to drive. Corruption erodes trust in institutions and among citizens, with consequences for development, social norms, and the democratic expression of citizens' preferences. Such distortions harm some subsets of a population more than others, which increases inequalities and contributes to violence, social unrest, and extremism. The poor pay the highest share of their income in bribes because it is more difficult for them to complain or afford private services. The 10th Global Corruption Barometer – Africa states that the poorest citizens are twice as likely to pay a bribe as the richest.

Corruption deteriorates the quality of a country's institutional environmentin particular, the institutions in charge of deterring, detecting, and punishing illegal behavior and misconduct. As a result, other types of dishonest behavior also thrive more easily. The net benefits of cheating consumers, phishing, or driving without a license, to provide a few examples, increase when corruption in the police is widespread. Therefore, in a review of the experimental literature on dishonesty in the developing world, it is important not only to consider corruption but to adopt a broader perspective that encompasses petty cheating, such as lying and other deceptive behavior. By adopting this broader perspective, one can better understand the determinants of dishonest behavior and how the presence of externalities affects such behavior.

Economists have investigated the mechanisms behind corruption and cheating to understand the determinants of dishonest behavior and to design more effective policy interventions. To study these mechanisms, the original economic literature was largely built on the economics-of-crime approach (Becker, 1968), principal-agent models of corruption (e.g., Rose-Ackerman, 1978), and analyses of the role of government institutions (e.g., Shleifer and Vishny, 1993). For example, using a natural experiment on extortion at road checkpoints in Indonesia, Olken and Bar-

ron (2009) provided evidence that the price charged responded to market structures, and that corrupt officials practiced price discrimination. Without ignoring the role of incentives and market structures, more recent behavioral economics approach has explored how institutions, social norms, and group dynamics affect individuals' moral preferences, beliefs, and behaviors. In the experimental studies conducted in the laboratory, three main types of games have been used: cheating games in a non-strategic setting (inspired mostly by the die-rolling task paradigm of Fischbacher and Föllmi-Heusi (2013)), deception games in a strategic setting such as sender-receiver games (e.g., Gneezy, 2005), and corruption games in which two individuals may cooperate to the detriment of a third. Most corruption games share some proximity with sender-receiver games in the sense that in both types of games, the environment is strategic and dishonest behavior generates negative externalities. However, there are important differences. In corruption games, the collusion between the briber and the bribee generates an externality that harms passive players, and victims can observe the other players' behavior. In contrast, in sender-receiver games, deception is not observable by the victim, and the harm (if it exists) is not imposed on third parties.

Owing to its illicit or immoral nature, how to best measure the extent of dishonesty is an empirical challenge. The traditional instruments, from perception-based surveys to audit studies, present disadvantages (Sequeira, 2012). Measuring perceptions leads to declarative biases and measurement errors. Estimates based on observational data typically suffer from endogeneity issues. Instead, experimental methods, whether implemented in the field, online or in the laboratory, facilitate the measurement of individual dishonesty. Unlike surveys, experiments directly measure consequential behavior. Through randomization and exogenous treatment manipulations, researchers can identify causal relationships instead of simply correlations, which help investigate the determinants of misconduct. Moreover, experiments can be used to test the effectiveness of various policy interventions. Naturally, questions remain about the external validity of certain experimental findings and their scalability, but this simply suggests the need for further investigations.

Section 2 highlights the diversity of the experimental methods used to measure dishonesty and the mechanisms that determine its level. Section 3 reports on cross-country comparisons of dishonesty. Section 4 reviews the experiments on the causes of dishonesty in the developing world. Section 5 focuses on the testing policy interventions intended to root out dishonesty. Section 6 provides a summary.

## 2 The Diversity of Experimental Methods

The experimental methods applied to the study of corruption and cheating - laboratory, field, lab-in-the-field experiments and Randomized Control Trials (RCT) - are diverse but share the principle of introducing exogenous variations across

treatments and randomly assigning participants to these treatments to identify the causal effects of the manipulation.

Laboratory experiments offer a highly controlled and replicable environment allowing for direct and cost-effective tests of theoretical models. The exogenous manipulation of the variables of interest, such as the levels of incentives, the observability of actions, and institutional environment (probability of detection, level of sanctions, nature of liability), is easier than in the field (for a survey of theories and experimental methods, see *e.g.*, Banerjee et al., 2022b). They allow researchers to elicit beliefs, morals and social preferences that play an important role in corruption (Lambsdorff, 2012).

Three main categories of games have been used to study dishonesty in laboratory experiments; the first and the third categories represent the quasi exclusivity of the studies conducted in developing countries. Forming the first category, individual cheating games exclude strategic interactions and offer the simplest possible environment to study intrinsic honesty. Thanks to its parsimony, the die-underthe-cup task designed by Fischbacher and Föllmi-Heusi (2013) has been widely used around the world (18% of the more than ninety studies reviewed in Abeler et al. (2019) have been conducted in developing countries). Typically, participants are asked to activate a random device in private (such as rolling a die, tossing a coin, or drawing a ticket), observe the outcome, and report the observed outcome. They can misreport their private information to increase their monetary payoff, knowing that it cannot be proven that they lied. Evidence of cheating is established at the aggregate level by comparing the empirical and the theoretical distributions of the reported outcomes. It can be established at the individual level if the game is repeated a sufficiently large number of times. "Mind games" (Jiang, 2013) offer an even stronger guarantee of confidentiality to the participants. The subject must first make a guess on the outcome of a random device without reporting this guess. Next, the outcome is observed by the subject and the experimenter. Finally, the subject reports whether the outcome corresponds to the guess or not, which determines their payoff.

The second category is represented by deception games, in the line of Gneezy (2005). These games differ from the previous ones in that they involve strategic interactions between a sender and a receiver. The sender, informed about the payoff functions of the two players, sends a message to the uninformed receiver who must make a decision that determines the payoffs of both players. Deception does not require lying (Sobel, 2020) but aims at manipulating the receiver's beliefs, usually at the sender's advantage. The third category includes corruption games. These games are closer to the second category than to the first one because they involve a strategic setting and dishonesty entails negative externalities for some players. However, as already mentioned in the introduction, there are certain differences from deception games. In particular, in corruption games, the party that suffers the negative externality is able to observe the dishonest action that induced the harm. Other differences depend on the specific game used to study

corruption.

The collusive corruption game of Abbink et al. (2002) has inspired several bribery experiments. This repeated sequential game involves three roles: a firm, a public official and the public (the other participants or a third-party). The firm can offer a bribe to the official in exchange of a favor. The official accepts or rejects the bribe, and decides whether to reciprocate. Granting the favor increases the payoff of the briber but generates a negative externality for the public. This constitutes another difference from deception games: here, the harm is imposed on third parties. There is equilibrium if all firms do not bribe. In variants, the third-party can punish the briber, the official, or both. A "sudden death" penalty can also occur exogenously with a low probability, leading to the exclusion of the corrupt players.

The games used to study extortionary corruption in the laboratory differ slightly from those used for collusive bribery. In Abbink et al. (2014), the official has to deliver a service but can deny it. In the first stage of a two-player game, the official decides whether to ask for a bribe and chooses its amount. Not demanding a bribe is the collective optimum. In the second stage, if a bribe was requested, the citizen decides whether or not to pay the bribe and whether or not to report the request. Not paying is costly for the citizen. Reporting the bribe triggers a higher probability of discovery and prosecution for the officials.

In comparison with lab experiments, field experiments have the advantage of a more direct external validity. Subjects are not usually aware they are participating in an experiment. Rare field experiments on dishonesty have been conducted in both developed and developing countries, using the same protocols. Cohn et al. (2019) measured civic honesty in 40 countries. They turned in more than 17,000 lost wallets at various institutions and asked a front desk employee to take care of the wallet. They measured whether the employee contacted the owner to return the wallet. By manipulating the amount of money contained in the wallet, they tested whether the return rate increased or decreased when the value of the wallet to the owner was higher. Other field experiments have been designed to fit the context of corruption in developing countries. Armantier and Boly (2011) hired participants in Burkina Faso for a part-time job consisting of grading 20 examination papers. A banknote was attached to the 11th paper with the following message: "Please, find few mistakes in my examination paper." The design varied the amount of the bribe, the wage paid to the graders and the punishment in case of detection.

While field experiments aim at measuring certain behaviors, RCT have become the gold standard in development economics for studying the impact and efficacy of policy interventions. By randomly assigning subjects in the field to either a control group or a treatment group and measuring differences-in-differences, they make it possible to identify the causal impact of the treatment, independent from unobservable characteristics. For example, Banerjee et al. (2018a) designed an RCT in which the Indonesian government provided information directly to a random set of households about their eligibility for a subsidized rice program,

whereas a control group did not receive the information. The researchers then surveyed the households about the subsidy received and estimated that informed households received 26% greater subsidies than the control group.

Field experiments are more naturalistic than laboratory experiments but one limit is the potential loss of control by the experimenter and possible ethical concerns such as whether the implementation of a treatment may harm the subjects. Another issue is related to the identification of mechanisms for which the laboratory may be better suited. Lab-in-the-field experiments offer the advantages of both lab and field experiments. They typically implement laboratory games on non-standard (students) subject pools. For example, in India Hanna and Wang (2017) used a repeated die rolling task and related the reported outcomes to students' professional aspirations (their willingness to apply for governmental jobs), and to nurses' individual records of fraudulent absenteeism, used as a measurement of dishonesty in the field. Another example is Kröll and Rustagi (2017) who studied the moral motivation of milkmen in Delhi. They related participants' reported performance in a monitored die rolling task - their measurement of motivation for honesty - to a measurement of dishonesty in the field - the quantity of water added to the milk sold by these participants, as measured by the experimenters.

It is important to highlight evidence showing that results from the laboratory are replicated in the field and that dishonesty in the laboratory predicts cheating in the field. Replicating their field experiment in the lab, Armantier and Boly (2013) showed that the probability of a person accepting a bribe was almost identical in both settings. Hanna and Wang (2017) found that the nurses who reported above median outcomes in the die rolling task were 10.7% more likely to have fraudulent absenteeism records at work than those reporting below median outcomes. Kröll and Rustagi (2017) established that the magnitude of overreported die-roll outcomes correlated with the percentage of water added to a liter of milk by the same subjects. Armand et al. (2021) showed that corrupt behavior in a novel corruption game played in Mozambique correlated with village leaders' actual embezzlement outside the laboratory. These findings bolster the external validity of the results obtained in the laboratory. This also pleads for considering the various experimental methods as complements to each other.

## 3 Cross-Country Evidence

Are there systematic differences between countries and cultures in terms of the prevalence of corruption and cheating? Is there a fundamental gap between the developed and developing worlds?

#### 3.1 Corruption

Country-level indices from Transparency International or the World Bank point to significant differences in corruption around the world. However, such indices measure perceptions and not behavior, and the two may be weakly correlated (Olken, 2009; Razandrakoto and Roubaud, 2010). A potential solution is running the same experiments in different countries and testing whether perceptions correlate with behavior. Cameron et al. (2009) ran a collusive bribery game to study the relationship between culture and corruption with students in Australia and Singapore (countries characterized by a low corruption index) and in India and Indonesia (countries characterized by a high corruption index). They found that the Indian participants were, on average, more likely to offer a bribe and less likely to punish bribery compared with the Australian sample. However, similarly to the Indians, the participants from Singapore were more likely to accept a bribe than the two other groups. Moreover, the Australian participants were less likely to punish. This confirms the importance of studying behavior and not only perceptions, as well as how behavior relates to institutional changes, which could explain the lower tolerance of corruption in Indonesia and higher tolerance in Singapore.

Other studies do not reject the predictability of the Corruption Perceptions index. Barr and Serra (2010) ran a corruption game with Oxford University students originating from 40 different countries. They found evidence of a cultural origin of dishonesty among undergraduates whose country predicted behavior in the experiment but not among graduates. In a follow-up extortion experiment, they further showed that social norms internalized during childhood differ between cultures and could explain individuals' bribing behavior later in life, but migration and subsequent socialization may induce behavioral changes. In an experiment conducted in Canada, Muthukrishna et al. (2017) found that migrants' cultural backgrounds affected their ability to accept bribes, even in a context with punishment. Salmon and Serra (2017) also enrolled students characterized by cultural heterogeneity owing to the immigration of their ancestors in an experiment run in the United States. The perspective of social judgment owing to observability reduced corruption only among subjects who identified culturally with countries characterized by low corruption. This again suggests the importance of internalized social norms in cross-cultural differences in corruption.

However, culture is not the entire story, as studies found very few differences when comparing decisions in experiments conducted both in developed and developing countries, despite very different corruption indices. Armantier and Boly (2013) replicated their original field experiment in the lab in both Burkina Faso and Canada. The direction and magnitude of several treatment effects were similar across countries. The bribe acceptance rate was even higher in Montreal, possibly owing to a lower awareness of the consequences of corruption in the Canadian sample. Likewise, Frank et al. (2015) compared bribing in lab experiments in Germany and China and found a country difference only for women. Banuri and Eckel

(2015) introduced an intense audit policy in the lab in the U.S. and Pakistan. The reactions to the policy implementation varied between countries, but the corruption levels differed between countries neither before nor after a crackdown.

#### 3.2 Lying and Cheating

A meta-analysis of more than 90 studies using the die paradigm by Abeler et al. (2019) concludes that its main finding - a substantial aversion to lying - is robust across countries despite local variations in lying rates. On average, subjects forego three quarters of the potential gains from lying. Conducting experiments in developing countries allows researchers to increase the level of incentives to the extent that payoffs from misconduct can represent several months of income. Nevertheless, honesty remains substantial (this has also been observed in a cheap talk game in Bangladesh by Leibbrandt et al., 2018). The model proposed by Abeler et al. (2019) that best fits the data combines a preference for being honest (moral concerns) and a preference for being seen as honest (reputational concerns). These motivations seem to be universal.

International comparisons also failed to find significant differences between the countries. Using a coin flip task in which participants could earn a chocolate bar, Pascual-Ezama et al. (2015) explored honesty among 16 developed and developing countries (including Colombia, India, Indonesia). They found high levels of honesty in most samples (86% on average) and no significant differences across countries. The country data did not correlate with their bribery paying index or the Corruption Perceptions Index. The same conclusion was reached by Mann et al. (2016) who compared cheating on a die task between students and the general public from five countries (China, Colombia, Germany, Portugal, and the U.S.) that vary in corruption index and cultural values, and by Suri et al. (2011) who found similar behavior in die tasks played on MTurk in India and the United States. These findings support the notion that fundamental lying aversion characterizes individuals around the world and that differences in country-level cultural norms of corruption do not translate into differences in generalized dishonesty.

However, larger-scale experiments contradicted this view by identifying significant relationships between cheating and measurements of morality and economic performance at the country level. Indeed, individuals' intrinsic honesty is probably modeled by the institutions supporting moral norms of varying permissiveness and economic development. Gächter and Schulz (2016) built an index for the prevalence of rule violations at the country level in 2003 and measured its correlation with intrinsic honesty in a lab experiment run in 12 developed and 11 developing countries. The index was built on three indicators of violations: the World Bank's Control of Corruption Index, the size of the shadow economy, and political rights. With the exception of Colombia and Turkey, developing countries constituted the pool of medium and low quality institutions. Intrinsic honesty was measured using the die-under-the-cup task. The study demonstrated a strong correlation between

the prevalence of rule violations index and the mean claim, the frequency of high claims, and the share of fully honest players in the die task. Weak institutions and a collectivist culture, more prevalent in developing countries, predicted lower intrinsic honesty. Using a mind game played online by prospective public employees in 10 developed and developing countries (including Morocco, Egypt, Algeria, Indonesia, and Thailand), Olsen et al. (2019) also found a strong positive correlation between the average cheating rate in the samples and the country-level Corruption Perceptions and Control of Corruption indices, but no correlation with the GDP per capita. In a mind game played in China, Italy, Japan and the Netherlands, Jiang (2014) observed that the lying rate was more consistent with the country's corruption level than with its degree of individualism versus collectivism.

These results were partly echoed in studies conducted on non-student subject pools. In the lost wallet experiment conducted in 355 cities by Cohn et al. (2019), the high level of honesty observed when the wallet contained no money - a 40% return rate - hid large differences in civic honesty around the globe. This rate varied between 7% and 70%, with the first quartile including only developed countries and the fourth only developing countries. However, in almost every country regardless of development degree, the rate was significantly higher when the wallet contained cash (51% on average). Not returning a wallet that contains money induces a psychological cost of seeing oneself as a thief. Yet, the return rate of a wallet with cash was three times higher in Switzerland than in China, for example. This rate is predicted by survey measurements of social capital, such as generalized trust, morality, and norms of civic cooperation, and it predicts cross-country differences in GDP and government effectiveness (Tannenbaum et al., 2020). In Hugh-Jones (2016), participants in online panels from 15 developed and developing countries (including Argentina, Brazil, China, India, South-Africa and Turkey) had the opportunity to cheat in a coin-flip task and a quiz to increase their payoff. Cheating differed dramatically between countries. While its correlation with the Corruption Perceptions Index was weak, cheating correlated negatively with countries' GDP per capita. The correlation was primarily driven by the GDP growth before 1950, suggesting that development and honesty are related and that cultural norms have a persistent effect.

Overall, the comparative literature reveals differences between developed and developing countries and within each category of countries but also similarities suggesting the presence of a common intrinsic preference for honesty. It also confirms the importance of observing behavior rather than collecting perceptions alone. The discrepancies between experimental findings suggest that economic development levels and cultural values play complex roles in shaping individual honesty. They may also be partly driven by specific aspects of the protocols, in particular the punishment opportunities and cross-cultural differences in their effects (Banuri and Eckel, 2012), as well as the level of statistical power. A limitation is that these studies establish correlations with culture and institutions, not causality. It is important to conduct studies investigating the determinants of

dishonest behavior to better understand its link with development.

### 4 Determinants of Corruption and Cheating

There are multiple causes of dishonesty in developing countries, both at the macro and microlevels, including the lack of economic competition, inefficient governments, weak legal systems, and information asymmetries (e.g., Rose-Ackerman, 1978; Shleifer and Vishny, 1993; Lambsdorff, 2006). The experimental research has contributed more specifically to the understanding of the role of institutions, social and cultural norms, and group identity, as well as how they affect individuals' moral preferences, expectations, and behaviors. A few studies have also explored whether individual characteristics play the same role as in developed countries.

#### 4.1 Social Norms and Institutions

The cross-country comparisons reviewed in section 3 emphasized the likely role of social norms and culture in honesty (for a general reflection on corruption and norms, see Kubbe and Engelbert, 2018). However, it is challenging to separate the impact of social norms from that of legal enforcement institutions because they are interdependent: More lenient moral norms tend to accompany weaker institutions. To address this challenge, Fisman and Miguel (2007) observed in a natural experiment the behavior of diplomats from 146 countries living in New York City where they all benefited from impunity in illegally parking their cars. They interpreted illegal parking behavior as reflecting an intrinsic propensity to break rules. Diplomats from more corrupt countries were significantly more likely to violate the parking law than diplomats from less corrupt countries, showing that individuals bring the social norms of their home countries in new contexts.

It is important to examine Where do corrupt social norms originate. Their nature and their cultural transmission are influenced by the existing formal institutions. Hruschka et al. (2014) designed a resource allocation game in which the reported outcome of a die roll could benefit an anonymous in-group (or oneself) and an out-group. They played this game in eight societies (including Bangladesh, Bolivia, China, Fiji). Individuals were less likely to lie to favor their in-groups or themselves in societies where they could benefit from better governmental services and community-level food security. Stronger social insurance programs help build better civic norms.

An anthropological approach may provide insight into to identify the impact of formal institutions on the emergence of cultural norms. Lowes et al. (2017) exploited historical data on state institutions in Central Africa, comparing the Kuba Kingdom, which was established in the early 17th century and had state institutions that were more developed) with villages having less formal institutions.

Implementing the same Resource Allocation games as Hruschka et al. (2014), they compared the propensity to break rules of individuals whose ancestors lived in the Kuba Kingdom to individuals whose ancestors lived just outside the kingdom. Centralized institutions were associated with weaker rule following norms and more theft, in contrast with Gächter and Schulz (2016). In line with theories of intergenerational transmission of cultural values, they found that Kuba parents cared less about teaching children rule-following values. Using a similar method to study violence in Rwanda, Heldring (2021) also found that historical exposure to centralized rules led causally to more violence and affected transmitted norms of obedience.

The direct effect of the quality of formal institutions on honesty norms relates to the nature of governance and power asymmetries between groups (World-BankGroup, 2017). The leaders' selection method and their discretionary power in the detection and punishment of misconduct influence how widespread dishonesty is in a society. Corrupt community leaders erode citizens' incentives to invest and cooperate, as evidenced by Beekman et al. (2014) in rural Liberia. In a lab experiment in Kenya, Boly and Gillanders (2018) showed that participants in the role of public officials, both corrupt and non corrupt, chose a lenient audit policy when their own embezzlement actions could also be monitored, compared to when it only applied to another public official. Thus, the equality before the law principle may have undesirable effects when elites can manipulate institutions to their advantage. However, if elite capture is often assumed to be an important issue in developing countries, some experiments nuance this judgment. A field experiment in Sierra Leone found little evidence of elite capture of resources and concluded that government by local elites did better in terms of project management than random villagers (Voors et al., 2018). The loss of welfare elite capture generates may also be much lower than that induced by a lack of capability to administer programs efficiently (as shown in a RCT in Indonesia by Alatas et al., 2019).

If the institution representatives are corrupt, this increases the probability that a society is trapped in a corrupt norm, not only because these representatives are more likely to promote ineffective anti-corruption policies but also because they send bad signals to the citizens. Ajzenman (2021) showed in a natural experiment in Mexico that secondary students were 10% more likely to cheat on school tests after the disclosure of corruption perpetrated by local officials in the use of federal funds. This effect persisted for over a year. Such information also impacted beliefs and values, as more individuals reported holding the belief that cheating is needed to succeed and that abiding by the rules is less necessary. This illustrates how the misconduct of leaders can affect the transmission of norms to the next generation. In a lab-in-the-field experiment in Thailand, Hübler et al. (2021) found that individuals who perceived a higher level of corruption in state affairs were more likely to cheat in a die game - although reverse causality cannot be excluded.

It is not only the example given by leaders that matters but also other citizens' behavior through the formation of beliefs. People follow social norms if they believe

that sufficiently many individuals in the society will comply with them and believe that one ought to comply with them (Bicchieri, 2017). Both empirical expectations about what others do (descriptive norms) and normative expectations about which action is socially appropriate (prescriptive norms) matter, because they signal whether breaking the norm may trigger social sanctions. Such a threat creates an incentive for people to conform to others' behavior and explains normative inertia. For example, Banerjee (2016a,b) showed in two laboratory experiments conducted in India that the perceived sense of social appropriateness plays a crucial role in the decision to bribe. Corbacho et al. (2016) manipulated the provision of information on the increased level of corruption in Costa Rica to respondents in a household survey before eliciting their willingness to bribe a police officer to avoid paying a traffic ticket. Compared to a control group, the proportion of respondents willing to pay a bribe increased by 28%. This effect of the contagion of peer information on behavior has also been observed in deception games in the lab (e.g., Innes and Mitra, 2013).

Peer effects create convergence on a social norm through belief formation. However, complex processes are at play in the relationships between beliefs and behavior. First, there may be asymmetries in norm compliance depending on whether dishonesty responds to contagion or to conformity. In a laboratory experiment run in Argentina, Abbink et al. (2018) found a contagion effect of descriptive social norms in a collusive bribery game: participants in the role of firms who knew they were paired with officials from a group with a majority of corrupt individuals offered twice as many bribes, independent of strategic considerations and the possibility of being sanctioned. In a laboratory experiment run in China, Italy, the Netherlands, and Russia, Schram et al. (2022) manipulated descriptive norms by providing different levels of information on the bribe choices in their matching groups to the subjects. Corruption increased in response to information on higher peer dishonesty, but it did not decrease when the descriptive norm was more honest, which supports contagion and rejects conformity.

Second, when a shock in beliefs regarding a descriptive norm in a society occurs, behavior does not necessarily respond to it. In a field experiment in Tanzania, Cappelen et al. (2021) examined whether information concerning the discovery of natural gas raised expectations about future corruption by making future rents more salient. This was observed (as also found in Sao Tome and Principe by Vicente, 2010). However, rejecting the hypothesis that the winner's curse is induced by self-fulfilling expectations, the updated beliefs about future corruption did not translate into an increased present willingness to engage in corruption, nor a change in normative views. Representing a shock in the opposite direction, Jiang and Villeval (2022) tested in a lab experiment conducted in China a game in which individual cheating behavior could induce a risk of collective sanction that affected all the group members equally. Even after such a shock occurred (signaling that many members cheated), the pursuit of selfish interests and a lack of coordination did not reduce cheating, particularly in large groups. Third, ex-

posure to greater corruption may sometimes induce less tolerance. Alatas et al. (2009b) found that Indonesian public servants were substantially less likely to engage in corruption in the lab than students (with respective bribery rates of 47% vs. 78%, respectively, and acceptance rates of 30% vs. 79%). This finding suggests that public servants were less tolerant of corruption than students because of their more frequent exposure to it in their workplace.

#### 4.2 Group Identity and Social Status

Existing behavioral economics literature has revealed the importance of group identity on behavior in various social encounters. Corruption and dishonesty are no exception. Priming professional or political group identity may, depending on the attached culture or a pure group identity effect, encourage or discourage misconduct (for example, see He and Jiang (2020) who primed subjects with the China Communist Party identity in a harassment bribery game).

Group identity often accompanied by in-group favoritism and out-group discrimination. People are more willing to help someone who shares something in common with them and disadvantage someone who belongs to another group. In a lab experiment in China, Cadsby et al. (2016) compared behavior in a die-undercup task and in a free allocation task. They manipulated whether players could allocate money between an in-group (a student from the same university) and an out-group (a student from another university), or between themselves and an out-group, similar to Hruschka et al. (2014) but in a between-subjects design. They identified a similar positive in-group bias when the allocation was free and in the die task, showing that people may be willing to lie for an in-group even without personal monetary benefit. In contrast, the negative out-group bias when their own payoff was at stake was stronger than the positive in-group bias when it was not at stake in the two tasks, but it was smaller in the die task than in the free allocation.

The link between in-group favoritism (particularly when it becomes a norm) and corruption is complicated. On the one hand, it may reduce corruption because individuals are more cooperative with in-groups. On the other hand, because trust is higher among in-groups, it may change the return expectations and reduce the risk of sanctions when offering or soliciting a bribe, and the pressure to reciprocate may be increased. Seim and Robinson (2020) conducted a field experiment in Malawi with Malawian confederates to measure the targeting strategies of employees of an electricity supply corporation when soliciting a bribe from customers who requested an electricity connection for their residence. In line with parochial corruption, shared ethnicity increased dramatically exposure to bribery (from 28% to 44%) but also preferential treatment without a bribe, whereas the apparent political connections of the confederates had the opposite effect.

Group identity does not systematically affect dishonesty and understanding when it matters is important to guiding policy interventions. One factor is the riskiness of misconduct. In a field experiment in Malawi, Robinson et al. (2018) measured exposure to corruption at police traffic roadblocks. Police officers' targeting strategies partly replicated those observed in Seim and Robinson (2020): the politically powerless were disproportionately the victims of bribery, while the citizens' socioeconomic status had no effects. However, in this context of frequent extortion, shared ethnicity no longer influenced bribe solicitation. Considered together, the two studies suggest that shared group identity increases corruption when bribery is riskier (*i.e.*, in the case of electricity supply). It is not always group identity in itself that matters but what it signals about the risk of retaliation.

Another factor is the scarcity of resources. Studying developing countries allows researchers to observe substantial natural fluctuations in the level of resources. Aksoy and Palma (2019) ran a standard die-in-the-cup experiment with the same low-income coffee farmers in Guatemala both before the coffee harvest (when resources are scarcer) and during the harvest season (when they are more abundant). Group identity was induced by natural village identity. While scarcity did not affect the extent to which farmers lied for their own benefit or for an in-group, it eliminated the out-group discrimination in lying that was observed during the period of abundance. Under scarcity, in-group favoritism disappeared, possibly owing to more intuitive thinking or a higher feeling of empathy.

Finally, status threatening circumstances also affect the importance attached to group identity. in rural India, Banerjee et al. (2018b) implemented a modified die task, in which the reported outcome determined both the subject's and another person's payoff after subjects played tournament games. High caste villagers discriminated against low-caste members in cheating. Moreover, when they learned that they had lost the competition under affirmative action, they were more likely to cheat spitefully against a low-caste member, even if they were not the opponent in the competition.

#### 4.3 Individual Determinants of Dishonesty

Although weak institutions and social norms may help explain why some places are trapped in a corrupt equilibrium, this does not exclude individual responsibility. Several studies have revealed that dishonest individuals tend to self-select in professions or activities in which corruption is widespread. In particular, students who applied for government jobs in India exhibited a higher propensity for lying in lab tasks compared to non-applicants (Banerjee et al., 2015; Hanna and Wang, 2017). Therefore, individual preferences should not be ignored when analyzing the causes of dishonesty. This is all the more important as corrupt people may strategically exploit information on preferences. Using data from Paraguay, Finan and Schechter (2012) showed that politicians hire intermediaries to buy votes in villages and that these intermediaries are more likely to target reciprocal villagers. However, little is yet known about the links between social preferences and dishonesty.

Few studies have explicitly examined the role of individual characteristics on dishonesty in the context of developing countries. This is unfortunate because there could be interactions between such characteristics, culture, and behavior. Regarding gender, females have been reported to be less tolerant of corruption and less prone to corruption and lying than males in developed countries (e.q.,Chaudhuri, 2012; Abeler et al., 2019). Beaman et al. (2009) also found some evidence of less bribery in Indian villages with reserved positions in elections for females. However, almost no gender differences were found in experimental studies conducted in developing countries. This suggests that such gender differences may depend more on culture and the actual exposure to corruption. In the bribery experiment of Alatas et al. (2009a) in Australia, India, Indonesia, and Singapore, the only significant gender difference was found in Australia where females were less corrupt and tolerant of corruption than males. Waithima (2011) reported no gender differences in a similar game played in Kenya, except that male briberbribee pairs were more likely to be corrupt than female pairs. In the Burkina Faso experiment by Armantier and Boly (2011), bribe acceptance did not differ by gender, although it did decrease with age and religiosity; however, females reciprocated less often than males in the presence of a risk of detection. Interestingly, adopting a dynamic approach in lab-in-the-field with local politicians in West Bengal, Chaudhuri et al. (2022) observed a gender gap in cheating in a die task among inexperienced politicians, but this gap vanished among experienced politicians. Time in power eliminated gender differences through socialization into the local political culture.

The meta-analysis of Abeler et al. (2019) revealed that compared to non-students, student samples lie significantly more, which suggests the possible role of cognitive skills or socioeconomic background. The only study that investigated these dimensions in a developing country is Alan et al. (2020) who tested a cheating real-effort task on a sample of elementary school children in Turkey. Higher IQ and socioeconomic status increased proneness to cheat. Introducing performance incentives had no effect except on altruistic children who then cheated less.

## 5 Policy Interventions

Designing effective policy interventions to curb dishonesty constitutes a challenge for development. Experiments provide powerful instruments for testing behavioral mechanism design. They investigated three types of interventions. In line with the economics-of-crime approach, the first group includes changes in the economic incentives that reduce the benefits of dishonesty or increase its costs. The second group includes information and transparency policies aimed at reducing information asymmetries. The third group consists of more recent interventions targeting social norms through nudging and moral appeals.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>Another group of experiments is excluded from this typology because very few have been run in developing countries: individual remediation interventions. For example, Blattman et al.

#### 5.1 Incentives and Monitoring

Laboratory studies, most of which are conducted in developed countries, have shown that the willingness to engage in corruption reacts to the wage level (Van Veldhuizen, 2013), monitoring, the amount of penalties (Abbink et al., 2002; Azfar and Nelson, 2007; Barr et al., 2009; Serra, 2012; Berninghaus et al., 2013), institutional arrangements (Abbink, 2004; Boly and Gillanders, 2018; Ryvkin and Serra, 2020), and symmetric liability (Abbink et al., 2014; Engel et al., 2016; Abbink and Wu, 2017). These results suggest that paying higher wages to public officials and increasing the cost of behaving dishonestly are effective levers for change. However, the evidence from the field is more varied. Barr et al. (2009) found little effect of wage increases on the quality of health service delivery in Ethiopia and Soraperra et al. (2019) observed that increasing the fixed-wage of teachers did not diminish bribery in Colombia. The underlying processes are complex, and incentives must be designed with care to be effective.

First, increasing wages may have an ambiguous effect on corruption because the latter also involves reciprocity between bribers and bribees (Lambsdorff, 2012). Armantier and Boly (2011) found that increasing the wage paid to graders in their experiment lowered bribe acceptance, but it also fostered reciprocation to the briber when a bribe was accepted. Second, the payment method matters as well as the salary amount. In Soraperra et al. (2019), introducing a piece-rate scheme that rewards teachers according to the number of students they attract reduced bribery substantially. In contrast, an RCT introducing performance pay for tax collectors in Pakistan increased bribery through an increase in their bargaining power (Khan et al., 2016). A third conditioning factor is who pays the wage. Duflo et al. (2013) tested a reform of the incentives paid to auditors of industrial plants in India. Auditors being paid from a central pool rather than by plants decreased the fraction of plants falsely reported as compliant with pollution standards, again highlighting the importance of governance structures. Finally, it is also important to consider the reference point, as research into the impact of incentives on cheating has revealed a nonlinear effect of rewards on cheating (for an example in India, see Balasubramanian et al., 2017).

It may be more effective to combine interventions on both wages and monitoring. In an RCT designed to reduce teacher absenteeism in India, Duflo et al. (2012) found that introducing daily monitoring with cameras and linking wages to attendance in a nonlinear fashion reduced absenteeism by 21% relative to a control group. In contrast, simply equipping inspectors in Pakistan with a smartphone monitoring system did not increase doctor attendance, whereas highlighting poorly performing facilities on a dashboard viewed by supervisors raised attendance by 75% (Callen et al., 2020). As with wages, interventions into monitoring must be carefully designed to avoid null or negative effects on corruption.

<sup>(2017)</sup> showed with an RCT in Liberia the ability of cognitive behavioral therapy to improve the non-cognitive skills of criminals and, when added to a monetary grant, reduce criminal activities.

A careful adjustment of audit frequency and the sanction levels is needed for them to be effective anti-corruption levers. Analyzing the consequences of a crackdown on public hospitals in Buenos Aires, Di Tella and Schargrodsky (2003) observed a long lasting effect of increased monitoring on the reduction of medical input prices, owing to continued threat of sanctions and higher wages. In contrast, Banuri and Eckel (2015) concluded that the effects of crackdowns in the lab in Pakistan and the U.S. were limited to the short run. In a lab experiment in India, Banerjee and Mitra (2018) found that a low probability of detection with high fines was more effective at reducing bribery than a high probability of detection with low fines. Armantier and Boly (2011) even found no improvement following a high audit probability. When they are too severe, monitoring and punishment may crowd-out intrinsic motivation for honesty, perhaps especially in countries where the social norm of corruption is stronger.

Another condition for making monitoring effective is the legitimacy and honesty of the officers who implement audit policies, otherwise empowering local leaders with sanctioning power may backfire (see Muthukrishna et al., 2017; Boly et al., 2019). In the domain of harassment corruption, asymmetric liability in which briber-takers are punished but not bribe-givers has the power of increasing the accountability of public officials; however, this policy is less effective if bribe-takers can retaliate (Abbink et al., 2014). Monitors' accountability and their mode of designation both matter. Barr et al. (2009) provided evidence of a higher impact of elected monitors on the performance of health service providers in Ethiopia. A related question is whether top-down audits are better or worse than bottomup monitoring, with contrasting results thus far. On the one hand, in an RCT covering road construction projects in Indonesia, Olken (2007) found that increasing top-down audit probability from 4% to 100% reduced the embezzlement of project expenses by an average of 8%, whereas grassroots monitoring through participation in village meetings proved ineffective. Banerjee et al. (2008) also found that a governmental program punishing absenteeism among midwives in India was initially effective, but efficacy decreased when the local administration undermined the incentive scheme. A Uganda experiment by Buntaine and Daniels (2020) demonstrated that citizen monitoring often fails because officials at upper bureaucratic levels tend to ignore the claims. On the other hand, studies conducted in Uganda found that bottom-up monitoring, notably through scorecards, was effective in improving the performance of health care providers (Björkman and Svensson, 2009) and decreasing teacher absenteeism (Barr et al., 2012).

New monitoring technologies may aid the fight against dishonesty by making threats of discovery more credible. Callen and Long (2015) studied electoral fraud during the aggregation of votes in Afghanistan's parliamentary elections. A subset of polling center managers were notified that a monitoring technique would photograph the vote tally sheets after ballots were cast at local poll centers, and record the vote totals both before and after aggregation. This reduced aggregation fraud and vote counts for connected candidates. Similarly, in an RCT in India,

informing local officials that the implementation of a transfer program would be monitored through phone calls to the intended beneficiaries reduced the number of farmers who did not receive their transfers by 7.8% (Muralidharan et al., 2021). Beyond showing that such information technologies may be cost-effective and easily scalable, these results contribute to better understand the role of improved transparency in the quality of institutions.

Finally, when evaluating the impact of monitoring interventions, it is important to factor in not only the direct effect on the target but all possible spillovers. On the one hand, an effective deterrence policy must not simply displace crime. Evidence of this dynamic was found by Yang (2008) after a customs reform in the Philippines and by Ichino and Schundeln (2012) after the introduction of observers for reducing electoral fraud in Ghana. On the other hand, the introduction of anti-corruption interventions may spill over positively into other domains of civic morality such as tax compliance - although the opposite was not true (Banerjee et al., 2022a).

#### 5.2 Information and Transparency

Information, transparency, and contestability in governance are considered major levers for change against dishonesty (WorldBankGroup, 2017). Decentralization and community involvement are expected to mitigate corruption by bringing officials into closer contact with citizens, provided local accountability is increased. In fact, the effects responsibility decentralization in fighting corruption are mixed. In a natural experiment in India, Asthana (2012) found that the decentralization of power to lower levels of government managing the water supply increased corruption, although only at the time of the decentralization. In related results, in a lab-in-the-field experiment in Tanzania by Di Falco et al. (2020) showed that longer transfer chains of donations increased embezzlement owin to more numerous sources of leakage.

To be effective, accountability requires a reduction of information asymmetries through transparency and better-informed citizens, notably thanks to free and independent medias. Several studies suggest that free access to information might progressively replace corrupt access to services. Banerjee et al. (2018a) found that mailing cards with information about a subsidized rice program in Indonesia sent to beneficiaries reduced leakage and local elite capture. Studying the resource curse with a rent-seeking game, Armand et al. (2020) measured the impact of various modes of dissemination of information about a natural gas discovery in Mozambique. While information targeting only local political leaders increased elite capture, information targeting communities at large strengthened political accountability and reduced capture. Access to credible information on politicians' performance can also reduce electoral fraud (Pande, 2011). Following random audits of municipalities' expenses by the Brazilian government, Ferraz and Finan (2008) showed that releasing audit reports exposing the corruption of local politi-

cians in the media influenced the outcomes of the following elections. Providing election information on candidate performance and qualification in a sample of Indian slums reduced vote buying (Banerjee et al., 2011). However, making information more transparent may also have drawbacks; for example, revealing the corruption of local politicians may reduce voter turnout in elections (for evidence in Mexico and Brazil, respectively, see Chong et al., 2014; de Figueiredo et al., 2022). Boas et al. (2019) found that the same voters in Brazil may be willing to sanction politicians for wrongdoing in the abstract but not their own corrupt mayor at election time.

Changes in the law and government interventions aimed at increasing the voice and empowerment of the poorest facilitate the fight against corruption. Stronger governance institutions and higher transparency must be combined to mitigate corruption. Peisakhin and Pinto (2010) studied the impact of a new freedom-of-information law in India on the access of slum dwellers to ration cards. The fastest access to a card was obtained when the applicant bribed a local official, but submitting an information request under the new law at the same time as the application considerably reduced the delay of card delivery, making access almost as fast as with bribery. In Uganda, Fiala and Premand (2018) found that large-scale social accountability programs strengthened local communities' ability to fight corruption and improved service delivery. These programs saw a greater improvement in welfare when they combined social accountability training and information on project quality, whereas training and information alone had little impact. Banerjee and Mitra (2018) also found a short-lived effect of an ethics education program in India.

New information technologies and the development of e-governance through digital platforms are expected to discourage dishonesty. In an RCT in India, Muralidharan et al. (2016) assessed the impact of introducing a smartcard system for making payments in welfare programs. In treated areas the intervention led to faster payment and an increase household incomes by 24%, revealing a drastic reduction in leakage. A significant reduction in embezzlement permitted by e-governance was also observed by Banerjee et al. (2020) who measured the impact of a fund flow reform in India. Instead of being sent in advance to local bodies, funds from a workfare program were released after individual information for wage payment was entered into the database. The electronic invoicing system reduced expenditures, the number of ghost workers, and the wealth of officials.

#### 5.3 Moral Appeals

Interventions focused on incentives may not be able to change the values internalized by citizens, and more direct interventions in social norms are likely needed. Nudging people through moral appeals or normative information messages have recently been used to promote an alternative moral norm. An interesting aspect of such nudges for developing countries is that their cost is limited since they do

not require a change in monetary incentives. Bursztyn et al. (2019) reported that text messages referring to payment defaults as a moral norm violation sent by an Indonesia bank to its late paying customers significantly increased the repayment of debts, with an effect stronger than that of an alternative cash repayment rebate. In a lab-in-the-field experiment in South Africa, Köbis et al. (2019) showed that nudging interventions thus as displaying descriptive norm messages on posters reduced both individuals' expectations about others' corruption and their own willingness to engage in bribery. Del Carpio (2013) reported a similar positive and long-lasting effect of messages about the neighbors' average behavior on property tax compliance in a field experiment in Peru. The mechanism driving the impact of these messages is a change in individuals' beliefs about others' behavior and expectations. Nudging worked because people on average underestimated their neighbors' compliance.

However, not all attempts are success stories and more research is needed to better understand the conditions that make them effective or not. For example, in a lab-in-the-field experiment in Burundi (Falisse and Leszczynska, 2022), public servants had to allocate rationed vouchers between anonymous citizens. Citizens could bribe them. Before making any decisions, public servants were randomly exposed to anti-corruption messages calling to either good governance or professional identity. The latter led to more equal allocations but failed to reduce bribe acceptance. Boonmanunt et al. (2020) identified that the timing of moral interventions matters for their impact. Using a lab-in-the-field experiment among rice farmers in Thailand, they rejected a causal effect of poverty on cheating but found that a moral reminder was successful in reducing cheating in the harvesting season, whereas it was ineffective in the scarcity season. This suggests that when people are more financially constrained, they have a smaller capacity to pay attention to reminders.

## 6 Summary

Corruption biases economic incentives, erodes civic values, fosters various dishonest behavior, and decreases trust, thereby hindering development overall. Going far beyond what we can learn from perception surveys, the literature on experimental economics is particularly useful for better understanding the mechanisms that encourage or discourage honest conduct in society. This chapter shows the value of mobilizing various experimental methods to explore cross-country cultural differences in intrinsic honesty, the causes and consequences of corruption and cheating, and the efficacy of interventions against dishonesty in developing countries. To address such a challenging topic, the experimental methods (whether implemented in the laboratory, online, or in the field) should be seen as complementary. The laboratory offers a controlled environment facilitating the identification of precise mechanisms underlying behavior and belief formation, explaining why certain outcomes do or do not develop. However, its artificiality requires simplifications

that can ignore elements that may condition behavior outside the lab. Field experiments have the advantage of identifying treatment effects in natural settings but at the price of less environmental control and a higher difficulty of identifying the underlying mechanisms. Combining both methods to capitalize on the advantages of each is a promising agenda to investigate further the links between moral behavior and development.

The experimental literature surveyed in this chapter has shown how formal institutions, social norms, and social structures model individuals' preferences and expectations that, in turn, influence the prevalence of dishonesty in developing countries. These studies underline the importance of investigating these dimensions in connection with macroeconomic factors such as the organization of markets and governance structures whose role was identified decades ago. If individuals' preferences for being honest and for being seen as honest may be universal, the economic, social, and political institutions likely influence the level of intrinsic honesty across countries.

The ability of the experimental literature to identify causal relationships is fundamental for mechanism design. Important lessons can be drawn from such research. For example, interventions on incentives are more likely to succeed when wage levels are reformed at the same time as payment systems. New information technologies and e-governance increase transparency and local accountability by making the threat of discovery more credible and by giving voice to the poor. Profound changes in laws facilitating citizen access to information, freedom of the media, and contestability in governance are major levers for increasing the legitimacy of elites and anti-corruption actions. To be effective in the short and long term, deterrence, information, and transparency policies must be combined with a strengthening of formal institutions and efforts to help people internalize new social norms. The dissemination of information about normative changes, through moral appeals and nudges, might provide cost-effective anti-corruption tools that accompany structural reforms.

More research is needed, in particular to address the crucial issues of replicability and scalability. The former derives from the fact that experiments are always conducted in a specific environment, even if laboratory protocols are designed to be as generic as possible. Replications are a condition for robust scientific findings. The second issue is the fact that a successful intervention in a given context may fail in another context or when generalized to an entire region or country. More research is needed to establish which results are scalable and which ones are not, which would have major implications on policy recommendations.

Finally, certain underexplored areas should attract more attention in the future. From a behavioral economics perspective, the relationships between social preferences, moral concepts, inequality, and cognitive resources are largely unknown in developing countries. Accordingly, the causal impact of violence, poverty, and parental exposure to bribery and extortion on how children internalize moral norms deserves further investigation. An ambitious program involving the sys-

tematic elicitation of empirical and normative expectations across social groups, regions, or countries could provide key knowledge, notably on the presence of pluralistic ignorance as a source of normative inertia. Investigating the processes that govern the dynamics of social norms, such as the question of what determines when citizens no longer tolerate corruption and abuse of power, would also be informative.

There is also a lack of experimental evidence on the differentiated impact of dishonesty on social categories. Studies suggest that the poor suffer the most from corruption; however, we know little about the other forms of dishonesty. As an exception, in an experiment on mail delivery in Peru, Castillo et al. (2014) observed that in fact, it is the residents of middle-income neighborhoods that were affected more heavily than others by the loss of mail. More broadly, it would be important to know more about who should be empowered to be better protected against dishonesty. Further research is also needed to understand how to curb political capture and help the formation of new coalitions that can implement coordinated anti-corruption reforms. Finally, the need to characterize and quantify the opportunities offered by the development of new information technologies and e-governance to curb dishonesty should lead to ambitious research programs conducted in the context of developing countries.

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