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Burdens, bribes, and bureaucrats: the political economy of petty corruption and administrative burdens

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Abstract

Bribery and other forms of petty corruption typically arise in bureaucratic encounters and are a common element of the everyday experience of the state in many countries, particularly in places with weak institutions. This type of corruption is especially troublesome because it creates direct costs for citizens when accessing services and benefits to which they are formally entitled. However, only a few studies deal with how situational attributes of bureaucratic interactions create incentives for citizens to pay bribes and opportunities for street-level bureaucrats to demand them. We contribute to filling this gap by providing evidence that administrative burdens increase the chance of bribery. We do so by analyzing the prevalence of (attempted) bribery in more than 63,000 interactions across 20 different types of bureaucratic encounters, ranging from paying taxes to accessing essential services, using multilevel logistic regression analysis. Our study contributes to understanding the possible consequences of administrative burdens and the factors conducive to petty corruption in specific citizen–state interactions.

Key words: petty corruption; administrative burdens; street-level bureaucracy; bribery; state–citizen interactions; Mexico.

Introduction

As probably everyone who has ever had to pay a bribe to a public official intuitively understands, there is a reinforcing dynamic between petty corruption and administrative burdens. Take, for instance, one of the most common forms of bribery in the world: bribing a transit police officer to avoid a ticket (D'Andrade 1985). The formal procedure for being pulled over for a presumed infraction in many countries involves paying a fine at the police station or having your car impounded pending the payment of the fine—in any case, a time-consuming procedure with possibly a lot of paperwork to get your car back. The costs of those administrative burdens give police officers an edge in extorting citizens on the spot and, conversely, give citizens an incentive to pay a bribe and get on with their day. We can find a similar dynamic in bribery to circumvent complex procedures to access or correct formal documents, overcome bureaucratic inaction regarding basic public service delivery, or jump waiting lines for emergency services. Moving beyond anecdotal evidence, this article presents findings that statistically demonstrate the positive and consistent link between administrative burdens and bribery in a large sample of interactions between citizens and street-level bureaucracies.

Petty corruption, often in the form of bribes and other illegal transactions, is an all-too-common part of citizens' everyday experience of the state in many countries. According to Transparency International (2017), about 25 percent of the global population is required to pay bribes for public services on a regular basis, with Asia-Pacific, Latin American, Middle Eastern, and African countries typically exhibiting bribery rates of about 28–29 percent or higher. This form of corruption negatively affects trust in government and democracy, dampers investment, reduces budgetary efficiency, and can create informal and shadow economies that are difficult to eradicate (Mungiu-Pippidi 2006; Neshkova and Kalesnikaite 2019). Moreover, corruption in street-level interactions leads to substantial costs and barriers to citizens' adequate access to the services, benefits, and rights to which they are formally entitled—especially for socioeconomically vulnerable population groups that often lack private-sector substitutes for corruption-riddled public services as well as the human or material resources needed to challenge corrupt practices (Justesen and Bjørnskov 2014; Peeters and Nieto-Morales 2021).

In the corruption control literature, why people pay bribes and why public officials demand them is commonly explained by looking at the costs and expected benefits associated with corruption (Ades and Di Tella 1999; Kiltgaard 1988) and with social expectations regarding the probability or acceptance of corrupt behavior (Persson, Rothstein, and Teorell 2013). Research also indicates that, while corruption is influenced by cultural, economic, and institutional factors, certain features of public organizations may contribute to the prevalence of bribery. For instance, some scholars suggest that services entangled in red tape—excessive bureaucratic or administrative procedures that result in inefficiency and a lack of transparency—create opportunities for bribery (Fazekas 2017; Fredriksson 2014; Guriev 2004). Moreover, scholars point out that the particular nature of street-level interactions and public services may influence the costs of honesty and the

incentives for corruption (Rose and Peiffer 2015; Sundström 2016). In this article, we provide evidence that people's experience of administrative burdens in bureaucratic encounters (Herd and Moynihan 2018) can constitute a factor correlated to bribery in contexts of endemic corruption (Meza and Pérez-Chiqués 2021). Specifically, we argue that the learning, compliance, and psychological costs involved in people's interactions with bureaucracy (Moynihan, Herd, and Harvey 2015) create incentives for people to pay a bribe to overcome such burdens as well as an increased opportunity for street-level bureaucrats to demand bribes and exploit people's vulnerability when faced with burdens. Given the prevalence of both petty corruption and administrative burdens worldwide (Heinrich 2016; Moreno-Jaimes 2022), studying their relationship is important for understanding their consequences for people's effective access to services and benefits.

Our evidence comes from the Mexican National Survey on Government Quality and Impact, which includes data regarding 63,235 bureaucratic encounters reported by 24,593 individuals in urban areas across the country. For each interaction, we analyze whether respondents' reports of bribery (composed of actual bribery and attempted bribery) correlate with indicators of administrative burden derived from the survey's interview questions. We differentiate our analysis for 20 types of bureaucratic encounters,[1] including paying taxes, reporting crimes, applying for essential public services such as water supply and healthcare, and obtaining government permits and certifications. Furthermore, following the relevant literature, we analyze whether levels of street-level bureaucratic discretion mitigate the relation between bribes and burdens, as well as the type of bureaucratic encounter and the availability of exit options. The Mexican case is pertinent given the pervasiveness of bribery in the public sector. Approximately 34 percent of public service users have reported paying bribes, which is well above the regional average for Latin American and Caribbean countries (~21 percent; Transparency International. 2017).

The present study investigates the connection between administrative burdens and instances of petty corruption, particularly bribery in bureaucratic encounters. This aspect has hitherto remained underexplored in the literature; thus, this article makes three contributions. First, by deepening our understanding of administrative factors that foster bribery, this research provides new insights into the political economy of petty corruption at the level of concrete interactions between citizens and public officials. In particular, we shed light on the potential consequences of administrative burdens. Building upon the work of Herd and Moynihan (2018), we identify their potential to facilitate petty corruption. Second, we examine the role of bureaucratic discretion, exit options, and the type of encounter (i.e., demand- vs. supply-based interactions) at the street level in shaping experiences of petty corruption. While the influence of street-level bureaucratic discretion on public service delivery and the role of monopoly power has been thoroughly acknowledged in the literature (Bell and Smith 2022; Klitgaard 1988), our research investigates how these factors can indirectly contribute to the likelihood of bribery by moderating the effect of administrative burdens. Finally, we provide a more detailed picture of the complexity and challenges faced in citizen–state interactions in environments characterized by weak institutions, which are particularly common across the Global South (Lotta, Nieto-Morales, and Peeters 2023; Peeters and Campos 2022).

We proceed as follows. First, we discuss the relevant literature on petty corruption in street-level interactions between citizens and public officials. Accordingly, we formulate hypotheses regarding the relationship between the experience of administrative burdens and the likelihood of bribery. Next, we formally examine this relationship through statistical analysis with administrative burden scores as predictors of bribing in bureaucratic interactions, followed by additional analyses to investigate the moderation effect of street-level bureaucrats' discretion, the type of bureaucratic encounter, and the availability of exit options. Most importantly, we find a correlation between the probability of (attempted) bribery on the one hand and learning, psychological, and compliance costs on the other hand, even when other variables are considered. Furthermore, we find some support for the hypotheses that given administrative burdens, the risk of bribery increases when street-level bureaucrats have more discretion and citizens actively demand access to services (compared to those where the state takes the initiative for engaging with citizens). Nevertheless, we also find that these relations are more complex than expected. Finally, we conclude the article by summarizing its main contributions, limitations, and opportunities for further research.

Corruption and street-level interactions

Petty corruption and administrative burdens

Studies typically define corruption as misusing public office or authority for personal gain (Nye 1967; Treisman 2000). However, this definition is notoriously broad, encompassing a wide set of illegal and illegitimate behaviors (Morris 2011; Rose-Ackerman 1999). In this article, we focus on a specific form of "grassroots" corruption (Rose and Peiffer 2015), which occurs at the level of concrete bureaucratic encounters between citizens and street-level bureaucrats (cf. Bose 2010; Dahlström and Lapuente 2011).

Petty corruption may occur in various forms, such as influence-peddling, patronage, nepotism, and abuse of discretion (Sundström 2019). However, *bribery* is perhaps the most common and extended form of petty corruption (Hunt and Laszlo 2012). It usually implies a monetary transaction—although other valuable items can be exchanged as well—with the intention to influence the behavior of a public official. This exchange shares characteristics with a market transaction; however, the distinction lies in the fact that in bribery at least one of the parties is not legitimately entitled to sell or acquire what the other party is offering or seeking (Rose and Peiffer 2015). This definition encompasses a variety of micro-level instances. For example, it includes people seeking illegal immunity from punishment, such as paying a bribe to a police officer or municipal inspector to avoid penalties. It also covers bribery cases related to expediting administrative actions, like fast-tracking permits or certifications. Additionally, it extends to instances when a public servant demands illegal payment to provide access to public services or benefits, such as healthcare or social welfare services (Rose and Peiffer 2015).

Accordingly, bribes may be either collusive or non-collusive (Sundström 2019; cf. Bauhr 2017). In the latter, citizens are

[1]In this study, we use the terms "bureaucratic interaction" and "encounter" interchangeably to describe instances of citizen–state interactions. These refer to situations where citizens engage with the state, either in efforts to access public services or benefits, or to fulfill obligations like paying taxes.

forced by rent-seeking officials to pay a sum of money or grant a favor to obtain access to services, benefits, or documents to which they are formally entitled (Rose-Ackerman and Palifka 2016). In the former, citizens take the initiative to pay officials to expedite processes, avoid sanctions, bypass regulations, or obtain access to services (Mizrahi, Yuval, and Cohen 2014; Sundström 2019). In any case, bribery implies anticipated reciprocity between the giving and receiving parties (Arellano Gault and Castillo Salas 2019). Therefore, it makes sense to look at the conditions conducive to bribery by both citizens and street-level bureaucrats.

Roughly speaking, the literature distinguishes between rational actor approaches, such as principal-agent and deterrence models, that stress cost-benefit calculations of bribery and the probability of getting caught (Ades and Di Tella 1999; Becker and Stigler 1974) and collective action and social norms approaches that highlight the importance of social expectations regarding the corruptness of individuals. According to collective action models, bribery emerges as a dominant strategy for citizens and officials when they believe (other) citizens or public officials are corrupt (Persson, Rothstein, and Teorell 2013; Rothstein 2011). Social norms models assume that bribery occurs and persists because it becomes "normalized"; thus, it can be seen as an appropriate or accepted response under certain circumstances (Anand, Ashford, and Joshi 2004). Additionally, studies have shown that the decision to accept bribes is also shaped by the expectation that refusing to do so may lead to intimidation, violence, or social repercussions by citizens, organized crime, or colluding colleagues (Dal Bó, Dal Bó, and Di Tella 2006; Sundström 2016). Finally, studies also find that bureaucrats hired based on personal or political connections are more likely to engage in corruption for either personal or political gain (Harris et al. 2023).

Recently, some new contributions have suggested that bribery is also affected by organizational factors. Scholars demonstrated, for example, that red tape in public services and organizations increases the opportunities for bribery (Fazekas 2017; Fredriksson 2014; Guriev 2004). Organizations characterized by excessive administrative procedures have reduced transparency, opening spaces for bureaucrats to ask for bribes. We contribute to this literature by proposing that not only red tape can lead to bribery, but that another organizational factor may also be associated with these practices: administrative burdens as experienced by citizens in their encounters with street-level bureaucrats. We argue that *administrative burdens* constitute a critical factor conducive to petty corruption, particularly bribing, in street-level interactions between citizens and public officials. Administrative burdens are commonly defined as an individual's experience of policy implementation as onerous (Burden et al. 2012). Administrative barriers in interactions with government agencies and public officials may thwart access to services, benefits, and rights to which people are formally entitled. Administrative burdens are, thereby, consequential for citizens' experience of the state (Baekgaard and Tankink 2022; Heinrich 2018). Moreover, studies have shown that burdens are often distributive and disproportionately affect vulnerable populations (Chudnovsky and Peeters 2020; Nisar 2018). Commonly, administrative burdens are conceptualized in terms of the costs of interacting with the state: the learning and informational costs of understanding government procedures and eligibility criteria, the psychological costs of experiencing stress, stigma, and a sense of loss of autonomy, and the compliance costs of going through paperwork, waiting times, and bureaucratic requirements (Moynihan, Herd, and Harvey 2015).

To the best of our knowledge, petty corruption has, so far, not been analyzed in terms of its relation with administrative burdens. However, especially at the street-level, where collusive forms of corruption may be less frequent (Justesen and Bjørnskov 2014), bribes are one of the possible barriers that citizens face while accessing services, rights, and benefits effectively. Overcoming this barrier—that is, paying a bribe to "grease the wheels" of bureaucracy (cf. Dreher and Gassebner 2013)—may be related to higher costs in bureaucratic encounters.

The political economy of burdens and bribes

The relationship between bribes and burdens is contingent on contextual incentives and expectations associated with a high prevalence of bribery. In other words, before considering the impact of administrative burdens, a necessary precondition is the commonality of bribery across bureaucratic encounters. Following the literature discussed above, the prevalence of bribery is associated with an incentive structure including the likelihood of detection, probability of punishment, penalty rates, and public officials' salaries and foreseeable costs on the one hand (Sundström 2016: 594) and with social expectations regarding the corruptness of street-level officials and their superiors in general on the other hand (Rothstein 2011). Both conditions are more likely to be satisfied in contexts characterized by weak institutions (BrinksLevitsky and Murillo 2020), where street-level bureaucrats' working conditions are often precarious (Lotta, Nieto-Morales, and Peeters 2023; Peeters and Campos 2022) and political and bureaucratic corruption is endemic (Bose 2010; Persson, Rothstein, and Teorell 2013). There, street-level bureaucrats are known to sometimes engage in "predatory," rent-seeking behavior (Bernstein and Lü 2003; Bose 2010) and "informal privatization" (Blundo 2006), and bribery is a common and often normalized practice in street-level interactions (Moreno-Jaimes 2022).

Further, although administrative burdens are not limited to specific policies or particular geographical or institutional settings, they are also likely more common in places where citizens face patchy public service provision (McDonnell 2017), selective rule enforcement (O'Brien and Li 1999), and recurring implementation gaps (Heinrich 2016; Peeters et al. 2018). In such settings, citizens often interpret and experience bribery as a dual-edged mechanism. On the one hand, they may see bribes as a tool to gain access, surmount burdens, and facilitate interactions with and within bureaucratic systems. In contexts where administrative processes are convoluted, opaque, time-consuming, or ridden with red tape, bribes can expediently unlock services or benefits that might otherwise be inaccessible or delayed. On the other hand, the need to pay a bribe may also be recognized as an informal and illegal form of administrative burden itself. This informal requirement adds another layer of stress, uncertainty, and material cost to already burdensome procedures. It imposes an additional, unofficial fee or tax on top of standard requirements, making it even more challenging for citizens to access services or benefits. These dual aspects of bribery—as both a tool for circumventing administrative challenges and as an additional

burden—underline the complex role of petty corruption in bureaucratic encounters (Nieto-Morales 2020).

In line with Sundström (2016: 596), our argument follows the assumption that there are more factors conducive to bribery than mere financial cost-benefit calculations and social expectations of corruptness. Such factors are related to the micro-environments where citizens and public officials interact. Specifically, within a broader context of endemic corruption, we propose that administrative burdens influence citizens' and street-level bureaucrats' decisions about whether to pay, offer, accept, or demand bribes. In general, citizens perpetuate corruption since bribes are expected to lead to effective access. Opting out would risk delaying or losing such access (Bauhr, Carlitz, and Kovacikova 2023: 4). Administrative burdens are a well-documented factor that can impede citizens' effective access and lead to administrative exclusion (Brodkin and Majmundar 2010). Administrative burdens encompass exogenous (e.g., excessive procedures and paperwork) and endogenous costs (e.g., arbitrary demands by an official) within an interaction (cf. Bose 2010). Further, the assumption that higher burdens increase people's willingness to pay bribes as a means to overcome or navigate those burdens is also consistent with studies on the strategic behavior that citizens may display when faced with unsatisfactory service delivery, disproportional sanctions, or risk of exclusion from benefits, such as misreporting (Jeffers and Hoggett 1995; Martinelli and Parker 2009), informal payments (Castillo 2001; Cohen 2012), exchanging personal favors (Van de Walle 2018; Zalpa, Tapia Tovar, and Reyes Martínez 2014), and befriending street-level bureaucrats (Peeters and Campos 2021). It is also consistent with studies showing that differences in the frequency of bribes are more related to public service attributes than individual characteristics (Rose and Peiffer 2015). Therefore, we expect a higher probability of bribe paying when citizens face administrative burdens that impede access to rights, services, or benefits to which they are formally entitled. Accordingly, our first hypothesis is:

Hypothesis 1: The experience of administrative burdens is positively related to bribery in bureaucratic encounters at the street level.

Besides this general assumption, we argue that the type of bureaucratic interaction is an additional factor that may moderate the relationship between burdens and bribery. Research has highlighted that street-level bribery is more common in situations where there is a larger power asymmetry between citizens and public officials—that is, when there is a lot at stake for citizens (e.g., avoiding sanctions or accessing emergency services) and bureaucrats hold the power to function as gatekeepers of the state (e.g., Hunt 2007; Justesen and Bjørnskov 2014; Peeters, Gofen, and Meza 2020). We develop three additional hypotheses to capture power asymmetries in bureaucratic encounters. First, we argue that bribery is more likely when citizens have no options to avoid a bureaucratic encounter—either because people heavily depend on government benefits, because they lack the financial means to access alternative private service providers, or because the state holds a monopoly over a particular procedure or task. For instance, Hunt (2007) shows that victims of crime are particularly likely to fall victim to extortion by police officers when reporting crimes. Elsewhere, Justesen and Bjørnskov (2014) demonstrate that poor people are much more prone to pay bribes since they heavily rely on public benefits and services. More generally, we expect a higher power asymmetry and, therefore, a propensity for bribe paying in bureaucratic procedures with administrative burdens when people structurally have no exit option available (Bauhr, Carlitz, and Kovacikova 2023: 4; Peeters, Gofen, and Meza 2020). Accordingly, our second hypothesis is:

Hypothesis 2: The experience of administrative burdens is positively related to bribery, particularly in street-level interactions where citizens have no exit option available.

Following our line of reasoning regarding power asymmetries between bureaucrats and citizens, an additional analytical distinction can be made between bureaucratic encounters that citizens initiate—for instance, because they seek access to a public service or apply for a benefit—and encounters that public officials initiate, such as law enforcement practices or other obligations such as service payments (Heinrich 2016). When citizens demand street-level bureaucrats to grant them access to services, permissions, or benefits, we assume there is a greater vulnerability on the side of the citizen as compared to situations in which the state seeks the compliance of citizens (e.g., in paying for basic services)—although we acknowledge that there are likely exceptions, such as extortion by transit police officers, which are covered by hypotheses 2 and 4. Furthermore, in the literature on administrative burdens, most attention has been paid to the first type of encounter and, furthermore, various studies suggest that burdens are higher when the citizen has to initiate the interaction and comply with the necessary requirements for the state to undertake action (Herd et al. 2013; Perales Fernández 2023). Accordingly, we might also expect citizens to initiate bribery in such encounters, especially if they feel following formal procedures will unlikely be successful. This is consistent with the idea that the outcomes of bureaucratic encounters are not solely dictated by the incentives or behavior of street-level bureaucrats but are also significantly influenced by the actions and decisions of the citizens themselves (Gofen et al. 2019). Their perceptions of officials' competence or amiability (de Boer 2020; Hansen 2021), their understanding of procedural justice and who is responsible for the burdensome interactions (Barnes and Henly 2018), and their responses to varying styles of enforcement and implementation (Nielsen, Nielsen, and Bisgaard 2021) can all shape the dynamic of these bureaucratic interactions. Consequently, besides possible power asymmetries, we reason that bureaucratic encounters initiated by citizens—that is, "on-demand" interactions—may also be more susceptible to bribery because "active citizens" may attempt to expedite services, dodge complexities, or seek preferential treatment by offering bribes; that is, they may initiate bribing as a way to circumvent burdens. Hence, we formulate an additional hypothesis that partly challenges our previous hypothesis regarding exit options:

Hypothesis 3: The experience of administrative burdens is positively related to bribery, particularly in on-demand street-level interactions initiated by citizens.

Furthermore, we also assume that street-level bureaucrats are more prone to accept or demand bribes in the context of administrative burdens if they hold more discretionary power over a bureaucratic encounter. Street-level bureaucrats are public officials who implement policies in direct interaction

with citizens. They are the face of the state (Zacka 2017) as well as the gatekeepers (Brodkin 2011), given their role to transform general rules and policy goals into individual decisions in a specific context. Hence, their decisions generate allocative and symbolic effects on citizens (Maynard-Moody and Musheno 2003). Street-level bureaucrats' inherent discretion (Maynard-Moody and Portillo 2010) is essential to understanding petty corruption and administrative burdens' role in street-level decision-making (especially given the abovementioned elements related to precarious working conditions and endemic corruption in weak institutional settings). Discretion is a necessary precondition for bribes to function as a means to overcome administrative burdens since it is the bureaucrat who decides to bypass, ignore, break, or bend administrative procedures in reciprocity to the bribe paid. Without the existence of such discretionary power, it would be pointless for citizens to pay a bride. The more discretion—either formally granted or enacted in practice—a street-level bureaucrat has, the more power he or she holds over a bureaucratic encounter.

Additionally, administrative burdens can present an increased opportunity for street-level bureaucrats to demand bribes. Although a still relatively underdeveloped issue, scholars have pointed out the possible role of street-level bureaucrats in mitigating and constructing administrative burdens (Bell et al. 2021; Bell and Smith 2022). We reason that burdens can also be a strategic resource because street-level bureaucrats have the discretion to influence, manipulate, or even construct them. For instance, consistent with the discussion above, bureaucrats may abuse information and power asymmetries to "hit people when they are down" (Hunt 2007), thereby exploiting compliance burdens and people's administrative vulnerability. In addition, learning costs due to procedural complexity or opacity of requirements may present another opportunity to ask for bribes—which is consistent with studies that show how bureaucratic complexity opens up a market for all sorts of brokers and intermediaries (Moynihan 2023; Peeters 2020: 580). Finally, street-level bureaucrats may also use a lack of transparency in bureaucratic procedures to keep citizens in the dark about their rights and formal procedural requirements to exaggerate potential administrative burdens. Therefore, we expect to see a higher probability of bribing in bureaucratic procedures with administrative burdens when street-level bureaucrats have higher discretion regarding the treatment of citizens and rule application in individual cases. Accordingly, our final hypothesis is:

Hypothesis 4: The experience of administrative burdens is positively related to bribery, particularly in encounters with high street-level bureaucrat discretion.

Methods and data

Case context

Over the last decades, Mexico transitioned from an authoritarian, hegemonic-party system towards a competitive democracy. Throughout this process, the country has faced significant challenges as it grapples with complex problems, which include drug-related violence, high social and economic inequality, stagnant economic growth, and widespread corruption. These problems have profoundly shaped the country's current political landscape. Corruption, in particular, has plagued the Mexican public sector for decades, undermining the efficacy of government institutions and the rule of law (Merino 2015). One particularly pervasive form of corruption is bribery, which permeates multiple levels of government and impacts various aspects of public administration. According to the Global Corruption Barometer (Transparency International 2017), approximately 34 percent of public service users in Mexico reported having paid a bribe, which is well above the regional average for Latin American and Caribbean countries (~21 percent). Moreover, there is evidence that officials often solicit bribes in exchange for favors, such as overlooking regulatory violations or granting access to social welfare benefits (Arellano Gault 2018a; Rose-Ackerman and Palifka 2016), whereas citizens and companies often pay bribes to obtain access to public services, contracts, permits, and benefits (Arellano Gault 2018b). As discussed in previous studies (e.g., Arellano Gault and Trejo Alonso 2021; Bailey and Paras 2006), the high perception of bureaucratic corruption and, in particular, the extensive practice of bribery has contributed to a lack of trust in public institutions, and it has likely hindered the Mexican government's ability to deliver essential services and reduce inequalities (Peeters and Nieto-Morales 2021).

Data

To empirically explore the relationship between administrative burdens and the probability of petty corruption (specifically, bribing) in bureaucratic interactions at the street-level, we analyze public data gathered by the National Institute of Statistics of Mexico (INEGI). In particular, this study was made possible thanks to the National Survey on Government Quality and Impact (all data are publicly available; see INEGI 2022). The dataset includes data from interviews in 46,000 households in 82 urban areas with 100,000 inhabitants or more. In particular, we use data from $N = 63{,}235$ bureaucratic encounters reported by 24,593 individuals (51 percent women, mean age 45 years old) in 2021 (about 2.6 interactions per person or 1.4 interactions per household within 12 months). These include 20 different types of interaction that comprise essential public services such as water supply and healthcare, payment of various local and general taxes and services, obtaining government permits and certifications, and interactions such as reporting a crime, filing a lawsuit at court, or obtaining a passport.[2] Although this list of bureaucratic encounters could be more comprehensive, it provides a valuable window into a relatively wide array of typical situations and interactions between citizens and government officials. In the survey, each participant specified if they had experienced any of the various interactions over the past year. Following this, the interviewer will inquire about the types of challenges and hurdles encountered during these interactions. This included probing if participants were requested or offered any advantages, such as money, gifts, or favors, to hasten or facilitate the execution of the identified procedure or service (see below).

Following hypotheses 2, 3, and 4, we classify bureaucratic encounters along three basic parameters—see Table 1 for an overview. First, bureaucratic encounters can be categorized based on the degree of formal discretion street-level

[2]The selection and definition of the different encounters were not decided by the researchers but were determined by the data collection agency.

Table 1. Bureaucratic interactions.

		On-demand (yes/no)	Discretion (high/low)	Exit option (yes/no)	Level of government (local/mixed/national)
1	Electricity (pay)[a]	No	Low	No	National
2	Water services[a]	No	Low	No	National
3	Property tax (pay)	No	Low	No	Local
4	Vehicle tax (pay)	No	Low	No	Local
5	Vehicle permits	Yes	High	No	Local
6	General taxes (pay)	No	Low	No	National
7	Healthcare (regular)	Yes	High	Yes	Mixed
8	Healthcare (emergency)	Yes	High	Yes	Mixed
9	Public education	Yes	High	Yes	Mixed
10	Civil registry	Yes	Low	No	Local
11	Municipal permits	Yes	High	No	Local
12	Municipal inspections	No	High	No	Local
13	Property permits	Yes	High	No	Local
14	Social welfare (access)	Yes	High	No	Mixed
15	Electricity (access)[a]	Yes	Low	No	National
16	Passport	Yes	Low	No	National
17	Report a crime	Yes	High	No	Mixed
18	Courthouse	Yes	High	No	Mixed
19	Police[b]	No	High	Yes	Mixed
20	Open a business	Yes	High	No	Mixed

[a]Electricity and water services in Mexico are predominantly state-owned and monopolistic.
[b]Public safety and protection services.

bureaucrats can exercise. For example, some interactions, like applying for a passport or paying taxes, adhere to very standardized procedures, thereby limiting the formal discretionary power of officials. Conversely, in other circumstances, such as opening a business or qualifying for welfare benefits, the procedures might be less rigid, or frontline workers' judgment is required, allowing for more subjective decision-making. While acknowledging that bureaucrats may also exert discretion informally (i.e., even if they are not formally granted discretion), we analyzed the formal procedures and coded them as "high" or "low" discretion based on their level of formalization in the procedural steps and case assessment criteria.

Second, we classified bureaucratic encounters according to whether the procedure or service is initiated by the citizen ("on-demand") or is mandated as a general obligation or provision. This distinction underscores the differential roles that citizens may play in their interactions with the state. For instance, when accessing healthcare services or obtaining municipal permits, the citizen typically assumes an active role. These interactions are initiated upon the citizen's request and often involve proactive engagement with public agencies. This active engagement often requires the citizen to navigate bureaucratic processes and interact directly with government officials, potentially influencing the nature and outcomes of the interaction. Conversely, other bureaucratic encounters, such as paying taxes or public services, are mandatory obligations that do not require active initiation by the citizen. In these cases, the citizen assumes a more passive role, primarily focused on complying with established rules and mandates. These interactions do not necessarily require engagement with government officials but instead involve mainly adherence to predefined procedures.

Lastly, we differentiate between bureaucratic interactions based on the structural availability of alternatives or exit options for the citizens involved. For instance, certain bureaucratic transactions might occur under circumstances where citizens are highly dependent on the services provided. This could be because they need access to government-provided benefits or due to the government holding a monopoly over a specific task. Examples of such monopolistic services include court proceedings and tax collection or public utilities in cases without private alternatives. On the other hand, there are bureaucratic interactions where citizens have alternative options, at least to some extent. Public schools and government-run hospitals are examples of such scenarios. In these cases, citizens can exit the public system and opt for private education or healthcare if they have the financial means to do so.[3]

Additionally, given that Mexico has a federative system, we differentiate between the level of government involved in the procedures included in our sample to control for variation in corruption levels as a possible confounder. For example, opening a business in Mexico often requires complying with national and local procedures, and healthcare services are provided at the national and local levels. Contrarily, municipal permits or paying vehicle taxes occur only locally. Accounting for levels of government is relevant because national public administrations have, in general, significantly improved over the last decades (Meyer-Sahling

[3]This differentiation in the data indicates that bureaucratic interactions involving high discretion are typically on-demand but tend to have exit options (see Table 1, also see Appendix). This observation is particularly noteworthy given our expectation of divergent effects stemming from these characteristics, as previously discussed.

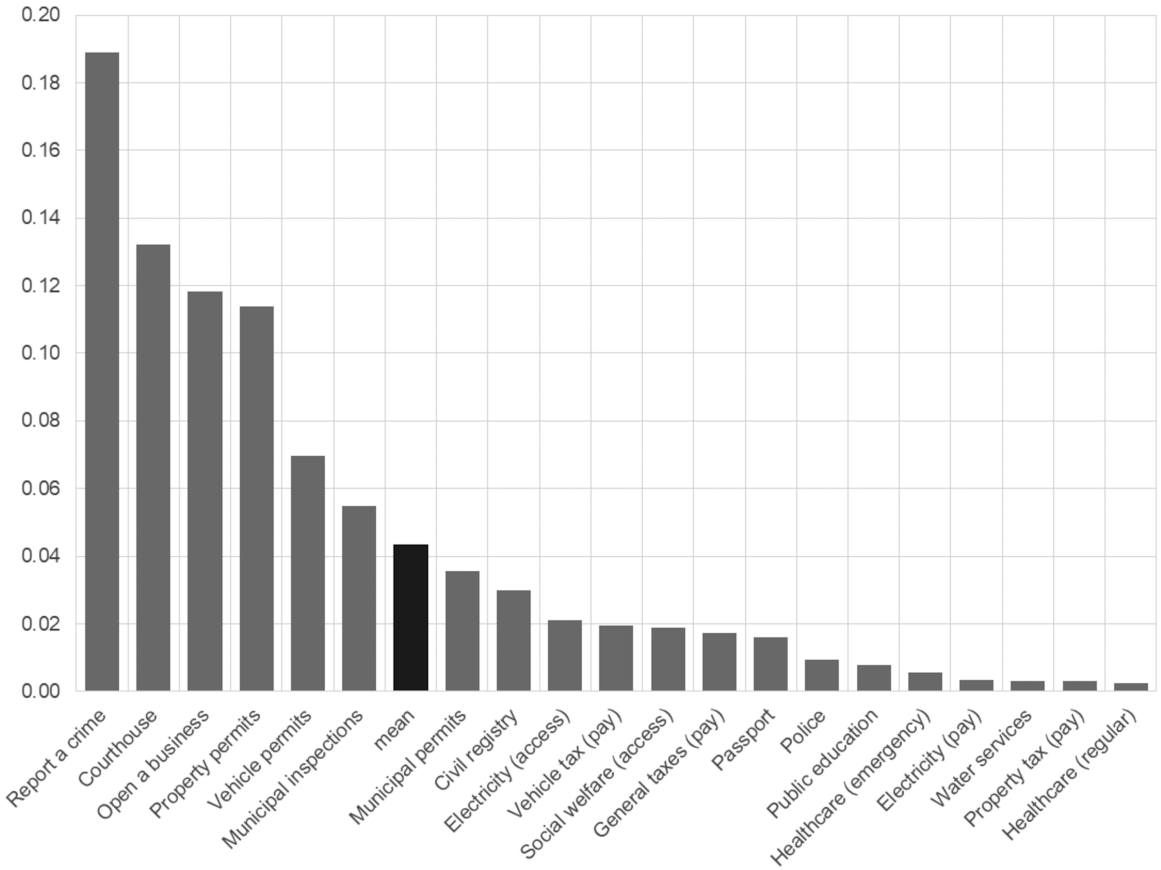

Figure 1. Proportion of bureaucratic interactions involving bribing per type of interaction.

and Mikkelsen 2016; Santiso 2015), whereas regional and municipal governments continue to be more prone to bribery and other forms of petty corruption (Charron et al. 2016; Nicholls-Nixon et al. 2011). We analyzed the formal procedures and coded them as bureaucratic encounters that typically involve local (state and municipal), national, or a combination of agencies and officials from different government levels (mixed).

Dependent variable: bribery

For each of the 63,235 encounters in the database, we have dichotomous data on whether it involved a bribe according to respondents (1 = there was bribing, 0 otherwise). In particular, bribes were defined as: "In order to expedite, carry out, or avoid fines in procedures, payments, or requests, has a public servant tried to appropriate or request some type of benefit (money, gifts, favors) that you could provide or were there insinuations or conditions that led you to provide money, gifts, or favors to a public servant?" Although this measurement is imperfect and it replicates limitations of similar measurements in the literature (cf. Hawken and Munck 2009), it encapsulates both scenarios where bribes are solicited and those where they are voluntarily offered, that is, including both collusive and non-collusive bribery (Sundström 2019). Moreover, this likely reduces some social desirability bias, thus allowing an indirect estimation of a sensitive behavior. Furthermore, we reason that the inclusion of both attempted and actual instances of bribery in this operationalization is valid, given that our interest is in examining the *situational* factors that may culminate in the solicitation, offering, or occurrence of bribery rather than in measuring actual levels of bribery (which is recognized as a highly complex issue in corruption studies, see e.g., Jensen 2020). Therefore, our operationalization of the dependent variable allows for the consideration of proactive and reactive behavior by both citizens and bureaucrats while mitigating social desirability bias.

Overall, respondents reported (attempted) bribing in about 5 percent of all interactions. However, as shown in figure 1, the rate per type of interaction ranges from 19 percent for reporting a crime to less than 1 percent for the electricity service, accessing the water supply, paying property taxes, and regular health services. Although, as mentioned before, these figures are likely underreported due to social desirability or memory biases (Jensen 2020), the higher frequencies of bribing in interactions like reporting a crime or opening a new business are consistent with general experience-based indicators of administrative corruption in Mexico, which typically estimate 12–15 percent occurrence of direct corruption in bureaucratic procedures and public services (INEGI 2022; Nieto-Morales and Rios 2022).

Independent variables: administrative burdens

Key to our argument is that citizens' experiences of administrative burdens characterize citizen–state encounters. This implies that while interacting with agencies and public officials, citizens can experience different compliance, learning, and psychological costs, which may vary across different types of interaction (Moynihan, Herd, and Harvey 2015). Psychological costs refer to the stress, anxiety,

Table 2. Factor analysis of administrative burdens.

	Psychological cost	Learning cost	Compliance cost
You felt mistreated by a public official	0.85		
You were dissatisfied with the procedure/service	0.80		
You felt you wasted your time	0.78		
You felt you did not achieve your goal	0.65		
You received the wrong information		0.74	
The procedure/service required you to provide too much information		0.69	
You visited many information points		0.69	
The procedure/service requirements were unknown		0.47	
The cost of doing/receiving the procedure/service was excessive			0.73
You had to travel far to do/receive the procedure/service			0.65
The procedure/service was only available in an inconvenient schedule/time			0.60

Note: Only correlations ≥0.3 are shown.

or frustration experienced by individuals when navigating complex bureaucratic processes and exchanges with public servants. Compliance costs encompass the time, effort, and resources required to adhere to regulations, gather necessary documentation, and fulfill procedural requirements. Finally, learning costs pertain to citizens' challenges in accessing clear, comprehensive, and accurate information about the processes, requirements, and relevant authorities involved in the bureaucratic interaction.

To empirically capture these costs, we use 11 dichotomous indicators (1 = yes, 0 = no) measuring different problems citizens reported experiencing during encounters. Although the questions included in the survey do not precisely match established measurements of administrative burden (e.g., Baekgaard and Madsen 2023; Madsen and Mikkelsen 2022), they approximate the measurement of learning, compliance, and psychological costs to a satisfactory degree. We performed a principal component analysis with oblique rotation on this set of indicators to test whether we could extract latent (administrative burden) components.[4] This approach to estimating administrative burdens offers several advantages over using additive indexes or other types of summarizing techniques, including reducing the dimensionality of the data, providing a more accurate representation of complex (unobserved) constructs, and the explicit handling of measurement error to emphasize signal over noise (Brown 2015).

Table 2 shows three components ($\lambda \geq 1$) corresponding to psychological, learning, and compliance costs. Confirmatory factor analysis showed that the data yields strong support for this three-factor solution: RMSEA = 0.04, CFI = 0.96, TLI = 0.95, SRMR = 0.03. Using this solution, we computed factorial scores for each row in the database. Specifically, the factorial score for an observation (i.e., each bureaucratic encounter) on a given component is the dot product of the encounter's standardized variable scores with the corresponding eigenvector of each principal component. As expected from the type of rotation, the resulting scores are not completely orthogonal. However, they exhibit only low positive correlations ranging from r = 0.15 for compliance and psychological costs, to r = 0.32 for learning and psychological costs.[5]

An important point is the reliability of our measurement of psychological cost. Firstly, the phrasing of two items ("You felt mistreated by a public official" and "You were dissatisfied with the procedure/service") could be confounded with our dependent variable, that is, bribery, in an encounter—as, for instance, people might identify paying a bribe with mistreatment or disappointment. However, we ruled out this possibility because the bivariate correlations between these indicators and the measurement of bribery in the pooled sample are negligible in both cases (r = 0.08 and r = 0.1, respectively) and because the measurement model remains robust even when these indicators are omitted. Secondly, while indeed our measurement of psychological cost overlaps with citizen's (dis)satisfaction, this does not undermine the validity of our analysis. These two concepts are closely interconnected—for example, unpredictability in state–citizen interactions or difficulties in accessing state-provided resources can elevate both psychological costs (manifesting as frustration or anxiety) and dissatisfaction. Hence, dissatisfaction can be a proxy for aspects of psychological strain that are not encompassed by other indicators. This approach, while a simplification, provides a practical means to gauge psychological impact in the absence of more comprehensive data.

Using factorial scores, we can characterize each type of bureaucratic encounter in the sample (fig. 2). First, interacting with the police, complying with municipality inspections, and reporting a crime are the interactions with the highest psychological costs on average. Conversely, paying for water services, property tax, and requesting electricity are the interactions with the lowest psychological costs. Second, the interactions with the highest learning costs are reporting a crime, opening a business, and obtaining property permits. The types with the lowest learning costs are requesting electricity services, obtaining water services, and paying property taxes. Finally, the encounters with the highest compliance costs are opening a business and obtaining a passport and property permits. The interactions with the lowest compliance costs are electricity service, paying the electricity bill, and interacting with the police.

[4]Adequacy sample tests were satisfactory. Bartlett test: $\chi^2(66) = 250{,}410.5$, $P < .001$; KMO = 0.82.

[5]Refer to the Appendix for detailed correlation and multicollinearity analyses.

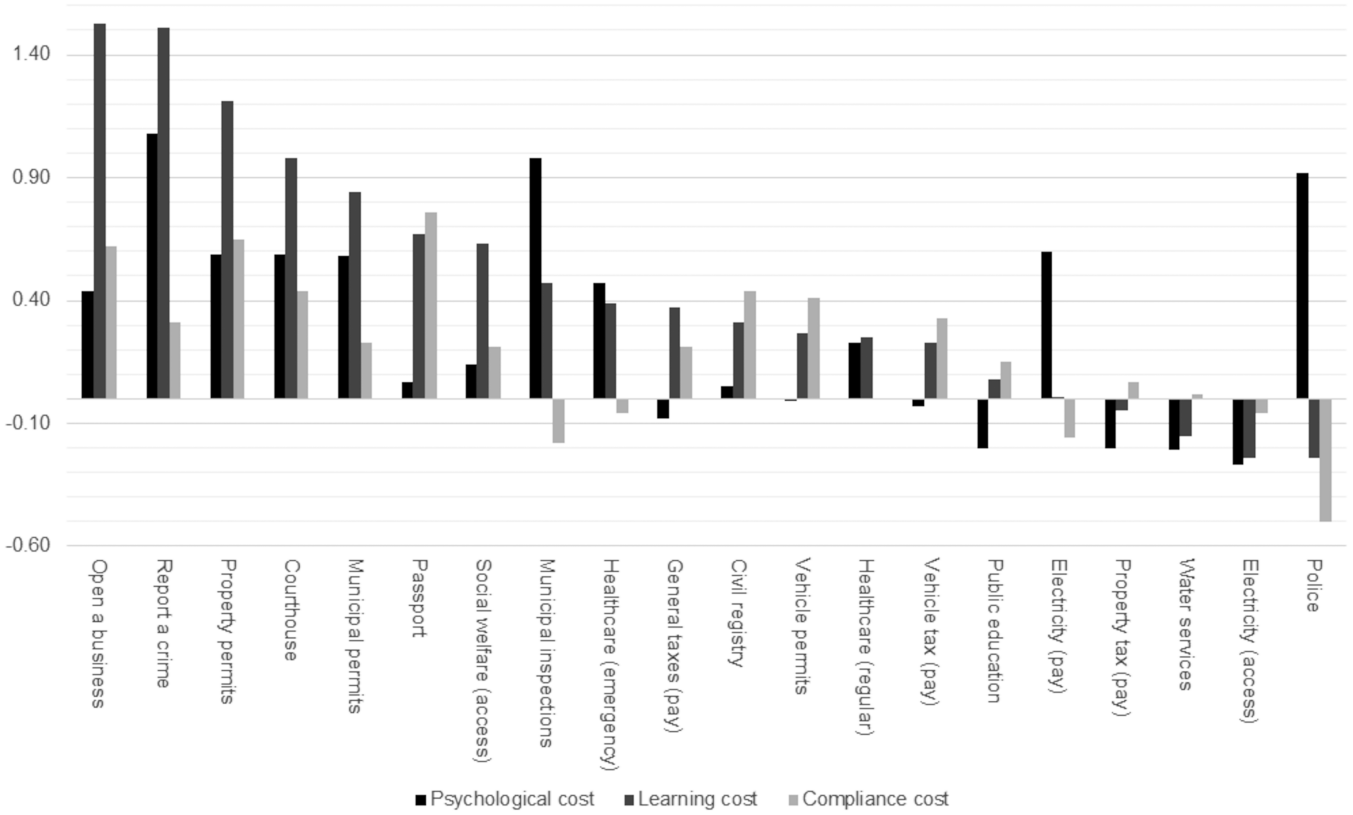

Figure 2. Mean administrative burden per type of encounter

Findings

In order to formally examine the relationship between administrative burdens and the likelihood of bribing in bureaucratic encounters, a two-step analytical approach was employed. This strategy aimed to account for the influence of administrative burdens on bribing and the relation between burdens and bribery moderated by other factors. First, a multilevel logistic regression analysis was conducted, with administrative burden scores as predictors of reported bribing in bureaucratic encounters, and individuals' characteristics as controls (sex, age, employment status, education, and whether a person is retired). Our analysis employed a multilevel approach to accommodate the data's hierarchical structure, wherein various bureaucratic interactions in the same period are nested within individuals. This means that a single participant in the study could have reported experiencing multiple types of encounters during the studied period. By doing this, the statistical analysis sought to determine if higher administrative burdens are associated with an increased likelihood of reported bribing in various street-level interactions. Next, we performed additional analyses to investigate the moderation effect of officials' discretion, the on-demand nature of bureaucratic encounters, and the availability of exit options in the relationship between bribing and administrative burdens—while using the duration of bureaucratic encounters and level of government as a control, as well as the abovementioned individual traits.

The results of the multilevel logistic regression analysis are detailed in Table 3. These findings support hypothesis 1 in that higher administrative burdens relate to an increased likelihood of (attempted) bribery in bureaucratic interactions when controlling for individual-level variables, as shown in Model 1.[6] There is a higher probability of (attempted) bribery in bureaucratic encounters and public services characterized by elevated psychological, learning, and compliance costs. Importantly, this relationship holds even when key encounter-level variables are considered—that is, the existence of bureaucratic discretion, the availability of exit options, and the type of role played by citizens (active on-demand participation vs. passive compliance) (Model 2). The relationship between burdens and bribes also holds when controlling for additional encounter characteristics like the duration of the interaction and the level of government, as reported in Model 3.

The analysis further reveals that, although relatively similar in magnitude and while holding everything else constant learning costs exert a slightly more powerful influence on the likelihood of (attempted) bribery than compliance and psychological costs. Specifically, for every unit increase in learning costs, the chances of bribery occurring within a given bureaucratic encounter are amplified by a factor of 1.54 (95% CI: 1.45–1.63). A unit increase in compliance or psychological costs leads to an increase of 1.43 (95% CI: 1.33–1.54) and 1.37 (95% CI: 1.28–1.48) in the odds of bribery, respectively.

[6]The terms "bribe" and "bribery" in this and the following section are to be understood as encompassing both actual instances and attempts thereof. This usage aligns with our operationalization of the dependent variable.

Table 3. Multilevel logistic regression analysis of bribery in bureaucratic encounters.

	Model 1		Model 2		Model 3	
	B (se)	*P*	B (se)	*P*	B (se)	*P*
(Intercept)	−9.67 (0.48)	<0.001	−11.4 (0.58)	<0.001	−11.1 (0.58)	<0.001
Administrative burdens						
Psychological	0.32 (0.04)	<0.001	0.33 (0.04)	<0.001	0.29 (0.04)	<0.001
Learning	0.43 (0.03)	<0.001	0.33 (0.03)	<0.001	0.28 (0.04)	<0.001
Compliance	0.36 (0.04)	<0.001	0.24 (0.04)	<0.001	0.21 (0.04)	<0.001
Discretion[a]			2.16 (0.16)	< 0.001	1.88 (0.19)	<0.001
On-demand[b]			1.35 (0.17)	<0.001	1.19 (0.17)	<0.001
Exit option[c]			−4.36 (0.21)	<0.001	−4.41 (0.24)	<0.001
Duration (hours)					0.16 (0.01)	<0.001
Level of government[d]						
Mixed					−0.03 (0.17)	0.86
National					−0.74 (0.24)	<0.001
Individual characteristics						
Woman	−0.67 (0.19)	<0.001	−0.36	0.09	−0.38 (0.22)	0.08
Age	−0.02 (0.01)	0.02	−0.02	0.04	−0.02 (0.01)	0.04
Employed	0.21 (0.24)	0.38	0.06	0.83	0.04 (0.27)	0.89
Education	0.07 (0.04)	0.08	0.01	0.77	0.02 (0.05)	0.72
Retired/pensioned	−0.03 (0.51)	0.95	−0.12	0.83	−0.13 (0.56)	0.81
AIC	8,280.1		7,266.7		7,215.0	
Accuracy	0.99		0.99		0.99	
N_1	63,235		63,235		63,235	
N_2	24,593		24,593		24,593	

[a]0 = low discretion, 1 = high discretion.
[b]0 = not on-demand, 1 = on-demand.
[c]0 = no, 1 = yes.
[d]Reference: Local government.

The analysis also indicates that other factors contribute to the probability of (attempted) bribery in bureaucratic interactions, as initially suggested by the arguments leading to hypotheses 2, 3, and 4. These include a positive effect of increased formal street-level discretion (hypothesis 4) and citizen-initiated (on-demand) interactions (hypothesis 3) and a negative effect of the availability of exit options (hypothesis 2). These results indicate that when there is greater room for officials' discretion, the risk of bribery increases. Encounters initiated by citizens (on-demand interactions), might be more susceptible to bribery because these interactions often involve citizens demanding access to services or permissions, which can create opportunities for corrupt practices as street-level bureaucrats function as "gatekeepers" of the state (Brodkin 2011). Conversely, encounters in public services or tasks with exit options have a lower associated risk of bribery, as predicted by corruption control theories (Klitgaard 1988). Overall, according to the estimates in Model 3, the odds of encountering bribery are 6.5 times greater in interactions characterized by high discretion than those with low discretion. Similarly, when citizens initiate the interaction or play a more active role (as opposed to interactions mandated as general obligations like paying taxes), the odds of encountering bribery are 3.3

Table 4. Moderation analysis of bribery in bureaucratic encounters.

	Model 4		Model 5		Model 6	
	B (se)	*P*	B (se)	*P*	B (se)	*P*
(Intercept)	−11.3 (0.58)	<0.001	−11.3 (0.59)	<0.001	−11.2 (0.58)	<0.001
Simple effects						
Administrative burdens						
Psychological	0.37 (0.08)	<0.001	0.53 (0.09)	<0.001	0.27 (0.05)	<0.001
Learning	0.43 (0.06)	<0.001	0.41 (0.07)	<0.001	0.29 (0.04)	<0.001
Compliance	0.14 (0.07)	0.04	−0.02 (0.09)	0.83	0.11 (0.05)	<0.001
Discretion[a]	2.13 (0.21)	<0.001	1.81 (0.19)	<0.001	1.86 (0.19)	<0.001
On-demand[b]	1.13 (0.18)	<0.001	1.39 (0.19)	<0.001	1.22 (0.17)	<0.001
Exit option[c]	−4.52 (0.24)	<0.001	−4.53 (0.24)	<0.001	−4.34 (0.27)	<0.001
Duration (hours)	0.17 (0.03)	<0.001	0.17 (0.03)	<0.001	0.16 (0.03)	<0.001
Level of government[d]						
Mixed	0.15 (0.17)	0.79	0.06 (0.16)	0.70	−0.04 (0.17)	0.83
National	−0.60 (0.19)	<0.001	−0.70 (0.18)	<0.001	−0.73 (0.18)	<0.001
Interactions						
Psychological × Discretion	−0.12 (0.09)	0.18				
Learning × Discretion	−0.21 (0.07)	0.003				
Compliance × Discretion	0.08 (0.08)	0.32				
Psychological × On-demand			−0.30 (0.10)	0.003		
Learning × On-demand			−0.16 (0.08)	0.04		
Compliance × On-demand			0.27 (0.09)	0.005		
Psychological × Exit					0.09 (0.12)	0.42
Learning × Exit					−0.12 (0.11)	0.24
Compliance × Exit					−0.18 (0.16)	0.28
Individual characteristics						
Woman	−0.37 (0.22)	0.09	−0.37 (0.22)	0.09	−0.38 (0.22)	0.08
Age	−0.02 (0.01)	0.03	−0.02 (0.01)	0.04	−0.02 (0.01)	0.04
Employed	0.03 (0.27)	0.91	0.03 (0.27)	0.90	0.04 (0.27)	0.89
Education	0.02 (0.05)	0.72	0.02 (0.05)	0.69	0.02 (0.05)	0.71
Retired/pensioned	−0.14 (0.56)	0.81	−0.14 (0.56)	0.80	−0.13 (0.56)	0.81
AIC	7,206.1		7,200.6		7,217.6	
Accuracy	0.99		0.99		0.99	
N_1	63,235		63,235		63,235	

Table 4. Continued

	Model 4		Model 5		Model 6	
	B (se)	*P*	B (se)	*P*	B (se)	*P*
N_2	24,593		24,593		24,593	

[a]0 = low discretion, 1 = high discretion.
[b]0 = not on-demand, 1 = on-demand.
[c]0 = no, 1 = yes.
[d]Reference: Local government.
Sig. codes: $^{**}P > .05$; $^{***}P < .01$.

times higher. The availability of exit options implies that the odds of corruption occurring are 99 percent lower, assuming all other factors are held constant.

Regarding controls, the analysis shows that longer bureaucratic interactions are associated with a higher risk of bribery. Further, we find that, in comparison to interactions that typically occur at the local or municipal level, interactions with national or federal public servants or public agencies are significantly less prone to bribery. This finding is consistent with the literature (Meyer-Sahling and Mikkelsen 2016) and might be due to reduced oversight, lower capacity, or closer relationships between officials and citizens at the local level. Finally, we found few significant fixed effects at the individual level, with the exception of a negative effect of sex (although only significant for $\alpha = .9$) and a minor negative effect of age; however, the random intercept across individuals exhibits significant variability across sampled participants in their proclivity to report (attempted) bribery—as would be expected in a large national sample.

Although promising, these models do not adequately test hypotheses 2, 3, and 4 and the role of these variables as moderating factors for the relationship between administrative burdens and bribery. To do this, we undertook a moderation analysis to delve deeper into these effects and, in particular, to explore the potential interplay between bureaucratic discretion, the on-demand nature of interactions, the availability of exit options, and administrative burdens. Formally, this analysis investigates how an intervening variable (discretion, exit option, or on-demand) influences the relationship between administrative burdens and the likelihood of bribery. Essentially, a moderation effect is present if the relationship between the predictor and the outcome changes depending on the level of the moderator. Here, we use Jaccard's (2001) interpretation of interaction effects within the context of logistic regression, the results of which are detailed in Table 4.

Model 4 inspects the moderating effect of bureaucratic discretion, assessing how variation in the level of discretion might influence the relationship between administrative burdens and the risk of bribery. The aim is to identify whether the positive correlation between administrative burdens and bribery risk becomes more robust or weaker when discretion levels are higher than when they are low. Similarly, Model 5 analyzes the moderating effect of the on-demand nature of an interaction. The objective is to determine whether the relationship between burdens and bribery risk is altered depending on whether interactions are initiated by the citizen (on-demand). Finally, Model 6 tests the moderation effect of exit options on the relationship between burdens and bribes.

Regarding the moderating effect of bureaucratic discretion (Model 4), our findings present only partial support to hypothesis 4. As before, a significant effect is observed on the relationship between administrative burdens and the likelihood of bribery. However, when accounting for the conditional effect of discretion, we find a significant interaction with learning costs. This implies that bureaucratic encounters characterized by a high degree of discretion mitigate the positive effect of informational costs on the likelihood of bribery. When public servants have greater latitude in interpreting and implementing regulations, the influence of the ambiguity of information or lack thereof on the probability of bribery could diminish. This might be because officials, when given more discretion, can better provide solutions to administrative obstacles, thereby reducing the learning costs experienced by the citizen and, thus, reducing citizens' incentives for offering bribes. In this sense, our results suggest that not all discretion is equal or, put differently, the influence of discretion can be more complex than initially suggested by hypothesis 4. Yet, it is noteworthy that discretion seems to only moderate the effect of a particular type of burden (learning costs) in the data, which implies that the role of discretion as a form of "mitigation mechanism" might be constrained to the informational side of bureaucratic encounters.

Model 5 tests the moderating effect of whether the interaction is initiated on-demand; that is, whether, in the interaction, citizens play a more active role, akin to a client or user, instead of merely complying with regulations. We observe a significant, yet negative, conditional effect on the relationship between psychological and learning costs and the likelihood of bribery. At the same time, there is a positive interaction between on-demand interactions and compliance costs. These findings suggest two points. First, contrary to hypothesis 3, the impact of heightened psychological stressors and increased learning costs is mitigated when citizens assume or have a more active role in street-level interactions. This could signify that when citizens exercise greater agency in their interactions with public officials, they may be able to navigate better and manage these burdens, thereby decreasing the probability of resorting to bribes. Secondly, in support of hypothesis 3, the positive moderation between compliance costs and the on-demand nature of a public service or procedure suggests that when citizens take on a more active role, the potential for corruption might increase in the face of high requirements, such as time and effort. This could mean that some citizens, when faced with high compliance costs, may take advantage of their active role and opt to offer bribes to lessen or avoid these burdens. In essence, these results indicate that while the on-demand nature of interaction can help alleviate the effect of psychological and learning costs, it may

simultaneously exacerbate the risk of bribery where compliance costs are high. This again underscores the complexity of the relationship between administrative burdens and bribery and the pivotal role played by the nature of citizens' engagement in this dynamic.

Finally, Model 6 tests the moderating effect of having exit options in street-level encounters with elevated administrative burdens. We do not find statistical evidence for a moderating effect on any type of cost in this case. Contrary to hypothesis 2, results suggest that the effects of administrative burdens and exit options on bribes, though significant by themselves, are likely independent.

Discussion and conclusion

In this article, we have presented evidence for the positive relationship between administrative burdens and reported (attempted) bribery using a large dataset of more than 63,000 bureaucratic encounters in Mexico. Furthermore, we also found a positive relation between street-level bureaucratic discretion and the risk of bribery as well as between the on-demand nature of bureaucratic encounters and bribery, and a negative relation between the availability of exit options and bribery.

However, our findings provide only limited support for the moderating effect of exit options, on-demand encounters, and street-level discretion on the relationship between administrative burdens and bribery. The on-demand nature of bureaucratic encounters may further increase the probability of bribing when compliance costs are prevalent. Contrarily, however, we also found statistical evidence that street-level bureaucratic discretion and the on-demand nature of encounters might temper the effects of psychological and learning costs on bribery. This suggests that the role of street-level discretion and citizen agency in the moderation of the relationship between administrative burdens and bribery is more complex than we expected. Even in a context of endemic corruption, not all forms of discretion appear to be equal and may sometimes be used to mitigate the learning and psychological costs that citizens face (cf. Bell and Meyer 2023; Kalman, Valdivia, and Miranda 2023). Likewise, the active role of citizens in demanding access to services and benefits appears associated to higher levels of administrative capital to deal with certain administrative burdens (cf. Masood and Nisar 2021).

To the best of our knowledge, this is the first study that systematically explores the statistical relationship between administrative burdens and petty corruption. Thereby, we contribute to the study of petty corruption by introducing administrative burdens as an additional factor conducive to bribery (Rose and Peiffer 2015; Sundström 2016), in addition to other organizational factors such as red tape. Furthermore, our findings increase our understanding of the various possible consequences of administrative burden for citizens' encounters with the state beyond the most commonly studied effects on take-up of benefits (Halling and Baekgaard 2023) and the role of street-level bureaucrats in shaping such encounters (Bell and Smith 2022). Finally, this study is relevant for analyzing citizens' everyday experience of the state in contexts of weak institutions and endemic corruption (Lotta, Nieto-Morales, and Peeters 2023; Peeters and Campos 2022).

Our study had to rely on relatively coarse measurements of, especially, administrative burden. This is due partly to data availability, but it was also necessary to increase comparability at the macro level. However, future studies might explore different operationalizations according to established measurements of administrative burden (Baekgaard and Madsen 2023; Madsen and Mikkelsen 2022) or introduce more nuanced data about specific interaction types or bureaucratic discretion levels. Our analysis is based on reported bureaucratic experiences by citizens rather than an empirical study of the encounters themselves, which might lead to certain reporting biases. Moreover, our measurement includes both actual and attempted bribery, which is a limitation justified by the need to reduce social desirability bias common for corruption studies, but it introduces uncertainty (cf. Hawken and Munck 2009).

Another important limitation of this study is the focus on a single country. Arguably, many of the observed effects are bounded by the characteristics of the Mexican case. For example, in many countries, electricity and water services are primarily privatized or are provided in competitive markets, which implies that the availability of exit options is different than in the case of Mexico. Similarly, different administrative systems and traditions grant different levels of discretion to public servants and street-level bureaucrats. Additionally, while it falls outside the scope of our current analysis, investigating variations across various regions and jurisdictions would be a significant and relevant aspect to explore. Comparative data on the relationship between administrative burdens, bribery, and moderating factors can further solidify our conclusions.

Furthermore, additional research might focus more specifically on whether specific citizen characteristics, such as income or educational level, or regional differences are associated with a higher incidence of bribery, in line with the notion that administrative burdens have a distributive effect (Chudnovsky and Peeters 2020) and that bribery tends to disproportionally affect vulnerable socioeconomic groups (Hunt 2007). This particular issue is critical because one might expect different citizen profiles to experience different administrative burdens and, thus, interact with government officials in diverse ways (cf. Bell et al. 2021). Similarly, ample evidence has shown that street-level bureaucrats differentiate between their clients (e.g., Andersen and Guul 2019; Guul, Pedersen, and Petersen 2021). Thus, discretion's conditional effects on administrative burden and corruption are expected to vary across different profiles of citizens. Related to this is the possibility that people with higher levels of social and economic capital might actively turn to other forms of corruption or manipulation rather than bribery, such as using befriended contacts in the bureaucracy or non-financial rewards to obtain a beneficial treatment (Peeters, Gofen, and Meza 2020).

Finally, the analysis presented here requires more detailed qualitative data about actual interactions between citizens and officials and the precise causality between administrative burdens and bribery. Understanding bribery and burdens in terms of a political economy underscores their interrelatedness but also urges us to take into account various considerations. Since our data and the existing literature suggest that administrative burdens create an opportunity for street-level bureaucrats to demand bribes, we should ask whether experienced burdens leading up to bribery follow from formal procedural requirements or from discretionary behavior by street-level bureaucrats seeking personal benefit from their

position (and whether citizens are able to distinguish between the two). Imposing additional informal requirements to amplify compliance costs, concealing formal procedural steps to increase learning costs, and creating sunk costs and frustration for people by stretching out procedures may all be part of a rent-seeking repertoire that is not captured by our data nor by our operationalization of street-level discretion as formally embedded in procedures rather than as enacted in practice. This also implies that merely reducing formal discretion does not necessarily mean street-level bureaucrats will no longer exert informal or illegal discretion.

Likewise, our analysis does not capture the role of informal intermediaries that assist citizens in going through bureaucratic procedures in exchange for a fee (which might also be interpreted as a bribe in itself)—a common phenomenon in Mexican bureaucratic encounters (Peeters et al. 2018)—in sustaining political economies of burdens and bribes. Additionally, the endemic nature of corruption in the Mexican context, as well as the precarious nature of public services often riddled with administrative burdens and plagued by overdemand, also implies that citizens may, in certain encounters, understand bribery as a solution to access barriers rather than as a burden in itself. These and other considerations regarding the actual dynamics between burdens, bribes, and bureaucrats indicate that there may be both justified and unjustified interests in maintaining administrative burdens (Herd and Moynihan 2018) and that, consequently, reducing them in the context of endemic corruption is easier said than done.

Data availability

The data underlying this article are publicly available in the online repository of Mexico's National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, INEGI) at www.inegi.org.mx/programas/encig/2021/.

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Appendix—Robustness checks

Multicollinearity checks (Models 1–3; cf. Table 4)

Model 1

	VIF	Tolerance
Psychological cost	1.12	0.89
Learning cost	1.15	0.87
Compliance cost	1.05	0.96
Woman	1.08	0.92
Age	1.26	0.80
Employed	1.30	0.77
Education	1.05	0.95
Retired	1.46	0.69

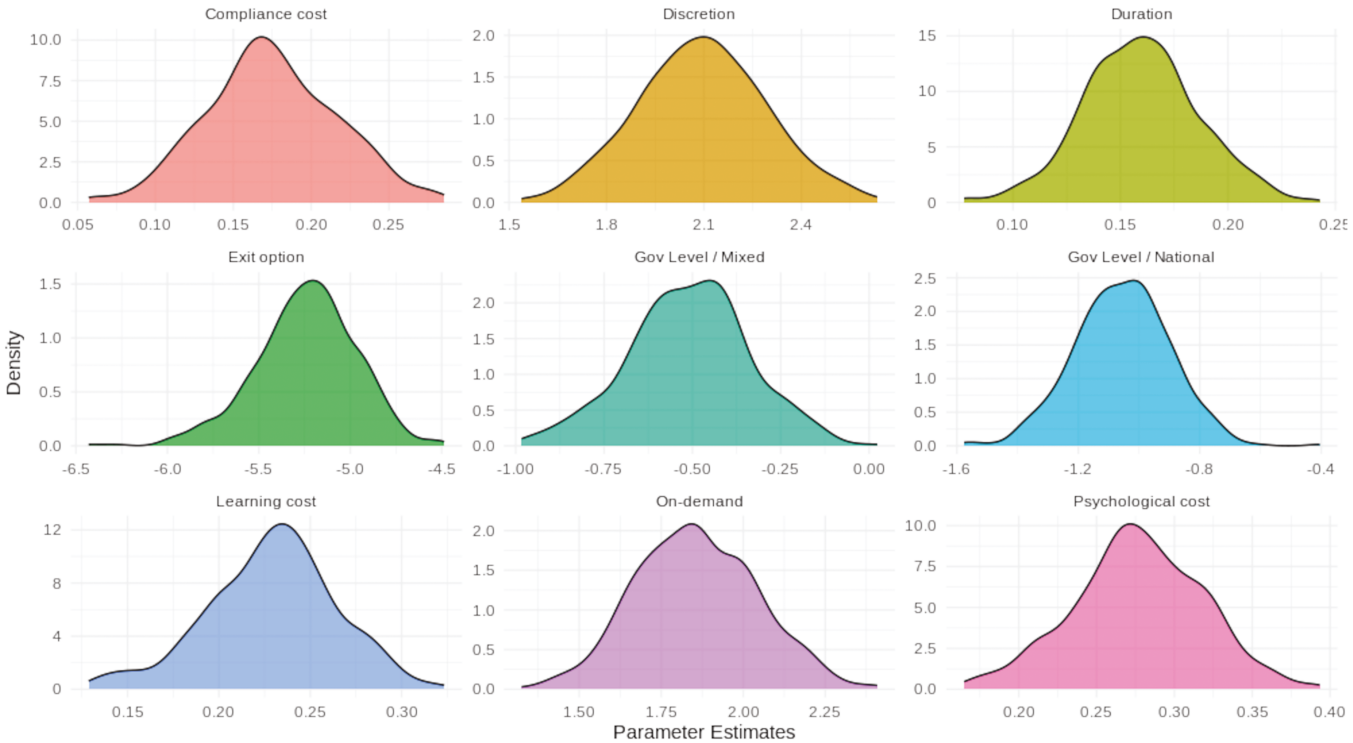
Model 2

	VIF	Tolerance
Psychological cost	1.13	0.88
Learning cost	1.15	0.87
Compliance cost	1.05	0.95
Discretion	1.81	0.55
On-demand	1.54	0.65
Exit option	1.29	0.77
Woman	1.09	0.92
Age	1.26	0.79
Employed	1.32	0.76
Education	1.05	0.95
Retired	1.46	0.68

Model 3

	VIF	Tolerance
Psychological cost	1.16	0.88
Learning cost	1.21	0.87
Compliance cost	1.07	0.95
Discretion	2.24	0.45
On-demand	1.56	0.64
Exit option	1.58	0.63
Duration	1.13	0.89
Level of government	2.26	0.44
Woman	1.10	0.92
Age	1.26	0.79
Employed	1.31	0.76
Education	1.06	0.94
Retired	1.46	0.68

Density plots for bootstrapped estimates (Model 3; 500 resamples)



Descriptive statistics and bivariate correlations among predictors

	M	SD	Min:Max	13	12	11	10	9	8	7	6	5	4	3	2
1. Psychological cost	0.05	1.05	−0.7:4.3	−0.05	0.05	0.03	−0.07	0.02	−0.06	0.28	0.14	0.13	0.19	0.15	0.32
2. Learning cost	0.12	1.13	−1.2:6.6	−0.04	0.05	0.02	−0.08	0.003	−0.11	0.31	0.01	0.19	0.14	0.27	--
3. Compliance cost	0.09	1.08	−1.4:5.3	−0.03	0.02	0.003	−0.04	0.01	−0.09	0.17	−0.09	0.08	−0.02	--	
4. Discretion	0.42	–	0:1	−0.05	0.02	−0.005	−0.12	0.07	−0.26	0.20	0.72	0.69	--		
5. On-demand	0.46	–	0:1	−0.05	0.04	−0.02	−0.14	0.08	−0.32	0.27	0.43	--			
6. Exit option	0.27	–	0:1	−0.05	−0.06	−0.06	−0.10	0.15	−0.01	0.10	--				
7. Duration	0.84	1.54	0.1:24	−0.03	0.03	0.01	−0.06	0.02	−0.13	--					
8. Level of gov.	1.01	0.82	0:2	−0.02	−0.09	−0.03	0.005	0.07	--						
9. Woman	0.51	–	0:1	−0.07	−0.06	−0.24	−0.04	--							
10. Age	45.1	15.7	18:98	0.45	−0.25	−0.26	--								
11. Employed	0.66	–	0:1	−0.44	0.16	--									
12. Education	5.45	2.37	0:8	−0.03	--										
13. Retired	0.09	–	0:1	--											