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Detecting Grassroots Bribery and Its Sources in China: A Survey Experimental Approach

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ABSTRACT

Drawing data from a national survey, this study relies on several embedded list experiments to examine the grassroots bribery that the survey respondents tried to hide due to social desirability. The findings from the list experiments are extracted to develop an innovative weighting technique to provide accurate estimations of bribery behavior. It finds that the level of grassroots bribery in public sectors is significantly higher than what people would admit; that the reasons for bribery can be traced to the country's public service distribution, the low risk of practicing bribery, and the rapid increase in disposable income. These findings suggest that grassroots bribery is still a serious issue in Chinese society, and it creates new challenges for effective governance during the country's anti-corruption campaign.

Research Questions

In March 2019, a video went viral online in China. Taken by a hidden camera, the rare video clip recorded an official in his office at the Henggang Residential Committee in the city of Shenzhen, accepting cash and gift cards eight times in 16 days between September 10 and 26, 2018. The comments of the video were just as revealing as the video itself. On one website where the video was posted, there were more than 200 viewer comments. Most of them were critical of the official. Only three were negative comments about the providers of the bribes.¹ The corrupt officials are nurtured by the people who bribe them. The bribers, equally guilty as the bribed, have been mostly excused or neglected. The ultimate solution to getting rid of corruption is when the public stops bribery behavior. This study will focus on the bribery of government officials by ordinary citizens.

Rampant bureaucratic corruption has accompanied China's rapid economic growth since the market reform in the 1980s.² Chinese leaders, including Jiang Zemin, Hu Jintao, and Xi Jinping, have repeatedly warned the country that corruption will jeopardize the Chinese regime. Since Xi Jinping came to power in 2012, China has launched a major anti-corruption campaign that has lasted until the present. This campaign aims to bring down corrupt government officials from the highest government offices to the local level or to use Xi Jinping's language, regardless if they are tigers or flies.³ The Chinese government has called upon its citizens to report corrupt officials online, and Chinese media has been reporting the punishment of these tigers and flies almost daily.⁴

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¹Haiyan Lu, 'Shenzhen Jiedaoban Ganbu Bangongshi Shouhui Shouli Guocheng Beibaoguang' *The Beijing News* (Beijing, 12 March 2019) <<https://news.sina.com.cn/c/2019-03-12/doc-ihxncv1996107.shtml>> accessed 24 March 2019.

²Yuen Yuen Ang, *China's Gilded Age: The Paradox of Economic Boom and Vast Corruption* (Cambridge University Press 2020).

³Jinping Xi, 'Speech at the 2nd Full Assembly of the 6th Plenary Session of the 18th CPC Central Committee' <http://www.ccdi.gov.cn/ldhd/gcsy/201312/t20131222_114953.html> accessed 21 March 2019.

⁴See, for example, the website of the Central Discipline Investigation Committee at <http://www.ccdi.gov.cn/>, accessed 7 March 2019.

Multiple studies have examined corruption in China and the Chinese government's effort at fighting corruption,⁵ including cross-national comparisons of corruption in China and other countries⁶; anti-corruption and elite politics⁷; corruption and economic development⁸; and corruption, institutions, informal politics, and political legitimacy.⁹ This study will build on the previous studies by taking a slightly different angle, namely, ordinary citizens' bribery behavior when interacting with government officials and public servants.¹⁰ If corruption can be studied as a supply and

⁵See a helpful review of the existing literature on corruption in China in Iza Ding, 'Corruption: The State of the Field' (2017) Harvard-MIT-BU Workshop: Cambridge China Politics Research Workshop, Harvard University.

⁶For cross-national studies of corruption, see Pranab K Bardhan, 'India and China: Governance Issues and Development' (2009) 68 *The Journal of Asian Studies* 347; Pranab K Bardhan, 'Comparative Corruption in China and India' (2014) 7 *Indian Growth and Development Review* 8; Yan Sun and Michael Johnston, 'Does Democracy Check Corruption? Insights from China and India' (2009) 42 *Comparative Politics* 1; Daniel Treisman, *The Architecture of Government: Rethinking Political Decentralization* (Cambridge University Press 2007); Susan Rose-Ackerman and Bonnie J Palifka, *Corruption and Government: Causes, Consequences, and Reform* (Cambridge University Press 2016); Carlos D Ramirez, 'Is Corruption in China "Out of Control"? A Comparison with the US in Historical Perspective' (2014) 42 *Journal of Comparative Economics* 76; Alan Smart, 'The Unbearable Discretion of Street-Level Bureaucrats: Corruption and Collusion in Hong Kong' (2018) 59 *Current Anthropology* 37.

⁷For corruption and elite politics, see, for example, Junyan Jiang and Dali L Yang, 'Lying or Believing? Measuring Preference Falsification From a Political Purge in China' (2016) 49 *Comparative Political Studies* 600; Xi Lu and Peter Lorentzen, 'Saving Meritocracy? China's Anti-Corruption Campaign' (2018) *China Research Workshops* <<https://fudan-uc.ucsd.edu/events/workshops.html#2018>> accessed 21 June 2019.

⁸There is a large body of literature on corruption and economic development. See, for example, Ang (n 2); Yuen Yuen Ang, *How China Escaped the Poverty Trap* (Cornell University Press 2016); Bruce J Dickson, *Wealth into Power: The Communist Party's Embrace of China's Private Sector* (Cambridge University Press Cambridge 2008); Jane Duckett, 'Bureaucrats in Business, Chinese-Style: The Lessons of Market Reform and State Entrepreneurialism in the People's Republic of China' (2001) 29 *World Development* 23; Ting Gong and Na Zhou, 'Corruption and Marketization: Formal and Informal Rules in Chinese Public Procurement: Corruption and Marketization' (2015) 9 *Regulation & Governance* 63; Ying Huang, 'Diachronic Representation of Social Actors in the New Year's Editorials in People's Daily.' (2008) 4 *China Media Research* 1; Daniel C Mattingly, 'Elite Capture: How Decentralization and Informal Institutions Weaken Property Rights in China' (2016) 68 *World Politics* 383; P Mauro, 'Corruption and Growth' (1995) 110 *The Quarterly Journal of Economics* 681; Jean C Oi, 'Fiscal Reform and the Economic Foundations of Local State Corporatism in China' (1992) 45 *World Politics* 99; Lynette H Ong, 'Between Developmental and Clientelist States: Local State-Business Relationships in China' (2012) 44 *Comparative Politics* 191; Minxin Pei, *China's Crony Capitalism* (Harvard University Press 2016); Meg E Rithmire, *Land Bargains and Chinese Capitalism: The Politics of Property Rights under Reform* (Cambridge University Press 2015); Yan Sun, *Corruption and Market in Contemporary China* (Cornell University Press 2004); Kellee S Tsai, 'Adaptive Informal Institutions And Endogenous Institutional Change In China' (2006) 59 *World Politics* 116; Kellee S Tsai, 'China: Economic Liberalization, Adaptive Informal Institutions, and Party-State Resilience' in Stephan Leibfried and others (eds), *The Oxford Handbook of Transformations of the State* (Oxford University Press 2015); Lily L Tsai, *Accountability Without Democracy: Solidarity Groups and Public Goods Provision in Rural China* (Cambridge University Press 2007); *ibid*: David L Wank, 'The Institutional Process of Market Clientelism: Guanxi and Private Business in a South China City*' (1996) 147 *The China Quarterly* 820; Andrew Wedeman, 'Great Disorder under Heaven: Endemic Corruption and Rapid Growth in Contemporary China' (2004) 4 *China Review* 1; Gordon White, 'Corruption and Market Reform in China' (1996) 27 *IDS Bulletin* 40; Susan H Whiting, *Power and Wealth in Rural China: The Political Economy of Institutional Change* (Cambridge University Press 2006); Boliang Zhu, 'MNCs, Rents, and Corruption: Evidence from China' (2017) 61 *American Journal of Political Science* 84.

⁹For corruption, formal and informal politics and political legitimacy, see Yuen Yuen Ang and Nan Jia, 'Perverse Complementarity: Political Connections and the Use of Courts among Private Firms in China' (2014) 76 *The Journal of Politics* 318; John James Kennedy and Yaojiang Shi, *Lost and Found: The 'Missing Girls' in Rural China* (Oxford University Press 2019); Pierre F Landry, *Decentralized Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era* (Cambridge University Press 2008); Xiaobo Lü, *Cadres and Corruption: The Organizational Involution of the Chinese Communist Party* (Stanford University Press 2000); Xiaobo Lü, 'Booty Socialism, Bureau-preneurs, and the State in Transition: Organizational Corruption in China' (2000) 32 *Comparative Politics* 273; Melanie Manion, 'Corruption and Corruption Control: More of the Same in 1996' [1997] *China Review* 33; Melanie Manion, *Corruption by Design* (Harvard University Press 2004); Susan L Shirk, *The Political Logic of Economic Reform in China*, vol 24 (Univ of California Press 1993); Jonathan R Stromseth, Edmund J Malesky and Dimitar D Gueorguiev, *China's Governance Puzzle: Enabling Transparency and Participation in a Single-Party State* (Cambridge University Press 2017); Yan Sun, 'The Chinese Protests of 1989: The Issue of Corruption' (1991) 31 *Asian Survey* 762; Jonathan Unger, 'Whither China?: Yang Xiguang, Red Capitalists, and the Social Turmoil of the Cultural Revolution' (1991) 17 *Modern China* 3; Yuhua Wang, 'Court Funding and Judicial Corruption in China' (2013) 69 *The China Journal* 43; Yuhua Wang and Bruce Dickson, 'How Corruption Investigations Undermine Regime Support: Evidence from China' (2020) SSRN Scholarly Paper 12/2017 <<https://papers.ssrn.com/abstract=3086286>> accessed 13 February 2020; Jiangnan Zhu, Jie Lu and Tianjian Shi, 'When Grapevine News Meets Mass Media: Different Information Sources and Popular Perceptions of Government Corruption in Mainland China' (2013) 46 *Comparative Political Studies* 920. among others.

¹⁰For a few earlier studies on the bribers (not the bribed), see Doug Guthrie, *Dragon in a Three-Piece Suit: The Emergence of Capitalism in China* (Princeton University Press 2001); Mayfair Mei-hui Yang, *Gifts, Favors, and Banquets: The Art of Social Relationships in China* (Cornell University Press 1994); Mayfair Mei-hui Yang, 'The Resilience of Guanxi and Its New Deployments: A Critique of Some New Guanxi Scholarship' (2002) 170 *The China Quarterly* 459; Jing Vivian Zhan, 'Filling the Gap of Formal Institutions: The Effects of Guanxi Network on Corruption in Reform-Era China' (2012) 58 *Crime, Law and Social Change* 93.

demand relationship, this paper intends to cast some new light on the bribers or the suppliers of bribery at the grassroots level (also known as ‘petty bribery’). This study will address two research questions: 1) How common is grassroots bribery in China? 2) What are the sources or origins of such behavior?

Grassroots Bribery in China

Before drawing empirical evidence to answer the two research questions mentioned above, this section will develop some hypotheses to be tested based on the theoretical literature on supply-demand relations and Chinese politics.

1) How common is grassroots bribery? One view sees that the post-Mao market reform has enhanced the role of formal institutions and reduced the need for informal economic activities. Doug Guthrie, *Dragon in a Three-Piece Suit: The Emergence of Capitalism in China* (Princeton University Press 2001). If this is true, one would expect a decline in bribery. Further, the intensification of the anti-corruption campaign under Xi Jinping since 2012 may have served to deter grassroots bribery. In the past several years, people have been watching the news about new discoveries of corrupt officials almost every day. These tigers and flies range from the members of the CCP Politburo to local officials, including village chiefs, bank tellers, tax bureau employees, cops, judges, doctors, hospital administrators, teachers, and school officials. If China’s anti-corruption campaign is effective, one should see a further decrease in grassroots bribery.

Others are less optimistic about this effect. Anecdotal examples suggest that grassroots bribery was widespread in the past.¹¹ One possible reason is the legacy of economic planning during the socialist era from the early 1950s to the early 1980s. Under such a system, the government allocated economic resources, and the shortage of resources was a constant phenomenon in everyday life.¹² For example, many consumer items were rationed, such as bicycles, sewing machines, housing, etc. People were compelled to bribe government officials to get goods that government offices controlled. Even after market reform, many aspects of daily life are still heavily regulated, including education, health care, business licensing, the legal system, among many others. Such a continued role of government regulation may lead to continued grassroots bribery.¹³

When bribery is studied as a supply and demand relationship, supply is expected to decrease when demand is low under the anti-corruption campaign. Nevertheless, in the economics literature, supply can stay at the same level or even increase when demand decreases.¹⁴ In other words, when the demand for bribery is low, it is theoretically possible that its supply can stay at the same level or even go up.

Several reasons can make the above scenario of greater supply than demand possible in China. First, the supply of bribery can increase with increasing disposable income. It is commonly known that household income in China has increased rapidly, and more and more people have been lifted out of poverty in the past several decades.¹⁵ Such an increase in real household income, combined with a decline in price, or the relative cost of bribery under decreased demand caused by the anti-corruption campaign, makes it possible to see a rise in grassroots bribery.

Second, the suppliers of grassroots bribery may not be deterred by the anticorruption campaign. The highly publicized anticorruption cases in the Chinese media may serve to warn the government officials against taking bribery, while paying inadequate attention to the public for supplying bribery. The blaming of the bribery receivers may even provide clues for the public to engage in bribery without getting caught.

¹¹Yang, *Gifts, Favors, and Banquets* (n 10).

¹²János Kornai, *Economics of Shortage* (North-Holland Pub Co 1980).

¹³Yang, ‘The Resilience of Guanxi and Its New Deployments’ (n 10).

¹⁴See WEBpedia, ‘Demand Decrease and Supply Increase’ (*AmosWEB Encyclopedic*, April 2020) <http://www.amosweb.com/cgi-bin/awb_nav.pl?s=wpd&c=dsp&k=demand+decrease+and+supply+increase> accessed 6 May 2020.

¹⁵Blanca Moreno-Dodson (ed), *Reducing Poverty on a Global Scale: Learning and Innovating for Development: Findings from the Shanghai Global Learning Initiative* (World Bank Publications 2005).

Third, grassroots bribery will remain high in a society with a high level of bureaucratic control and distribution of public services. In a market equilibrium, supply will not increase when price is too low. In a bureaucratic environment, prices for public services are often set below market levels and the quality of the services may suffer due to inadequate incentives for the service providers. Bribery becomes a necessary tool for the public to maintain the quality of government services.

Based on the above discussion, in the existing literature, one can find support for both the decline and increase of grassroots bribery since China's market reform and during the recent anti-corruption campaign. However, before researchers can determine the change of corruption, one difficulty is how to detect the exact level of such behavior in Chinese society. Even though many people are aware of and practice bribery in their interaction with the public sectors, it is a socially and politically sensitive topic that people may not want to discuss openly. It is challenging to detect bribery by researchers in a public opinion survey during an ongoing anticorruption campaign. Respondents may provide socially desirable answers by under-reporting their bribery behavior.

Social desirability is a common problem not only in China. For example, in the United States, survey respondents often hide their racial prejudice in public opinion surveys because racism is a politically sensitive question.¹⁶ Similarly, in China, we expect that *survey respondents will under-report their bribery behavior due to social desirability* (Hypothesis 1). One of the goals of this study is to create a benchmark for the exact level of bribery in China by detecting and correcting such social desirability effect.

II) Institutional sources of grassroots bribery: The second goal of this study is to further explore the sources of grassroots bribery. The first source to be examined is related to China's institutions and policies. In China's unified political system, the central government's authority overwrites the local governments, and government institutions and administrative regulations still play a crucial role in ordinary people's political, social, and economic lives. According to the existing literature, a hierarchical system privileges government institutions with the power to manipulate industrial plans and priorities and administratively monopolize critical materials such as land and other scarce and less mobile resources.¹⁷ The dependency on government's resource allocation, such as in SOEs and even multinational corporations, and the non-transparency of rules and processes would bring strong incentives for people who work in such places to practice bribery.¹⁸ The tendency was further aggravated by an incomplete judicial institutions.¹⁹ On the other hand, China is a vast country, and the central government's policies are often carried out with a great deal of variation at different administrative levels and in different sectors of the bureaucratic hierarchy.²⁰ It would not be easy to investigate the influence of institutional sources in each specific area. Nevertheless, in general, one can expect that *those who work and live in places closer to the bureaucratic system are less likely to be bribers due to the ability of the government to crackdown on corruption and their easier access to public services* (Hypothesis 2).

¹⁶For example, see James H Kuklinski and others, 'Racial Prejudice and Attitudes toward Affirmative Action' [1997] *American Journal of Political Science* 402.

¹⁷E.g. Tak-Wing Ngo, 'Rent-Seeking and Economic Governance in the Structural Nexus of Corruption in China' (2008) 49 *Crime, Law and Social Change* 27; Qianfan Zhang, 'How Land Grabs Are Made "Constitutional" in China' in Connie Carter and Andrew Harding (eds), *Land Grabs in Asia* (1st edn, Routledge 2015); See a more comprehensive summary and bibliographical list in Yan Sun and Baishun Yuan, 'Corruption in China' [2021] *Oxford Bibliographies* <<https://www.oxfordbibliographies.com/view/document/obo-9780199756223/obo-9780199756223-0201.xml>> accessed 13 October 2021.

¹⁸Siobhan M Garside, 'Corruption and Money Laundering: International Asset Recovery from Politically Exposed Persons in the UK, Nigeria, Russia and China' (Master of Arts, Norwegian University of Life Sciences 2016) <<http://hdl.handle.net/11250/2443256>> accessed 18 November 2021; Bing Zhang and others, 'Causes of Business-to-Government Corruption in the Tendering Process in China' (2017) 33 *Journal of Management in Engineering* 1; Zhu (n 8).

¹⁹Fenfei Li and Jinting Deng, 'The Limits of the Arbitrariness in Anticorruption by China's Local Party Discipline Inspection Committees' (2016) 25 *Journal of Contemporary China* 75; Yuen Yuen Ang and Nan Jia, 'Perverse Complementarity: Political Connections and the Use of Courts among Private Firms in China' (2014) 76 *The Journal of Politics* 318.

²⁰Yang Zhong, *Local Government and Politics in China: Challenges from Below* (Routledge 2015); Kenneth Lieberthal and David M Lampton, *Bureaucracy, Politics, and Decision Making in Post-Mao China* (University of California Press Berkeley 1992).

In China's context, there are at least three sets of variables that are related to institutions and policies: household registration, work unit ownership type, and administrative level of one's residency. Household registration, measured by the respondents' self-reported type of residence, including rural and urban, was first introduced under central planning in the 1950s. The purpose of such a system was to finance China's industrial development in urban centers by subsidizing urban life at the expense of farmers. Even though the household registration policy has been under a lot of criticism for its unfair treatment of the rural population, urban residents continue to enjoy more government subsidies and public services than the rural folks. The urbanites are expected to practice less bribery than the rural residents due to their easier access to public services.

The other important new category of residents is migrants. Since the market reform in the late 1970s and early 1980s, the residential restriction has been loosened significantly by allowing rural residents to work and live in cities. Currently, it is estimated that about 10% of China's population are migrants, and most of them are rural-to-urban migrants. The percentage of migrants is much higher in the large Tier 1 cities, up to 50% of the city population by some estimates.²¹ This group has more disposable income than rural residents but enjoys less entitlement in welfare benefits than the urban residents. Consequently, migrants are expected to practice more bribery than rural and urban residents.

The second set of institutional variables is related to work unit type, including party-state organizations, non-profit organizations, private companies, self-owned businesses, and those with no work unit. Party-state organizations are expected to produce less bribery than the other ownership types since these are the closest to the political center and possibly the most scrutinized group by the government.

The third group of variables is the administrative grades of the respondents' residence. As will be described in the next section on the Grassroots Bribery Behavior Survey, the survey sample was drawn from 6 strata, representing six levels of the Chinese state administrative structure, 1) tier 1 cities of large cosmopolitan centers such as Beijing, 2) provincial capital cities, 3) prefecture cities, and 4)-6) high, middle and low-income counties and county-level cities. Tier 1 cities are the most closely watched and should show fewer bribery behaviors than those at lower levels.

III) Other sources of grassroots bribery. This study will also examine three other sources: political mobilization, cultural tradition, and economic development.

Political mobilization as another source is expected to reduce grassroots bribery (Hypothesis 3). The Chinese government may intend to use the anti-corruption campaign as a deterrence to discourage bribery at the grassroots level. The officially controlled TV news has been at the anti-corruption campaign's forefront.²² We expect that those who rely on TV for political news would be less likely to practice bribery. In contrast, social media is less controlled by the government and represents a more diverse source of information.²³ Social media is also a way to connect with other people in one's network, which may further increase the likelihood of bribery.

Culture. Some studies argue that bribery is deeply rooted in Chinese culture, dating back to Confucian ethics of social networks in which gifts and favors were exchanged based on reciprocal obligations.²⁴ The key concept in which bribery is embedded is called *guanxi*, or interpersonal

²¹Zihua Xiao, *The Report on Urban Migrant Population's Social Integration in China No. 1* (Social Sciences Academic Press (China) 2018); National Population and Family Planning Commission of China, *2017 Report on China's Migrant Population Development* (China Population Publishing House 2017).

²²Ting Gong, 'More Than Mere Words, Less Than Hard Law: A Rhetorical Analysis of China's Anti-Corruption Policy' [2003] Public Administration Quarterly 159; Daniela Stockmann, 'Greasing the Reels: Advertising as a Means of Campaigning on Chinese Television' (2011) 208 *The China Quarterly* 851; Samson Yuen, 'Disciplining the Party: Xi Jinping's Anti-Corruption Campaign and Its Limits' (2014) 2014 *China Perspectives* 41.

²³Nancy Qin and Jaya Wen, 'The Impact of Xi Jinping's Anti-Corruption Campaign on Luxury Imports in China' (2015) Preliminary Draft <https://www.kellogg.northwestern.edu/faculty/qian/resources/QianWen_20150403.pdf> accessed 20 March 2022.

²⁴Xiaotong Fei, Gary G Hamilton and Wang Zheng, *From the Soil: The Foundations of Chinese Society* (First Edition, A translation of Fei Xiaotong's *Xiangtu Zhongguo* edition, University of California Press 1992).

network. The art of *guanxi*, or *guanxiology*, revived itself in contemporary China during the period of central planning from the early 1950s to the early 1980s and continued into the post-Mao market reform.²⁵ Recent studies have also pointed out that *guanxi* is an important facilitator of corruption.²⁶ Following this line of research, the existence of an *interpersonal network is expected to encourage bribery* (Hypothesis 4).

Economic development. The fourth source of grassroots bribery is expected to come from economic development and modernization. These consequences can be measured by four variables, years of education, family income, retrospective and prospective improvements of family economic conditions. Education and past and future improvement of economic conditions can be understood as long-term, or indirect consequences of economic growth and modernization, while family income is a short-term benefit of economic growth.

Education, measured by the respondents' years of schooling, is supposed to provide more information and develop more awareness of citizen rights.²⁷ However, its impact on people's bribery behavior remains to be seen. What has been learned is that the cultural emphasis on education and the expectation that higher education creates a better future bred a strong incentive for Chinese people to fight for educational resources even through bribery.²⁸ The overall improvement of family economic conditions may create satisfaction that makes people feel less necessary to make additional payment for public services.²⁹ On the other hand, income is a direct consequence of economic growth. As discussed in the above supply-demand relationship, it is likely that higher income provides more immediately available cash that can be disposed of in exchange for public services.

In summary, the *long-term impact of economic growth, measured by education and the overall improvement of family economic conditions, is expected to reduce grassroots bribery (Hypothesis 5.1), while short-term effect of economic growth, measured by family income, is likely to encourage bribery (Hypothesis 5.2).*

Control variables. Gender and age serve as two control variables. Women may be less inclined to engage in grassroots bribery because they spend more time on childbearing at home and most social networking was traditionally carried out by men.³⁰ In contrast, others may predict women to be more likely to become bribers at the grassroots level because they may have more need to interact with public services due to their responsibilities in childbearing, such as in their children's education and health care.³¹ Age may play a curvilinear role (bell-shape) in grassroots bribery.³² The youngest group may not have as many needs in public service as the older groups. Similarly, the need for public services may also diminish as one gets older, although health care may be an exception. Overall, the younger and older age groups are expected to bribe less than the middle-aged group.

²⁵Yang, *Gifts, Favors, and Banquets* (n 10); Yang, 'The Resilience of Guanxi and Its New Deployments' (n 10).

²⁶Bin Dong and Benno Torgler, 'Corruption and Social Interaction: Evidence from China' (2012) 34 *Journal of Policy Modeling* 932; Ling Li, 'The Moral Economy of Guanxi and the Market of Corruption: Networks, Brokers and Corruption in China's Courts' (2018) 39 *International Political Science Review* 634; Jun Lin and Steven X Si, 'Can Guanxi Be a Problem? Contexts, Ties, and Some Unfavorable Consequences of Social Capital in China' (2010) 27 *Asia Pacific Journal of Management* 561.

²⁷Alex Inkeles and David H Smith, *Becoming Modern: Individual Change in Six Developing Countries* (Harvard University Press 1974).

²⁸Qijun Liu and Yaping Peng, 'Determinants of Willingness to Bribe: Micro Evidence from the Educational Sector in China' (2016) 235 *Jahrbücher für Nationalökonomie und Statistik* 168; Ji Ruan, "'Bribery with Chinese Characteristics" and the Use of Guanxi to Obtain Admission to Prestigious Secondary Schools in Urban China' (2019) 51 *Critical Asian Studies* 120; Qijun Liu and Yaping Peng, 'Corruption in College Admissions Examinations in China' (2015) 41 *International Journal of Educational Development* 104.

²⁹Byung-Yeon Kim and Yu Mi Koh, 'The Informal Economy and Bribery in North Korea' (2011) 10 *Asian Economic Papers* 104; Daniel Kaufmann, Judit Montoriol-Garriga and Francesca Recanatini, *How Does Bribery Affect Public Service Delivery? Micro-Evidence from Service Users and Public Officials in Peru* (The World Bank 2008).

³⁰Yang, *Gifts, Favors, and Banquets* (n 10).

³¹Grace K Baruch, Lois Biener and Rosalind C Barnett, 'Women and Gender in Research on Work and Family Stress' (1987) 42 *American Psychologist* 130; Joseph H Pleck, 'The Work-Family Role System' (1977) 24 *Social Problems* 417.

³²Naci Mocan, 'What Determines Corruption? International Evidence from Microdata' (2008) 46 *Economic Inquiry* 493; Anand Swamy and others, 'Gender and Corruption' (2001) 64 *Journal of Development Economics* 25; Benno Torgler and Neven T Valev, 'Corruption and Age' (2006) 8 *Journal of Bioeconomics* 133.

How Common Is Grassroots Bribery Behavior?

The data for this study is drawn from the 2018 China Grassroots Bribery Behavior Survey, which includes a nationally representative sample of 2,581 respondents (2018 GBB Survey afterward, see Appendix 1 for details). In this survey, the respondents were asked if they had any interaction with employees in four public sectors in the past two years: education, health care, local government offices, and public security and law. As shown in Table 1, the interaction rates (visited at least once) were 54% in health care, 37% in education, 22% in local government offices, and 17% in public security and law. Overall, 67% of the respondents in the survey had at least one interaction with one of the four sectors. This relatively high interaction rate suggests that the four sectors are realistic choices for studying the government-public interaction in China. Admittedly, these four sectors cannot represent the entire spectrum of government services. Nevertheless, the high percentage of visits suggests that they are frequently used services by the public. Each of them includes many different types of services. For example, visiting a local government office in Shenzhen can serve many different purposes, such as business licensing, land development, public project bidding, public procurement, social welfare administration, vehicle administrating, among others.

Public opinion survey data are widely used in studying individual behavior and attitude in social science research, if not yet that common in studying grassroots bribery. For example, survey data are routinely used to study voting, protest, regime support, and contacting government officials for problem-solving, among many other issues in many countries worldwide. For some readers who are more comfortable with qualitative case studies of corruption, relying on survey data may seem 'superficial'. For these readers, focusing on individual citizens may be too insignificant compared to high-profile corruption cases.

It is undeniable that qualitative case studies can yield in-depth insight and eye-catching stories about the intricacies of corruption. What these case studies are less capable of doing, however, is the generalizability of their findings. They are less capable of providing evidence to accurately answer the important question of 'how common?'. This task can be easily accomplished by survey research based on representative samples. With a nationally representative sample, this study can provide a relatively precise answer.

The respondents were then asked if they were satisfied with the services provided by these sectors (bottom two rows, Table 1). On a 0–1 scale with 0 as the minimum and 1 as the maximum level of satisfaction, health care scored .63. Education was rated .71, local government offices, and public security and law were rated as .57. When the four sectors were combined into a single index of public service satisfaction, the score was .62. This result is much lower than a perfect score of 1. However, given the complexity of coordinating public services for 1.4 billion people, such a rating seems to be a passing grade for the government given by the public.

Following the inquiry about the public sector, interaction was the burning question we wanted to ask in the survey, namely, the respondents' bribery behavior. Among those who had any experience in visiting the above four sectors, we asked them if they presented any significant gift (not flowers, cards, and other small gifts), such as cash and red envelop with cash (hongbao, 红包), and/or providing any help for the service providers. The proportions of bribery in the four sectors were

Table 1. Public service interaction and satisfaction

Visited public services in past two years, %	Health care	Education	Local gov offices	Public security & law	All
None	46	63	78	84	33
1–2 times	29	15	14	11	27
3 times or more	25	22	8	6	40
Total	100	100	100	100	100
Obs	2559	2556	2558	2560	2581
Satisfied with services (0 = min, 1 = max)	0.63	0.71	0.57	0.57	0.62
Obs	1334	920	556	408	1689

Source: 2018 China Grassroots Bribery Behavior Survey.

7.12% for health care, 8.62% for education, 6.77% for local government offices, and 6.44% for legal offices. Overall, about 12.33% of the respondents admitted bribery behavior in the entire sample (row 1, 'raw data %', Table 2).

These numbers of bribery seem low. The reader may immediately challenge that some of our survey respondents did not tell the truth because of the concern for social desirability. Bribery in China is mostly an under-the-table practice even at the grassroots level, and people normally do not discuss such behavior publicly. The survey respondents may be very reluctant to report their bribery behavior in a face-to-face interview, resulting in a significant underestimation.

To solve this problem, we embedded four list experiments in the survey. List experiment has been used in the U.S. to detect the survey respondents' racial bias³³ and in China to assess the political fear effect.³⁴ As we will explain in further detail below, such a method turned out to be a key instrument in estimating grassroots bribery behaviors in China.

To implement the list experiment, the sample of the 2018 GBB survey was randomly divided into five groups with a roughly equal number of respondents in each group. The first is the control group. Respondents in this group were shown a list of four items and asked to pick a number between 0 and 4, representing the number of items they agreed. The goal of the list experiment is that by only giving a number but not mentioning any specific item, the respondents feel comfortable telling the truth about their socially undesirable opinion and behavior.³⁵ Respondents in the control group were asked the following question:

Please think and tell me HOW MANY of these statements you would agree with. Please give me a number from 0 to 4, and DO NOT mention any specific item on the list.

I know the name of the head of the Central Bank of China
I watch TV every day
I own a cell phone
The pensions in China are high enough

The remaining four treatment groups were asked the same question above with one more item:

Over the last two years, I presented an informal payment/gift/did a favor in addition to a required formal fee in exchange for their services to government employees in health care (treatment group 1)/education (treatment group 2)/local government offices (treatment group 3)/public security and law (treatment group 4).

The mean scores are 1.8911 for the control group, 2.0747 for treatment group 1, 2.0651 for treatment group 2, 1.9787 for treatment group 3, and 2.141 for treatment group 4. Each score is multiplied by 100, and the difference between each treatment group and the control group represents the percentage of bribery in each treatment group, $207.47 - 189.11 = 18.36\%$ (health care), $206.51 -$

Table 2. Grassroots bribery by sectors

Bribery (cash+gift+favor) %	Health care	Education	Local gov	Police-law	Visited at least once
(1) yes (raw data %)	7.12	8.62	6.77	6.44	12.33
(2) yes (adjusted by list experiment %)	18.36	17.40	8.76	24.99	
(3) yes (weighted % by <i>gbbwt</i>)	30.16	37.19	20.67	24.40	47.65

Source: 2018 China Grassroots Bribery Behavior Survey.

³³Martin Gilens, Paul M Sniderman and James H Kuklinski, 'Affirmative Action and the Politics of Realignment' (1998) 28 *British Journal of Political Science* 159; Kuklinski and others (n 16); James G Kane, Stephen C Craig and Kenneth D Wald, 'Religion and Presidential Politics in Florida: A List Experiment' (2004) 85 *Social Science Quarterly* 281.

³⁴Wenfang Tang and Yang Zhang, 'Political Trust: An Experimental Study', *Populist Authoritarianism: Chinese Political Culture and Authoritarian Regime Sustainability* (Oxford University Press 2016).

³⁵Daniel Corstange, 'Sensitive Questions, Truthful Answers? Modeling the List Experiment with LISTIT' (2009) 17 *Political Analysis* 45.

189.11 = 17.40% (education), 197.87–189.11 = 8.76% (local government), and 214.10–189.11 = 24.99% (public security and law). These numbers in Table 2 (row 2, ‘adjusted by list experiment’) are significantly higher than the initially reported bribery in the raw data in Table 2.^{36 37}

While the list experiment significantly improved in detecting social desirability in the 2018 GBB Survey, it has its limitations. It can only provide a rough estimate of social desirability at the group level. For example, we know from the list experiment that 18.36% of visitors to the health care sector practiced bribery in the sample, but the list experiment cannot tell who did it at the individual level. Another limitation of the list experiment is that it only gives the percentage of bribery in each of the four public service sectors, but we cannot estimate the overall percentage of bribery across the four sectors in the entire sample. The third limitation of the list experiment is that it can only detect past behavior but not the potential of grassroots bribery. For example, the respondent did not report any bribery in health care because she only had an outpatient visit. The results of the list experiment cannot predict if the same respondent would practice bribery had she had an inpatient visit such as surgery. To deal with these issues, it is necessary to construct a weight variable based on the list experiment outcomes that can be used to overcome these limitations by adjusting the respondents’ answers to bribery-related questions at the individual level.

For the reasons described above, a frequency weight was constructed based on the ratios between people’s reported bribery experiences (‘biased’, Table 3) and the list experiment results (‘unbiased’, Table 3). As shown in Table 3 (‘Ratios’), bribery is 2.58 times higher than originally reported by the respondents in health care (18.36/7.12), 2.02 times higher in education, 1.29 times higher in local government, and 3.88 times higher for police and court. Similarly, from Table 3, only 30.49% of all the self-claimed non-bribers are genuine (30.49/89.81). Accordingly, the weight variable is used to recalculate the subsamples of bribers by 2.58 times more in healthcare, 2.02 times more in education, 1.29 times more for local government bureaus, and 3.88 times more for police and court. The subsample of non-bribers is counted as only about 30% of its unweighted size. More technical details of how the ratios are calculated and how the information of four areas are combined are presented in Appendix 3. The weight variable enables us to conduct analysis superior to each list experiment and give more accurate estimates at the individual level by simultaneously incorporating the findings from the four list experiments together.

Table 3. Weighting scheme

Bribery behavior in	Unbiased distribution (adjusted by list experiment)	Biased distribution (raw data)	Ratios
Health care	18.36%	7.12%	18.36/7.12 \approx 2.58
Education	17.4%	8.62%	17.4/8.62 \approx 2.02
Local gov bureaus	8.76%	6.77%	8.76/6.77 \approx 1.29
Police/court	24.99%	6.44%	24.99/6.44 \approx 3.88
No bribery	30.49%	89.81% ³⁷	30.49/89.81 \approx 0.34

Source: Table 2

³⁶Three measures were taken to prevent the potential biases in the list experiments caused by the ceiling effect. See more details in Graeme Blair and Kosuke Imai, ‘Statistical Analysis of List Experiments’ (2012) 20 *Political Analysis* 47; James Alan Fox and Paul E Tracy, *Randomized Response: A Method for Sensitive Surveys* (Sage Publications 1986); Adam N Glynn, ‘What Can We Learn with Statistical Truth Serum Design and Analysis of the List Experiment’ (2013) 77 *Public Opinion Quarterly* 159., the fixed order effect responses. See Kosuke Imai, ‘Multivariate Regression Analysis for the Item Count Technique’ (2011) 106 *Journal of the American Statistical Association* 407; David P Redlawsk, Caroline J Tolbert and William Franko, ‘Voters, Emotions, and Race in 2008: Obama as the First Black President’ (2010) 63 *Political Research Quarterly* 875, and the broadcast effect which refers to the fact the respondents would mention the specific item on the list, rather than giving a number from 0 to 5. Details can be provided upon the reader’s request.

³⁷The percentage is the proportion of respondents who report no grass-roots bribery. Bribe givers may report more than one type of bribery. In that case, adding them together will double count these multi-type bribers, and that is why the sum of column 3 (‘biased’) in Table 3 is above 100%.

Applying this newly created weight variable reveals more drastic social desirability effects in three of the four sectors. As shown in rows 2 and 3, [Table 2](#), the weighted proportions of bribery increased from 18.36% (only using information from the list experiment of a single type of bribery) to 30.16% (using weights with aggregate information from all types of bribery) in health care, from 17.40% to 37.19% in education, and from 8.76% to 20.67% in local government. Bribery in public security and law stayed at about the same level before and after weighting, from 24.99% to 24.40%. The most alarming is the overall proportion of grassroots bribery. It was at 47.65% after weighting! *Almost one out of every two visitors to these four public sectors practiced grassroots bribery.*³⁸

Next, in the 2018 GBB Survey, the respondents were also asked about their tolerance of bribery and whether bribery was safe. Although the level of bribery tolerance in the sample was about 35 out of 100, the feeling that bribery was safe was around 60 out of 100 ([Figure 1](#)). In other words, while approval of bribery was relatively low, perhaps due to the deterrence effect of the anti-corruption campaign, the safety level of practicing bribery was reasonably high. That feeling of safety may serve to encourage grassroots bribery.

When the respondents were asked about their perception of corruption in the central, county/city, and local governments, they reported high levels of perceived corruption. The perceived corruption degrees were 34 out of 100 for the central government, 52 for county and city, and 57 for the village and residential committee. The combined index of perceived government corruption is 50 out of 100 ([Figure 1](#)).

In summary, the findings in this section suggest that while the Chinese survey respondents were relatively satisfied with the four public service sectors, those who had contact with these sectors significantly underreported their bribery behavior. Hypothesis 1 is supported. Even though the tolerance of bribery was relatively low, the risk of practicing bribery was also low, and the level of perceived government corruption was high, particularly at the local level. The most important finding in this section is the relatively accurate estimation of bribery behavior. By correcting the social desirability effect, this study hopes to establish a benchmark of grassroots bribery that future researchers can use to study the trend of corruption when external conditions change.



Figure 1. Grassroots bribery in China (weighted %). Source: 2018 China Grassroots Bribery Behavior Survey.

³⁸One caution of the about 48% bribery engagement is that this is only an average number that does not reflect the difference between different subunits. For example, in health care, outpatient visits may not require bribery but inpatient care, particularly surgeries, may see much higher percentage of bribery.

Sources of Grassroots Bribery

After detecting the extent of grassroots bribery, it is necessary to explore its sources further to better understand why it is widespread. As discussed above, four such sources will be studied in this section, namely, 1) institutions and their related policies (residence type, work unit type, and city/county administrative level), 2) political mobilization (TV news and social media), 3) culture (interpersonal trust), 4) economic development (family income, education, retrospective, and prospective family economic conditions), while controlling for biological factors (gender and age).

We use multilevel modelling allowing intercept varying at the county level, in order to fully account for the variance of the source variables at both individual and group levels.³⁹ Moreover, multiple imputations are used to deal with the missing value problem across the variables.⁴⁰

To ensure the above sources play independent roles, certain factors should be controlled, such as the perceived safety of bribery and the frequency of public service visits. When these two variables are included in the regression equations, perceived safety and frequency of visits encouraged bribery (Figure 2). The respondents tended to practice more bribery when they felt they would not get caught and when they used the services more frequently. These are all expected.

To further detect the impact of the anti-corruption campaign on bribery, the regression model also includes such a variable. This anti-corruption variable was generated from the China Corruption Investigations Dataset (CCID), which contains the information of every corruption investigation during Xi's anti-corruption campaign in an online database collected by Tencent—the largest Internet company in China.⁴¹ The dataset includes information about the case locations and the number of corruption cases in each location. Such information was used to create a new anti-corruption variable at the county level. When this variable is included in the regression analysis, it does not seem to significantly reduce the respondents' bribery practice in the 2018 GBB Survey (Figure 2). Unless there is a better measurement of the anticorruption effect, this preliminary finding again suggests that the anticorruption campaign may have deterred people from openly admitting bribery, but it played little role in stopping people from practicing it under the table.

In the regression analysis in Figure 2, as expected, migrants stood out as the most active and practiced more bribery than both urban and rural residents. As mentioned above, migrants have the advantage of living in the urban 'institution' but are not bound by such a system. With more disposable income than rural residents but less welfare benefits as enjoyed by the urban residents, migrants are the natural group for grassroots bribery behavior.

Work unit type showed an interesting impact. Non-profit organizations stood out as the most bribery-inductive type among others. Non-profit units in China do not mean nongovernment units. These organizations are highly regulated by the state, but perhaps less monitored than party-state organizations. Employees in the non-profit units had the necessary organizational network and resources to exchange favors with other public sector employees, while feeling less risk of getting caught than those in party-state organizations (Figure 2).

Equally interesting in Figure 2 is the city type. The most active bribers were not the top or bottom tiers, but those in the middle. Bribery behaviors were the most noticeable in provincial capital cities, and to a lesser extent, prefecture cities. Similar to the reasoning about residence type and work unit type, Tier 2 and Tier 3 cities had the necessary organizational resources than their lower-level cities

³⁹Frederick Solt, 'Economic Inequality and Democratic Political Engagement: Economic Inequality and Political Engagement' (2008) 52 *American Journal of Political Science* 48; Marco R Steenbergen and Bradford S Jones, 'Modeling Multilevel Data Structures' [2002] *American Journal of Political Science* 218.

⁴⁰We combined the multiple imputations according to Rubin's rule and estimated the Monte Carlo errors through a jackknife procedure. See Donald B Rubin, *Multiple Imputation for Nonresponse in Surveys* (Wiley 1987); Ian R White, Patrick Royston and Angela M Wood, 'Multiple Imputation Using Chained Equations: Issues and Guidance for Practice' (2011) 30 *Statistics in Medicine* 377.

⁴¹Yuhua Wang and Bruce Dickson, 'How Corruption Investigations Undermine Regime Support: Evidence from China' (Social Science Research Network 2020) SSRN Scholarly Paper ID 3086286.

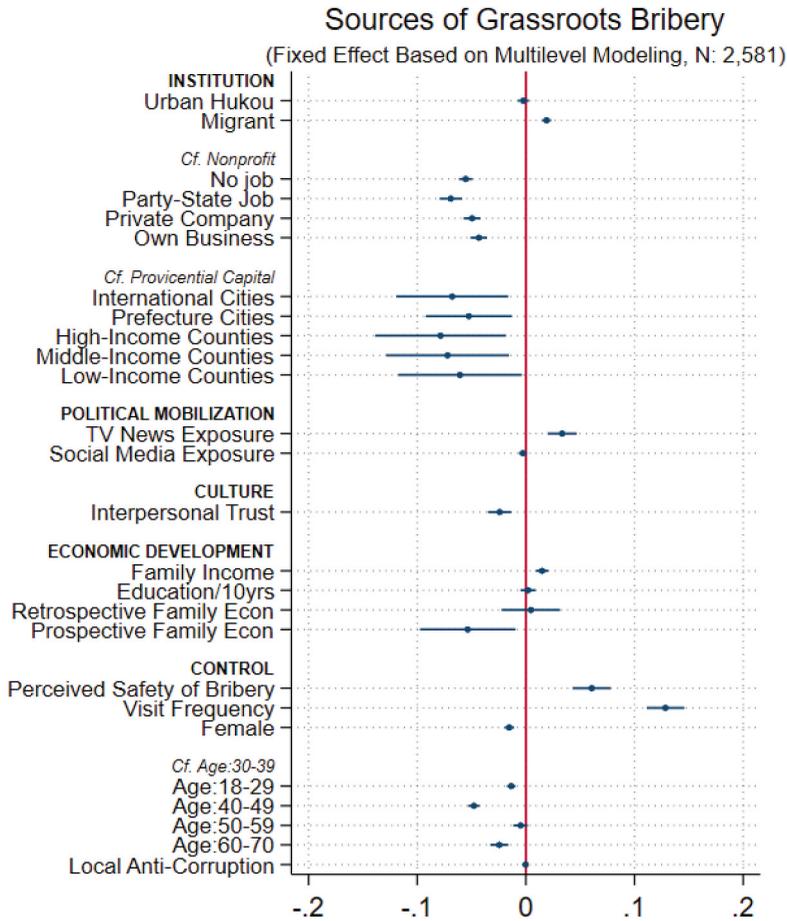


Figure 2. Sources of grassroots bribery (fixed effects based on multilevel modeling, N: 2,581). Notes: Also see Appendix 2 for the summary statistics of the variables in the figure and Appendix 4 for the full models. Source: 2018 China Grassroots Bribery Behavior Survey.

and perhaps were less monitored than Tier 1 cities when committing bribery. Future studies should explore this intriguing finding and collect more data at each stratum to reduce the uncertainty in the estimation and further investigate the underlying mechanisms causing such stratified variance.

The above findings provide partial support for hypothesis 2 about observing less grassroots bribery among those who are close to the bureaucratic center. They also point to another important source of bribery, namely, institutional resources that people can use in exchange for better public services.

In the same regression analysis, both TV news and social media news were likely to encourage bribery when examined alone (Model 2 in Appendix 4). In the multivariate analysis when other factors are considered, social media became a negative and insignificant factor in practicing bribery, but TV news continued to encourage bribery (Figure 2 and Model 6, Appendix 4). The users of the less controlled social media were unlikely to practice bribery was perhaps because they were exposed to less censored criticism of corruption and under more public pressure against bribery.

The role of TV news in encouraging grassroots bribery is even more puzzling. Watching TV news about busted corrupt officials should deter bribery. One reason TV news encourage bribery may be the detachment of the anti-corruption campaign from the public. The daily evening CCTV network news always presents a rosy image of the CCP's determination in cracking down corruption.

Nevertheless, it does so by reporting the punishment of the tigers and flies. The average viewer of the TV news may feel that the anti-corruption campaign is far away from the ordinary citizens. An even more provocative reason is that media coverage of so many corruption cases provides a rare opportunity for the average viewer to see how corrupt officials operate and thus gain new knowledge in their own bribery practice. This is similar to other studies that find a negative impact in government support when the government exposes corruption cases⁴² and how uncensored media coverage of Western societies leads Chinese viewers to negative conclusions about Western societies.⁴³ In this process, the side effect of political mobilization (information and knowledge) overtakes the intended effect of discouraging corruption. No matter what the reasons may be, China's tightly controlled TV media as a tool of political mobilization, while exposing an unprecedented number of corruption cases and the institutional loopholes through which these cases take place, seems to serve the opposite role and encourage further bribery at the grassroots level. As far as TV news is concerned, Hypothesis 3 about the impact of anti-corruption political mobilization is not supported.

In the 2018 GBB Survey, the respondents were asked 'if most people can be trusted.' This question can be used as a measure of the social network because 'most people' in the Chinese cultural context usually include neighbors, friends, coworkers, schoolmates and others in one's community, while in the West 'most people' are more likely to refer to strangers.⁴⁴ It is expected that those who think most people can be trusted in China are more likely to have developed a reliable social network and, accordingly, practice bribery than those who do not think most people can be trusted.

Interestingly, when the interpersonal trust variable is included in the regression analysis to test its effect on bribery, it produced a statistically significant negative coefficient—those who thought most people could be trusted were less likely to be bribers (Figure 2 and Models 3 and 6, Appendix 4). The reason could be that people did not feel the need to provide gifts or favors because they had enough trust in the service providers in their communities to fulfill their responsibilities without additional payment. In this context, interpersonal trust as a cultural factor somewhat unexpectedly discourages bribery, and such a finding does not support Hypothesis 4. It should be cautioned that interpersonal trust is only an indirect measure of one's social network. To further detect the cultural effect on grassroots bribery, it is necessary to rely on more direct measures of one's network of social ties or *guanxi*.

In the same regression analysis, income was expectedly linked to more bribery. The higher the family income was, the more one would practice bribery. Also, while the effect of the retrospective view of the family economic conditions is inconclusive, those with the more positive prospect of family economic conditions showed negative effects on bribery engagement (Figure 2 and Models 4 and 6, Appendix 4). When examined alone, education encouraged bribery behaviors (Model 4, Appendix 4), but it had an inconclusive effect on bribery in the final multivariate analysis (Figure 2 and Model 6, Appendix 4). In short, economic growth generated mixed results on grassroots bribery, and the findings support its long-term negative effect (Hypothesis 5.1) and short-term positive effect (Hypothesis 5.2).

In Figure 2 and Appendix 4, women were significantly different from men (Figure 2 and Models 5 and 6, Appendix 4). Although probably interacting more with public services, they appeared to engage in less bribery than men.

Interestingly, age produced a nonlinear and bimodal effect on grassroots bribery. The 30–39 and 50–59 groups stood out as the most likely ages for bribery compared to the 18–29, 40–49, and 60+ groups (Figure 2 and Models 5 and 6, Appendix 4). The 30–39 group is the most active in career development and is in their early stage of marriage and family life. This group may have more interaction with public services

⁴²Jiang and Yang (n 7); Wang and Dickson (n 41).

⁴³Haifeng Huang, 'International Knowledge and Domestic Evaluations in a Changing Society: The Case of China' (2015) 109 *American Political Science Review* 613.

⁴⁴See, for example, the different meaning of trust in China and the Netherlands in the 6th Wave World Values Survey, and Wenfang Tang, *Populist Authoritarianism* (Oxford University Press 2016).

and more opportunities for bribery. The 50–59 group faces the last chance to improve their career and life, given the mandatory retirement ages of 60 for men and 55 for women. This age group may have acquired more social and organizational resources that further encouraged bribery.

In sum, this section aims to identify the likely sources of bribery in China. Among the sources discussed, namely, institutional variables (household type, work unit type, and administrative grades), political mobilization (TV and social media), culture (interpersonal trust), economic development (education, family income, and improvement of past and future family economic conditions), and biological factors (gender and age), we find 1) that the most noticeable source of bribery seems to be rooted in the bureaucratic structure, 2) that state media exposure of corruption unintentionally created the opposite effect of encouraging bribery, 3) that the cultural variable of interpersonal trust unexpectedly decreased bribery, 4) that while economic development produced more bribery practices in the short term, it tends to discourage bribery in the long run, and finally, 5) more bribery among men and the 30–39 and the 50–59 age groups.

Grassroots bribery is more likely to be observed among those with more disposable income but less public service access, organizations, and locations with a relatively high degree of institutional resources but less administrative supervision, such as migrants, Tier 2 and Tier 3 cities, and in non-profit organizations. The top two sources of grassroots bribery judged by their combined R^2 values in Appendix 4, seem to come from institutional arrangement and economic development.⁴⁵ All these findings stay robust when controlling for the effect of anti-corruption campaign.

Summary and Discussion

This study attempts to answer two questions: how common is grassroots bribery? What are its sources? While the overall satisfaction with public services was relatively high, other findings in this study show that people tend to hide their grassroots bribery in their everyday interaction with the four public service sectors—education, health care, local government officials, and public security and law. With embedded list experiments and a new statistical weighting technique, this study finds a significantly higher level of grassroots bribery behavior than the survey respondents would openly admit. This level of grassroots bribery can serve as a point of reference for future studies.

Regarding the second question about the contributing factors of grassroots bribery, in addition to disposable income as a secondary reason, the primary source of bribery seems to be rooted in the institutional arrangements. Those who possess organizational resources but not under the direct watch of the central government and the migrants who have more disposable income but enjoy fewer urban subsidies were the most active in practicing bribery.

Due to space limitation, we cannot show the details of a separate analysis of grassroots bribery's effect on public political support. In that analysis, grassroots bribery was found to have a consistently negative impact on people's trust in the government, no matter how the latter was measured as satisfaction with the public service sectors, perceived cleanness of the government, public satisfaction with various public policies, trust in government and in public institutions, support for China's political system, or feeling of political efficacy. Even in some economics literature, bribery was found to play a positive role in economic development, it clearly damages regime support.

The intensified and highly publicized anti-corruption campaign in China in the past decade may be effective in knocking down the corrupt officials and deterring those in the party-state organizations and large cities. However, the findings in this study show that to achieve further success, China still needs to face the challenge of curbing the supply side of corruption among those in non-profit organizations, living in medium-size cities and among the migrants and those simply with more cash.

⁴⁵We estimated the R^2 based on the method of Tom AB Snijders and Roel J Bosker, 'Modeled Variance in Two-Level Models' (1994) 22 *Sociological Methods & Research* 342. The statistics were calculated based on the models before the multiple imputations as the methods were designed. We compared the results before and after the imputations. There was no substantial difference.

This finding echoes Sun and Yuan's (2017)'s observations that the anti-corruption campaign is more effective at the national level but less so at corruption related to people's everyday lives.⁴⁶ One learns ingenious ways of practicing bribery in China through casual conversations with Chinese citizens, such as indirect payment for the officials' family members and online orders delivered where the sender's information cannot be traced. The Chinese media have been drumming up the Party's campaign by exposing the details of corruption cases, but such a tactic can also help the viewers to learn more about the loopholes and thus, unintentionally encourages further grassroots bribery. This possibility seems to be supported by the best available evidence, as suggested by the insignificant effect of local anti-corruption crackdowns (see [Figure 2](#)). This study points to the need to clean up bribery behavior at the grassroots level. The corrupt tigers and flies will finally disappear when their supply line is cut off.

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Appendix A. 2018 China Grassroots Bribery Behavior Survey

The empirical evidence of this study is drawn from the Grassroots Bribery Behavior (GBB) Survey conducted by the Research Center for Contemporary China in the fall of 2018. A national sample of 2,581 respondents was drawn by first defining six strata of administrative units in the country, including 1) the largest international cities (1), 2) provincial capital cities (2), 3) prefecture cities (3), 4) high-income counties and county-level cities (or), 5) middle income counties and county-level cities, and 6) low-income counties and county-level cities. Second, 50 primary sampling units or PSUs (counties, county-level cities, and urban districts) were randomly selected from the six strata.⁴⁷ The number of PSUs from each stratum was determined by the proportion of that stratum's population in the national population. For example, if a stratum included 20% of the national population, 10 PSUs (50x.20) were randomly selected from that stratum. In each PSU, two urban districts and rural townships were randomly selected as secondary sampling units (SSU). In each SSU, two residential geographic squares

⁴⁶Yan Sun and Baichuan Yuan, 'Does Xi Jinping's Anticorruption Campaign Improve Regime Legitimacy?' (2017) 2 *Modern China Studies* 14.

⁴⁷The 50 PSU are distributed in 25 of the 31 provinces and provincial level cities. The 6 provinces not included are Hainan, Xinjiang, Tibet, Hunan, Jilin and Jiangxi.

(about 90 mx90m) were randomly selected on the map. Sampling staffs were sent to the field who located each square with a GPS device and recorded all the addresses in the square. In the final stage, households in each square were randomly selected, and family members from 18 to 70 were randomly interviewed with the Kish table method.⁴⁸ This process assures that the final sample is representative of the national population.

The questionnaire of the 2018 GBB Survey was designed to detect the respondents' grassroots bribery behavior. We first asked respondents if they had any interaction with the employees in four public service sectors in the past two years, including education, health care, local government bureaus, and public security and law. If the respondents answered yes, they were further asked whether they presented any significant gift (excluding flowers, cards, and other small gifts), cash (red envelop stuffed with cash), or provided any help to the service providers, and whether they were satisfied with the service. The questionnaire also included many questions about the respondents' political attitudes. These questions will allow us to examine the relationship between grassroots bribery behavior and its impact on regime support and legitimacy. One warning is that our survey may still underestimate the actual frequency of grassroots bribery. It only covered the interaction with government employees, but not with nongovernment employees, such as friends, colleagues, neighbours, etc., and it only included four sectors but missed other branches of the government.

Appendix B. Summary statistics for all variables except public service satisfaction

Variable	Mean	Std. Dev.	Obs	Min	Max
gbb	0.016	0.076	2,571	0	1
gbbsafe	0.563	0.338	2,144	0	1
saw4	0.238	0.243	2,520	0	1
female	0.486	0.500	2,581	0	1
agegrp					
18–29	0.264	0.441	2,581	0	1
40–49	0.179	0.383	2,581	0	1
50–59	0.190	0.392	2,581	0	1
60–70	0.197	0.398	2,581	0	1
tv	0.609	0.394	2,184	0	1
internet	0.575	0.425	2,200	0	1
socmedia	0.731	0.444	2,581	0	1
trust	0.625	0.484	2,352	0	1
edyr10	1.013	0.383	2,522	0.3	2.2
faminc	3.095	0.508	2,473	1	5
fampast	0.629	0.249	2,492	0	1
famfuture	0.715	0.245	2,027	0	1
urbanhukou	0.428	0.495	2,542	0	1
migrant	0.241	0.428	2,566	0	1
worknunit	0.461	0.499	2,581	0	1
workpub	0.072	0.258	2,581	0	1
workprv	0.217	0.412	2,581	0	1
workngo	0.018	0.134	2,581	0	1
workown	0.232	0.422	2,581	0	1
strata1	0.121	0.326	2,581	0	1
strata2	0.120	0.326	2,581	0	1
strata3	0.520	0.500	2,581	0	1
strata4	0.080	0.271	2,581	0	1
strata5	0.079	0.270	2,581	0	1
strata6	0.080	0.272	2,581	0	1
ac_county	4.344	5.252	2,581	0	29

Note: Edyr10 is measured by the ratio of years people get educated divided by 10. Source: 2018 China Grassroots Bribery Behavior Survey

⁴⁸See Tom Piazza, 'Respondent selection for CATI/CAPI' (*Srcweb.Berkeley*, 2005) <<http://srcweb.berkeley.edu/res/rsel.html>> accessed 25 February 2017 for an example of the Kish procedure.

Appendix C. Construction of the Weight Variable

We were able to construct the weight variable based on the results from the list experiment. First, for each respondent in our sample, we used a battery of indicators (I_i^{type} , $type \in \{med, edu, loc, law\}$) to identify whether s/he once conducted each type of grassroots bribery. If, for example, respondent i reported bribery in health care and education but not in local government or police/law, then,

$$\begin{cases} I_i^{med} = 1; \\ I_i^{edu} = 1; \\ I_i^{loc} = 0; \\ I_i^{law} = 0. \end{cases}$$

We also counted how many types of bribery a respondent was engaged in total (t). In the above case, for respondent i , $t_i = 2$. Then, we calculated the ratio (O^{type}) between the respondents' genuine engagement and their openly reported engagement, using the information from both the list experiment and direct questions in the survey, i.e.

$$O^{type} = \frac{Prob_{list}^{type}}{Prob_{direct}^{type}},$$

where $Prob_{list}^{type}$ is the proportion engaged in a particular type of IEB according to the results of the list experiment (Row 2, Table 2), $Prob_{direct}^{type}$ is the directly reported proportion of the type of IEB (Row 1, Table 2). For instance, $O^{med} = \frac{Prob_{list}^{med}}{Prob_{direct}^{med}} = \frac{18.36}{7.12} \approx 2.58$. This ratio denotes that, if there were 100 respondents reporting affirmatively in health-care related bribery in the survey, the true number should be at least 258 people in real life. The actual size should be even larger, since we addressed people's misreporting potential of only one type of bribery in this step. In the next step, we built a weight that could take multiple types of grassroots bribery into account and distribute the group estimation to the individual level. The weight was created based on the type of bribery a respondent reported (I_i^{type}) and the size of people this respondent potentially represented (O^{type}). Given that a respondent might report more than one type of bribery, we adjusted the weight with the type count (t). Following the example illustrated above, the weight given to respondent i (W_i) is⁴⁹

$$\begin{aligned} W_i &= \sum I_i^{type} \cdot \frac{O^{type}}{t_i} = I_i^{med} \cdot \frac{O^{med}}{t_i} + I_i^{Edu} \cdot \frac{O^{edu}}{t_i} + I_i^{Type} \cdot \frac{O^{loc}}{t_i} + I_i^{Type} \cdot \frac{O^{law}}{t_i} \\ &= 1 \cdot \frac{18.36/7.12}{2} + 1 \cdot \frac{17.40/8.62}{2} + 0 \cdot \frac{8.76/6.77}{2} + 0 \cdot \frac{24.99/6.44}{2} \approx 2.30. \end{aligned}$$

Appendix D. Sources of grassroots bribery

	DV: Grassroot Bribery					
	(1)	(2)	(3)	(4)	(5)	(6)
Urban (vs. Rural) Hukou	0.008***					-0.002
Migrant	0.017***					0.019***
<i>Nonprofit (comparison)</i>						
No job	-0.063***					-0.055***
Party-state job	-0.059***					-0.069***
Private company	-0.044***					-0.049***
Own business	-0.040***					-0.043***
<i>Provincial capitals (comparison)</i>						
International cities	-0.078***					-0.068**

(Continued)

⁴⁹Note that following the established literature, we treat social desirability as a single latent variable. Social desirability leads the respondents to underreport or completely hide their engagement in bribery behaviors. In turn, misreporting in all types of bribery reflects the influence of this latent variable. Given that there is no further information about which type of bribery is misreported more than others, we assigned equal adjustment to the odds of misreporting each type with t_i to account for the situation that respondents reported multiple types.:

(Continued).

	DV: Grassroot Bribery					
	(1)	(2)	(3)	(4)	(5)	(6)
Prefecture cities	-0.058***					-0.052***
Hi inc county/cities	-0.086***					-0.078**
Mid inc counties/cities	-0.068**					-0.072**
Lo inc counties/cities	-0.070**					-0.061**
TV		0.037***				0.033***
Social Media		0.017***				-0.003
Interpersonal Trust			-0.026***			-0.024***
Family Income				0.022***		0.015***
Education/10 yrs				0.023***		0.002
Retrospective Fam Eco				-0.003		0.005
Prospective Fam Eco				-0.053**		-0.054**
Perceived Bribery Safety					0.065***	0.061***
Visit Frequency					0.133***	0.129***
Female					-0.023***	-0.015***
2.agegrp30-39 (comparison)					0.000	
1.agegrp18-29					-0.015***	-0.013***
3.agegrp40-49					-0.047***	-0.048***
4.agegrp50-59					-0.004	-0.005
5.agegrp60-70					-0.027***	-0.024***
Local Anti-Corruption					-0.001	-0.000
R ² (Individual)	0.046	0.013	0.016	0.035	0.122	0.242
R ² (Group)	0.207	-0.006	0.045	0.104	0.105	0.386

Notes: The table presented the fixed effects based on multilevel modelling and multiple imputations. Group (PSU) = 50 and N = 2581 for all the models after multiple imputations of missing values. See Appendix 1 for summary statistics of the variables in the table. Source: 2018 China Grassroots Bribery Behavior Survey.