Disguised Corruption: Evidence from Consumer Credit in China*

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November 2018

ABSTRACT

Using a comprehensive sample of credit card data from a leading Chinese bank, we find that government bureaucrats receive 16% higher credit lines than non-bureaucrats with similar income and demographics, but their accounts experience a significantly higher likelihood of delinquency and debt forgiveness. These patterns are concentrated among bureaucrats with greater power and located in more "corrupt" cities. Areas associated with greater credit provision to bureaucrats open more branches and receive more deposits from the local government. Using staggered crackdowns of provincial-level political officials as exogenous shocks to the risk of corruption investigation, we find that the new credit cards originated to bureaucrats do not enjoy a credit line premium, and bureaucrats' delinquency and reinstatement rates are no higher than those of non-bureaucrats in the treated provinces during the post-crackdown period. We use our estimates to infer the size of corruption and explore the impact on aggregate economic outcomes.

Keywords: Corruption, Credit Cards, Household Finance, Government, Bureaucrats, Credit, Debt, Banking, Political Connections, China

JEL Classification Codes: D73, P26

*We benefited from the comments of Patrick Bolton, Emily Breza, Jennifer Carpenter, Souphala Chomsisengphet, Henrik Cronqvist, Mara Faccio, Hanming Fang, Ray Fisman, David Laibson, Florencio Lòpez de Silanes, Alexander Ljungqvist, Ivan Png, Nagpurnanand Prabhala, Tarun Ramadorai, David Reeb, Paul Tetlock, Shang-Jin Wei, Bernard Yeung, seminar and conference participants at Columbia University, NYU Stern, Georgetown University, Australian National University, Goethe University, Chinese University of Hong Kong, Singapore Management University, National University of Singapore, Southwestern University of Economics and Finance, 2015 Asian Bureau of Finance and Economics Research meeting, 2015 RFS Emerging Market Symposium, and 2015 CEIBS finance conference. We thank Haitian Lu for kindly sharing data on the corruption crackdown events in China.

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1. Introduction

We document a disguised form of corruption—through the banking channel—by using a unique, representative sample of consumer credit card data in China. Credit cards are an increasingly important means of financial transactions in China, as evidenced by the fact that credit card spending has accounted for 50% of aggregate retail consumption in recent years. This makes credit cards a viable and potentially important vehicle for corruption. Support from local governments is crucial to banking operations, such as opening new branches and attracting local government deposits. Thus, offering implicit bribes to government employees, such as by extending over-generous credit lines and writing off unpaid balances, in return for such support is less risky for banks due to the lower probability of corruption investigation.

We establish the presence of such a channel and quantify the size of corruption through disguised credit to Chinese bureaucrats using a representative sample of credit cardholders from a leading Chinese commercial bank. The bank has a credit card market share of more than 10% in China, and our dataset contains card origination information and monthly statement for more than 185,000 individuals from all 31 provinces and municipalities in main China from January 2003 to December 2005. For each individual cardholder, we also observe a rich array of cardholders' demographics including age, gender, marital status, income, education, and occupation (e.g., bureaucrat status).

We start our empirical analysis by establishing that Chinese bureaucrats in our sample receive 16% higher (3,398 RMB) credit lines compared to non-bureaucrats with similar income and demographics. We conduct several tests that assess credit card performance to disentangle the "implicit bribe" explanation for the bureaucrat credit premium from one based on bureaucrats' higher creditworthiness. Rather than bureaucrat credit card accounts being less risky, as would be needed to justify a credit premium, we find that these accounts are 15% more likely to become delinquent. These accounts also experience a shorter time to delinquency than those of non-bureaucrats. Interestingly, conditional on delinquency, such accounts are also more likely to experience debt forgiveness ("reinstatement") by the bank. Collectively, this evidence is consistent with our interpretation that banks offer generous credit lines to bureaucrats as implicit "bribes".

If the objective of banks is to bribe bureaucrats to garner favors in return, they are more likely to do so when the expected benefit is higher or when the cost of such behavior is lower. We find evidence that strongly supports this conjecture in the cross-section. The bureaucrats' credit line premium, their delinquent probability, as well as the reinstatement likelihood, are greater among bureaucrats with a higher hierarchical rank, especially those who are not near retirement age. Geographically, such patterns on credit allocation and performance outcomes are more prominent in cities that can be ex ante classified as being more corrupt.

Next, as evidence of "quid pro quo," we find that cities (provinces) with more credit lines to bureaucrats are associated with more new branches (higher government deposits), compared to other areas associated with lower bureaucrat credit line premiums. The positive association is significantly stronger in regions where the bank serves a greater proportion of local bureaucrats. On the other hand, non-bureaucrat consumers living in cities with higher bureaucrat credit line

premiums are associated with significantly lower credit lines relative to similar non-bureaucrat consumers in regions with a lower bureaucrat credit line premium, even though they are comparable in their creditworthiness both ex ante and ex post.

To further differentiate the implicit bribes explanation from one that is driven by bureaucrats' true creditworthiness, we use a set of staggered corruption crackdowns of provincial-level political officers that occurred in China between 2003 and 2005. To the extent that these events constitute exogenous shocks to the risk of corruption investigation for the (non-caught) bureaucrats in the affected provinces, we expect a reduction in implicit bribes in those provinces. We find that the bank extends a much smaller credit line for the new credit cards issued to bureaucrats in the affected provinces after the crackdowns. In addition, the credit line issued to bureaucrats during the one-year post-crackdown period is no different from that for the new credit cards issued to comparable non-bureaucrats. Moreover, bureaucrats' credit card accounts are no more likely to be delinquent or reinstated than non-bureaucrats in the affected provinces during the one-year post-crackdown period. Finally, the positive association between new branch opening (or government deposits) and the bureaucrat credit line premium diminishes in the affected provinces after the crackdowns.

We conduct additional robustness tests to rule out alternative explanations, including underestimation of bureaucrat income, unobservable determinants of credit allocation, and bureaucrats' stronger banking relationship or greater financial sophistication. We also confirm that our delinquency results not only hold on average but also apply to "marginal bureaucrats." Moreover, we provide external validation with consistent results both in the (before-matching) full credit card sample, as well as in the mortgage and car loan performance data from the same bank. To summarize, our evidence strongly supports the hypothesis that banks offer excess credit lines to bureaucrats as implicit bribes. While each of the results may be potentially consistent with another explanation, it is difficult to identify an alternative interpretation that can reconcile with all the evidence we provide.

Given the widespread corruption in China, the corruption channel we document is one of the many forms that take place in different sectors. We provide an estimate of the benefits transferred to bureaucrats through higher credit access and higher defaults. To the extent that non-bureaucrats suffer from such corruption through credit under-provision, we find evidence consistent with a negative externality to small business creation. These back-of-the-envelope numbers are quite coarse but do highlight the importance of the "disguised" form of corruption in the banking sector that we discuss.

Our work is most directly related to the literature on corruption. Olken and Pande (2012) provide a complete review of corruption in developing countries, including the definition, determinants, and consequences. Due to its secretive and illicit nature, measuring corruption often entails deductive reasoning based on indirect evidence except for a few notable exceptions (e.g., Mcmillan and Zoido, 2004; Fisman and Miguel,2007; Olken and Barron, 2009; Banerjee, Hanna, and Mullainathan, 2012; and Sequeira and Djankov, 2014). For example, Reinikka and Svennson (2004), Fisman and Wei (2004), and Olken (2007) use the discrepancy in reported statistics to infer

the scope of corruption. Cai, Fang, and Xu (2011) correlate the extent of corruption with corporate entertainment and travel costs in China. Fang, Gu and Zhou (2014) argue that the price discounts received by bureaucrat buyers in the Chinese housing market are a manifestation of corruption. Deng, Wei, and Wu (2017) propose a way to systematically estimate the unofficial income based on house purchase information in China. We contribute to this literature by uncovering a novel form of corruption in a representative sample of bureaucrats and quantifying its economy-wide impact.

Our work also contributes to the literature on the benefits associated with political connections. Fisman (2001) uses rumors about former Indonesian President Suharto's health and stock price changes of listed firms with varying political exposure to infer the value of political connections. Similarly, cross-country studies such as Faccio (2006) and Faccio, Masulis, McConnell (2006) show that firms with political connections enjoy higher market valuation and are more likely to get bailed out by the government. Dinc (2005) documents the banks in many countries exert significant political influence through their lending decisions. La Porta, Lòpez-de-Silanes, and Zamarripa (2003) and Khwaja and Mian (2005), and Agarwal, Morais, Ruiz, and Zhang (2016) study a channel like ours and show that loans to the politically favored or related firms exhibit significantly higher default rates. Our study provides new evidence on how banks acquire (or strengthen) political connections through offering implicit bribes.

Finally, our paper is related to the literature on the resource misallocation and social cost implications of corruption. The distortive consequences of corruption include disruptions in economic growth (Murphy, Shleifer, and Vishny, 1993; Shleifer and Vishny, 1993), regional favoritism in resource distributions (Levitt and Snyder, 1997; Holder and Raschky, 2014), misallocation of drivers' licenses (Bertrand, Djankov, Hanna, and Mullainathan 2007), poor public good provisions (Campante and Do, 2014), privatization (Fisman and Wang, 2014), and workplace fatalities (Fisman and Wang, 2015) and loan modification/foreclosure (Agarwal, Amromin, Ben-David, and Dinc, 2018; Agarwal, Gerardi, and Yao, 2018). We add to the literature by identifying a new social cost in the form of credit under-provision among the non-favored consumers in the more corrupt regions in China. Our results highlight the role of finance, financial intermediaries in our setting, in economically and socially inefficient allocation of resources (Zingales, 2015).

This rest of the paper is organized as follows. In Section 2, we describe the institutional background of the Chinese credit card market and the connection between banks and bureaucrats. In Section 3, we describe the methodology and data. We provide the results in Section 4. We discuss the economic implications in Section 5. Concluding remarks are in Section 6.

2. Institutional background

2.1 China's credit card market

In March 1985, Bank of China issued the first credit card in China. This event marked the beginning of the Chinese credit card market. With China becoming a member of the World Trade Organization in 2001 and the financial market opening to foreign institutions, Chinese commercial

banks expanded to seize a portion of the growing credit card market.

According to the statistics published by the People's Bank of China in May 2018, the total number of credit cards issued by commercial banks reached 612 million and the total credit line reached 13.14 trillion RMB. The average usage of the granted credit card limit is 44.17%. Credit cards have become the primary method of household consumption in China (Gu, He, and Qian, 2018; Agarwal, et al., 2018). Within the credit card market, China's five state-owned commercial banks, the Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Agricultural Bank of China (ABC), Bank of China (BOC), and Communication Bank of China (CBC), have a consistently dominant market share of more than 50%.

The credit card application process in China is similar to other countries. To qualify for a credit card, applicants are required to fill in an application with basic personal information and submit certification including personal identification, an address certificate, occupation and proof of income. The bank uses this information to make credit card approval decisions, as well as to determine the credit line amount. The interest rate on credit cards is fixed across card types and banks in China.

Up until 2006, there was no information sharing system across banks on individual credit history (except in Shanghai, which established its own credit record sharing system in 2001). Specifically, when an individual consumer seeks credit through a mortgage or credit card application, the bank can only view the applicant's credit history within that specific bank. As a result, consumer credit approval decisions are delegated at the bank branch level. Moreover, each individual bank branch also exercises discretion in the subsequent credit management. In the case of borrower delinquency, a bank branch has the option of whether and when to pursue legal action against the borrower. If it decides not to sue the borrower, the main impact on the borrower is a lower internal credit score at this bank.

2.2 Banking and local government bureaucrats

Local governments play a vital role in the operation of bank branches. First, an application to open a new bank branch requires the permission and support from the local government. During the process, the bank has to go through several local government agencies for approval regarding site location, tax and environmental issues. Second, local governments are important sources of deposits for local banks. For example, deposits from all levels of the local government constitute a major part of a bank's deposits. This is likely important for the branch manager's performance and promotion or during a shortage of liquidity. Third, the state-owned enterprises (SOEs) that are under the supervision of local governments usually serve as large clients of the bank. Even for private firms, the contractual relationship with the bank is typically mediated by local governments through events like the bank and enterprise forums called "yin qi qia tan hui." Finally, the government in China, especially at the local level, exploits its power to support connected businesses to address its various political and personal agendas (Bai, Hsieh, and Song, 2014).

3. Data and descriptive statistics

3.1 Data

We obtain data from a leading commercial bank in China. This bank is among the market leaders in China based on the number of products and services. Moreover, the bank is ranked among the top in the credit card industry, with a market share of over 10% as of 2012. The bank has an extensive branch network that covers all 31 provinces and direct-controlled municipalities in mainland China.

Our sample is a random, representative sample of the bank's customer accounts, containing consumer credit card data of more than 185,000 individuals spanning 2003:Q1 to 2005:Q4. For each individual cardholder, we observe the total credit line granted by this bank, monthly payment status of individual credit cards, and the most recent monthly credit card statement, which includes the balance, credit card payment, and outstanding debt. The dataset also contains detailed demographic information, including age, gender, marital status, income, education, occupation, region, and address at the time of card origination. Using this information, we are able to identify the nature of the cardholder's employer; thus, this enables us to identify the government bureaucrats. We define "bureaucrats" as those working in an administrative agency of the government. This definition excludes individuals who belong to the so-called "Institutional Organization" or "shiye danwei"; these employees are not counted as "civil servants" and have different compensation schemes and less power than bureaucrats.

Bureaucrats account for around 7% of our full sample. This is significantly higher than the unconditional average of 0.86% bureaucrats in the total population of China between 1989 and 2006 (see Fang, Gu, and Zhou, 2014). Notably, we are also able to observe cardholders' seniority at their job, allowing us to assess the differential effect associated with the hierarchical level of bureaucrats.

3.2 Descriptive statistics

Table 1 presents summary statistics of demographics and credit variables for the treatment group (bureaucrats) and the control group (non-bureaucrats). Panel A shows the demographics of the bureaucrats and non-bureaucrats for the full sample. On average, bureaucrats have fewer credit cards and a shorter banking history with the bank relative to the non-bureaucrats. Bureaucrats receive an average credit line of 26,498 RMB, which is 16% higher than the average credit line of 22,869 RMB for the non-bureaucrats. Interestingly, bureaucrats are also associated with a higher card delinquency rate and a shorter time until delinquency conditional on being delinquent.

We also have information on whether and when the delinquent credit card is reinstated. After delinquency, a card can be reinstated when the borrower pays off the debt, or if the bank decides to forgive the debt. Although our data do not provide the exact source of debt relief for card reinstatement, the combined information of reinstatement probability and time to reinstatement produces a strong signal of debt forgiveness. This is because consumers with delinquent credit cards, in the absence of bank favorable treatment, are motivated to pay off their debt as soon as possible to avoid high interest expenses, especially since in China interest expenses

are accumulated based on the total outstanding credit card balance instead of the unpaid balance. As a result, a higher reinstatement occurrence plus a longer time to reinstatement together are strongly indicative of debt forgiveness by the bank. Indeed, this is the pattern we observe for bureaucrats in Table 1.

Bureaucrats also differ from the non-bureaucrats on several demographic characteristics. For example, bureaucrats in our sample earn, on average, a monthly salary that is 16% higher than non-bureaucrats. Bureaucrats are also older (38.6 years old vs. 36.9 years), more likely to be married (77.5% vs. 70.7%), and college educated (36.9% vs. 34.4%) than non-bureaucrats. These characteristics are likely to be key determinants of credit line allocation decisions, which makes a direct comparison of the two groups difficult.

To create a valid counterfactual for the treatment group, we construct a matched sample of bureaucrats and non-bureaucrats who are observationally similar. In particular, we estimate a logistic regression using demographic information including age, monthly income, gender, education, and province of residence. The matched control group is selected by the nearest-neighbor algorithm based on the computed propensity scores. The matching exercise makes the two groups closely comparable along the dimensions of age, monthly income, gender, marital status, the number of credit cards and banking relationship. The similarity in the two groups after matching is not only visible in means but also for the entire distribution. For instance, we plot the kernel density of monthly income and age for the bureaucrats and non-bureaucrats in the matched sample (Figure A1 in the Online Appendix). As can be observed, there is no visible difference in the distribution of income or age between the matched treatment and control groups. The only exception in terms of obtaining a balanced treatment and control sample is on the dimension of education and sophistication. Compared to the full sample, the difference shrinks a lot and is economically insignificant.

Within the matched treatment and control groups, in Panel B in Table 1 we continue to observe a statistically and economically significant difference in the credit line granted to bureaucrats relative to non-bureaucrats. In fact, the gap in the granted credit line widens between the two groups. Bureaucrats receive, on average, a credit line of 26,509 RMB that is 25% higher than that received by non-bureaucrats. This difference is economically large. It amounts to about 98% of the average monthly income of the bureaucrats. Bureaucrats have a delinquency rate that is 1.3 percentage points, or equivalently 43% in relative terms, higher than the matched non-bureaucrats and their average time to delinquency is one month shorter as well. In addition, conditional on delinquency, relative to non-bureaucrats, the credit card debt of bureaucrats is 6.7 % more likely to be forgiven. These simple descriptive patterns in the data offer suggestive evidence against a “higher credit quality” interpretation of the observed bureaucrat credit premium.

4. Main results

4.1 Empirical specification

We are interested in comparing the difference in the credit line, delinquency status, and

reinstatement status (conditional on delinquency) between the matched sample of treatment (bureaucrats) and control (non-bureaucrats) groups. We do so by estimating the following regression:

$$Y_{i,j,t} = \alpha_i + \beta_i * Bureaucrat_i + \gamma_{i,j,t} * X_{i,j,t} + \theta_{t,j} + \epsilon_{i,j,t}, \quad (1)$$

where $Y_{i,j,t}$ is the dependent variable denoting the total credit line granted to individual *i* living in city *j* at the time of credit card origination year *t*. We also examine other outcome variables, for each individual *i*, including account delinquency indicator, time to delinquency, reinstatement indicator (conditional on delinquency), and time to reinstatement for the delinquent card. $Bureaucrat_i$ is a binary variable equal to one if the applicant works in the government agency, and zero otherwise. $X_{i,j,t}$ denotes a vector of demographical controls for the individual *i*. $\theta_{t,j}$ captures the time-variant region fixed effects that absorb the common variation in regions for each point in time. We define all the variables in the Appendix.

4.2 Credit premium for bureaucrats

Table 2 reports the results from specifications that assess whether, all else equal, bureaucrats are offered a larger credit line by the bank than they offer for non-bureaucrats. The dependent variable is the natural logarithm of the total credit line granted at the time of credit card origination. The specifications differ in terms of the sets of controls employed. As noted earlier, our specifications include the origination-year-specific city of residence fixed effects. The standard errors are clustered at the city level.

We find in column (1) of Table 2 that bureaucrats receive a premium of 19% (=exp (0.173)-1), and the estimate is statistically significant at the 1% level. Next, we include in our regression demographic characteristics such as age, monthly income as of the origination year, gender, marital status, and college education. Agarwal, Chomsisengphet, Liu, Song, and Souleles (2018) suggest that individuals with a longer relationship with the bank and greater financial sophistication are associated with higher credit lines. Thus, we include as additional controls card holders' relationship with this bank and the level of their financial sophistication (i.e., months since the cardholders have established any interaction with the bank, including mortgage and debit accounts). The credit line difference decreases slightly to 15.2% but remains statistically significant at the 1% level. Adding origination year or city fixed effects does not change the estimates in columns (3) and (4), respectively, in a significant way. We include city-origination year fixed effects to allow city-specific time trends and present the results in column (5). The credit line premium for bureaucrats becomes 16.0% and is statistically significant at the 1% level. These results are consistent with the view that the bank offers a higher credit line to bureaucrats than what might be warranted based on the counterfactual creditworthiness level of the control group.

The coefficients in Table 2 report the *average* credit line premium bureaucrats receive relative to non-bureaucrats. While the mean credit line for the matched sample is 23,909 RMB, the credit line distribution is quite skewed: the top 10th percentile of the credit line distribution is

60,000 RMB and the top 5th percentile of the distribution is 90,000 RMB. If bureaucrats receive more favorable treatment than is warranted, one would expect that such favorable treatment is more prevalent among high credit line accounts.

One way to test this idea is to examine the presence of bureaucrats relative to non-bureaucrats in the right tail of the credit line distribution. Specifically, for a given credit line X, we compute and plot in Figure 1 the fraction of bureaucrats with credit lines $\geq X$ and the fraction of non-bureaucrats with credit lines $\geq X$ respectively. As can be seen, there is an increasingly greater presence of bureaucrats with higher levels of credit lines. For example, for the level of 200,000 RMB (equivalently 99.3th percentile of the credit line distribution), the proportion of bureaucrats with at least that credit line amount is 0.8%, which is more than twice the proportion of non-bureaucrats with the same credit line level.

We also perform quantile regressions for the credit line difference between bureaucrats and non-bureaucrats. We include the same control variables as in column (5) of Table 2 Panel A and include city origination year fixed effects. The results in Table 2 Panel B confirm the OLS regression results in Panel A of Table 2. We observe a bureaucrat credit line premium throughout the credit line distribution, and the coefficients are all statistically significant and economically meaningful. More importantly, the results reveal a much larger bureaucrat credit line premium in the high end of the credit line distribution (coeff. = 0.184) than in the low end of the credit line distribution (coeff. = 0.089). This, together with the evidence in Figure 1, lends further support to our hypothesis of the bank extending favors to bureaucrats.

4.3 Does credit premium for bureaucrats reflect better credit quality?

Our results on credit premiums for bureaucrats relative to non-bureaucrats are obtained after controlling for observable characteristics including monthly income, age, gender, education and marital status. Nevertheless, bureaucrats and non-bureaucrats could potentially differ in ways that are unobservable to econometricians. Banks likely have access to such "soft information" (see Keys, Mukherjee, Seru, and Vig, 2010), so they may decide a higher credit line is appropriate for bureaucrats. To assess this alternative, we examine the credit card performance of bureaucrats. The notion is that if banks offer a higher credit line to bureaucrats based on their "true" higher credit quality, one should observe, on average, that bureaucrats would have a lower propensity to become delinquent on their credit card accounts.

We define a credit card account to be delinquent if the bill is at least three months past due (Gross and Souleles, 2002). We then assess whether, conditional on observables, credit card delinquency behavior differs between bureaucrats and non-bureaucrats. In columns (1) and (2) of Table 3, we find a higher credit card delinquency rate among bureaucrats relative to the non-bureaucrats. In particular, the delinquency rate of bureaucrats is, on average, 0.45 percentage points higher than non-bureaucrats, with the effect being statistically significant at the 1% level. This is a large economic effect: in relative terms, this differential delinquency rate corresponds to 15.0% of the average delinquency rate among non-bureaucrats (3.0 percentage points, Table 1 Panel B). In addition, conditional on delinquency, the time between account opening and

delinquency is significantly shorter, by 0.9 months (or 9.4%), for bureaucrats than non-bureaucrats (columns (3) and (4)). This effect is significant at the 1% level.

While credit card payment delinquency does not necessarily equate default, it is nevertheless a strong indicator given the general pattern of a high conditional probability of borrower default given delinquency. For example, a significant fraction of delinquent credit cards subsequently default, and the bank typically recovers very little. Under the plausible assumption that this pattern is confined to the U.S., the higher credit card delinquency rates among bureaucrats is difficult to reconcile with our premise that the credit premium for bureaucrats reflects their higher credit quality.

A well-known interpretation challenge arising from outcome tests (i.e., delinquency differences in our context) is the "inframarginality problem" (Anwar and Fang, 2006). Our evidence suggests that bureaucrats are *on average* more delinquent on their credit card payments than non-bureaucrats. However, under the hypothesis that bureaucrats are treated more favorably by the bank ("disguised corruption"), we expect that the *marginal* bureaucrat, all else equal, is less creditworthy than the *marginal* non-bureaucrat. The comparison of the average creditworthiness of bureaucrats and non-bureaucrats depends on the delinquency distribution of the two groups.

We address the inframarginality problem by examining the delinquency difference between bureaucrats and non-bureaucrats throughout the credit line (and income) distribution. Specifically, we divide the matched sample into deciles based on the credit line and income respectively and perform a regression analysis on the delinquency difference between bureaucrats and non-bureaucrats within each decile. We plot the estimated coefficients as well as the 90th percentile confidence interval for each of the ten groups. Figure 2 shows that bureaucrats, for all levels of the credit line or income, exhibit a higher delinquency rate than non-bureaucrats. Consistent with our prior evidence of a stronger bureaucrat credit line premium at the high end of the credit line distribution, the positive delinquency rate differential for bureaucrats is stronger, both in magnitude and in statistical significance, for high income and high credit line groups. This suggests that the marginal delinquency rate is no different from the average delinquency rate, and thus our application of the outcome test is robust to the inframarginality concern.

4.4 Do the delinquent credit card accounts of bureaucrats get treated differently?

We next examine whether, conditional on delinquency, the credit card accounts of bureaucrats are treated differently by the banks. First, we ask if relative to the control group, the delinquent credit card accounts of bureaucrats experience a greater probability of getting their card reinstated.

Second, conditional on reinstatement, we assess if there are differences between bureaucrats and non-bureaucrats in the time it takes to reinstatement. In the absence of favorable treatment, it is optimal for delinquent consumers to pay off their credit card debt and get the card reinstated as soon as possible. This is because a longer period of delinquency leads to greater interest rate expenses (normally a daily rate of 5 bps or 18% APR). More importantly, a special institutional feature in China exacerbates the costs for leaving debt unattended. During our sample

period, Chinese banks charge interest based on the total credit card balance instead of the unpaid balance. The accumulation stops only when the customer pays the entire balance owed. In contrast, such costs are irrelevant for the debt that is forgiven by the bank. Thus, if the bank uses debt forgiveness as an implicit bribe, bureaucrats will not internalize the high cost of credit card debt: conditional on the final reinstatement status, their cards will take a longer time to be reinstated.

In columns (5) and (6) of Table 3, we find that bureaucrats' delinquent credit card accounts are more likely to get reinstated and become active again as compared to non-bureaucrats. The estimates are economically meaningful: for example, in column (6) the bureaucrats' accounts are 5.4% (=4.1/76.3 in Table 1 Panel B) more likely to get reinstated. Moreover, from columns (7) and (8) we see that for reinstated credit card accounts, it takes on average an additional 0.6 months for bureaucrats' cards to be reinstated.

Overall, our results in Subsections 4.3 and 4.4 suggest that (i) bureaucrats are more likely to become delinquent on their credit cards than non-bureaucrat and do so earlier and (ii) the bank writes off bureaucrats' debt and reinstates their credit card accounts.

4.5 Exploiting heterogeneity to drill down on explanation: By bureaucratic power

In this subsection, we examine whether bureaucrats with more political influence receive higher credit lines than who exert less power. We classify "high-rank bureaucrats" as those who work in a government agency and have a rank that is above the median rank of individuals working in that agency. We then explore whether there are noticeable differences between the ranks and the credit provision and performance outcomes. Specifically, we repeat the specifications for Tables 2 and 3 by decomposing the bureaucrat dummy into the low-rank bureaucrat dummy and the high-rank bureaucrat dummy and report the results in Panel A of Table 4.

The results in column (1) of Table 4 show that both the low-rank and the high-rank bureaucrats receive significantly higher credit lines than their matched non-bureaucrats. High-rank (low-rank) bureaucrats are offered, on average, credit lines that are 30.6% (10.6%) higher than non-bureaucrats. The difference in the credit line premium between low-rank bureaucrats and high-rank bureaucrats is 20%, which is economically large.

More strikingly, the results in column (2) show that our results on the higher delinquency rate of bureaucrats relative to the control group are driven entirely by higher ranked bureaucrats. Low-rank bureaucrats experience similar delinquency rates as non-bureaucrats. However, the delinquency rates of high-rank bureaucrats' credit card accounts are 1.38 % higher than those of non-bureaucrats. The shorter time to delinquency effect is prominent only among high-rank bureaucrats (column (3)). We can make similar inferences for reinstatement rates (column (4)) and the time it takes to reinstatement (column (5)). The high reinstatement rate and longer reinstatement times associated with bureaucrats that we find in Table 3 are concentrated among higher ranked bureaucrats.

These results further help rule out the view that the credit premium for bureaucrats reflects higher credit quality. Under this view, credit performance should turn out better for high-rank bureaucrats. These are individuals for whom hard information on record likely underestimates their

true (good) creditworthiness. Rather, our findings are consistent with the view that a credit line premium is granted primarily to high-rank bureaucrats, who are targeted by the bank due to their power and political influence.

While power is not uniformly distributed among high-rank bureaucrats, their ability to offer potential quid pro quo likely diminishes as they transition out of their position. We test this conjecture by exploiting a unique institutional feature of the Chinese bureaucratic system, whereby bureaucrats have a mandatory retirement age (60 for male and 55 for female for most bureaucrats). We repeat our earlier specifications by additionally stratifying high-rank bureaucrats into two subcategories: those who are retiring (≥ age 59 for male and ≥ age 54 for female) and those who are not retiring (< age 59 for male and < age 54 for female). As can be seen in Panel B of Table 4, the credit line premium is concentrated in high-rank bureaucrats that are not approaching retirement. Retiring bureaucrats, even if they currently hold a senior position in the government, do not receive higher credit lines, nor are their accounts more likely to become delinquent or reinstated relative to non-bureaucrats.

4.6 Exploiting heterogeneity to drill down on explanation: By geographic corruption intensity

We next explore whether bureaucrats located in more corrupt regions—regions with a lower cost of bribing—are more likely to receive higher credit lines. Figure 3 presents the geographical distribution of the bureaucrat credit line premium, which are the estimated coefficients by running the regression used for column (3) of Table 2 for each city in our matched sample. As a first glance, there is evident geographical heterogeneity in the bureaucrat credit line premium across cities.

We use various measures to proxy for the extent of government corruption at the city level. Our first measure of corruption is based on the overall ranking for the government (in)effectiveness of Chinese cities as reported by the World Bank Report (2006). The World Bank evaluates the government inefficiency among 120 cities in China, based on survey questions on measures including the prevalence of state versus privately-owned enterprises, tax burdens, labor redundancy (or over-staffing), travel and entertainment expenditures, and time spent on bureaucratic interactions. We use a dummy variable *WB-Govt-Inefficiency* that equals one when the ranking of a city is above the sample median based on this measure. Alternatively, we follow Cai, Fang, and Xu (2011) and Fang, Gu, and Zhou (2014) and use the city-level average of firms' business travel, entertainment, and conference expenses (ETC) as another proxy for the extent of corruption in the city. We obtain information on city-level ETC from the Investment Climate Survey conducted by the World Bank and the Enterprises Survey Organization of the National Bureau of Statistics of China in 2005. The survey includes 12,400 firms located in 120 cities from all Chinese provinces except Tibet.

Table 5 reports the regression results for the matched sample of the cross-sectional heterogeneity in the credit outcomes by the level of corruption across cities. As can be seen, the credit line premium for bureaucrats is mostly concentrated in regions with a more corrupt government. The results in column (1) in Panels A and B reveal that bureaucrats in regions with

more inefficient governments or high business expenses on travel, entertainment, and conference receive significantly higher credit lines (14.1% - 18.5%) relative to non-bureaucrats. Similarly, bureaucrats in more corrupt regions experience a higher delinquency rate, shorter time to delinquency, higher reinstatement likelihoods, as well as longer time until reinstatement than non-bureaucrats (columns (2)-(5) in Panels A and B).

4.7 "Quid Pro Quo": Branch opening and government deposits

Our results suggest that the bank offers additional credit to bureaucrats that is difficult to justify based on their creditworthiness. In return, the bank or its managers expect to garner some favors from government officials. In this subsection, we study two benefits that can accrue to the bank: (1) new branch opening and (2) stable government deposits. Besides obtaining approval from the regulator (China Banking Regulatory Commission) to open a new branch, banks also have to attain permission and endorsement from local governments regarding branch location, taxes, and environmental issues. Therefore, banks have incentives to extend favors to bureaucrats in exchange for a "green light" to open a new branch.

We manually collect city and year of branch opening for all branches of this bank from the China Banking Regulatory Commission for 2004-2006. We first estimate the same specifications as for the results in column (5) of Table 2 and column (1) of Table 4 for each city-year to generate yearly city-level coefficient estimates of *Bureaucrat*, *Low-rank bureaucrat*, and *High-rank bureaucrat*. Then we merge these coefficients with the branch opening for each city-year pair. Next, we estimate how the observed bureaucrat credit line premium is associated with the new branch opening of this bank in the following year in the same city.

Panel A of Table 6 presents the coefficient estimates of the association between the bureaucrat credit line premium and future branch opening. In all specifications, we include year×province fixed effects to absorb region-specific time trends. Because the specifications include a generated regressor, we perform a weighted least squares regression by using the variance of the estimated coefficients on *Bureaucrat*, *High-rank bureaucrat*, and *Low-rank bureaucrat* as regression weights. We find that for cities in the year that an "excessive" credit line is offered to bureaucrats (especially high-rank bureaucrats), they experience a higher probability of a new branch opening in the following year. A one standard deviation increases in the credit line premium offered to bureaucrats increases the probability of new branch opening by 3 percentage points, equivalent to a 36% increase relative to the sample mean. There is a much weaker association between new branch opening and the credit line premium received by low-rank bureaucrats.

Second, we use the province-level government deposits at this bank to proxy for the economic benefits banks likely receive from bureaucrats. Government is a large and, more importantly, stable source of deposits for local banks in China. Thus, a commitment to offer such deposits is valuable for bank branch managers, especially since deposits typically serve as an important performance metric for branch managers' promotions.

We hand-collect this bank's government deposits for each province-year from the *Almanac*

of China's Finance and Banking and supplement this information with *Provincial Almanac of Finance and Banking* information for 2003-2005. We use the same specifications as in the regressions for column (5) of Table 2 and column (1) of Table 4 to generate yearly province-level coefficient estimates of *Bureaucrat, High-rank bureaucrat,* and *Low-rank bureaucrat* and then merge these coefficients with the government deposits at the bank for each province-year pair.

Panel B in Table 6 reports the results on the relationship between a bureaucrat's credit premium and government deposits at the bank. We include both year and province fixed effects and perform a weighted least squares regression. We find that government deposits are positively associated with a greater credit line offered to bureaucrats (column (1) of Panel B) or to higher ranked bureaucrats (column (3) of Panel B). However, there is a much weaker association between government deposits and the credit line premium offered to low-rank bureaucrats.

We also exploit the cross-sectional variation in the "market share" of bureaucrats served by the bank in a province to further validate the results. The notion is that the ability of the bank to obtain these two benefits as the result of an expected favor could depend on the size of the local bureaucrats they serve. A large market share of local bureaucrats implies a higher likelihood of serving the "right" bureaucrats, as well as a reduced probability of other local banks competing for the same access to these benefits.

Using data on the provincial-level statistics of bureaucrats from the yearbook issued by China's Ministry of Labor and Social Security, we calculate the share of bureaucrats served by our bank, *% Bureaucrat served*, by scaling the number of bureaucrats in our full sample by the total number of bureaucrats in each province. We repeat the specifications for Panels A and B of Table 6 by interacting *% Bureaucrat served* with the coefficient estimates of *Bureaucrat, High-rank bureaucrat,* and *Low-rank bureaucrat.* The results are reported in columns (2), (4), and (6) of Panels A and B. The positive association between new branch opening (or government deposits) and the bureaucrat credit line premium is stronger in provinces in which the bank serves a larger share of local bureaucrats.

Collectively, these results are consistent with the view that banks receive benefits in return for the favors they extend to bureaucrats.

4.8 Who loses out?

Who loses out when banks allocate resources to bureaucrats for garnering favors? The credit provision of China's banking system is subject to the principles for a "quota management, deposit-based loan" (e.g., Liu, 2004; Xie, 2008). In other words, the maximum loan amount granted to each bank should be first determined and approved by the People's Bank of China (PBC) on a quarterly basis. Within the amount of the approved loan plan for a given bank, the headquarters of the bank makes lending allocations for their different branches. This allocation plan must also be submitted to the head office of the People's Bank of China for approval and will be monitored by the regional offices of PBC. As a result, each bank branch has little discretion over the total amount of lending. Granting more consumer credit to bureaucrats likely crowds out consumer credit to non-bureaucrats in the same region.

To explore this conjecture, we start by defining high (low) bureaucrat credit line premium cities that fall into the top (bottom) half of the city-level credit line premium distribution, which are obtained from coefficient estimates of *Bureaucrat* in Table 2. We use this stratification to compare the credit lines received by similar non-bureaucrat consumers in high and low bureaucrat credit line premium cities. The difference between the two groups provides an estimate of under-provision of credit to non-bureaucrats. Notably, this estimate provides a lower bound of under-provision of credit since it only captures the "intensive margin" and ignores any effects that operate on the "extensive margin" (i.e., through application denial).

We start with the full sample of non-bureaucrats and create a matched sample of non-bureaucrats in the high bureaucrat credit line premium cities with comparable non-bureaucrats who reside in low bureaucrat credit line premium cities. The results in Panel A in Table 7 verify the validity of the matching procedure. In the matched sample, the differences between income, marital status and gender become statistically and economically indistinguishable from zero. The difference in age and education remain statistically significant, but the economic magnitude is small. Despite the similarity of non-bureaucrats in the two subsamples of cities, we observe a striking difference in the credit line extended. Non-bureaucrats in high bureaucrat credit line premium cities, on average, receive 21% less for their credit line than those in low bureaucrat credit line premium cities.

In order to confirm our results, we regress the natural logarithm of the total credit line extended to non-bureaucrats on various estimates of city-level credit line premiums extended to bureaucrats that we computed earlier. To address the generated regressor problem, we perform weighted least squares analyses using the variance of the estimated coefficients as regression weights in all specifications. In Panel B of Table 7, we find that the coefficients on the bureaucrat credit line premium (columns (1) and (2)) or the high-rank bureaucrat credit line premium (columns (3) and (4)) are all negative and statistically significant. For example, the coefficient estimate in column (2) indicates that there is a 16.8% under-provision of credit lines to non-bureaucrats in high bureaucrat credit line premium cities relative to the matched non-bureaucrats in low bureaucrat credit line premium cities. On the other hand, we do not identify a relationship between the non-bureaucrat credit provision and city-level low-rank bureaucrat credit premium, consistent with our evidence that the favorable bank treatment is concentrated among high-rank bureaucrats.

4.9 Using corruption crackdowns as a shock to "corruption investigation risk"

The results in Tables 2-7 provide strong evidence that the bank extends favors to bureaucrats as a form of disguised corruption as opposed to their credit assessment based on, possibly, unobservable characteristics. We next examine a set of corruption crackdowns of local provincial-level government officials. Following Chen, Jiang, Ljungqvist, Lu, and Zhou (2015), we identify 22 cases of crackdowns on province-level political office holders in 15 provinces between 2003 and 2005. When one province is associated with multiple crackdowns, we use the first crackdown to identify the timing of the shock. These form a staggered set of exogenous shocks

to the corruption investigation risk. We examine the credit outcomes, branch opening and government deposits for the affected bureaucrats during the one-year period following the crackdowns. The choice of the one-year post-crackdown horizon arises from the observation that a deterrence effect is short-lived and that our time series (of about three years) restricts the option of using alternative (short-term) post-crackdown windows.

In unreported tests, we first verify that the timing of the crackdowns in these 15 provinces (i.e., the number of months since 2003, the beginning of our sample period) is indeed uncorrelated with local economic conditions, such as provincial-level GDP, house price level, or inflation rate.

In Table 8, we present the univariate results of the credit outcomes in the one-year pre- and post-crackdown period. Panel A shows that the credit lines bureaucrats receive at the time of new credit card origination shrink by 8% after the crackdown in the treated provinces. In comparison, the newly originated credit cards to bureaucrats in the control provinces experience an increase of 20% in their credit lines in the same period. We also find a significant decrease in the delinquency rate, an increase in the time to delinquency, as well as a lower reinstatement rate for bureaucrats in the treated provinces, relative to the bureaucrats in the control provinces. These results provide evidence for our conjecture of lower corruption activity in the post-crackdown period.

We next use multivariate regressions to examine the response of the credit line premiums of bureaucrats after crackdowns. Column (1) in Panel B of Table 8 shows that bureaucrats' credit card accounts that were originated during the one-year post-crackdown period in the affected provinces are associated with a 12.1% smaller credit line premium (vs. non-bureaucrats) than the bureaucrats' credit card accounts originated outside this window. Compared with the average bureaucrat credit line premium of 20.6% during non-treatment episodes or unaffected regions, this suggests that during the one-year period after crackdowns, bureaucrats do not receive favorable treatment in terms of excess credit lines relative to non-bureaucrats (0.188-0.129=0.059, *p*-value = 0.11).

Similarly, bureaucrats' credit card accounts experienced a great decline in their delinquency and reinstatement likelihood during the one-year post-crackdown period. They are no different from non-bureaucrats in the delinquency and reinstatement behavior during this period (*p*-value = 0.55 and 0.53, respectively). In addition, bureaucrats' time-to-delinquency increases and their reinstated credit cards exhibit a shorter time to reinstatement in the affected provinces post-crackdown.

We also explore how the quid pro quo is affected after the corruption crackdowns. Panel C (Panel D) of Table 8 shows that the positive relationship between new branch opening (local government deposits) and the bureaucrat credit card premium diminishes for affected provinces during the one-year post-crackdown period.

Taken together, these results support our hypothesis that the higher credit lines extended to bureaucrats represent implicit bribes offered by the bank. When the risk of accountability increases due to the corruption crackdown, the bank significantly reduces this practice.

4.10 Robustness

We conduct a series of robustness tests to check the validity of our results. First, we perform various analyses to further dispel alternative interpretations. The major tests include the following: (i) take advantage of an institutional feature in China's credit card industry, the unique credit sharing system in Shanghai, to further assess whether bureaucrats get more credit due to their higher creditworthiness; (ii) address the concerns related to bureaucrats having longer banking relationships or being financially sophisticated; and (iii) compute the income premium that is required for non-bureaucrats with similar demographics to obtain the same credit line as bureaucrats to rule out the possibility of income underestimation. Second, we conduct our tests using alternative specifications for example by allowing more flexible functional forms of the control variables. Third, we extend our analysis to mortgages and car loans at this bank and find consistent evidence with the credit card results. Last, to ensure our results can be generalized to the full sample, we extend the analysis to the unmatched sample. Our main findings remain robust in all these tests and we leave the details to the Online Appendix.

5. Economic implications

5.1 Aggregate cost of rents

One way of quantifying the potential misallocation of credit is to assess how much of the "excess" that is given to bureaucrats is forgiven. Unfortunately, our data do not allow us to observe the credit card balances at the time of delinquency or at the time of reinstatement. However, we have bank statements for the last (or most recent) month for a given account and use the credit card balance to proxy for the average monthly credit card spending amount. We focus on the outstanding balance of bureaucrats with their delinquent credit cards ever reinstated in our sample period, which is estimated to be, on average, 2,880 RMB higher than non-bureaucrats (see the Online Appendix for details). Thus, there seems to be a significant "excess amount" allocated to bureaucrats relative to non-bureaucrats and as we find that bureaucrats are more likely to become delinquent, this excess is likely to be forgiven by the bank.

We next extrapolate these estimates to provide an aggregate magnitude of favoritism provided by the bank. To compute the aggregate statistic, we need information on the total number of bureaucrats served by the bank, the fraction of bureaucrats who received excessive credit, and the magnitude of excessive credit to a bureaucrat. While precise data on some of these aspects are not readily available, we perform a back-of-the-envelope analysis based on the publicly available aggregate statistics about the bank as well as the estimates derived from our representative sample of the bank's credit card account population. For a cleaner estimate, we infer the implicit bribes based on the statistics from the provinces that are unaffected by the corruption crackdown events during our sample period.

According to the bank's 2005 annual report, it issued 1.47 million credit cards in 2005. Bureaucrats comprise of 7.38% of all customers in our sample, which translates to 108,486 bureaucrats served by this bank. We measure the magnitude of corruption in the following way. First, we measure corruption by the total credit line received by the bureaucrats, which is RMB

26,509 in our sample and RMB 2.87 billion in aggregate. Second, we rely on the excess credit line received by bureaucrats (relative to similar non-bureaucrats). In our sample, an average bureaucrat receives a credit line that is RMB 5,270 greater than what is given to a non-bureaucrat. Using this metric, total bribes extended to bureaucrats are estimated to be RMB 572 million. Third, we compute bribes as the unpaid credit card debt of bureaucrats that is forgiven by the bank. The average delinquency and reinstatement rate for bureaucrats are 4.3% and 81.4%, respectively, in our data. We proxy for unpaid debt with the average credit card balance among reinstated bureaucrat accounts (RMB 4,093). This implies that the total cost incurred by the bank, in the form of bad debt, is RMB 15.5 million (=108,486×4.3%×81.4%×RMB 4,093).

Under the plausible assumption that the documented corruption is not unique to our bank, we could also estimate the total disguised corruption through lending practices in the Chinese economy. The market share in China of this bank is around 10% as of 2005. Scaling the estimates, which we obtained from our bank, by this share would imply about RMB 0.16 billion to RMB 28.7 billion of credit card lending in Chinese markets is likely corrupt. These are plausibly conservative estimates of the true degree of corruption, because they are computed based on the assumption that bribery by the bank occurs for each account only once per year, and occurs exclusively through credit card lending.

As an example of the potential underestimate of the aggregate effects, we also produce a coarse estimate of the corruption level based on our mortgage and auto loan data from the same bank. Using the sample of non-bureaucrats, we regress the loan amount on the ex post default indicator, as well as loan and borrower characteristics. Using the coefficient estimate from the default indicator regression, we then predict the "fair" loan amount each bureaucrat with the same ex post default behavior and demographics should have received. The average difference between the actual and the predicted loan amount for bureaucrats thus represents the unwarranted loan amount, likely due to corruption. The estimated corruption amount is RMB 0.457 billion, which amounts to 2.79% of the aggregate mortgage and auto loan size in our sample. According to the bank's 2005 annual report, its total amount of new consumer loan is RMB 50.43 billion, suggesting that the total corruption cost for this bank due to consumer mortgage or auto loans is RMB 1.41 billion (=2.79%×50.43). Given the bank's 5% market share in the residential mortgage market, this implies RMB 28.2 billion (=1.41/0.05) in corruption through other consumer credit channels for all banks. Our conservative estimates of the corruption through banks in their credit card and other consumer lending practice would imply up to RMB 28.36 (= 28.2+0.16) to 56.9 (= 28.2+28.7) billion in 2005.

5.2 Impact on economic growth

In addition to the direct cost as implied by the dollar amount estimated above, the documented corruption arguably imposes a significant negative externality through its deterrent effect on economic growth. As documented earlier, extending favors to bureaucrats is associated with credit under-provision to non-bureaucrats. The limited access to credit markets can in return inhibit growth in the small business sector (Midrigan and Xu, 2014). We measure small businesses

by the number of individually-owned businesses ("ge ti hu") at the province-year level (source: *China Economic and Social Development Data*, compiled based on the *China Statistical Yearbook*).

We study the relationship between small business in a province-year and the bureaucrat credit line premium for the same province in the previous year. Following the same specification as in column (5) of Table 2, we run regressions for each province in each year between 2003 and 2005 and obtain the coefficient estimates of *Bureaucrat* as the key independent variable. The result (see Table A11 of the Online Appendix) suggests that a one standard deviation increase in the estimated coefficient for *Bureaucrat* (0.22) is followed by 5% decrease in small business creation. While statistically insignificant, the effect is economically relevant as the small business sector serves as the engine of economic growth (e.g., Petersen and Rajan, 1994; Li and Rama, 2015), which is facilitated by bank financing (Ayyagari, Demirgüç-Kunt, and Maksimovic, 2010). Collectively, these estimates highlight the importance of the disguised form of corruption in the banking sector.

6. Conclusion

Corruption is a prevalent feature in many countries. It can distort resource allocation and has many social welfare implications. Despite its importance, its form and scope are not well understood due to sparse data and measurement challenges. We uncover a disguised form of corruption through the banking channel using a comprehensive sample of credit card data in China. We document that government bureaucrats receive 16% higher credit lines than non-bureaucrats with similar income and demographics. Despite the higher credit lines, bureaucrats' accounts experience a significantly higher delinquency rate and a higher likelihood of debt forgiveness by the bank.

Our patterns are concentrated among bureaucrats with greater power and in cities that can be classified as more corrupt ex ante. As a "quid pro quo", regions with greater credit provision to bureaucrats open more new branches and receive more deposits from the local government. Consumers in cities where the bank offers greater credit provision to bureaucrats receive significantly lower credit lines relative to similar consumers in other cities. Using the crackdowns of provincial-level political officials as exogenous shocks to the risk of corruption investigation, we find that new credit cards originated to bureaucrats no longer enjoy a credit line premium; bureaucrats' credit card delinquency and reinstatement rates are no higher than those of non-bureaucrats, and the "quid pro quo" diminishes in the treated provinces during the post-crackdown period. Our estimates imply a large magnitude of consumer credit extended for corruption related reasons. We conclude by evaluating the impact on the growth of the small business sector in China.

References

Agarwal, Sumit, Barnardo Morais, Claudia Ruiz, and Jian Zhang, 2016. The political economy of bank lending: evidence from an emerging market. Unpublished working paper. The World Bank.

Agarwal, Sumit, Gene Amromin, Itzhak Ben-David, and Serdar Dinc, 2018. The politics of foreclosures. *Journal of Finance* 73(6), 2677-2712.

Agarwal, Sumit, Souphala Chomsisengphet, Chunlin Liu, Changcheng Song, and Nicholas S. Souleles, 2018. Benefits of relationship banking: evidence from consumer credit market. *Journal of Monetary Economics*, 96, 16-32.

Agarwal, Sumit, Yongheng Deng, Quanlin Gu, Jia He, Wenlan Qian, and Yuan Ren, 2018. Consumption and debt response to monetary policy: The debt service channel. Working paper.

Agarwal, Sumit, Kristopher Geradi, and Vincent Yao, 2018. The Political Economy of Loan Modification. Unpublished working paper. Georgia State University.

Anwar, Shamena, and Hanming Fang, 2006. An alternative test of racial prejudice in motor vehicle searches: theory and evidence. *American Economic Review*, 96(1), 127-151.

Ayyagari, Meghana, Asli Demirgüç-Kunt and Vojislav Maksimovic, 2010. Formal versus informal finance: Evidence from China. *Review of Financial Studies*, 23(8), 3048-97.

Bai, Chong-En, Chang-Tai Hsieh, and Zheng (Michael) Song, 2014. Crony capitalism with Chinese characteristics. University of Chicago, Working Paper.

Banerjee, Abhijit V, Rema Hanna, and Sendhil Mullainathan. 2012. Corruption. In *Handbook of Organizational Economics.*

Bertrand, Marianne, Simeon Djankov, Rema Hanna, and Sendhil Mullainathan, 2007. Obtaining a driving license in India: an experimental approach to studying corruption. *Quarterly Journal of Economics*, 122(4), 1639-1676.

Cai, Hongbin, Hanming Fang and Lixin Xu, 2011. Eat, drink, firms, government: an investigation of corruption from the entertainment and travel costs of Chinese firms. *Journal of Law and Economics*, 54, 56-77.

Campante, Filipe R. and Quoc-Anh Do, 2014. Isolated capital cities, accountability and corruption: Evidence from US states. *American Economic Review*, 104(8), 2456-81.

Chen, Donghua, Dequan Jiang, Alexander Ljungqvist, Haitian Lu and Mingming Zhou, 2015. State Capitalism vs. Private Enterprise. NBER working paper, No.20930.

Deng, Yongheng, Shang-Jin Wei, and Jiang Wu, 2017. Estimating the unofficial income of officials from housing purchases: the case of China. *Columbia University Working Paper*.

Dinc, Serdar, 2005. Politicians and banks: Political influences on government-owned banks in emerging markets. *Journal of Financial Economics*, 77, 453-479.

Faccio, Mara, 2006. Politically connected firms. *American Economic Review*, 96(1), 1412-1444.

Faccio, Mara, Ronald W. Masulis and John J. McConnell, 2006. Political connections and corporate bailouts. *Journal of Finance*, 61(6), 2597-2635.

Fang, Hanming, Quanlin Gu and Li-An Zhou, 2014. The gradient of power: evidence from the Chinese housing market. NBER working paper No.20317.

Fisman, Raymond, 2001. Estimating the value of political connections. *American Economic Review*, 91(4), 1095-1102.

Fisman, Raymond, and Shang-Jin Wei, 2004. Tax rates and tax evasion: Evidence from "missing imports" in China. *Journal of Political Economy*, 112(2), 471-496.

Fisman, Raymond, and Edward Miguel, 2007. Corruption, norms and legal enforcement: Evidence from UN diplomatic parking tickets. *Journal of Political Economy*, 115(6), 1020-1048.

Fisman, Raymond, and Yongxiang Wang, 2014. Corruption in Chinese privatizations. *Journal of Law, Economics, and Organizations*, 31(1), 1-29.

Fisman, Raymond, and Yongxiang Wang, 2015. The mortality cost of political connections. *Review of Economic Studies*, 82(4), 1346-1382.

Gu, Quanlin, Jia He, and Wenlan Qian, 2018. Housing booms and shirking. Working paper.

Gross, David, and Nicholas S. Souleles, 2002. An empirical analysis of personal bankruptcy and delinquency. *Review of Financial Studies*, 15(1), 319-347.

Holder, Roland, and Paul A. Raschky, 2014. Regional favoritism. *Quarterly Journal of Economics*, 129(2), 995-1033.

Khwaja, Asim Ijaz, and Atif Mian, 2005. Do lender favor politically connected firms? Rent provision in an emerging financial market. *Quarterly Journal of Economics*, 120(4), 1371-1411.

Keys, Benjamin J., Tanmoy Mukherjee, Amit Seru, and Vikrant Vig, 2010. Did securitization lead to lax screening? Evidence from subprime loans. *Quarterly Journal of Economics*, 125(1), 307-362.

La Porta, Rafael, Florencio Lòpez-de-Silanes and Guillermo Zamarripa, 2003. Related lending. *Quarterly Journal of Economics*, 118(1), 231-268.

Levitt, Steven, and James, Snyder, 1997. The impact of federal spending on house election outcomes. *Journal of Political Economy*, 105(1), 30-53.

Li, Yue, and Martin Rama, 2015. Firm dynamics, productivity growth, and job creation in developing countries: The role of micro- and small enterprises. *World Bank Research Observer*, 30(1), 3-38.

Liu, Xiahui, 2004. Why is China's economy either too cold or too hot? *Economic Research Journal*, 11, 58-68.

McMillan, John, and Pablo Zoido, 2004. How to subvert democracy: Montesinos in Peru. *Journal of Economic Perspectives*, 18(4), 69-92.

Midrigan, Virgiliu, and Daniel Yi Xu, 2014. Finance and misallocation: Evidence from plant-level data. *American Economic Review*, 104 (2): 422-458

Murphy, Kevin, Andrei Shleifer and Robert Vishny, 1993. Why is rent-seeking so costly to growth. *American Economic Review Papers and Proceedings*, 83(2), 409-414.

Olken, Benjamin A., 2007. Monitoring corruption: evidence from a field experiment in Indonesia. *Journal of Political Economy*, 115, 200-249.

Olken, Benjamin A., and Patrick Barron, 2009. The simple economics of extortion: Evidence from trucking in Aceh. *Journal of Political Economy*, 117(3), 417-452.

Olken, Benjamin A., and Rohini Pande, 2012. Corruption in developing countries. *Annual Review of Economics*, 4, 479-505.

Petersen, Mitchell A., and Raghuram G. Rajan, 1994. The benefits of lending relationships: Evidence from small business data. *Journal of Finance*, 49(1), 3-37.

Reinikka, Ritva, and Jakob Svensson, 2004. Local capture: Evidence from a central government transfer program in Uganda. *The Quarterly Journal of Economics*, 119(2), 678-70.

Sequeira, Sandra and Simeon Djankov, 2014. Corruption and firm behavior: Evidence from African ports. *Journal of International Economics*, 94(2), 277-294.

Shleifer, Andrei, and Robert, Vishny, 1993. Corruption. *Quarterly Journal of Economics*, 108(3), 599-617.

Xie, Ping, 2008. Thirty years of reform of state-owned commercial banks. *Wealth Today: Financial Development and Regulation*, 10, 9-12

World Bank, 2006. Governance, Investment Climate and Harmonious Society. Washington, D.C.: World Bank.

Zingales, Luigi, 2015. Does Finance Benefit Society? *Journal of Finance,* 70(4), 1327-1363.

Appendix: Variable Definitions

Credit Variables

Credit line is the total credit line (in RMB) of all the credit cards within this bank as of the card origination year.

Delinquency is a dummy variable that equals one if the credit card account is 3 months+ past due; zero otherwise.

Reinstatement is a dummy variable that equals one if the delinquent account returns to normal status (either current or carrying a balance as shown in the data); zero otherwise.

Time to reinstatement is the number of months between delinquency and reinstatement.

No. of cards is the total number of credit cards the applicant holds within this bank.

Banking relationship is defined as the number of months since the individual established a relationship with this bank through debit card, mortgage loan or credit card account.

Sophistication is the total number of banks with which the individual has established banking relationships through debit card, mortgage loan or credit card account.

Demographic Variables

Bureaucrat is a dummy variable that equals one if the individual works in the administrative agency of the government.

Low rank bureaucrat is a dummy variable that equals one if the individual works in the administrative agency of the government and his seniority rank, as recorded in the bank data, is below median (i.e., the categorical seniority variable takes a value of 0, 1, or 2, where values for the variable range between 0 and 5).

High rank bureaucrat is a dummy variable that equals one if the individual works in the administrative agency of the government and his seniority rank, as recorded in the bank data, is above median (i.e., the categorical seniority variable takes a value of 3 or 4, where values for the variable range between 0 and 4).

Retiring high-rank bureaucrat is a dummy variable that equals one for ***High-rank bureaucrat*** whose age is ≥ 59 (54) for male (female), and zero otherwise.

Non-retiring high-rank bureaucrat is a dummy variable that equals one for ***High-rank bureaucrat*** whose age is < 59 (54) for male (female).

Age is the individual card holder's age as of origination year.

Income is defined as the monthly income in RMB 1,000 of the individual card holder (verified by the bank) as of the card origination year.

Female is a dummy variable that equals one if the individual is female; zero otherwise.

College is a dummy variable that equals one if the individual obtains a college degree or above; zero if below college.

Married is a dummy variable that equals one if the individual is married as of origination year; zero otherwise.

Provincial-Level Variables

Government deposits are the total deposit amount within this bank from the local government including Treasury deposits and deposits from provincial government agencies and organizations from 2003 to 2005. (In China, deposits are divided into saving deposits, enterprise deposits, and government deposits according to different depositors). We collect the data from the Almanac of China's Finance and Banking published by the People's Bank of China,

supplemented with the Provincial Almanac of Finance and Banking.

$\boldsymbol{\Delta\ government\ deposits_t}$ is the annual growth rate of the local government deposit amount within this bank from year *t*-1 to *t*.

$\boldsymbol{D(New\ Branch\ Opening)_{k,t+1}}$ is a dummy variable that equals one if the branch is opened at year *t*+1 and zero otherwise.

WB-Govt-Inefficiency-Rank is based on the overall ranking for government (in)effectiveness of Chinese cities reported by the World Bank Report (2006). The ranking evaluates the government inefficiency, among 120 cities in China, based on survey questions on measures including the prevalence of state- vs. privately-owned enterprises, tax burdens, labor redundancy (or over-staffing), travel and entertainment expenditures, and time spent on bureaucratic interactions. The ranking (of inefficiency) ranges from 1 to 120, and ***WB-Govt-Inefficiency*** is a dummy variable equal to one if the city's rank is above the median of the cross-sectional distribution.

Travel is the city-level average of all firms' business travel expenses obtained from the Investment Climate Survey conducted by The World Bank and the Enterprises Survey Organization of the National Bureau of Statistics of China in 2005. The survey included 12,400 firms located in 120 cities of all Chinese provinces except Tibet.

Entertainment is the city-level average of all firms' entertainment expenses obtained from the Investment Climate Survey conducted by The World Bank and the Enterprises Survey Organization of the National Bureau of Statistics of China in 2005. The survey included 12,400 firms located in 120 cities of all Chinese provinces except Tibet.

Conference is the city-level average of all firms' conference expenses obtained from the Investment Climate Survey conducted by the World Bank and the Enterprises Survey Organization of the National Bureau of Statistics of China in 2005. The survey included 12,400 firms located in 120 cities of all Chinese provinces except Tibet.

ETC is the city-level average of the combined ***Entertainment***, ***Travel,*** and ***Conference*** expenditures as defined above. ***ETC High*** is a dummy variable equal to one if the city's *ETC* is above the median of the cross-sectional distribution.

GDP per capita is the annual GDP per capita for 31 provinces and municipalities in China, between 2003 and 2005, from China Statistical Yearbook compiled by National Bureau of Statistics of China.

% Bureaucrat served is the ratio of total number bureaucrats in our full sample to total number bureaucrats reported from China Labor Statistical Yearbook issued by Ministry of Labor and Social Security between 2003 and 2005. The ratio is normalized from 0 to 1.

Small business is the number of individually-owned business ("ge ti hu"), measured at the province year level. We obtain the data from the China Economic and Social Development Data that is compiled based on the C*hina Statistical Yearbook.*

Figure 1. Credit Line Distribution among Bureaucrats and non-Bureaucrats

The figure compares the representation of bureaucrats and non-bureaucrats across the distribution of the (granted) credit line at the time of credit card origination. For a given value of the credit limit *X*, we compute and plot the percentage of bureaucrats with credit limit ≥ *X,* as well as the percentage of non-bureaucrats with credit limit ≥ *X*.

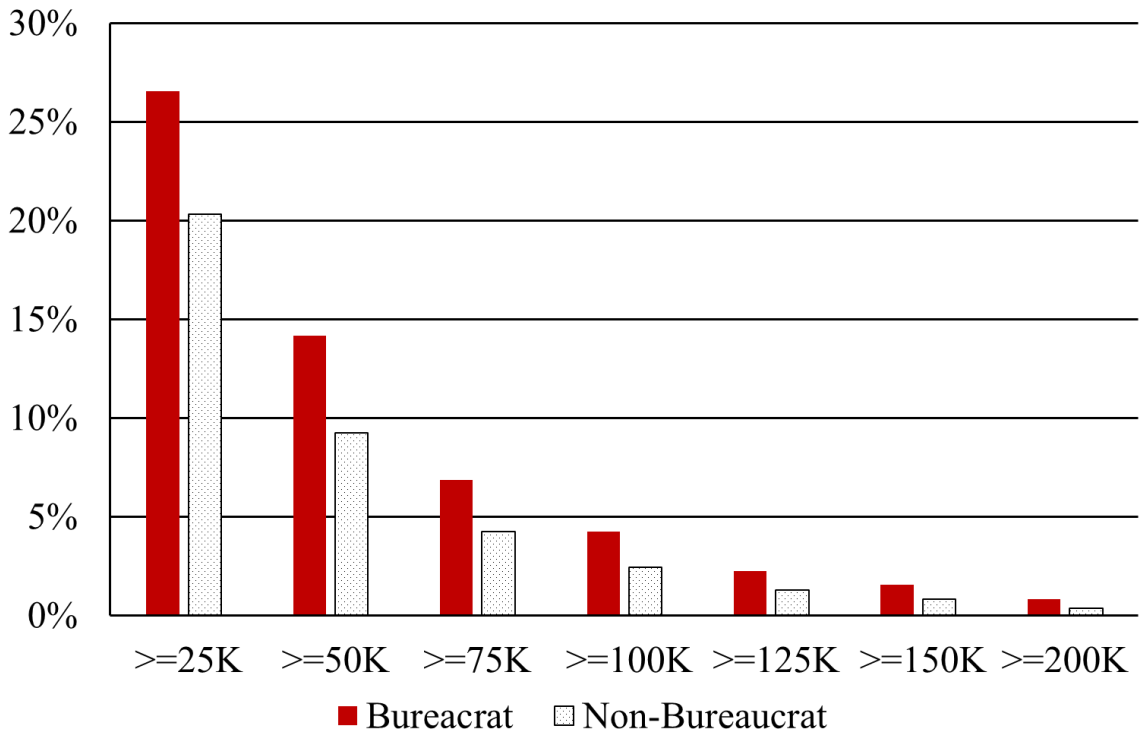
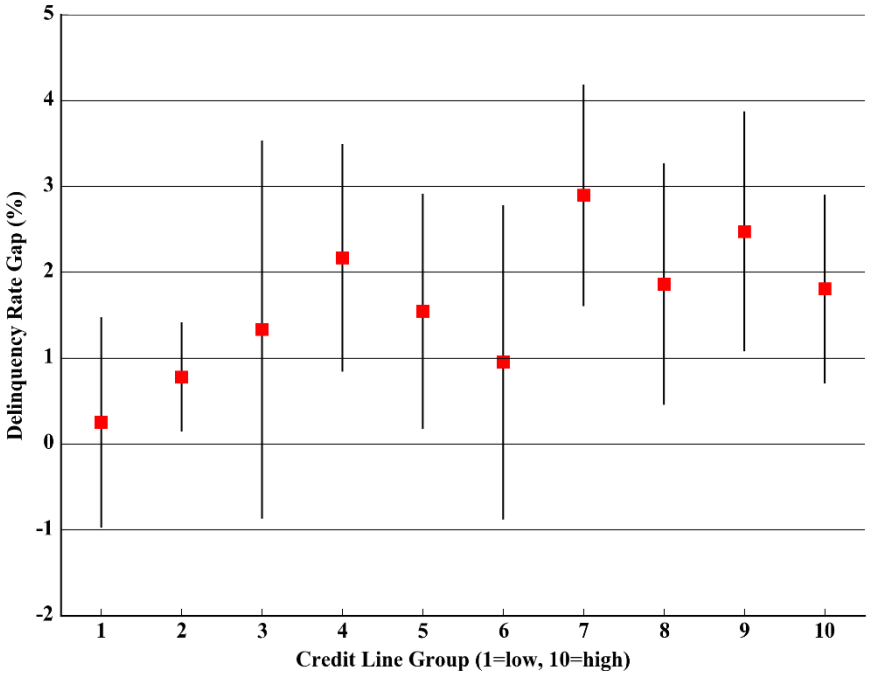


Figure 2: Delinquency Difference between Bureaucrats and non-Bureaucrats

We plot the estimated delinquency difference between bureaucrats and non-bureaucrats using our matched sample from 2003 to 2005. For each decile of the (granted) credit line distribution (Panel A) or income (Panel B) in the matched sample, we perform an analysis as in column (2) of Table 3 and obtain the coefficients on *Bureaucrat*, along with the 90% confidence intervals.

Panel A: Estimated delinquency difference by credit line



Panel B: Estimated delinquency difference by income

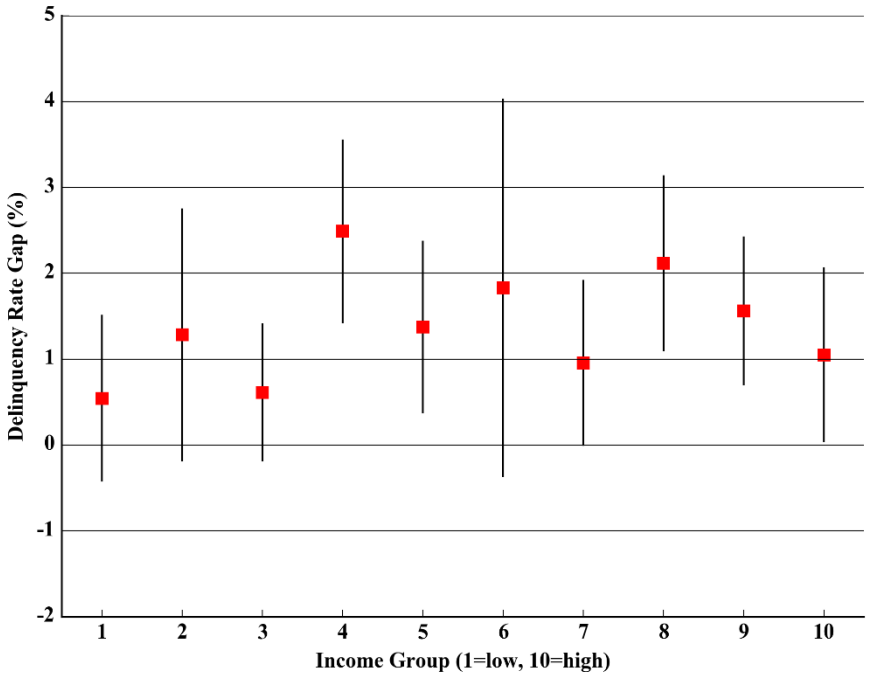


Figure 3. Distribution of the Bureaucrat Credit Line Premium across Cities in China

The figure shows the distribution of the computed bureaucrat credit line premiums across cities in China. The bureaucrat credit line premiums are the coefficients for *Bureaucrat* variable estimated as in column (3) of Table 2 for each city. All cities are equally grouped into five categories by the 20th, 40th, 60th, and 80th percentile distribution of bureaucrat credit line premium estimates and represented by gradient colors from light gray (least corrupt) to dark (most corrupt).

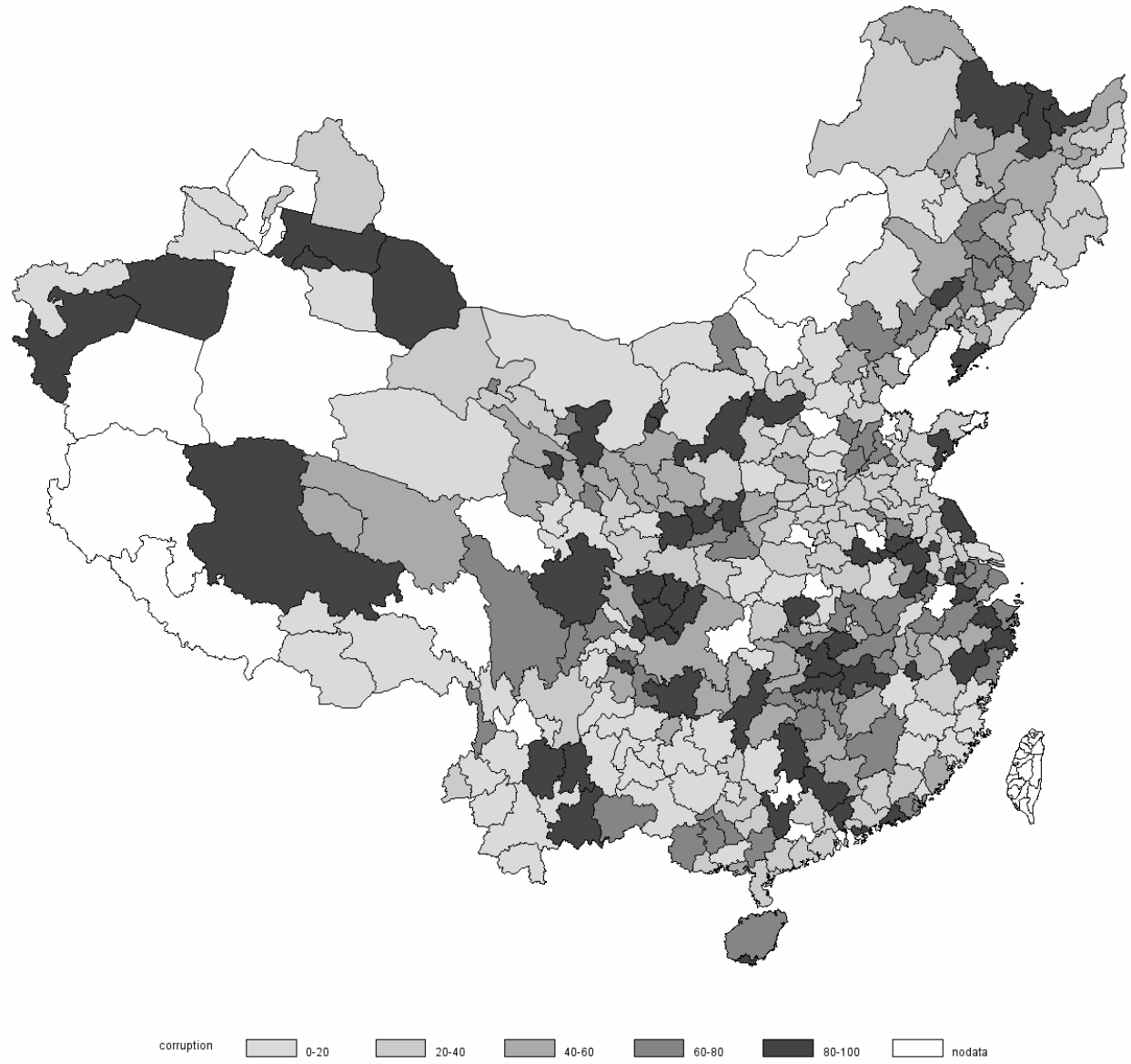


Table 1. Summary Statistics

This table reports the summary statistics of bureaucrats and non-bureaucrats in our sample. Panel A provides the sample mean and difference of demographical characteristics for the full sample while Panel B provides the results of a comparison for the matched sample. The matching methodology is the nearest neighbor propensity score matching based on *age, monthly income, gender, education,* and *province of residence*. ***, **, and * correspond to statistical significance (of difference in means tests) at the 1%, 5% and 10% levels, respectively.

	(1) Mean	(2) Std. dev.	(3) Mean	(4) Std. dev.	(5)
Panel A: Full sample					
	Bureaucrat		Non-Bureaucrat		Difference
No. of cards	2.5	1.3	2.6	1.3	-0.1***
Banking relationship	15.8	7.5	16.4	7.7	-0.6***
Sophistication	2.4	1.3	2.4	1.2	0.0
Age	38.6	7.5	36.9	8.0	1.7***
Income (RMB)	5,372	6,564	4,627	5,413	745***
Female (%)	26.4	44.1	34.0	47.4	-7.6***
College (%)	36.9	48.3	34.4	47.5	2.5***
Married (%)	77.5	41.8	70.7	45.5	6.7***
Credit line (RMB)	26,498	31,245	22,869	26,128	3,629***
Delinquency rate (%)	4.3	20.2	3.1	17.3	1.2***
Time to delinquency (months)	8.9	4.6	10.0	5.0	-1.1***
Reinstatement rate (%)	81.4	38.9	76.2	42.6	5.2***
Time to reinstatement (months)	3.8	2.0	3.3	1.6	0.5***
N	13,728		172,086		
Panel B: Matched sample					
	Matched Bureaucrat		Matched Non-Bureaucrat		Difference
No. of cards	2.5	1.3	2.5	1.2	0.0
Banking relationship	15.8	7.3	15.8	7.3	0.0
Sophistication	2.4	1.1	2.3	1.3	0.1***
Age	38.6	7.5	38.6	7.6	0.0
Income (RMB)	5,374	6,565	5,272	6,488	102
Female (%)	26.4	44.1	26.7	44.2	-0.3
College (%)	37.0	48.2	35.8	47.9	1.2**
Married (%)	77.5	41.8	77.0	42.1	0.5
Credit line (RMB)	26,509	31,253	21,239	25,834	5,270***
Delinquency rate (%)	4.3	20.2	3.0	17.0	1.3***
Time to delinquency (months)	8.9	4.6	9.9	5.1	-1.0***
Reinstatement rate (%)	81.4	38.9	76.3	42.5	5.1**
Time to reinstatement (months)	3.8	1.9	3.2	1.5	0.6***
N	13,715		13,356		

Table 2. Credit Line Premium for Bureaucrats

The table reports the OLS regression estimates of the relationship between credit line and bureaucratic status in the matched sample. The dependent variable is the natural logarithm of the total credit line (computed as the sum of granted credit limits of all the credit cards within this bank). Please refer to the Appendix for other variable definitions. All regressions include city*origination year fixed effect. Panel A shows the OLS results. Panel B reports the quantile regression results, where we include the same control variables as used in the regression for column (5) of Panel A. Standard errors are clustered at the city level. Robust *t*-statistics are reported in parentheses. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: OLS

	(1)	(2)	(3)	(4)	(5)
Bureaucrat	0.173***	0.142***	0.142***	0.150***	0.149***
	(4.52)	(6.06)	(6.04)	(6.86)	(6.66)
Ln(age)		0.672***	0.668***	0.553***	0.545***
		(5.79)	(5.83)	(5.52)	(5.39)
Ln(income)		0.258***	0.258***	0.191***	0.192***
		(11.42)	(11.46)	(8.97)	(8.73)
Female		0.002	0.001	-0.043***	-0.042***
		(0.13)	(0.10)	(-3.01)	(-2.85)
College		-0.399***	-0.399***	-0.315***	-0.316***
		(-9.75)	(-9.74)	(-7.64)	(-7.53)
Married		0.017	0.018	0.082***	0.083***
		(0.85)	(0.92)	(4.45)	(4.41)
Sophistication		0.307***	0.307***	0.303***	0.304***
		(13.59)	(13.63)	(12.38)	(12.19)
Banking relationship		0.001	-0.002	-0.001*	0.001
		(1.32)	(-0.64)	(-1.96)	(0.51)
Constant	9.459***	6.115***	6.249***	6.605***	6.594***
	(108.44)	(14.70)	(17.44)	(21.13)	(21.93)
Origination year FE	N	N	Y	N	N
City FE	N	N	N	Y	N
City*Origination year FE	N	N	N	N	Y
Observations	27,071	24,026	24,026	24,026	24,026
R^2	0.007	0.287	0.287	0.376	0.384

Panel B: Quantile Regression

*N*th Quantile	1	2	3	4	5
Bureaucrat	0.089***	0.138***	0.138***	0.146***	0.184***
	(6.41)	(10.09)	(10.03)	(8.73)	(4.32)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	Y	Y	Y	Y
Observations	24,026	24,026	24,026	24,026	24,026

Table 3. Delinquency and Reinstatement for Bureaucrats

The table provides the delinquency and reinstatement outcomes for granted consumer credit using OLS and the matched sample. The dependent variable used for the regressions for columns (1) and (2) is equal to 100 if the credit card account is at least three months past due, and zero otherwise. The dependent variable used for the regressions for columns (3) and (4) is the number of months between account opening and delinquency. The dependent variable used for the regressions for columns (5) and (6) is a dummy equal to one if the delinquent account comes back to normal status (either current or carrying a balance as shown in the data); zero otherwise. The dependent variable used for the regressions for columns (7) and (8) is the number of months between account delinquency and reinstatements. Refer to the Appendix for the definitions of other variables. In all specifications, we include the same controls as in the regression for column (5) of Table 2 (Panel A), as well as the city*delinquency quarter fixed effects. Standard errors are clustered at the city level. Robust *t*-statistics are reported in parentheses. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Delinquency (=100)		Time to delinquency (in months)		Reinstatement (=1)		Time to Reinstatement (in months)	
Bureaucrat	1.344***	0.447***	-0.885***	-0.926***	0.052**	0.041**	0.567***	0.558**
	(5.37)	(2.86)	(2.69)	(3.52)	(2.31)	(2.03)	(3.09)	(2.49)
Controls	Y	Y	Y	Y	Y	Y	Y	Y
City*Delinquency quarter FE	N	Y	N	Y	N	Y	N	Y
Observations	38,118	38,118	1,417	1,417	1,417	1,417	1,120	1,120
R^2	0.007	0.576	0.025	0.488	0.014	0.290	0.032	0.248

Table 4. Credit Provision and Performance Outcomes by the Power of Bureaucrats

The table reports OLS regression results of the credit outcomes by the power of bureaucrats in the matched sample. The dependent variable for the regression for column (1) is the natural logarithm of total credit line guaranteed by this bank as of the origination year. The dependent variable for the regression for column (2) is equal to 100 if the credit card account is at least three months past due, and zero otherwise. The dependent variable for the regression for column (3) is the number of months between account opening and delinquency. The dependent variable for the regression for column (4) is a dummy equal to one if the delinquent account returns to normal status (either current or carrying a balance as shown in the data); zero otherwise. The dependent variable for the regression for column (5) is the number of months between account delinquency and reinstatement. In the regression for Panel A, we use the rank of bureaucrats to measure power. In the regression for Panel B, we decompose *High-rank bureaucrat* into *Retiring high-rank bureaucrat* (near the retirement age) and *Non-retiring high-rank bureaucrat*. Please refer to Appendix A for definitions of these variables. In all specifications, we include the same control variables as for column (5) of Table 2 (Panel A). We include city* origination year fixed effects in the regression for column (1), and city* delinquency quarter fixed effects in regressions for columns (2)-(5). Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)	(5)
	Ln (credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Panel A: Rank of Bureaucrats					
Low-rank bureaucrat	0.101***	0.166	-0.270	-0.009	-0.107
	(5.12)	(0.94)	(-0.91)	(-0.35)	(-0.32)
High-rank bureaucrat	0.267***	1.384***	-1.871***	0.131***	1.229***
	(8.79)	(5.52)	(-3.01)	(5.54)	(6.71)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,188	1,417	1,417	1,120
R^2	0.388	0.577	0.500	0.304	0.302
Panel B: Age of Bureaucrats					
Low-rank bureaucrats	0.101***	0.170	-0.293	-0.008	-0.098
	(5.13)	(0.97)	(-0.99)	(-0.29)	(-0.29)
Retiring high-rank bureaucrats	-0.045	-0.305	2.272	-0.176	-0.491
	(-0.24)	(-0.96)	(1.17)	(-0.82)	(-0.75)
Non-retiring high-rank bureaucrats	0.270***	1.415***	-1.923***	0.135***	1.257***
	(8.86)	(5.63)	(-2.99)	(5.75)	(7.00)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,188	1,417	1,417	1,120
R^2	0.388	0.577	0.502	0.305	0.304

Table 5. Credit Provision and Performance Outcomes in More Corrupt Areas

The table reports OLS regression results, in the matched sample, of the cross-sectional heterogeneity in the credit outcomes by the level of corruption across cities. The dependent variable in the first column is the natural logarithm of total credit line guaranteed by this bank as of the origination year. The dependent variable in the second column is equal to 100 if the credit card account is at least three months past due, and zero otherwise. The dependent variable in the third column is the number of months between account opening and delinquency conditional on the card being delinquent. The dependent variable in the fourth column is a dummy equal to one if the delinquent account comes back to normal status (either current or carrying a balance as shown in the data); zero otherwise. The dependent variable in the last column is the number of months between account delinquency and reinstatement conditional on the delinquent accounts that are subsequently reinstated. We measure the level of corruption across cities based on *WB-Govt-Inefficiency-Rank* (Panel A), *Travel, Entertainment, and Conference Expenses (ETC)* (Panel B). Please refer to Appendix A for these variable definitions. In all specifications, we include the same control variables as in column 5 of Table 2 Panel A. We include city*origination year fixed effects for specification in column 1, and city*delinquency quarter fixed effects for specifications in columns 2-5. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Panel A					
Bureaucrat	0.076**	-0.314	-0.635**	-0.004	0.433
	(2.59)	(-1.36)	(-2.22)	(-0.12)	(1.48)
Bureaucrat x WB-Govt-Inefficiency	0.132***	1.137***	-1.148**	0.073*	0.526
	(3.58)	(4.00)	(-2.04)	(1.72)	(1.51)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	20,246	31,856	1,211	1,211	948
R^2	0.370	0.555	0.475	0.269	0.242
Panel B					
Bureaucrat	0.015	-0.125	0.010	0.001	0.032
	(0.32)	(-0.32)	(0.02)	(0.04)	(0.11)
Bureaucrat x ETC High	0.170***	0.672	-1.115**	0.074**	0.673**
	(3.29)	(1.61)	(-2.55)	(2.21)	(2.05)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	20,250	31,864	1,212	1,212	950
R^2	0.371	0.557	0.475	0.271	0.246

Table 6. Branch Opening and Government Deposits

Panel A of this table shows the impact of bureaucrat credit line premium at city *k*, year *t* on the probability of new branch opening of this bank in the following year *t*+1 in the same city. The observation is at the branch-year level. The dependent variable is a dummy variable that equals one if the branch is opened at year *t*+1 and zero otherwise. We run the regression as in column 5 of Table 2 Panel A and column 1 of Table 4 for each city and year in the period of 2003-2005, and obtain the coefficient of *Bureaucrat* ($\beta_{B,k,t}$), *High-rank bureaucrat* ($\beta_{HB,k,t}$), and *Low-rank bureaucrat* ($\beta_{LB,k,t}$) for city *k* in year *t*. We also examine how this effect varies with the local market share of our bank proxied by *% Bureaucrat served*. We use the variance of the estimated *Bureaucrat* (*High-rank bureaucrat* or *Low-rank bureaucrat)* coefficients as the regression weights. We include (natural logarithm of) the city-level GDP per capita as controls and year*province fixed effects in all specifications of Panel A. In Panel B, the dependent variable is the natural logarithm of annual government deposits at this bank for each of the 31 provinces in our sample during the 2003-2005 period. We run the regression as in column 5 of Table 2 Panel A and column 1 of Table 4 for each of the 31 provinces and for each year in the 2003-2005 period, and obtain the coefficient of *Bureaucrat* ($\beta_{B,l,t}$), *High-rank bureaucrat* ($\beta_{HB,l,t}$), and *Low-rank bureaucrat* ($\beta_{LB,l,t}$) for province *l* in year *t*. We also examine how this effect varies with the local market share of our bank proxied by *% Bureaucrat served*. We use the variance of the estimated *Bureaucrat* (*High-rank bureaucrat* or *Low-rank bureaucrat)* coefficients as the regression weights. We include (natural logarithm of) the provincial-level GDP per capita as controls and year and province fixed effects in all specifications of Panel B. Please refer to Appendix A for the detailed definition of variables. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A

	(1)	(2)	(3)	(4)	(5)	(6)
			$D(New\ Branch\ Opening)_{k,t+1}$			
$\beta_{B,k,t}$	0.070**	-0.286**				
	(2.21)	(-2.06)				
$\beta_{B,k,t}$ x % Bureaucrat served		0.932**				
		(2.40)				
$\beta_{HB,k,t}$			0.091***	-0.214*		
			(2.99)	(-1.74)		
$\beta_{HB,k,t}$ x % Bureaucrat served				0.796**		
				(2.29)		
$\beta_{LB,k,t}$					0.023*	-0.002
					(1.65)	(-0.02)
$\beta_{LB,k,t}$ x % Bureaucrat served						0.082
						(0.28)
Constant	-0.074	0.023	-0.111	-0.046	-0.142	-0.215*
	(-0.59)	(0.17)	(-0.95)	(-0.39)	(-1.24)	(-1.83)
Control	Y	Y	Y	Y	Y	Y
Province*Year FE	Y	Y	Y	Y	Y	Y
Observations	4,416	4,416	4,416	4,416	4,416	4,416
R^2	0.232	0.233	0.227	0.228	0.198	0.199

Panel B						
	(1)	(2)	(3)	(4)	(5)	(6)
				Ln($government\ deposits\ at\ the\ bank$)$_{l,t}$		
$\beta_{B,l,t}$	0.113***	-0.579				
	(2.74)	(-1.62)				
$\beta_{B,l,t}$ x % Bureaucrat served		0.730**				
		(1.98)				
$\beta_{HB,l,t}$			0.106***	-0.721*		
			(3.30)	(-1.87)		
$\beta_{HB,l,t}$ x % Bureaucrat served				0.859**		
				(2.09)		
$\beta_{LB,l,t}$					0.048*	-0.880
					(1.79)	(-1.55)
$\beta_{LB,l,t}$ x % Bureaucrat served						0.965
						(1.65)
Constant	3.429	3.871	1.125	0.788	2.159	2.888
	(0.95)	(1.05)	(0.33)	(0.23)	(0.58)	(0.77)
Control	Y	Y	Y	Y	Y	Y
Province FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Observations	74	74	74	74	74	74
R^2	0.996	0.996	0.996	0.996	0.996	0.996

Table 7. Credit Provision for Non-Bureaucrats

The table presents results on the cross-sectional differences in credit line granted to non-bureaucrats. The dependent variable is the natural logarithm of the granted total credit line within this bank as of the origination year. We run the regression as in column 5 of Table 2 Panel A (and column 1 of Table 4) for each of the cities in our sample, and obtain the coefficients for city *j* of *Bureaucrat* ($\beta_{B,j}$), *High-rank bureaucrat* ($\beta_{HB,j}$), and *Low-rank bureaucrat* ($\beta_{LB,j}$) in each regression. We define the city as *High bureaucrat credit line premium area* (*Low bureaucrat credit line premium area*) if $\beta_{B,j}$lies above (below) the median of the cross-sectional distribution. We then match non-bureaucrat consumers residing in the *High bureaucrat credit line premium area* with those residing in the *Low bureaucrat credit line premium area*, based on the one-to-one nearest neighbor propensity score matching on *age, monthly income, gender and education*. Panel A presents the matched-sample summary statistics of non-bureaucrats in those two areas. Panel B reports results of regressions that study, within the matched sample of non-bureaucrats, the association between the total credit line and bureaucrat credit line premium at the city level. City-level measures of bureaucrat credit line premium include $\beta_{B,j}$, $\beta_{HB,j}$, and $\beta_{LB,j}$. Alternatively, we use the dummy variables *Above median* $\beta_{B,j}$, *Above median* $\beta_{HB,j}$, *and Above median* $\beta_{LB,j}$, which equal one if the estimated $\beta_{B,j}$, $\beta_{HB,j}$, *and* $\beta_{LB,j}$ for city j is above the cross-sectional median. All regressions have the same controls as in column 5 of Table 2 Panel A. Origination year fixed effects are included in all specifications. To address the generated regressor problem, we use the variance of the estimated coefficients on $\beta_{B,j}$, $\beta_{HB,j}$, *and* $\beta_{LB,j}$ as regression weights. Standard errors are clustered by the city. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Summary statistics of non-bureaucrats in the matched sample

	(1) High bureaucrat credit line premium area	(2) Low bureaucrat credit line premium area	(3) Difference (1)-(2)
Credit line	15,968	20,101	-4,133***
Income	4,347	4,332	15
Age	36.1	35.9	0.2***
Female (%)	33.6	33.8	-0.2
College (%)	46.1	45.0	1.1**
Married (%)	73.8	73.9	-0.1
N	36,982	36,982	

Panel B: Non-bureaucrat credit line discount regression

	(1)	(2)	(3)	(4)	(5)	(6)
	Ln(credit line)					
$\beta_{B,j}$	-0.530***					
	(-5.15)					
Above median $\beta_{B,j}$		-0.184***				
		(-3.28)				
$\beta_{HB,j}$			-0.317***			
			(-3.45)			
Above median $\beta_{HB,j}$				-0.163***		
				(-3.02)		
$\beta_{LB,j}$					0.028	
					(0.21)	
Above median $\beta_{LB,j}$						0.088
						(1.47)
Controls	Y	Y	Y	Y	Y	Y
Origination year FE	Y	Y	Y	Y	Y	Y
Observations	66,949	66,949	66,949	66,949	66,949	66,949
R^2	0.251	0.245	0.262	0.260	0.230	0.232

Table 8. Evidence from Corruption Crackdowns

The table reports the credit outcomes during the one-year period following corruption crackdowns. In Panel A, we compare the average credit outcomes (credit line at origination, delinquency rate, time to delinquency, reinstatement rate, and time to reinstatement) for bureaucrats in the year before and after the crackdown events for the treatment and control provinces respectively. The treatment group includes provinces that experienced at least one corruption crackdown during our sample period and contains 15 provinces. Each treatment province is matched with a neighboring province from the control group with the event time aligned. Difference-in-difference results are in Panel B. Specifically, we repeat the regressions for Table 2 (column 5) and Table 3 (columns 2, 4, 6, and 8) by interacting the *Bureaucrat* dummy with a *Post Crackdown* dummy. *Post Crackdown* dummy is equal to one for accounts opened during the period (*t+1m, t+12m)* in provinces with a corruption crackdown in month *t.* In all specifications, we include the same control variables as in column 5 of Table 2 Panel A, and cluster the standard errors at the city level. In Panels C and D, we repeat the analysis for Panels A and B of Table 6 (columns 2, 4, and 6) by interacting the independent variables in Table 6 with *Post Crackdown,* which is equal to one during the period *T+1y* for provinces with a crackdown event in year *T.* Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Univariate comparison of pre- and post-crackdown (Bureaucrats)

	(1)	(2)	(3)	(4)
		One year before	One year after	Difference (3) – (2)
Ln (credit line)	Treated	9.42	9.34	-0.08**
	Control	9.74	9.92	0.18***
Delinquency (%)	Treated	6.61	3.34	-3.28***
	Control	5.85	3.88	-1.97***
Time to delinquency(in months)	Treated	7.57	8.39	0.82**
	Control	9.34	9.41	0.07
Reinstatement (%)	Treated	90.52	85.18	-5.34*
	Control	75.00	81.00	6.00
Time to Reinstatement(in months)	Treated	3.89	3.78	-0.12
	Control	3.66	3.74	0.08

Panel B: Regression analysis of credit outcomes

	(1)	(2)	(3)	(4)	(5)
	Ln (credit line)	Delinquency (=100)	Time to Delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Bureaucrat	0.188***	0.589***	-1.220***	0.067***	0.588**
	(8.90)	(3.63)	(-3.39)	(3.06)	(1.98)
Bureaucrat x Post crackdown	-0.129***	-0.474**	1.075*	-0.098*	-0.138
	(-3.21)	(-1.99)	(1.95)	(-1.76)	(-0.37)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,118	1,417	1,417	1,120
R^2	0.385	0.576	0.490	0.292	0.251

Panel C: Regression analysis of new branch opening			
	(1)	(2)	(3)
		$\mathrm{D}(New\ Branch\ Opening)_{\mathrm{k,t+1}}$	
$\beta_{B,k,t}$	0.125***		
	(3.48)		
$\beta_{B,k,t}$ x Post crackdown	-0.241***		
	(-3.60)		
$\beta_{HB,k,t}$		0.130***	
		(3.70)	
$\beta_{HB,k,t}$ x Post crackdown		-0.167***	
		(-2.68)	
$\beta_{LB,k,t}$			0.033**
			(2.28)
$\beta_{LB,k,t}$ x Post crackdown			-0.018
			(-0.69)
Constant	-0.140	-0.161	-0.136
	(-1.19)	(-1.46)	(-1.20)
Control	Y	Y	Y
Province*Year FE	Y	Y	Y
Observations	4,416	4,416	4,416
R^2	0.239	0.230	0.198
Panel D: Regression analysis of government deposits			
	(1)	(2)	(3)
		$\mathrm{Ln}(government\ deposits\ at\ the\ bank)_{l,\mathrm{t}}$	
$\beta_{B,l,t}$	0.146***		
	(3.46)		
$\beta_{B,l,t}$ x Post crackdown	-0.491**		
	(-2.40)		
$\beta_{HB,l,t}$		0.107***	
		(3.20)	
$\beta_{HB,l,t}$ x Post crackdown		-0.059	
		(-0.35)	
$\beta_{LB,l,t}$			0.053*
			(1.91)
$\beta_{LB,l,t}$ x Post crackdown			-0.274
			(-1.26)
Constant	1.784	0.544	1.934
	(0.59)	(0.17)	(0.54)
Control	Y	Y	Y
Province FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	74	74	74
R^2	0.996	0.996	0.996

Disguised Corruption: Evidence from Consumer Credit in China

Online Appendix

(Not Intended for Publication)

I. Alternative Interpretations

I.A. Unobservable determinants of credit

We provide more tests to dispel alternative interpretations. We take advantage of an institutional feature in China's credit card industry to assess if bureaucrats get more credit due to their higher creditworthiness. During our sample period, Shanghai was the only city that established a credit sharing system through which banks could get access to an individual's credit history across participating banks. Bank branches located in Shanghai had better information to assess borrower's creditworthiness than in other parts of China. Consequently, the credit line decision in Shanghai should be less affected by unobservable information relative to other regions in China. If bureaucrat credit premium simply reflects omitted (unobservable) credit quality relevant information, we would expect the omitted variable bias reflected in the coefficient on *Bureaucrat* to be smaller in Shanghai.

We test this conjecture by re-estimating the credit line regressions interacting *Bureaucrat* with a dummy that equals one if the branch is located in Shanghai (Table A1). We find that bureaucrats in Shanghai receive higher credit lines – not lower as would be expected based on the omitted variable argument above -- than other cities, and this pattern continues to hold when we use the other first-tier cities with similar economic development as the comparison group.

[Insert Table A1 about Here]

I.B. Banking relationships and financial sophistication

Another set of explanations for the credit line premium received by bureaucrats could be that banks are better informed about the bureaucrats through years of relationship or because bureaucrats are financially sophisticated and, therefore, conduct better bargaining. However, in Table A2 of the online appendix, we show that bureaucrats do not have a significantly longer banking relationship with this bank than non-bureaucrats and that there is no difference in financial sophistication between bureaucrats and non-bureaucrats.

[Insert Table A2 about Here]

I.C. Underestimation of income for bureaucrats

A natural concern against the "quid pro quo" interpretation of our findings is that credit premium offered to bureaucrats' might reflect their true income, which could be underreported to the bank (e.g. Deng, Wei, and Wu, 2017). Moreover, the underestimated income could be particularly relevant in more corrupt regions as bribes and benefits are likely a significant additional source of

income for bureaucrats. It is worth noting that while this alternative might explain why banks lend more credit to some bureaucrats, it cannot reconcile with the higher defaults for such individuals that we also establish in the data.

Furthermore, we address this concern by asking how much more income non-bureaucrats with similar demographics would need to earn in order to have the same credit line as bureaucrats. We achieve this by first artificially adding income X to non-bureaucrats and perform the same matching procedure as before. As a result, we obtain a matched sample in which non-bureaucrats are similar with bureaucrats in most characteristics except that the income for non-bureaucrats is higher by X. We then follow similar specification as in Table 2 and regress credit line on *Bureaucrat* and other controls. In Figure A2, we plot the coefficients on *Bureaucrat* from running such iterative regressions against income difference X. As can be observed, the credit line differential between the two groups disappears when non-bureaucrats with income that is 93 (Panel A)-95 (Panel B) percent above the median income in the province are sampled. This evidence suggests a large, potentially implausible level of income misreporting by bureaucrats is needed to justify the credit premium observed in the data.

[Insert Figure A2 about Here]

II. Robustness Checks

II.A. More tests on the role of bureaucrat power (Table 4)

First, we address the concern that non-bureaucrats on average may have a lower seniority rank and therefore may not be an appropriate control group for high ranked bureaucrats. To this end, we carry out an additional analysis by matching non-bureaucrats with bureaucrats within each seniority rank. As a result, we compare non-bureaucrats and bureaucrats with the same demographics as well as seniority rank. Second, we restrict to the top rank category to identify the high rank bureaucrats and use a different age threshold to identify near retirement bureaucrats and results are very similar. Lastly, we replicate the estimate in Table 4 by limiting the analysis to the sample of bureaucrats. These results are reported in Table A3 of Online Appendix. Our results continue to hold in all these tests.

[Insert Table A3 about Here]

II.B. Relating to external corruption measure

We provide further evidence for the geographical variation in bureaucrat credit line premium in Table 5. We first repeat the analysis in column 5 of Table 2 (and column 1 of Table 4) city by city using the matched sample and obtain the coefficient estimate of *Bureaucrat* (or *High-rank*

bureaucrat) for each city. Using the regression coefficients as measure of the city-level bureaucrat credit line premium, we study whether the cross-city variation in the bureaucrat credit line premium is consistent with the pattern of corruption across these cities. We follow Cai, Fang, and Xu (2011) and use the city-level average of business expenses on travel, entertainment, and conference to proxy for city-level corruption level. Consistent with results in Table 5, the bureaucrat credit line premium, primarily the high-rank bureaucrat credit line premium, is indeed higher in cities where firms spend more on ETC expenditures. For brevity, these results in reported in Table A4 of the Online Appendix. We also plot the ranking of Cai, Fang, and Xu (2011)'s measure along with our Figure 3 (based on common cities) in Figure A3 in the Online Appendix and the two plots reveal similar patterns.

[Insert Table A4 about Here]

[Insert Figure A3 about Here]

II.C. Is the credit under-provision among non-bureaucrats driven by their low credit quality?

The under-provision to non-bureaucrats in regions may reflect "soft information" about the borrower's average quality that banks likely have. We address this concern by showing that there is no difference in delinquency and reinstatement behavior between non-bureaucrats in the high bureaucrat credit line premium regions and those in low bureaucrat credit line premium. These findings, reported in Table A5, further support the view that credit was under-provided to non-bureaucrats in regions where banks extended more credit to bureaucrats.

[Insert Table A5 about Here]

II.D. Credit performance of other consumer loans outcomes

In addition to the credit card accounts, we also observe information on the performance of several other consumer credit types at this bank. For example, the data include both mortgages and car loans originated by the same bank during 2001-2005, for which we observe the basic loan information such as the total loan amount, whether the loan is collateralized or not, and the subsequent loan performance. While not as comprehensive as the credit card data, the information on the other consumer credit performance still provides value for further internal as well as external validation of the main economic argument we propose.

As in the main analysis, we first create a matched sample of mortgage and car loans for bureaucrats and non-bureaucrats. Panel A of Table A6 shows that, after matching, bureaucrats and non-bureaucrats are comparable in their observables. However, mortgages and car loans of bureaucrats are 1.3 percentage points (or 54.2 percent) more likely to be delinquent than those of non-bureaucrats. In the multivariate regression, column 1 in Panel B of Table A6 confirms the univariate result that, else equal, bureaucrats are more likely to be delinquent on their mortgage

and car loans than otherwise comparable non-bureaucrats. Combined with the fact that a large proportion of the mortgage and car loans are uncollateralized (around 35 percent for both bureaucrats and non-bureaucrats as shown in Table A6 Panel A), the result is highly indicative of benefits accrued to bureaucrats and loss suffered by the bank upon loan delinquency. Furthermore, consistent with our previous results on credit card outcomes, such delinquency pattern is stronger among high-rank bureaucrats (column 2) and in more corruptive regions (columns 3 and 4).

These results lend strong support to our central claim. First, the remarkably consistent pattern in delinquency outcomes of mortgage and car loans further rules out alternative explanations based on the creditworthiness of bureaucrats or unobserved attributes associated with bureaucrats' credit cards (e.g., they are more likely to be used for work-related rather than personal spending). Second, the evidence suggests that the corruption mechanism may not be specific to credit card products. Our credit card evidence likely underestimates the economic magnitude of the disguised corruption.

[Insert Table A6 about Here]

II.E. Specification checks

First, we make sure that our main results are robust to flexible specifications of control variables by allowing the influence of control variables to be (i) linear, (ii) quadratic, and (iii) higher-order polynomial. As shown in Table A7, our main findings in Table 2 and 4 remain the same. Second, we allow all control variables, including age, monthly income of the individual reported as of the origination year, gender, marital status, college education, banking relationship and financial sophistication, to interact in the heterogeneity tests and the main results are robust (reported in Table A8).

[Insert Table A7 about Here]

[Insert Table A8 about Here]

In our main analyses, we estimate linear probability models to facilitate estimation with a large number of fixed effects. In unreported results, we verify our findings by re-running the analysis using logit regression and the estimates obtained are qualitatively similar.

II.F. Full sample analysis

We also check the external validity of our results by re-estimating the main analysis in the entire sample instead of the matched sample. We present these results in Table A9 in the Online Appendix. All results are qualitatively and quantitatively similar. For example, in the full sample, bureaucrats are associated with 13 percent larger credit lines when compared to non-bureaucrats.

[Insert Table A9 about Here]

III. Aggregate implications estimation

III.A. Inferring from card balance of post-reinstated accounts

To get an estimate of the average monthly credit card spending amount, we take advantage of the bank statements available in the last (or most recent) month and focus on the outstanding balance of bureaucrats who in the past had their delinquent credit cards reinstated. Then we compare the outstanding balance for reinstated bureaucrats relative to others for the most recent month in Table A10. We find that the credit card balance for bureaucrats with reinstated accounts is, on average, 2,880 RMB higher after controlling for all demographics and banking relationship variables available. Moreover, consistent with our earlier evidence, the balance for high (low) rank bureaucrats is 3,936 (1,382) RMB higher than non-bureaucrats.

[Insert Table A10 about Here]

III.B. Impact on small business creation

The limited access to credit markets can in turn inhibit growth in the small business sector. We study the relationship between small business in a given province-year and the bureaucrat credit line premium for the same province in the previous year. Small business is measured by the number of individually owned business ("*ge ti hu*") at the province year level, which is obtained from the *China Economic and Social Development Data* that is compiled based on the *China Statistical Yearbook*. We first obtain the coefficients for *Bureaucrat* by running the regression as in column 5 of Table 2 for each of the 31 provinces between 2003 and 2005, after which we study the association with the local small business creation. In Table A11, we find that an increase in the estimated coefficient for bureaucrat is associated with a subsequent decrease in small business creation, though the estimate is statistically insignificant.

[Insert Table A11 about Here]

Figure A1. Kernel Density Plots of the Matched Sample

This figure shows the kernel density distribution of age and monthly income between bureaucrats and non-bureaucrats in the matched sample.

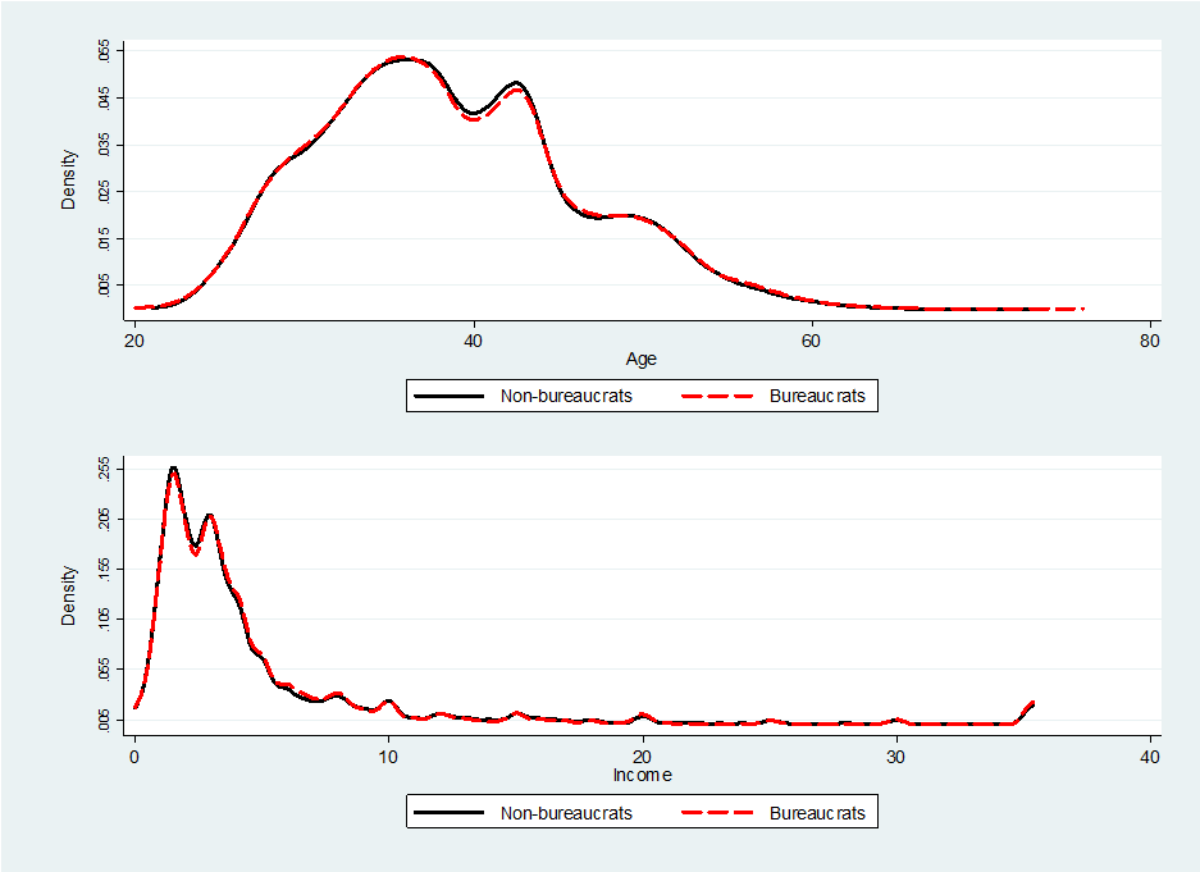
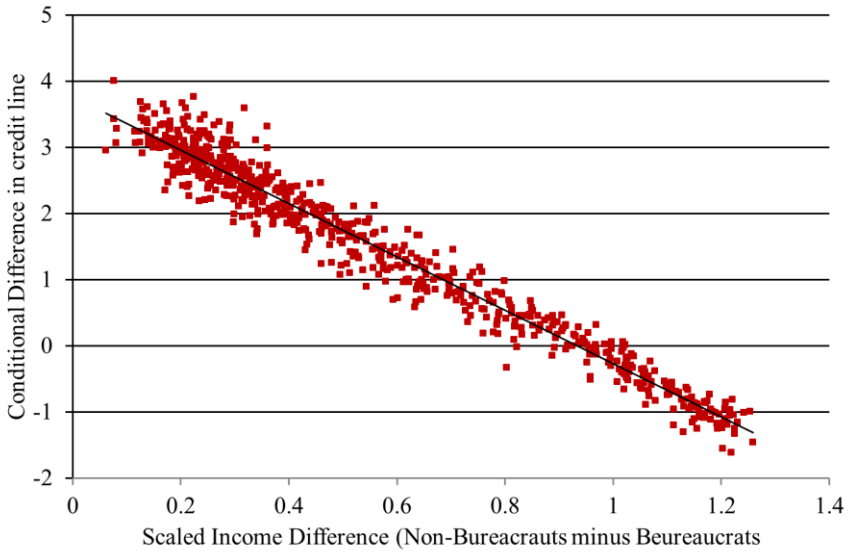


Figure A2: Scatterplot of Conditional Credit Line Differences and (Scaled) Income Differences and between Bureaucrats and non-Bureaucrats

The figure describes how much more income the non-bureaucrats need to earn in order to have the same credit line with bureaucrats of similar characteristics. We achieve this by first artificially adding income X to non-bureaucrats and perform the matching procedure. As a result, we obtain a matched sample, in which non-bureaucrats are similar with bureaucrats in most characteristics except that the income for non-bureaucrats is X higher. We then follow similar specification as in Table 2 and regress credit line on *bureaucrat* and other controls. We plot the estimated coefficients for *bureaucrat* against the differences in average income between bureaucrats and non-bureaucrats as one point in the graph. We repeat this procedure and plot the estimated coefficients against the income difference X (scaled by the province median income) in Panel A. Panel B shows the plot based only on the statistically significant coefficient estimates.

Panel A



Panel B

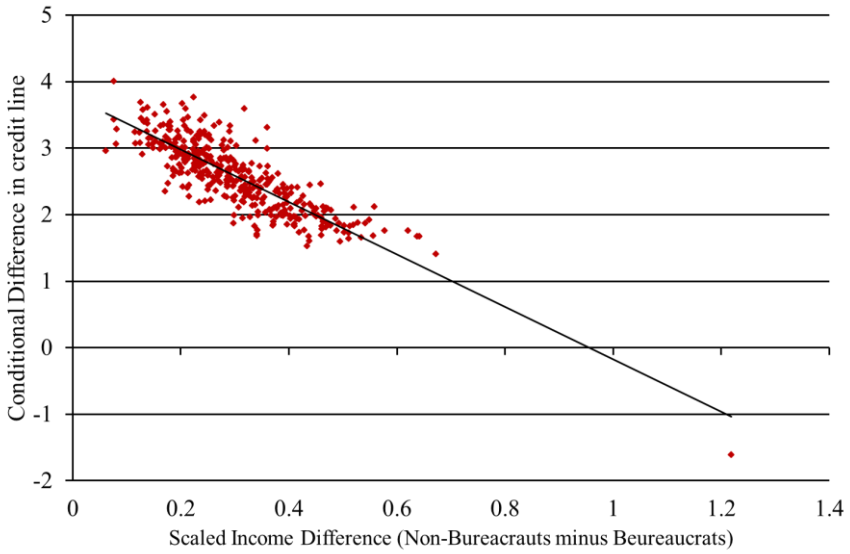
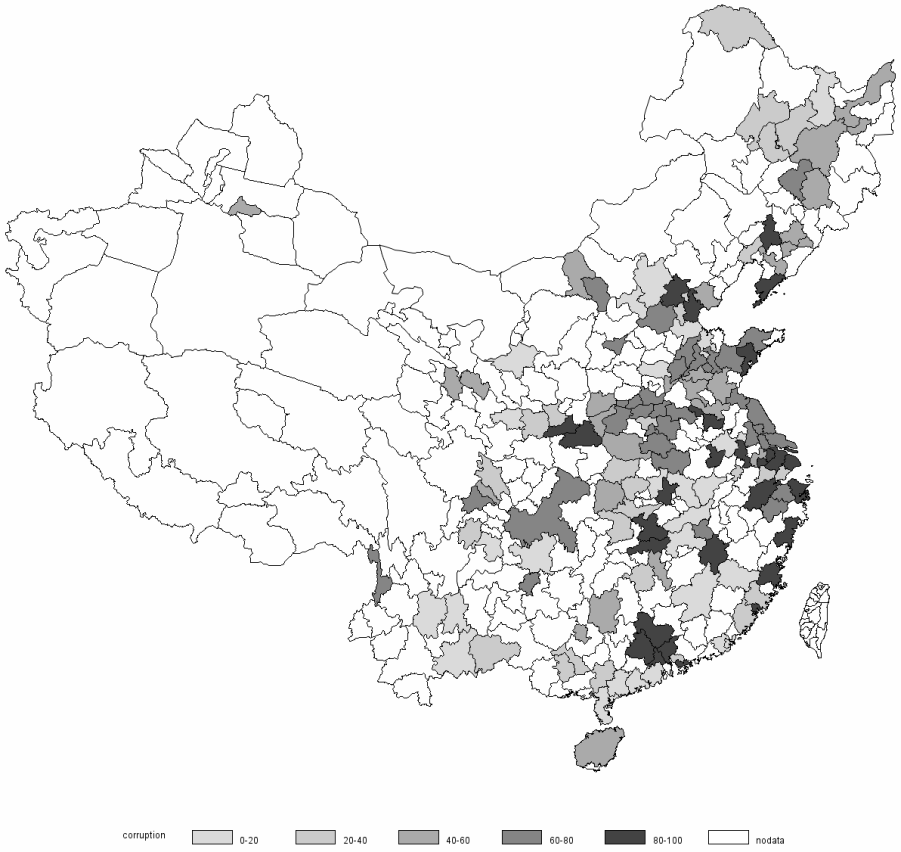


Figure A3. Geographical Distribution: Comparison with Cai, Fang, and Xu (2011)

Panel A plots the distribution of the corruption level, based on the ETC measure in Cai, Fang, and Xu (2011) in China. Panel B re-plots Figure 3, based the common cities with those in Cai, Fang, and Xu (2011).

Panel A: Cai, Fang, and Xu (2011)



Panel B: The estimated bureaucrat credit line premium

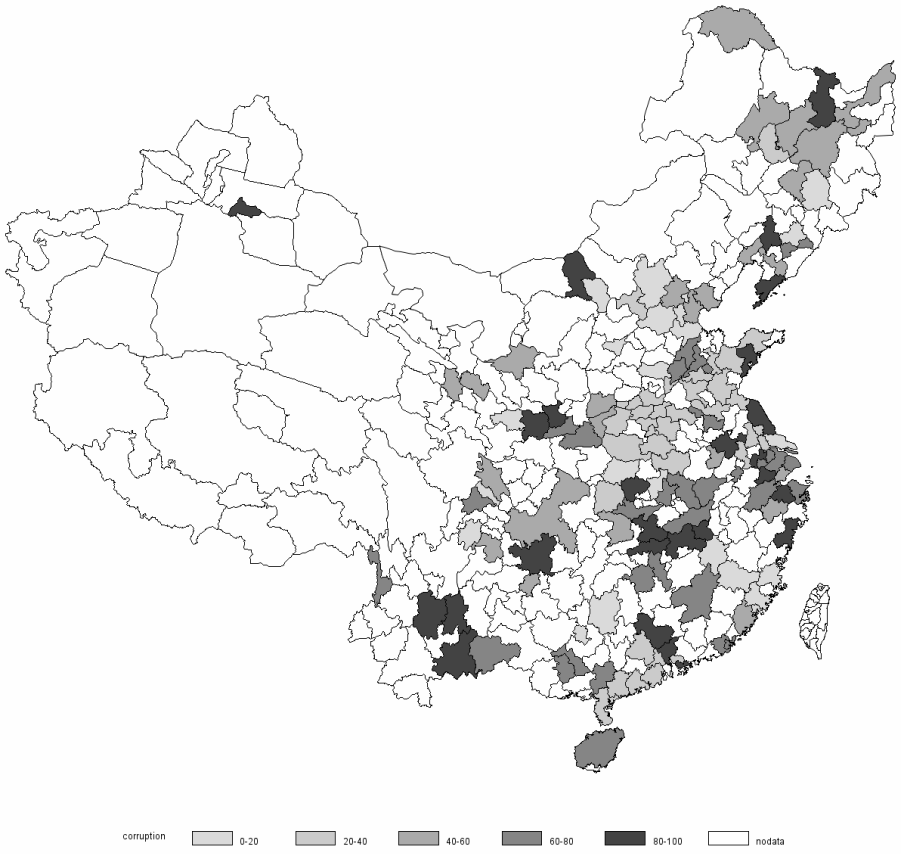


Table A1. Evidence from Shanghai

The table estimates the credit line difference, in the matched sample, between bureaucrats and non-bureaucrats in Shanghai, where there exists a well-functioning credit scoring system in credit card approval decisions during our sample period. We use the same empirical specification as in Table 2. Panel A shows the summary statistics for Shanghai and other first-tier cities (Beijing, Guangzhou, and Shenzhen) and Panel B shows the regression results. In column 1, we include all cities in the analysis, and in column 2, we include only the first-tier cities (Beijing, Shanghai, Guangzhou, and Shenzhen) in the analysis. Please refer to Appendix A for all variable definitions. All regressions include city *origination year fixed effect. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Summary statistics

	(1)	(2)	(3)	(4)
	Mean	Std. Dev.	Mean	Std. Dev.
	Shanghai		Other first-tier cities	
Bureaucrat	0.5	0.5	0.5	0.5
No. of cards	2.7	1.4	2.7	1.6
Banking relationship	18.1	7.8	15.5	7.5
Sophistication	2.7	1.4	2.1	1.3
Age	41.0	8.8	37.9	7.6
Income (RMB)	6,519	7,079	7,112	7,536
Female (%)	23.1	42.1	32.8	46.9
College (%)	28.5	45.2	35.0	47.7
Married (%)	79.6	40.2	64.5	47.8
Credit line (RMB)	40,857	38,275	28,497	32,587

Panel B: Credit line premium for bureaucrats

	(1)	(2)
	All	First-tier cities
	Ln (credit line)	
Bureaucrat	0.131***	0.154***
	(5.97)	(6.16)
Bureaucrat x Shanghai	0.153***	0.104***
	(4.17)	(2.71)
Controls	Y	Y
City*Origination year FE	Y	Y
Observations	24,026	8,842
R^2	0.385	0.367

Table A2. Banking Relationship and Sophistication

The table studies whether bureaucrats exhibit better banking relationship and sophistication in their financial decision behavior in the matched sample. The dependent variables in columns 1 and 2 are *Banking relationship*, defined as the number of months since the individual established relationship with this bank through debit card, mortgage loan or credit card account. The dependent variables in columns 3 and 4 are *Sophistication*, defined as the total number of banks (including this one) the individual has opened credit or debit card accounts. In all specifications, we include the same control variables as in column 5 of Table 2 Panel A, as well as city fixed effects. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)
	Banking relationship		Sophistication	
Bureaucrat	0.035	0.060	0.100	0.098
	(1.06)	(1.62)	(1.30)	(1.58)
Controls	N	Y	N	Y
City FE	Y	Y	Y	Y
Observations	27,071	24,026	27,071	24,026
R^2	0.799	0.798	0.096	0.125

Table A3. Credit Provision and Performance Outcomes: Alternative Specification of the Rank of Bureaucrats

The table reports further robustness check by using alternative specifications of the rank of bureaucrats. In Panel A, we match bureaucrats with non-bureaucrats based on the same demographics, but separately for high rank and low rank group respectively. As a result, the control groups for high-rank (or low-rank) bureaucrats only stems from non-bureaucrats with a high-rank (or low rank). Then we repeat the analysis in Panel A of Table 4. Panel B repeats the analysis in Table 4 Panel A by defining *High-rank bureaucrat* to be 1 for bureaucrats in the top category (out of the five rank categories provided in the data). Panel C replicates Table 4 Panel B by dividing high-rank bureaucrats into two subcategories: those who are retiring (> =58 for male and >= 53 for female) and those who are not retiring (< 58 for male and < 53 for female). Panel D presents the robustness test of Table 4 by limiting the sample to bureaucrats only. In all specifications, we include the same control variables as in Table 4. ***, ** and * correspond to statistical significance at 1%, 5%, and 10% level respectively.

	(1)	(2)	(3)	(4)	(5)
	Ln (Credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Panel A: Matching bureaucrats and non-bureaucrats based on their rank					
Low-rank bureaucrat	0.044**	0.147	-0.220	-0.003	0.069
	(2.18)	(0.72)	(-0.88)	(-0.10)	(0.20)
High-rank bureaucrat	0.202***	1.328***	-1.613**	0.107***	1.369***
	(6.49)	(5.89)	(-2.03)	(3.20)	(6.85)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	19,737	30,770	1,199	1,199	949
R^2	0.407	0.573	0.499	0.319	0.331
Panel B: Alternative definition of high-rank bureaucrats (80 percentile and above)					
Low-rank bureaucrat	0.144***	0.381***	-0.735***	0.026	0.174
	(6.78)	(2.83)	(-3.53)	(1.27)	(0.63)
High-rank bureaucrats	0.318***	2.365***	-1.953***	0.154***	1.716***
	(6.36)	(6.05)	(-2.90)	(5.41)	(8.23)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,118	1,417	1,417	1,120
R^2	0.387	0.577	0.495	0.300	0.310
Panel C Alternative threshold for retirement age (>=58 for male and >=53 for female)					
Low-rank bureaucrat	0.101***	0.167	-0.283	-0.007	-0.098
	(5.13)	(0.95)	(-0.97)	(0.27)	(-0.29)
Retiring high-rank bureaucrat	0.122	-0.032	0.936	-0.341**	-0.850
	(0.70)	(-0.02)	(0.82)	(-2.26)	(-1.52)
Non-retiring high-rank bureaucrat	0.269***	1.402***	-1.935***	0.142***	1.271***
	(8.78)	(5.51)	(-2.99)	(6.20)	(7.16)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,118	1,417	1,417	1,120
R^2	0.388	0.577	0.502	0.309	0.307
Panel D Sample of Bureaucrats Only					
Panel D1: Rank of Bureaucrats					
High-rank bureaucrat	0.172***	1.205***	-1.367*	0.110***	1.169***
	(6.48)	(4.64)	(-1.66)	(3.33)	(3.32)

Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.450	0.601	0.533	0.357	0.396
Panel D2: Age of Bureaucrats					
Retiring high-rank bureaucrats	-0.162	-0.323	2.033	-0.252	-0.741
	(-0.83)	(-0.98)	(1.02)	(-0.88)	(-0.85)
Non-retiring high-rank bureaucrats	0.175***	1.229***	-1.382	0.112***	1.192***
	(6.42)	(4.67)	(-1.65)	(3.36)	(3.47)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.450	0.601	0.534	0.359	0.400

Table A4. City-level Corruption and the Bureaucrat Credit Line Premium

In this table, we study the cross-sectional relationship between the bureaucrat credit line premium and the city-level corruption. In Panel A (Panel B and C), we repeat the regression as in column 5 of Table 2 (column 1 of Table 4 Panel A) for each of the cities in our matched sample and obtain the coefficients for city j of *Bureaucrat* ($\beta_{B,j}$) and *High-rank bureaucrat* ($\beta_{HB,j}$) and *Low-rank bureaucrat* ($\beta_{LB,j}$) in each regression. Then we study how the bureaucrat credit line premium in each city is related to measures of corruption at the city level. After deleting cities with a missing value or small samples of credit data, the sample contains 70 cities. We include (natural logarithm of) the province-level GDP as controls in all specifications. Please refer to Appendix A for all other variable definitions. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A								
					$\beta_{B,j}$			
Ln(travel)	0.111***	0.079						
	(3.23)	(1.64)						
Ln (entertainment)			0.114***	0.068				
			(2.94)	(1.13)				
Ln(conference)					0.062**	0.022		
					(1.99)	(0.67)		
Ln(ETC)							0.110***	0.072
							(2.99)	(1.33)
Observations	67	67	67	67	67	67	67	67
R^2	0.176	0.197	0.142	0.172	0.070	0.150	0.156	0.182
Panel B								
					$\beta_{HB,j}$			
Ln(travel)	0.157***	0.156**						
	(3.09)	(2.20)						
Ln(entertainment)			0.166***	0.155**				
			(3.07)	(1.97)				
Ln(conference)					0.093**	0.062		
					(2.11)	(1.01)		
Ln(ETC)							0.158***	0.153**
							(2.99)	(2.00)
Observations	67	67	67	67	67	67	67	67
R^2	0.154	0.154	0.129	0.129	0.073	0.092	0.140	0.140
Panel C								
					$\beta_{LB,j}$			
Ln(travel)	-0.060	-0.058						
	(-1.41)	(-0.68)						
Ln(entertainment)			-0.051	-0.030				
			(-1.17)	(-0.33)				
Ln(conference)					-0.027	-0.005		
					(-0.90)	(-0.12)		
Ln(ETC)							-0.060	-0.054
							(-1.38)	(-0.61)
Observations	67	67	67	67	67	67	67	67
R^2	0.047	0.047	0.024	0.028	0.011	0.024	0.040	0.041

Table A5. Delinquency and Reinstatement for Non-Bureaucrats

The table further compares the matched non-bureaucrats in the high bureaucrat credit line premium area vs low bureaucrat credit line premium area in Table 7. The dependent variables are the credit card delinquency rate (Panel A), time to delinquency (Panel B), reinstatement probability (Panel C), and time to reinstatement (Panel D), as in Table 3. We include the same independent variables as in Table 7 Panel B. All regressions have the same controls as in column 5 of Table 2 Panel A. Each regression is weighted by the variance of the estimated coefficients $\beta_{B,j}$ or $\beta_{HB,j}$. Delinquency year-quarter fixed effects are included in all specifications. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)
Panel A: Delinquency				
	Delinquency (= 100)			
$\beta_{B,j}$	0.356			
	(0.96)			
Above median $\beta_{B,j}$		0.092		
		(0.52)		
$\beta_{HB,j}$			0.062	
			(0.35)	
Above median $\beta_{HB,j}$				0.220
				(1.30)
Controls	Y	Y	Y	Y
Delinquency year-quarter FE	Y	Y	Y	Y
Observations	75,817	75,817	84,518	84,518
R^2	0.561	0.561	0.585	0.585
Panel B: Time to Delinquency				
	Time to delinquency (in months)			
$\beta_{B,j}$	-0.444			
	(-0.60)			
Above median $\beta_{B,j}$		0.019		
		(0.06)		
$\beta_{HB,j}$			-0.190	
			(-0.41)	
Above median $\beta_{HB,j}$				-0.085
				(-0.25)
Controls	Y	Y	Y	Y
Delinquency year-quarter FE	Y	Y	Y	Y
Observations	2,879	2,879	3,059	3,059
R^2	0.438	0.438	0.490	0.490

Panel C: Reinstatement probability				
	Reinstatement (=1)			
$\beta_{B,j}$	0.069			
	(1.32)			
Above median $\beta_{B,j}$		-0.001		
		(-0.05)		
$\beta_{HB,j}$			0.043	
			(1.39)	
Above median $\beta_{HB,j}$				-0.052*
				(-1.97)
Controls	Y	Y	Y	Y
Delinquency year-quarter FE	Y	Y	Y	Y
Observations	2,879	2,879	3,059	3,059
R^2	0.170	0.169	0.151	0.153
Panel D: Time to reinstatement				
	Time to reinstatement (in months)			
$\beta_{B,j}$	-0.107			
	(-0.50)			
Above median $\beta_{B,j}$		0.012		
		(0.12)		
$\beta_{HB,j}$			-0.157	
			(-1.33)	
Above median $\beta_{HB,j}$				-0.046
				(-0.44)
Controls	Y	Y	Y	Y
Delinquency year-quarter FE	Y	Y	Y	Y
Observations	2,138	2,138	2,286	2,286
R^2	0.039	0.038	0.057	0.056

Table A6. Delinquency of Other Consumer Loan Types

This table compares the performance of other consumer loan types by the bureaucrat's status. The sample includes both house mortgage and car loans originated by the same bank during 2001-2005. We use one-to-one nearest neighbor propensity score method, based on observable loan characteristics such as total loan amount, loan type, collateralized loan dummy, as well as borrower's demographics including income, age, gender, and province to create a matched sample. Panel A reports the summary statistics of bureaucrats and non-bureaucrats in the matched sample. Panel B reports the OLS regression estimates of the relationship between delinquency outcome, defined as the loan being 90+ days past due, and bureaucratic status for the matched sample. We control for borrower age, income, gender, marital status, education level, bank relationship, as well as loan amount, mortgage loan indicator and collateralized loan indicator in all specifications in Panel B. Please refer to Appendix A for other variable definitions. All regressions include city*delinquency quarter fixed effect. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Summary statistics

	(1) Mean	(2) Std. dev.	(3) Mean	(4) Std. dev.	(5) Difference
	Matched bureaucrat		Matched non-bureaucrat		(1)-(3)
No. of cards	2.7	1.5	2.7	1.5	0.0
Banking relationship	15.4	7.7	15.2	7.5	0.2
Sophistication	2.2	1.3	2.1	1.1	0.1**
Age	38.1	7.3	38.2	7.7	-0.1
Income (RMB)	5,432	7,646	5,183	6,973	249
Female (%)	26.4	44.0	25.8	43.7	0.6
College (%)	40.2	49.0	41.7	49.3	-1.5
Married (%)	75.9	42.7	74.4	43.6	1.5
Loan amount ('000 RMB)	265.2	310.6	266.3	296.9	-1.1
House mortgage (%)	88.6	31.8	88.7	31.7	-0.1
With collateral (%)	65.1	47.7	64.3	47.9	0.8
Delinquency (%)	3.7	18.9	2.4	15.3	1.3***
N	4,439		4,439		

Panel B: Loan delinquency in the matched sample

	Delinquency (=100)			
	(1)	(2)	(3)	(4)
Bureaucrat	1.083***		0.561	-0.817
	(3.09)		(1.01)	(-1.62)
Low-rank bureaucrat		0.584		
		(1.58)		
High-rank bureaucrat		2.152***		
		(3.34)		
Bureaucrat x WB-Govt-Inefficiency			0.565	
			(0.80)	
Bureaucrat x ETC High				2.080***
				(3.38)
Controls	Y	Y	Y	Y
City*Delinquency year-quarter FE	Y	Y	Y	Y
Observations	7,936	7,936	6,823	6,819
R^2	0.355	0.356	0.347	0.350

Table A7. Specification Checks: Analysis with More Flexible Controls

The table reports the robustness check of our main results allowing for flexible functional forms of controls. In Panel A, we replicate the analysis in Table 2 and add flexible specifications of controls in the regressions including (i) linear, (ii) quadratic, and (iii) higher polynomials. Panel B presents the robustness test of Table 4 by adding flexible specifications of income to tests on sample of bureaucrats only. Please refer to Appendix A for other variable definitions and the corresponding tables for specifications. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A Credit Line Premium for Bureaucrats (Table 2 Panel A)									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	linear, quadratic and cubic income			linear, quadratic and cubic age			linear, quadratic and cubic age and income		
Bureaucrat	0.148***	0.147***	0.148***	0.149***	0.149***	0.149***	0.147***	0.147***	0.148***
	(6.71)	(6.75)	(6.77)	(6.67)	(6.66)	(6.66)	(6.71)	(6.75)	(6.77)
Ln(age)	0.519***	0.488***	0.488***						
	(5.08)	(4.81)	(4.87)						
Age				0.014***	0.051***	0.060***	0.013***	0.045***	0.059**
				(5.75)	(3.46)	(2.61)	(5.46)	(2.92)	(2.59)
Age^2					-0.000***	-0.001		-0.000**	-0.001
					(-2.92)	(-1.31)		(-2.46)	(-1.42)
Age^3						0.000			0.000
						(0.40)			(0.61)
Ln(income)				0.193***	0.190***	0.190***			
				(8.72)	(8.72)	(8.72)			
Income	0.030***	0.072***	0.108***				0.030***	0.072***	0.107***
	(12.43)	(7.46)	(5.00)				(12.24)	(7.49)	(5.01)
Income^2		-0.001***	-0.005***					-0.001***	-0.005***
		(-5.13)	(-3.11)					(-5.12)	(-3.12)
Income^3			0.000**						0.000**
			(2.55)						(2.55)
Other Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
City*Origination year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	24,026	24,026	24,026	24,026	24,026	24,026	24,026	24,026	24,026
R^2	0.387	0.394	0.396	0.384	0.385	0.385	0.386	0.395	0.396

Panel B Credit Line Premium for Bureaucrats (Table 4)					
	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Panel B1: Sample of bureaucrats only and linear form of income					
Panel B1-1: Rank of Bureaucrats					
High-rank bureaucrat	0.172***	1.203***	-1.352*	0.113***	1.158***
	(6.93)	(4.59)	(-1.73)	(3.44)	(3.23)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.413	0.601	0.534	0.358	0.395
Panel B1-2: Age of Bureaucrats					
Retiring high-rank bureaucrats	-0.177	-0.317	2.039	-0.247	-0.770
	(-0.89)	(-0.94)	(1.10)	(-0.87)	(-0.84)
Non-retiring high-rank bureaucrats	0.175***	1.227***	-1.368*	0.115***	1.181***
	(6.90)	(4.62)	(-1.73)	(3.48)	(3.39)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.452	0.601	0.535	0.359	0.399
Panel B2: Sample of bureaucrats only and quadratic form of income					
Panel B2-1: Rank of Bureaucrats					
High-rank bureaucrat	0.160***	1.209***	-1.393*	0.113***	1.158***
	(7.90)	(4.64)	(-1.72)	(3.45)	(3.24)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.460	0.601	0.537	0.358	0.395
Panel B2-2: Age of Bureaucrats					
Retiring high-rank bureaucrats	-0.164	-0.327	1.967	-0.248	-0.770
	(-0.80)	(-1.01)	(0.91)	(-0.86)	(-0.84)
Non-retiring high-rank bureaucrats	0.163***	1.234***	-1.409*	0.114***	1.182***
	(7.87)	(4.67)	(-1.72)	(3.48)	(3.40)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.460	0.601	0.538	0.359	0.399

Panel B3: Sample of bureaucrats only and cubic form of income					
Panel B3-1: Rank of Bureaucrats					
High-rank bureaucrat	0.156***	1.208***	-1.396*	0.109***	1.166***
	(7.89)	(4.64)	(-1.66)	(3.40)	(3.32)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.461	0.601	0.537	0.359	0.395
Panel B3-2: Age of Bureaucrats					
Retiring high-rank bureaucrats	-0.157	-0.326	1.961	-0.255	-0.745
	(-0.78)	(-1.01)	(0.91)	(-0.87)	(-0.84)
Non-retiring high-rank bureaucrats	0.159***	1.233***	-1.411*	0.111***	1.189***
	(7.87)	(4.67)	(-1.66)	(3.43)	(3.46)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	12,324	19,182	843	843	688
R^2	0.461	0.601	0.538	0.360	0.399

Table A8. Specification Checks: Interactions for Control Variables

The table reports the robustness check of all our heterogeneity results by including the interactions for all control variables as well, which include age, monthly income of the individual reported as of the origination year, gender, marital status, college education, banking relationship and financial sophistication. Please refer to Appendix A for other variable definitions and the corresponding tables for specifications. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Credit outcomes in more corrupt areas (Table 5)					
	(1)	(2)	(3)	(4)	(5)
	Ln (credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Government inefficiency (Table 5 Panel A)					
Bureaucrat	0.092***	-0.257	-0.664**	0.003	0.445
	(3.25)	(-1.16)	(-2.39)	(0.07)	(1.47)
Bureaucrat x WB-Govt-Inefficiency	0.115***	1.059***	-1.123**	0.065	0.490
	(3.06)	(3.77)	(-2.03)	(1.42)	(1.29)
Controls and Interactions	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	20,246	31,856	1,211	1,211	948
R^2	0.375	0.555	0.476	0.270	0.245
ETC (Table 5 Panel B)					
Bureaucrat	0.053*	-0.328	-0.030	-0.033	0.448*
	(1.78)	(-0.74)	(-0.08)	(-1.03)	(1.82)
Bureaucrat x ETC High	0.130***	0.905*	-1.126***	0.126***	0.210
	(3.39)	(1.91)	(-2.65)	(2.93)	(0.58)
Controls and Interactions	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	20,250	31,864	1,204	1,212	950
R^2	0.376	0.557	0.479	0.280	0.253
Panel B: Quid Pro Quo (Table 6)					
New Branch Opening (Table 6 Panel A)					
		(2)	(4)		(6)
			$\mathrm{D}(New\ Branch\ Opening)_{k,t+1}$		
$\beta_{B,k,t}$		-0.302**			
		(-2.15)			
$\beta_{B,k,t}$ x % Bureaucrat served		0.957**			
		(2.45)			
$\beta_{HB,k,t}$			-0.223*		
			(-1.82)		
$\beta_{HB,k,t}$ x % Bureaucrat served			0.809**		
			(2.32)		
$\beta_{LB,k,t}$					-0.020
					(-0.22)
$\beta_{LB,k,t}$ x % Bureaucrat served					0.153
					(0.55)
Constant		1.712**	1.017		2.902***
		(1.97)	(1.27)		(2.75)
Control and Interactions		Y	Y		Y
Province*Year FE		Y	Y		Y

Observations	4,416	4,416	4,416
R^2	0.235	0.228	0.202

Government deposits (Table 6 Panel B)

	(2)	(4)	(6)
	Ln(government deposits at the bank)$_{l,t}$		
$\beta_{B,l,t}$	-0.579		
	(-1.60)		
$\beta_{B,l,t}$ x % Bureaucrat served	0.730*		
	(1.95)		
$\beta_{HB,l,t}$		-0.757*	
		(-1.87)	
$\beta_{HB,l,t}$ x % Bureaucrat served		0.896**	
		(2.08)	
$\beta_{LB,l,t}$			-0.884
			(-1.52)
$\beta_{LB,l,t}$ x % Bureaucrat served			0.969
			(1.61)
Constant	2.652	-0.145	1.739
	(0.77)	(-0.04)	(0.49)
Control and Interactions	Y	Y	Y
Province FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	74	74	74
R^2	0.996	0.996	0.996

Panel C: Evidence from Corruption Crackdowns (Table 8)

Regression analysis of credit outcomes (Table 8 Panel B)

	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to Delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Bureaucrat	0.186***	0.582***	-1.234***	0.068***	0.584**
	(9.31)	(3.58)	(-3.42)	(3.03)	(2.02)
Bureaucrat x Post crackdown	-0.111***	-0.430*	1.075**	-0.101*	-0.077
	(-3.12)	(-1.91)	(1.96)	(-1.73)	(-0.20)
Controls and Interactions	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	24,026	38,118	1,417	1,417	1,120
R^2	0.389	0.577	0.493	0.294	0.260

Regression analysis of new branch opening (Table 8 Panel C)

	(1)	(2)	(3)
	D$(New\ Branch\ Opening)_{k,t+1}$		
$\beta_{B,k,t}$	0.125***		
	(3.50)		
$\beta_{B,k,t}$ x Post crackdown	-0.236***		
	(-3.46)		
$\beta_{HB,k,t}$		0.130***	
		(3.72)	
$\beta_{HB,k,t}$ x Post crackdown		-0.162**	
		(-2.54)	
$\beta_{LB,k,t}$			0.033**
			(2.25)
$\beta_{LB,k,t}$ x Post crackdown			-0.021
			(-0.80)

Constant	-0.130	-0.151	-0.128
	(-1.04)	(-1.33)	(-1.11)
Controls and Interactions	Y	Y	Y
Province*Year FE	Y	Y	Y
Observations	4,416	4,416	4,416
R^2	0.239	0.230	0.199
Regression analysis of government deposit (Table 8 Panel D)			
	(1)	(2)	(3)
	Ln(government deposits at the bank)$_{l,t}$		
$\beta_{B,l,t}$	0.152***		
	(3.50)		
$\beta_{B,l,t}$ x Post crackdown	-0.355*		
	(-1.70)		
$\beta_{HB,l,t}$		0.117***	
		(3.65)	
$\beta_{HB,l,t}$ x Post crackdown		-0.035	
		(-0.26)	
$\beta_{LB,l,t}$			0.053*
			(1.99)
$\beta_{LB,l,t}$ x Post crackdown			-0.256
			(-1.49)
Constant	0.920	-1.120	0.751
	(0.32)	(-0.43)	(0.23)
Controls and Interactions	Y	Y	Y
Province and Year FE	Y	Y	Y
Observations	74	74	74
R^2	0.997	0.997	0.996

Table A9. Analysis on Full Sample

The table replicates the major analysis in the paper (Table 2-8) in the full sample. Please refer to Appendix A for other variable definitions and the corresponding tables for specifications. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A: Credit line premium (Table 2 Panel A)

	(1)	(2)	(3)	(4)	(5)
Bureaucrat	0.082**	0.040	0.043	0.126***	0.126***
	(1.98)	(0.95)	(1.02)	(4.69)	(4.64)
Ln(age)		0.442***	0.437***	0.336***	0.336***
		(6.16)	(6.10)	(3.95)	(3.94)
Ln(income)		0.219***	0.218***	0.177***	0.178***
		(10.39)	(10.40)	(7.96)	(7.93)
Female		-0.008	-0.008	-0.021	-0.021
		(-0.53)	(-0.54)	(-1.57)	(-1.53)
College		-0.391***	-0.391***	-0.334***	-0.334***
		(-9.70)	(-9.67)	(-7.78)	(-7.76)
Married		0.059***	0.060***	0.121***	0.121***
		(3.92)	(4.07)	(9.93)	(9.94)
Sophistication		0.347***	0.347***	0.333***	0.333***
		(22.89)	(23.01)	(21.84)	(21.83)
Banking relationship		0.003***	0.001	-0.001*	0.001
		(4.18)	(0.63)	(-1.89)	(1.15)
Constant	9.550***	6.955***	7.061***	7.403***	7.376***
	(101.55)	(25.69)	(28.16)	(27.83)	(27.55)
Origination year FE	N	N	Y	N	N
City FE	N	N	N	Y	N
City*Origination year FE	N	N	N	N	Y
Observations	185,814	159,768	159,768	159,768	159,768
R^2	0.000	0.269	0.270	0.327	0.329

Panel B: Delinquency and reinstatement for bureaucrats (Table 3)

	(1) Delinquency (=100)	(2) Time to Delinquency (in months)	(3) Reinstatement (=1)	(4) Time to Reinstatement (in months)
Bureaucrat	0.589***	-0.544***	0.043***	0.567***
	(4.16)	(-3.31)	(2.71)	(3.78)
Controls	Y	Y	Y	Y
City*Delinquency quarter FE	Y	Y	Y	Y
Obs.	257,772	8,097	8,097	6,189
R^2	0.543	0.499	0.252	0.106

Panel C: Credit outcomes by the power of bureaucrat (Table 4)					
	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Rank of bureaucrats (Table 4 Panel A)					
Low-rank bureaucrat	0.071***	0.231	-0.164	0.006	-0.106
	(2.92)	(1.12)	(-0.61)	(0.24)	(-0.41)
High-rank bureaucrat	0.261***	1.553***	-1.094***	0.087***	1.161***
	(7.34)	(6.48)	(-3.02)	(4.48)	(7.87)
Controls	Y	Y	Y	Y	Y
FE	Y	Y	Y	Y	Y
Obs.	159,768	257,772	8,097	8,097	6,189
R^2	0.330	0.543	0.500	0.252	0.118
Age of bureaucrats (Table 4 Panel B)					
Low-rank bureaucrat	0.071***	0.231	-0.165	0.006	-0.105
	(2.92)	(1.12)	(-0.62)	(0.25)	(-0.40)
Retiring high-rank bureaucrat	0.035	-2.011	1.903	-0.178	-0.138
	(0.19)	(-1.21)	(0.62)	(-0.56)	(-0.27)
Non-retiring high-rank bureaucrat	0.263***	1.582***	-1.113***	0.089***	1.178***
	(7.42)	(6.56)	(-3.06)	(4.62)	(8.07)
Controls	Y	Y	Y	Y	Y
FE	Y	Y	Y	Y	Y
Obs.	159,768	257,772	8,097	8,097	6,189
R^2	0.330	0.543	0.500	0.253	0.119
Panel D: Credit outcomes in more corrupt areas (Table 5)					
	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Government inefficiency (Table 5 Panel A)					
Bureaucrat	0.029	-0.033	-0.266	-0.017	0.408**
	(0.77)	(-0.20)	(-1.57)	(-0.76)	(2.12)
Bureaucrat x WB-Govt-Inefficiency	0.163***	0.971***	-0.772**	0.086***	0.467*
	(3.28)	(4.58)	(-2.26)	(3.08)	(1.81)
Controls	Y	Y	Y	Y	Y
FE	Y	Y	Y	Y	Y
Observations	142,744	229,561	7,441	7,441	5,592
R^2	0.319	0.535	0.482	0.225	0.099

ETC (Table 5 Panel B)						
Bureaucrat	-0.009	0.227	0.258	-0.006	0.097	
	(-0.20)	(0.85)	(0.85)	(-0.31)	(0.54)	
Bureaucrat x ETC High	0.169***	0.460	-0.902**	0.081***	0.583**	
	(2.99)	(1.50)	(-2.52)	(3.31)	(2.16)	
Controls	Y	Y	Y	Y	Y	
FE	Y	Y	Y	Y	Y	
Observations	143,470	230,694	7,477	7,477	5,623	
R^2	0.318	0.536	0.482	0.225	0.101	
Panel E: "Quid Pro Quo" (Table 6)						
New Branch Opening (Panel A)						
	(1)	(2)	(3)	(4)	(5)	(6)
	$D(New\ Branch\ Opening)_{k,t+1}$					
$\beta_{B,k,t}$	0.049	-0.326				
	(1.41)	(-1.60)				
$\beta_{B,k,t}$ x % Bureaucrat served		0.971*				
		(1.75)				
$\beta_{HB,k,t}$			0.103***	0.020		
			(3.39)	(0.09)		
$\beta_{HB,k,t}$ x % Bureaucrat served				0.217		
				(0.39)		
$\beta_{LB,k,t}$					0.021	-0.036
					(1.26)	(-0.29)
$\beta_{LB,k,t}$ x % Bureaucrat served						0.173
						(0.47)
Controls	Y	Y	Y	Y	Y	Y
Province*year FE	Y	Y	Y	Y	Y	Y
Observations	4,542	4,542	4,542	4,542	4,542	4,542
R^2	0.220	0.221	0.215	0.215	0.192	0.193
Government Deposits (Panel B)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Ln(government deposits at the bank)$_{l,t}$					
$\beta_{B,l,t}$	0.095	-0.182				
	(1.08)	(-0.27)				
$\beta_{B,l,t}$ x % Bureaucrat served		0.282				
		(0.38)				
$\beta_{HB,l,t}$			0.027	-0.719		
			(0.58)	(-1.09)		
$\beta_{HB,l,t}$ x % Bureaucrat served				0.759		
				(1.09)		
$\beta_{LB,l,t}$					0.034	-0.017
					(0.84)	(-0.03)
$\beta_{LB,l,t}$ x % Bureaucrat served						0.052
						(0.08)
Controls	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Province FE	Y	Y	Y	Y	Y	Y
Observations	81	81	80	80	81	81
R^2	0.994	0.994	0.994	0.994	0.994	0.994

Panel F: Non-bureaucrat credit line discount regression (Table 7 Panel B)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Ln (credit line)					
$\beta_{B,j}$	-0.541***					
	(-5.88)					
Above median $\beta_{B,j}$		-0.171***				
		(-3.04)				
$\beta_{HB,j}$			-0.341***			
			(-3.57)			
Above median $\beta_{HB,j}$				-0.170***		
				(-2.95)		
$\beta_{LB,j}$					0.162	
					(1.23)	
Above median $\beta_{LB,j}$						0.159***
						(2.71)
Controls	Y	Y	Y	Y	Y	Y
Origination year FE	Y	Y	Y	Y	Y	Y
Observations	140,773	140,773	140,773	140,773	140,773	140,773
R^2	0.256	0.247	0.259	0.255	0.236	0.241

Panel G: Evidence from Corruption Crackdown (Table 8)					
Credit Outcomes (Panel B)					
	(1)	(2)	(3)	(4)	(5)
	Ln(credit line)	Delinquency (=100)	Time to Delinquency (in months)	Reinstatement (=1)	Time to Reinstatement (in months)
Bureaucrat	0.173***	0.739***	-0.750***	0.060***	0.634***
	(6.97)	(5.87)	(-4.07)	(4.30)	(3.10)
Bureaucrat x Post crackdown	-0.157***	-0.491**	0.804**	-0.071**	-0.252
	(-4.23)	(-2.41)	(2.39)	(-2.14)	(-1.06)
Controls	Y	Y	Y	Y	Y
City*Origination year FE	Y	N	N	N	N
City*Delinquency qtr FE	N	Y	Y	Y	Y
Observations	159,768	257,772	8,097	8,097	6,189
R^2	0.330	0.543	0.500	0.252	0.106

New Branch Opening(Panel C)			
	(1)	(2)	(3)
		$\mathrm{D}(New\ Branch\ Opening)_{\mathrm{k,t+1}}$	
$\beta_{B,k,t}$	0.090**		
	(2.29)		
$\beta_{B,k,t}$ x Post crackdown	-0.185**		
	(-2.40)		
$\beta_{HB,k,t}$		0.104***	
		(3.07)	
$\beta_{HB,k,t}$ x Post crackdown		-0.003	
		(-0.04)	
$\beta_{LB,k,t}$			0.037*
			(1.88)
$\beta_{LB,k,t}$ x Post crackdown			-0.033
			(-0.95)
Constant	-0.012	-0.021	-0.046
	(-0.10)	(-0.18)	(-0.42)
Control	Y	Y	Y
Province*Year FE	Y	Y	Y
Observations	4,542	4,542	4,542
R^2	0.223	0.215	0.193
Government Deposits(Panel D)			
	(1)	(2)	(3)
		$\mathrm{Ln(government\ deposits\ at\ the\ bank)}_{l,\mathrm{t}}$	
$\beta_{B,l,t}$	0.151		
	(1.60)		
$\beta_{B,l,t}$ x Post crackdown	-0.024		
	(-0.33)		
$\beta_{HB,l,t}$		0.095**	
		(2.22)	
$\beta_{HB,l,t}$ x Post crackdown		-0.062	
		(-0.80)	
$\beta_{LB,l,t}$			0.073
			(1.31)
$\beta_{LB,l,t}$ x Post crackdown			-0.041
			(-0.48)
Constant	6.577*	3.331	3.998
	(1.81)	(0.99)	(1.08)
Control	Y	Y	Y
Province FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	81	80	81
R^2	0.995	0.995	0.994

Table A10. Card Balance of Post-Reinstated Bureaucrats' Accounts

The table presents estimates of the credit card outstanding balance for reinstated bureaucrats relative to others for the last (or most recent) month of our sample. In column 4, the reinstated bureaucrats are further divided according to their rank. The dependent variable is the total balance in thousand RMB for each individual using the bank statement data in the most recent month. In all specifications, we include the same control variables as in column 5 of Table 2, as well as city and statement year quarter fixed effects. Please refer to Appendix A for all other variable definitions. Standard errors are clustered at the city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)
	Credit card balance (in 1,000 RMB)			
Bureaucrat with reinstated account	3.118***	2.974***	2.880***	
	(4.29)	(4.15)	(4.22)	
High-rank bureaucrat with reinstated account				3.936***
				(3.63)
Low-rank bureaucrat with reinstated account				1.382**
				(2.52)
Ln(Age)	-0.201***	-0.124***	-0.101**	-0.103**
	(-5.31)	(-2.75)	(-2.50)	(-2.52)
Ln(Income)	0.031***	0.046***	0.039***	0.038***
	(2.79)	(3.29)	(2.90)	(2.85)
Female		0.044*	0.034	0.033
		(1.72)	(1.55)	(1.54)
College		-0.019	-0.012	-0.013
		(-1.06)	(-0.70)	(-0.74)
Married		-0.061***	-0.044**	-0.044**
		(-2.88)	(-2.38)	(-2.35)
Sophistication			0.015*	0.015*
			(1.71)	(1.68)
Banking relationship			-0.156***	-0.156***
			(-22.10)	(-22.09)
Constant	1.692***	1.424***	3.788***	3.794***
	(12.01)	(9.06)	(19.84)	(19.92)
City*Statement quarter FE	Y	Y	Y	Y
Observations	207,597	181,907	181,907	181,907
R^2	0.007	0.007	0.022	0.022

Table A11. Bureaucrat Credit Line Premium and Small Business Creation

This table reports the results of the relationship between the number of small business creation in a given province and year and the bureaucrat credit line premium from the new credit card origination of the same province in the previous year. We measure small business by the number of individually-owned business ("*ge ti hu*"), obtained from the China Economic and Social Development Data that is compiled based on the China Statistical Yearbook. For the key independent variables, we run the regression as in Colum 5 of Table 2 for each of the 31 provinces and for each year in the period of 2003-2005, and obtain the coefficients for province *l* of *Bureaucrat* ($\beta_{B,l,t}$) in each regression. Please refer to Appendix A for the detailed definition of variables. We include (natural logarithm of) the provincial-level GDP per capita. Each regression is weighted by the variance of the estimated coefficient $\beta_{B,l,t}$ as regression weights. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	$\text{Ln}(\#\text{small business})_{l,t+1}$	
	(1)	(2)
$\beta_{B,l,t}$	-0.215	-0.228
	(-1.24)	(-1.26)
Control	Y	Y
Province FE	Y	Y
Year FE	N	Y
Observations	74	74
R^2	0.980	0.982