Disguised Corruption: Evidence from Consumer Credit in China¹

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ABSTRACT

We investigate a disguised form of corruption using a unique and comprehensive sample of credit card data in China. We document that bureaucrats—defined as those working in the government—receive 12% higher credit lines than non-bureaucrats with similar income and demographics. Despite the higher credit lines, bureaucrats' credit card accounts experience a higher delinquency rate and a higher likelihood of reinstatement indicating their debt being forgiven by the bank. The effect of greater credit lines and higher delinquency and reinstatement rates associated with bureaucrats is stronger among bureaucrats with a higher hierarchy rank and in more corruptive areas. Last, we provide evidence that the bank branches with a higher bureaucrat credit line premium receive more deposits from the local government. Non-bureaucrat consumers in those areas with a higher bureaucrat credit line premium, on the other hand, receive significantly lower credit lines compared to non-bureaucrats in less corrupt branches.

Keywords: Corruption, Credit cards, Household Finance, Government, Bureaucrats, Debt, Bankruptcy

JEL Classification Codes: D72; D73; D78; D14

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1. Introduction

Corruption is a prevalent feature in many countries around the world, which distorts resource allocation with consequential social welfare implications (Bertrand et. al., 2007; Banerjee, Hanna, and Mullainathan, 2012; Olken and Pande, 2011). For example, when describing the rapid growth rate of China, it is inevitable that corruption is part of the conversation. This is perhaps unsurprising since fast economic growth in the past three decades combined with strong controlling power by the central and local governments render enormous incentives for engaging in corruption activities. It is well known that corruption in China is endemic (Fisman and Wang 2014 and forthcoming). Hence, the new Premier has embarked on cleaning up the image and implemented some symbolic gestures to signal his resolve to remove corruption. For instance, at official dinner parties alcohol is prohibited. Despite its importance, detecting the form and scope of corrupt practice proves challenging. There are a few studies that have been successful in showing quid-pro-quo behavior (Fisman and Wei 2004; Fisman and Miguel 2007; Levitt and Snyder 1997).

In this study we document a rather disguised form of corruption using a unique, representative sample of consumer credit data in China. For banks, support from the (powerful) local governments is crucial to their business operation and growth. However, offering explicit bribes are rather costly for bank managers which subject them to a high probability of corruption investigation and charges. Alternatively, banks could offer bribes in a more disguised way to government officials. Here is the story that can best describe the thought experiment we have in mind. A bank wants to bribe government officials to get access to government funds but it does not want to bribe. In other words, we argue that banks provide implicit bribes to bureaucrats, those who work in government administration, by extending over-generous credit lines to them.

We document, in our sample, that bureaucrats receive 12% higher in credit line, compared to non-bureaucrats who earn similar income and comparable demographics. The bureaucrat credit premium is greater among higher-ranked bureaucrats, and among bureaucrats in plausibly more corruptive locations. To disentangle the implicit bribe explanation for the bureaucrat credit line premium from one based on the true (higher) creditworthiness, we study the subsequent credit card performance. Bureaucrats' credit card accounts are 22.4% more likely to become delinquent,

and conditional on delinquency, experience a higher probability of gaining reinstatement. Among those whose delinquent credit accounts subsequently get reinstated, it takes a longer time till reinstatement for bureaucrats, suggesting that they most likely achieve account reinstatement by the bank writing off their credit debt. Collectively, the evidence is consistent with the interpretation that banks offer generous credit line to bureaucrats as implicit bribes: bureaucrats receive higher credit lines, become delinquent more often, following which banks forgive their credit card debt and reinstate their credit card accounts. We further verify in various robustness tests that the higher credit line cannot be explained by bureaucrats' true (higher) credit quality.

Last, we provide evidence that branches within the bank that grant more credit lines to bureaucrats are associated with higher government deposits, compared to other branches within the same bank located in areas associated with lower bureaucrat credit line premium. This is consistent with banks receiving benefits in the form of government deposits in return for the (implicit) bribes they extend to bureaucrats. On the other hand, non-bureaucrat consumers appear to suffer from credit under-provision: those living in areas with a high bureaucrat credit line premium are associated with significantly lower credit lines relative the matched non-bureaucrat consumers in areas with similar development but a lower bureaucrat credit line premium.

We conduct a series of robustness test to rule out alternative explanations. We provide evidences to show the result is driven by the fact that bureaucrats have a higher level of financial sophistication or banks are informed about the bureaucrats are informed about them through years of relationship. As a way of avoiding potential investigation, bureaucrats' income is likely to be an underreported version of their true wealth. We address this concern by matching bureaucrats with non-bureaucrats who earn significantly higher income and confirm the credit line premium still exists for bureaucrats. Exploiting one special institutional feature in China's credit card industry, we also conduct tests to exclude the concern that bureaucrats are offered more credit line due to their being more creditworthy.

We contribute to the literature in the following ways. The last decade has seen a significant increase of academic interests and literatures on the corruption (Olken and Pande, 2011, provides a complete review on the evidence of corruption in developing countries, including the definition, determinants and consequences). We can separate the literature into (i) forensic

finance, where the authors uncover documents providing evidence of corruption, (ii) deductive reasoning, which allows the authors to show that corruption most be happening otherwise the math does not add up, and finally (iii) showing the role of political connection and resource distortions. Our paper relates to all these strands of the literature.

The best way to measure corruption is through direct observations. One example is the case of Montesionos in Peru by Mcmillan and Zoido (2004), they use the private documents kept by a secret-police chief that have detailed records of the bribes he paid to judges, politicians and the news media to support the Fujimori regime. They estimate the cost of bribing different types of government officials and show that politicians on average received bribes ranging from 30,000 to 50,000 USD per month. Olken and Barron (2009) measures corruption via bribes paid by the truck drivers to the police during their routes in Indonesia and show the illegal payments represented 13 percent of the marginal cost of the trip. Sequeira and Djankov(2010) estimate the economic cost and distortion through observing the bribe payments to port and border officials in Mozambique and South Africa. In line with these studies, our paper provides evidence of banks bribing bureaucrats to gain access to government funds.

Another popular method is through estimating graft or subtraction. Using the Public Expenditure Tracking Survey, Reinikka and Svennson (2004) compares the amount of one special education block grant sent down from the central government which was subsequently received by schools and shows the leakage rate is as high as 87 percent. With similar approach, Fisman and Wei (2004) examine the difference between Hong Kong's reported exports and China's reported imports of the same products to estimate the effect of tax rate on tax evasion. They document three forms of tax evasions including underreporting of unit value, taxable quantities and mislabeling of higher-taxed products as lower-taxed products. Olken (2007) try to detect corruption in the rural road projects of Indonesia. He compares the official amount spent on the road with actual cost estimate obtained by independent engineers and finds that missing expenditures average about 24 percent of the total cost of the road.

One stream of studies focuses on estimating the benefits to firm's profit through political connections. Fisman (2001) is among the first few studies to use the market inference approach to infer the value of political connections. He shows how the news about Indonesian President

Suharto's deteriorating health affect the value of the firms with strong connection to him and estimates price movement as the stock market assessment of value from political ties. In a cross-country study with 20,202 publicly traded firms in 47 countries, Faccios (2006) find that having a member of board or large shareholder becoming a politician leads to a 2.29 percent increase in the company's market value. Moreover, firms with political connections have easier access to debt financing and enjoy lower taxation. Similarly, Faccio et al (2006) demonstrate the role of political connections in the government decision to rescue a financially rescued company and provide the evidence of favorable treatment from political relationship.

Our paper is also related to literatures providing evidence that corruption leads to distortion of the resource allocation and social cost. Holder and Raschky (2014) use a large panel of satellite data on nighttime light intensity as proxy for economic development and support the notion that the political leaders support their birthplace with favorable policy. Fisman and Wang (2014) find that the worker death rate for political connected firms in China is five times that of unconnected firms and argue that this is best explained by well-connected companies using their political relationships to circumvent safety oversight and regulations. Fang, Gu and Zhou(2014) explore the price discount received by bureaucrats buyers in the Chinese housing market and show this is evidence of corruption and measures of government power.

This rest of the paper is organized as follows. Section 2 gives the institutional background of the Chinese credit card market and the interconnection of banks and bureaucrats. Section 3 describes the methodology and data utilized in this study. Section 4 analyzes the results of empirical and robustness tests. Section 5 concludes this study.

2. Institutional Background

2.1. China's credit card market

In March 1985, the Development Bank of Guangdong issued Guangfa Renminbi credit card, which was the first of its kind under the global standard in China. Then followed the wave in which several other commercial banks took positive actions to make their own issuance. This marked the early stage of Chinese credit card market development. With China becoming a member of the World Trade Organization in 2001 and financial market open to foreign

institutions, Chinese commercial banks were speeding up to expand and seize the credit card market.

According to the statistics published by the People's Bank of China in 2013, the total number of credit card issued by commercial banks has climbed to 343 million and the total credit line reached to 3.66 trillion RMB. The average usage of credit card limit was 37 percent. In the credit card market, China's five state-owned commercial banks take a dominant position with a total market share of nearly 60 percent.²

The application procedure for credit card is more or less similar to elsewhere in the world. To be qualified for the credit card, the applicants are required to fill out an application form with basic personal information and submit certification files like valid personal identification, address certificate and income proof provided by the employers or the statement by the bank. Taken all these as input, the bank will rely on its internal system to decide the appropriate type of credit card and credit line for the applicants. As a type of unsecured debt, the credit card limit decision is largely based on soft information and usually varies substantially across applicants. As one Chinese credit market survey shows, 55 percent of respondents are with between 30 and 100 thousand RMB and around 12% are granted with credit line of 100 thousand plus.

In the United States, the FICO score is often relied on to represent the creditworthiness of person and the likelihood that he or she pays back debts. However, China is still in the developing stage of its financial development and the corresponding legal and technology system is far from being mature. Before 2006, the personal credit information was in a status of segmentation across different banks as there was lack a nationwide system of information sharing.³ When individual applies for the personal debt like mortgage or credit card, the bank can only view the applicant's credit history within this bank. This has led to severe cases when people take advantage of the weakness and accumulate high level of debts across different banks. The central bank took measures to solve the problem by initiating the first integrated credit record system that was implemented nationwide across banks starting from January 2006. As our sample period ends in

² They are 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).

³ One exception is Shanghai that established its own credit record sharing system in 2001. The system was incorporated and operated as part of the national network in 2006.

September of 2005, we can use this special institution to exclude the concern that bureaucrats are offered more credit line due to their being more creditworthy.

2.2. Bank with local government bureaucrats

Although local bank branches are directed by the head office of the commercial bank under the supervision of the People's Bank of China, local government still plays a vital role in its operation and profits.

First, the perquisite for the new branch opening is to apply for the office land that requires the permission and support from local government. During the process, the bank has to go through several local government agencies for approval regarding to the tax and environment issues. Second, local government provides important saving sources for local banks. For example, the deposit from all levels of the local government, especially local fiscal and tax bureau and other fee collecting unit, constitutes a major part of stable deposit for the bank. This is especially important to the bank during the period of liquidity dry-up.⁴ Third, the state-owned enterprises that are under the supervision of local government usually serve as large clients to 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" in Chinese. Fourth, government in China, especially in local level, exhibits huge power and regulates nearly every corner of the society. This naturally leads to moral hazard problem within the bank, in which bank manager to do bribery for personal benefits at the cost of the bank operation and profits.

Therefore, it is not surprising to find reports about banks catering to high local officials like having them employed.⁵

3. Data and Methodology

3.1. Data

⁴ An example of this liquidity crisis in China is one that happens in June 20 of 2013, when the overnight interbank lending rate, SHIBOR, rises by 578 basis points up to 13.44 percent.

⁵ Similar to the recent events that the US investigate J.P. Morgan and other U.S. banks operating in China for violating the Foreign Corrupt Practices Act by hiring the sons and daughters of China officials in order to win business.

We obtain the data from a leading commercial bank in China. It is among the market leaders in China in a number of products and services, including infrastructure loans, residential mortgage lending, and bank cards. It has an extensive network of branch outlets with coverage of all 31 provinces and direct-controlled municipalities in mainland China. In addition, this bank is ranked among the top in the credit card industry with a market share of over ten percent as of 2012.

Our sample is a random, representative sample of the bank's customer accounts, containing consumer credit card data of close to one million individuals dating from the first quarter of 2003 to the third quarter of 2005. The consumer credit data cover all provinces in mainland China. We observe each individual card holder's total credit line granted by this bank, and monthly information about the payment status of individuals' credit cards and the most recent monthly statement including balance, credit card payment, and debt. The dataset also contains detailed information on the card holders' demographics (e.g. age, gender, marital status, income, education, occupation, region and address of residence). In particular, we are able to identify the nature of the individual card holders' employers. In our analysis, we define bureaucrats as those working in the administrative agency of the government. This definition excludes individuals that belong to the so-called "Institutional Organization" or "*shiye danwei*". ⁶ Bureaucrats account for around seven percent of our full sample, that is higher than the proportion (0.86 percent) in the total population of China (Fang, Gu and Zhou, 2014). In addition, we observe individual card holders' seniority at their job, which allows us to study the differential effect associated with the hierarchical level of bureaucrats.

Table 1 presents summary statistics of demographics and credit variables for the treatment group (bureaucrats) and control group (non-bureaucrats) used in our analysis. Panel A shows the demographics of the bureaucrats and non-bureaucrats for the full sample. Bureaucrats on average receive a credit line of 26,579 RMB, 16% higher than the average credit line of 22,884 RMB for the non-bureaucrats. Interestingly, bureaucrats are also associated with a higher card delinquency rate, a greater probability of getting reinstated conditional on delinquency with a longer time to reinstatement. At the same time, bureaucrats do not appear to be more sophisticated consumers:

⁶ Institutional Organizations in China are usually affiliated with the government agencies but do not perform administrative functions. They mainly engage in public welfare and social services like health, entertainment, university. Employees working in the institutional organization are not counted as 'civil servants' and enjoy different compensation in China's social welfare system.

they have a slightly fewer number of credit cards and shorter banking history with the bank relative to the non-bureaucrats.

On the other hand, bureaucrats differ from the bureaucrats in several demographic characteristics. Non-bureaucrats are on average younger; earn lower income than bureaucrats and receive less education. For example, bureaucrats in our sample on average earn a monthly salary that is 13% higher than the average among non-bureaucrats. Bureaucrats are also older (38.6 years old vs. 36.9 years for non-bureaucrats), more likely to be married (77.4% vs. 70.8% for non-bureaucrats) and college educated (43.4% vs. 35.5% for non-bureaucrats). Those characteristics arguably are key determinants of credit line granted to consumers, which renders a direct comparison of the two groups difficult. To ensure balanced treatment and control groups and a valid counterfactual in our study, we construct and use in our analysis a matched sample of bureaucrats and non-bureaucrats who are observationally similar.

Specifically, we run a logistic regression using income and other demographic information including age, gender and province of residence (Table A1 provides the logistic regression result). The matched control group is selected by the nearest-neighbor algorithm based on the computed propensity scores. After matching, bureaucrats and non-bureaucrats are comparable in age, monthly income, gender, marital status, sophistication and banking relationship. The only exception lies in percentage of college degree holders, for which the difference between the two groups remains but nevertheless shrinks in magnitude. As a further check, we plot the kernel density of monthly income and age for the bureaucrats and non-bureaucrats in the matched sample (Figure A1). There is no visible difference in the distribution of income or age between the treatment group and the control group in the matched sample.

After matching by income and other demographic variables, we continue to observe a statistically and economically significance in the amount of granted credit line between bureaucrats and the (matched) non-bureaucrats in our sample (Table 1, Panel B). In fact, the gap in the total granted credit line widens between the two groups. Bureaucrats on average receive a credit line of 26,590 RMB, 22% higher than the average credit line of 21,767 RMB among non-

bureaucrats. Economically, the difference is approximately equivalent to 89% of the average monthly income among bureaucrats in our sample. Similarly, the delinquency rate of 4.1% among bureaucrats is 41% higher than non-bureaucrats with similar observable demographics. Conditional on delinquency, their credit cards are more likely to be reinstated by 9.4% more than the matched non-bureaucrats and the reinstatement takes 23% longer time on average. The joint pattern in credit line, delinquency, and reinstatement in the matched sample thus offers the first suggestive evidence in support of a non-creditworthiness interpretation of the bureaucrats credit line premium.

3.2. Methodology

In this paper, we compare the difference in credit line, delinquency status, and reinstatement status (conditional on delinquency) between bureaucrats and non-bureaucrats in a regression framework. Specifically, we estimate the following OLS specification⁷

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

where $Y_{i,j,t}$ is the dependent variable denoting the total credit line (or account delinquency indicator, reinstatement indicator, time to reinstatement) granted for individual *i* living in city *j* at time of credit card origination year *t*. *Bueaucrats*_i is the binary variable equal to one if the applicant works in the government agency. $X_{i,j,t}$ denotes a vector of demographical controls for the cardholder. θ_t and δ_j are time and location fixed effect used to absorb the common variation in time and across locations.

Throughout the analysis, we present the regression results both in the full sample and those in the matched sample. Non-bureaucrats in the matched sample offer a better counterfactual group to interpret the coefficients associated with *Bureaucrat* dummy. However, we also show the full sample results to provide external validity of the matched sample analysis.

4. Main Results

⁷ OLS estimates are arguably more consistent in specifications with a large number of fixed effects (Agarwal et al, 2012).We rerun the analysis with probit regression for delinquency analysis and the estimates are qualitatively similar.

4.1. Do bureaucrats enjoy higher credit line?

Table 2 reports the ordinary least square estimation of whether the bureaucrats are offered more credit line by the bank. The dependent variable is the natural logarithm of total credit line guaranteed at the time of credit card origination. Three specifications are presented here with different sets of controls for both the matched (Panel A) and full (Panel B) sample. We include origination year and city of residence fixed effect to capture the common variation in time and across locations, and standard errors are clustered at the city level.

In Column 1 of Panel A, we only control the most important variables for the determinant of credit line, age and monthly income reported as of credit card origination year. We find that bureaucrats receive 18% more credit line than otherwise similar non-bureaucrats and the difference is significant at the 1% level. In Column 2, we add controls for the applicant's other demographic characteristics, including gender, marital status and college education. The credit line difference decreases slightly to 16.3% and remains statistical significant at 1 percent level. The literature shows that individuals with a longer relationship with the bank and greater financial sophistication are associated with higher credit lines (Agarwal et al, 2009). In Column 3, we thus include additional controls including card holders' relationship with this bank and the level of their financial sophistication (i.e., months since the individuals has established any relationship within this bank including mortgage and debit accounts). The credit line premium for bureaucrats decreases further to 12.9% and but still remain statistically significant at the 1% level. These results suggest a plausible favor the bank offers bureaucrats in the form of significantly higher credit lines, even though these bureaucrats are not observably more creditworthy.

In Panel B, we re-estimate all the specifications for our full sample and the difference in credit line between bureaucrats and non-bureaucrats are qualitatively similar. Depending on the specifications, bureaucrats are associated with 11%-16% higher amount of credit lines (Column 1-3 of Panel B), compared to non-bureaucrats in the full sample. Taken together, results in Panel B validate the findings in the matched sample (Panel A) in the broader sample.

[Insert Table 2 Here]

4.2. Heterogeneity of the bureaucrat credit line premium

If the credit line premium observed in our sample indeed reveals a favor (or an implicit bribe) offered to bureaucrats, we expect to observe a stronger effect where benefits of such bribes are greater and/or where the costs of such bribes are lower. Specifically, more senior bureaucrats who are usually with higher political power likely receive (even) higher credit lines compared to bureaucrats with a lower rank in the hierarchy. Bureaucrats located in more corruptive areas also likely receive higher credit lines, as the cost of bribing is lower at such places.

Table 3 presents the regression results in the cross-sectional heterogeneity in the bureaucrat credit line premium. Panel A reports the results from the matched sample analysis. In Column 1 of Panel A, we find that bureaucrat's hierarchical level matters for the credit line premium they receive. Compared with the control group (i.e., non-bureaucrats), bureaucrats with a low rank enjoy a credit line premium of 7.6% (coefficient on *Low rank bureaucrat*), and the effect is significant at the 1% level. Moreover, high rank bureaucrats enjoy a substantially greater credit line (26.1%) than non-bureaucrats, which is statistically significant at 1% level. An F-test of the difference between the coefficients on *High rank bureaucrat* and *Low rank bureaucrat* suggests that high rank bureaucrats are associated with 18.5% more credit line (statistically significant at less than 1%). These results are consistent with the interpretation that the bank offers more credit line especially to bureaucrats in high ranking as a disguised way of bribery.

Columns 2-5 of Table 3, Panel A show the geographical heterogeneity results, where we use various measures to proxy for the extent of government corruption at the city level. We base our first measure of corruption 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 overstaffing), travel and entertainment expenditures, and time spent on bureaucratic interactions. We use a dummy variable *Government inefficiency* equal to one when the ranking is above the sample median. Alternatively, we obtain the city-level average of all firms' business travel, entertainment, and conference expenses 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. ⁸ Chinese managers commonly use the entertainment and travel costs (ETC) accounting category to reimburse expenditures that are spent on bribing government officials or entertaining suppliers and customers. Therefore, it is another common proxy for corruption in Chinese firms (Cai, Fang and Xu, 2011; Fang, Gu and Zhou, 2014).

Consistent with our conjecture, we find the credit premium is mostly concentrated in areas with more corruptive government. Bureaucrats in areas with less effective government or high business expenses on travel, entertainment, and conference receive significantly higher credit line (14.3%-15.9%) than non-bureaucrats (columns 2-5,Table 3 Panel A). We repeat the analysis in the full sample and the results are very similar (Panel B).

[Insert Table 3 Here]

An alternative way to test our hypothesis that banks are conveying favorable credit extension to bureaucrats as implicit bribes is the following. We first repeat the analysis in Column 3 of Table 2 by city using the matched sample⁹ 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 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. After deleting cities with missing value or small samples of credit data, we are left with a sample of 70 cities.

Table 4 reports the OLS regression results of various kinds of entertainment, travel, and conference (ETC) expenditure and city-level credit line premium. Consistent with our previous results, the bureaucrat credit line premium is indeed higher in cities where firms spend more on ETC expenditures. The correlation coefficients are all statistically significant in all specifications.¹⁰

⁸ Please refer to Cai, Fang and Xu(2011) and Fang et al(2014) for detailed introduction about the survey data.

⁹ We also use full sample to obtain the on *Bureaucrat* and *High rank bureaucrat* estimate and results are similar. ¹⁰ To address the econometric concern that our right hand side variables in Table 4 are estimated, we run a weighted

least square regression using the variance of estimated coefficient on *Bureaucrat* and *High rank bureaucrat* as the

[Insert Table 4 Here]

4.3. Credit card delinquency

Results in Table 2-4 establish a strong positive correlation between bureaucrats and the granted credit line, even though bureaucrats and non-bureaucrats share the same observable characteristics such as monthly income, age, gender and marital status. Nevertheless, bureaucrats and non-bureaucrats potentially differ in ways that are unobservable to econometricians. Banks likely have access to such "soft information", based on which they decide on a higher credit line for bureaucrats. To disentangle this alternative interpretation from our implicit bribe hypothesis, we focus on a direct examination of the subsequent credit card performance of bureaucrats in this section.¹¹ If indeed banks offer a higher credit line to bureaucrats based on their "true" higher creditworthiness, we should observe them to have a lower propensity to go delinquent on their credit card account.

We follow the literature and define the delinquency to be equal to one if the credit card is at least 3 months past due (Gross and Souleles, 2002). We study whether the credit card delinquency rate differs between bureaucrats and non-bureaucrats, and results are presented in Table 5. We perform the analysis both in the matched sample and in the full sample, both of which deliver similar results. For brevity, the following discussion focuses on the matched sample result.

In the matched sample (Panel A), we observe a higher credit card delinquency rate among bureaucrats, compared to observationally similar non-bureaucrats (column 1). Specifically, the delinquency rate for bureaucrat is on average 0.65% higher than non-bureaucrats, and the effect is statistically significant at the 1% level. This is a large economic effect: the differential delinquency rate by the bureaucrats (0.65%) is equivalent to 22.4% of the average delinquency rate among non-bureaucrats (2.9%, Table 1 Panel B). Then we separate the bureaucrats by their seniority level and find that the significantly high delinquency rate of bureaucrats is driven by higher ranked bureaucrats (column 2). This further helps differentiate our hypothesis from the

regression weights. The results are very similar. For brevity, we report the results in the Online Appendix (Table A2).

¹¹In the subsequent robustness analysis (Section 5), we will also explicitly study possible soft information channels in favor of a higher credit line for bureaucrats (such as income underestimate).

creditworthiness channel; bureaucrats' true creditworthiness is likely under-estimated especially for senior bureaucrats.

We continue to examine whether, conditional on delinquency, bureaucrats and non-bureaucrats differ systematically in the timing of their delinquency (as measured by the time after card origination). In column 3 of Panel A, we interact the *Bureaucrat* dummy with the time between delinquency and account origination (variable *Time since origination*) and find that bureaucrats are significantly more likely to become delinquent at an earlier time compared with matched non-bureaucrats. This presents another piece of evidence hard to reconcile with the alternative interpretation of the bureaucrat credit line premium based on their true creditworthiness.

Columns 4 to 7 in Table 5 Panel A reveal more interesting patterns on the cross-sectional heterogeneity in delinquency. Using the same measures of city-level corruption as in Table 3, we find that bureaucrats in more corruptive areas experience a higher delinquency rate than matched non-bureaucrats. Combined with the earlier results that the bureaucrat credit line premium is greater in more corruptive cities, documenting a consistent delinquency pattern in those cities provides additional support to the implicit bribe hypothesis.

[Insert Table 5 Here]

4.4. Credit card reinstatement

In this section, we provide further evidence on the difference in credit card reinstatement (conditional on delinquency) between bureaucrats and non-bureaucrats. Specifically, we study two questions. First, do bureaucrats' credit card accounts experience a greater probability of getting reinstated? Second, conditional on reinstatement, are there any difference in time to getting their delinquent credit cards reinstated? If banks offer the extended credit line to bureaucrats as implicit bribes, they are also likely to write-off the bad debt on bureaucrats' delinquent credit cards and re-instate their cards to the active status. As a result, we should expect bureaucrats' credit card accounts to experience a higher probability of reinstatement (to active status). Such a mechanism also implies a longer time till reinstatement, as banks typically are in no hurry to write off the debt. On the contrary, regular consumers with delinquent credit cards, conditional on having their cards reinstated subsequently, would be incentivized to pay off

their debt to reinstate their cards as soon as possible to avoid high interest expenses and negative implications on their credit rating.

We define the delinquent account to be reinstated if the account comes back to normal use (either current or carrying balance as shown in the data). We carry out the analysis for the probability of reinstatement (Table 6) and for the time to reinstatement (Table 7), respectively. Similarly, both the full sample and the matched sample produce similar results, and we will focus our discussion on the matched sample findings.

In Table 6 (Panel A), we find that compared to matched non-bureaucrats, bureaucrats' delinquent credit card accounts are more likely to get reinstated and become active again. Conditional on being delinquent, the bureaucrats' accounts are 7.8 percent more likely to get reinstated. We also find that the high reinstatement rate is basically concentrated among higher ranked bureaucrat and areas with more corruptive government. Consistently, for the delinquent credit card accounts that are subsequently reinstated, it takes on average an additional 0.7 month for bureaucrats' cards to get reinstated, and the effect is statistically significant at the 1% level. In addition, the longer time to reinstatement for bureaucrats is primarily observed among higher ranked bureaucrats, and for those located in more corruptive cities. Taken together, results in Table 6 and 7 are consistent with the interpretation that the bank helps bureaucrats re-instate their delinquent credit cards by writing off the debt.

[Insert Table 6 Here]

[Insert Table 7 Here]

4.5. Government deposits at the bank

It is critical for the bank to build good connections with the government and offer (explicit or implicit) bribes to local bureaucrats as discussed earlier. In return, banks expect to extract benefits for its business, or bank managers expect to obtain private benefits. In this section, we study on particular form of potential benefits accrued to the bank: government deposits. Deposits usually serve as one of the most important business indicators and one of the most popular

criteria for bank managers' promotion decision. The government remains a large and, more importantly, stable source of deposits for local banks.¹²

Therefore, we rely on the province-level government deposits within this bank to proxy for the economic benefits banks expect and receive from bureaucrats. We hand collect the data from the Almanac of China's Finance and Banking and supplemented it with the Provincial Almanac of Finance and Banking between 2003 and 2005. The panel structure of government deposit data enables us to explore the variation in both time and location to relate the benefits with the credit line premium. Similarly as before, we run credit line regressions, using specifications in Table 2 and 3, for each province in each year, based on which we measure the credit line premium for each province in each year based on coefficient estimates of Bureaucrat and High rank *bureaucrats* using the matched sample¹³. Then we merge with our measures of benefits for each province in each year.

Table 8 reports the OLS regression results, in which we control for both year and province fixed effects. Government deposits are higher for this bank in provinces at times that are associated with a greater credit line offer to bureaucrats or to higher ranked bureaucrats. The correlation between the credit line premium to bureaucrats (high ranked bureaucrats) and the log of government deposit is ranges from 0.367 to 1.039, and they are significant at least the 10 percent level. The result is statistically significant and robust to adding level of economic development as control.

[Insert Table 8 Here]

4.6. Implication on credit misallocation

With a fixed supply of consumer credit, granting more consumer credit to bureaucrats has the implication on a potential credit misallocation. In this section, we will study one consequence – under-provision of consumer credit among non-bureaucrats-associated with the implicit bribes the bank offers to bureaucrats.

¹² To provide one example to illustrate the importance of government deposit to banks, a recent news article reports that local governments use (potential) deposit withdrawal as an effective bargaining tool with the local banks (Source: http://finance.ifeng.com/a/20131001/10789714_0.shtml). ¹³ We also use full sample to obtain the on *Bureaucrat* and *High rank bureaucrat* estimate and results are similar.

We begin by defining more corruptive (less corruptive) areas as those cities that fall into the top(bottom) half of the city-level credit line premium distribution, which is the coefficient estimates of *Bureaucrat* in section 4.5. Non-bureaucrats in less corruptive areas are expected to suffer less from credit under-provision. Our strategy is to compare the credit line received by non-bureaucrat consumers in both more corruptive and less corruptive areas: the difference between the two groups provides an informative (and likely a lower bound) estimate of the credit under-provision to non-bureaucrats. We focus only on the full sample of non-bureaucrats and match non-bureaucrats living in more corruptive areas with comparable non-bureaucrats who live in less corruptive cities. Note that we require the GDP per capita of residence city as one of the matching criteria to exclude the effect driven by difference in economic development.

Panel A in Table 9 shows the validity of the matching. After matching, the difference between income and age become statistically and economically indistinguishable from zero. Differences in other observables (e.g., GDP per capita, percentage of college graduates) remain to be statistically significant, but the magnitude is less economically important. Despite the fact that non-bureaucrats in the more corruptive areas and in the less corruptive areas are observationally similar, we observe a striking difference in their credit line. Non-bureaucrat consumers in more corruptive areas on average receive 3,402 RMB less for their credit line, or equivalently 17% lower, than non-bureaucrat consumers in the less corruptive areas. The difference is statistically significant at the 1% level.

[Insert Table 9 Here]

In Panel B, we confirm the above univariate analysis in a regression framework. Specifically, we regress the natural logarithm of total credit line on the corruption level measured by the city-level credit line premium. The coefficients on various measures of corruption are all negative and statistically significant. To interpret, these results suggest that non-bureaucrats in more corruptive areas on average receive smaller credit lines than comparable non-bureaucrats living in cities with less corruptive areas. The coefficient in column 2 indicates that the credit line offered to non-bureaucrats in more corruptive areas is 15.9% smaller than that offered to matched non-bureaucrats in less corruptive areas.

5. Robustness Checks

Evidence on the subsequent credit performance provides evidence against the interpretation based on unobserved true credit quality for bureaucrats. As a further robustness check, we explicitly discuss reasons why bureaucrats potentially have a higher credit quality, and then perform additional analysis to further dispel the concern.

5.1. Income underestimate for bureaucrats

One natural concern lies in that bureaucrats' reported income is an underestimate of their true income. This underestimate is particularly relevant in more corruptive areas as bribes or perks in general are likely a significant source of income in addition to their wage income. The bank, on the other hand, takes into account of their true income and wealth in making the credit line decision, which results in a credit line premium especially in relatively more corruptive areas.

We address the concern by creating a matched sample of bureaucrats with non-bureaucrats who earn significantly higher income. Specifically, we select only non-bureaucrats whose income are above the median of the non-bureaucrats' distribution and use these as control sample to repeat the propensity matching procedure. Panel A in Table 10 shows that non-bureaucrats do earn a significantly higher income of 1,378 RMB per month, or equivalently 25% more, than bureaucrats. However, the credit line difference is still significantly higher for bureaucrats: bureaucrats receive 1,469 RMB more (or 6% more) in credit line compared to non-bureaucrats who are otherwise similar but earn 25% higher income. We confirm the univariate analysis in the regression framework (Table 10, Panel B).

[Insert Table 10 Here]

5.2. Unobservable determinants of credit line

We take advantage of the special institutional feature in China's credit card industry as discussed earlier and conduct further tests to exclude the concern that bureaucrats are offered more credit line due to their being more creditworthy.

During our sample period, Shanghai was the only city that established its own personal credit sharing system in which the banks can get access to the individual's credit history in other banks. As a result, banks in Shanghai had a better credit model (based on observables) to judge the applicant's creditworthiness than that in other parts of China. Put differently, the credit line decision in Shanghai is less affected by unobservable information, which implies that the coefficient estimate for bureaucrat is less contaminated by those unobservables. If bureaucrat credit premium simply reflects other relevant unobservable information about the individual credit quality, we expect the estimation bias for *Bureaucrat* coefficient to be smaller in Shanghai. To proceed, we repeat the credit line regression analysis by interacting *Bureaucrat* with *Shanghai* dummy (equal to one if the branch is located in Shanghai).

We first compare with all other cities in the matched sample (Table 11, column 1), and find that bureaucrats in Shanghai receive more credit line premium than other cities. To address the concern that Shanghai is more economically developed and incomparable with the most of the Chinese cities, we also restrict the matched sample to the first-tier cities (including Beijing, Shanghai, Guangzhou, Shenzhen) and re-estimate the credit line difference, and results are very similar (Table 11, column 2). Full sample results (Table 11, columns 3-4) also confirm the matched sample findings.

[Insert Table 11 Here]

5.3. Financial sophistication and banking relationship

Another explanation for the credit line premium received by bureaucrats is that banks are informed about the bureaucrats through years of relationship. One may also be concerned that bureaucrats are more informed or sophisticated in handling banking issues and therefore exhibit better bargaining power. We now present evidence to assess whether the two stories are responsible for the credit line premium.

Columns 1 and 2 in Table 12 (both in the matched sample in Panel A, and in the full sample in Panel B) reports regression results where the dependent variable is the number of months since the applicant has had a mortgage account or debit card with this bank. We find that bureaucrats have shorter banking relationship with this bank than non-bureaucrats, and the difference is not statistically significant. The finding holds when we include the full set of controls in column 2.

[Insert Table 12 Here]

In columns 3 and 4, we directly test whether bureaucrats have a higher level of financial sophistication. We measure sophistication using the number of banks (including this one) that the applicants have mortgage, credit or debit accounts as of credit card origination year. With more banking relationships, the individual may possess stronger bargaining power with this bank and obtain more favorable credit. However, we find no difference in sophistication between bureaucrats and non-bureaucrats.

6. Conclusion

Corruption is a prevalent feature in many countries of the world, which distorts resource allocation and has social welfare implications. Despite its importance, it remains a challenge to understand the forms and scope of corruption, one key reason being the difficulty to measure corruption by its very nature. In this study, we identify one (disguised) form of corruption using a unique, representative sample of consumer credit data in China. China is an ideal country to study corruption: fast economic growth in the past three decades combined with strong controlling power by the central and local governments suggest enormous benefits and incentives for corruption activities.

We argue that banks provide implicit bribes to bureaucrats, those who work in government administration, by extending over-generous credit lines to them. We document, in our sample, that bureaucrats receive 12% higher in credit line, compared to non-bureaucrats who earn similar income and comparable demographics. In addition, bureaucrats' credit card accounts are 22.4% more likely to become delinquent, and conditional on delinquency, experience a higher probability of gaining reinstatement indicating of their credit card debt being forgiven by the bank. Last, we provide evidence that branches within the bank that grant more credit lines to bureaucrats are associated with higher government deposits, compared to other branches within the same bank located in areas associated with lower bureaucrat credit line premium. Non-bureaucrat credit line premium are associated with significantly lower credit lines.

Overall, we uncover a disguised form of bribery to the government officials by the bank through favorable consumer credit extension. The results are robust to alternative explanations and specifications. Our study shed light on the distortion from the localized bureaucratic power for an economy with weak institutions.

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Appendix A. 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 comes back to normal status (either current or carrying balance as shown in the data); zero otherwise.

Time to reinstatement is the number of months between the 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 the individual has established relationship with this bank through debit card, mortgage loan or credit card account.

Sophistication is the total number of banks 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.

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).

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).

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

Income is defined as the monthly income in 1,000 RMB 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 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.

Government inefficiency is obtained from 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 *Government inefficiency(High)* is a dummy variable equal to one if the city's rank is above median in 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.

Travel (High) is a dummy variable equal one if *Travel* for the city is above median of the cross-sectional distribution.

Entertainment (High) is a dummy variable equal to one if *Entertainment* for the city is above median of the cross-sectional distribution.

Conference (High) is a dummy variable equal to one if *Conference* for the city is above 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.

Table 1 Summary Statistics

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

	(1)	(2)	(3)	(4)	(5)
	Mean	Sd	Mean	Sd	
Panel A Full Sample					
	Burea	ucrat	Non-Bure	eaucrat	Difference
No. of cards	2.5	1.3	2.6	1.3	-0.1***
Banking relationship	15.8	7.5	16.5	7.7	-0.7***
Sophistication	2.4	1.3	2.4	1.2	0.0
Age	38.6	7.5	36.9	8.0	1.7^{***}
Income (RMB)	5,374	6,567	4,718	5,413	656***
Female (%)	26.4	44.1	33.9	47.3	-7.5***
College (%)	43.4	49.5	35.5	47.8	7.9^{***}
Married (%)	77.4	41.8	70.8	45.5	6.6^{***}
Credit line (RMB)	26,579	31,400	22,884	26,172	3,695***
Delinquency rate (%)	4.2	20.2	3.1	17.4	1.1***
Reinstatement Rate(%)	81.4	38.9	75.2	42.5	6.2^{***}
Time to reinstatement (months)	3.8	1.9	3.2	1.6	0.6^{***}
N	13,788		172,966		

Panel B Matched Sample

	Matched B	Matched Bureaucrat		Matched Non-Bureaucrat		
No. of cards	2.5	1.3	2.5	1.3	0	
Banking relationship	15.9	7.5	15.8	7.5	0.1	
Sophistication	2.4	1.4	2.3	1.1	0.1	
Age	38.6	7.5	38.6	7.6	0	
Income (RMB)	5,376	6,570	5,299	6,558	77	
Female (%)	26.4	44.1	26.4	43.8	0.0	
College (%)	43.4	49.5	37.5	48.4	5.9^{***}	
Married (%)	77.4	41.8	76.5	42.3	0.9	
Credit line (RMB)	26,590	31,409	21,767	26,754	4,823***	
Delinquency Rate (%)	4.1	20.2	2.9	16.3	1.2^{***}	
Reinstatement Rate(%)	81.4	38.9	74.4	43.6	7.0^{***}	
Time to reinstatement (months)	3.8	1.9	3.1	1.4	0.7^{**}	
N	13,553		13,553			

Table 2 The Credit line Premium for Bureaucrats

The table reports the regression estimates of the relationship between credit line and bureaucratic status, where the dependent variable is the natural logarithm of total credit line (computed as the sum of granted credit limits of all the credit cards within this bank). Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. We use the one-to-one nearest neighbor propensity score matching based on income, age, gender and province. Please refer to Appendix A for other variable definitions. All regressions include city and origination year fixed effect. Standard errors are clustered at city level. Robust t-statistics are reported in brackets. ", ", and " correspond to statistical significance at 1%,5% and 10% level respectively.

	(1)	(2)	(3)				
	Ln(Credit line)						
Bureaucrat	0.180***	0.163***	0.129***				
	(3.64)	(5.23)	(5.71)				
Ln(Age)	0.448^{***}	0.425^{***}	0.524^{***}				
	(3.01)	(3.50)	(5.38)				
Ln(Income)	0.235***	0.253***	0.197^{***}				
	(7.42)	(8.40)	(9.09)				
Female		-0.103***	-0.060***				
		(-8.70)	(-5.23)				
College		0.330***	0.323***				
		(6.82)	(7.61)				
Married		0.083***	0.083^{***}				
		(5.12)	(5.02)				
Sophistication			0.307^{***}				
			(12.01)				
Banking relationship			0.001				
			(0.29)				
Constant	9.565***	7.677***	6.483***				
	(19.05)	(17.30)	(24.66)				
FE		City, Origination year					
Observations	27,106	24,126	24,126				
R-squared	0.247	0.279	0.385				

Panel A Matched Sample

Panel B Full Sample

	(1)	(2)	(3)			
	Ln(Credit line)					
Bureaucrat	0.155**	0.144^{***}	0.112**			
	(2.51)	(2.76)	(2.46)			
Ln(Age)	0.268**	0.240*	0.336***			
	(2.15)	(1.86)	(3.29)			
Ln(Income)	0.215***	0.241***	0.187^{***}			
	(6.08)	(6.48)	(7.56)			
Female		-0.029**	-0.015			
		(-2.04)	(-1.50)			
College		0.369***	0.344^{***}			
		(6.59)	(6.81)			
Married		0.099^{***}	0.109^{***}			
		(6.65)	(6.06)			
Sophistication			0.336***			
			(20.80)			
Banking relationship			0.001			
			(1.53)			
Constant	8.977^{***}	7.673***	6.643***			
	(16.13)	(18.27)	(21.87)			
FE		City, Origination year				
Observations	186,754	160,553	160,553			
R-squared	0.146	0.185	0.315			

Table 3 Cross-sectional Heterogeneity in the Bureaucrat Credit line Premium

The table reports results of the cross-sectional heterogeneity in the credit line premium granted to bureaucrats. The dependent variable is the natural logarithm of total credit line guaranteed within this bank as of the origination year. Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. The matching is based on one-to-one nearest neighbor propensity score matching on income, age, gender and province. Please refer to Appendix A for all other variable definitions. In all specifications, we include the same control variables as in Column 3 of Table 2, as well as city and origination year fixed effects. Standard errors are clustered at city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%,5% and 10% level respectively.

	(1)	(2)	(3) Ln(Credit line	(4)	(5)
Bureaucrat		0.037 (1.34)	0.012 (0.32)	0.016 (0.48)	0.013 (0.39)
High rank bureaucrat	0.261***	(1.5 1)	~ /		
Low rank bureaucrat	(7.71) 0.076 ^{***} (3.62)				
Bureaucrat * Government inefficiency	(3.02)	0.143 ^{****} (3.82)			
Bureaucrat * Travel(High)			0.155 ^{***} (3.13)		
Bureaucrat * Entertainment(High)			(3.13)	0.159 ^{***} (3.43)	
Bureaucrat * Conference(High)				(3.43)	0.156 ^{***} (3.36)
Controls			Yes		(0100)
FE		Ci	ty, Origination	year	
Observations	24,126	20,342	20,342	20,342	20,342
R-squared	0.389	0.357	0.374	0.374	0.374

Panel A Matched Sample

Panel B Full Sample

	(1)	(2)	(3)	(4)	(5)
Bureaucrat		0.005	-0.111	-0.115	-0.112
		(0.08)	(-1.17)	(-1.32)	(-1.26)
High rank bureaucrat	0.260^{***}				
	(5.33)				
Low rank bureaucrat	0.056^{*}				
	(1.75)				
Bureaucrat * Government inefficiency		0.179^{**}			
		(2.25)			
Bureaucrat * Travel(High)			0.266^{***}		
			(2.86)		
Bureaucrat * Entertainment(High)				0.285^{***}	
				(2.95)	
Bureaucrat * Conference(High)					0.282***
-					(2.91)
Controls			Yes		()
FE		Ci	ty, Origination	n year	
Observations	160,553	143,454	143,454	143,454	143,454
R-squared	0.316	0.310	0.310	0.309	0.310

Table 4 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), we repeat the regression as in Colum 3 of Table 2 (in Column 4 of Table 4) for each of the 70 cities in our matched sample, and obtain the coefficients for *Bureaucrat* variable (*High rank bureaucrat*) 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. 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								
			Coefficient o	on "Bureauc	rat" Column	3 of Table	2	
Ln(Travel)	0.086 ^{***} (3.63)	0.073 ^{**} (2.38)						
Ln (Entertainment)			0.106 ^{***} (3.75)	0.100 ^{***} (2.82)				
Ln(Conference)			(5.75)	(2:02)	0.049**	0.026		
Ln(ETC)					(2.38)	(1.10)	0.091 ^{***} (3.51)	0.079 ^{**} (2.41)
Ln(GDP per capita)		0.026		0.009		0.061	(5.51)	0.022
Constant	-0.424 ^{***} (-2.72)	(0.71) -0.591 ^{**} (-2.08)	-0.505 ^{***} (-2.95)	(0.24) -0.557 ^{**} (-2.01)	-0.089 (-0.91)	(1.57) -0.573 [*] (-1.74)	-0.514 ^{***} (-2.76)	(0.60) -0.640 ^{**} (-2.26)
Observations	70	70	70	70	70	70	70	70
R-squared	0.140	0.146	0.171	0.172	0.063	0.097	0.144	0.148
Panel B								
Ln(Travel)	0.153 ^{***} (4.16)	Coeffic 0.138 ^{***} (3.32)	cient on "Hig	gh rank bure	aucrat" in C	olumn 1 of	Table 3	
Ln(Entertainment)			0.170 ^{***} (4.12)	0.161 ^{***} (3.20)				
Ln(Conference)			(112)	(3.20)	0.092 ^{***} (2.90)	0.060^{*} (1.67)		
Ln(ETC)							0.158 ^{***} (3.99)	0.144 ^{***} (3.14)
Ln(GDP per capita)		0.030 (0.62)		0.015 (0.28)		0.086 (1.57)		0.026 (0.51)
Constant	-0.776 ^{****} (-3.11)	-0.966 ^{**} (-2.23)	-0.804 ^{***} (-3.08)	-0.895 ^{**} (-2.01)	-0.206 (-1.27)	-0.894 [*] (-1.85)	-0.905 ^{***} (-3.08)	(0.31) -1.052 ^{**} (-2.39)
Observations	70	70	70	70	70	70	70	70
R-squared	0.183	0.186	0.189	0.190	0.093	0.122	0.180	0.182

Table 5 Delinquency and Bureaucrats

The table presents linear probability model results of the credit card delinquency. Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. Please refer to Appendix A for all variable definitions. In all specifications, we include the same controls as in Column 3 of Table 2, as well as the city, delinquency quarter and origination quarter fixed effects. Standard errors are clustered at 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)	(6)	(7)	
	Delinquency * 100							
Bureaucrat	0.646***		1.261***	0.246	0.347	0.302	0.320	
	(3.00)		(2.65)	(0.89)	(0.83)	(1.07)	(1.06)	
High rank bureaucrat		1.577^{***}						
		(3.83)						
Low rank bureaucrat		0.225						
		(0.95)						
Bureaucrat * Time since origination			-0.184**					
			(-2.03)					
Bureaucrat * Government inefficiency				1.043***				
				(3.04)				
Bureaucrat * Travel(High)					0.685^{**}			
					(2.12)			
Bureaucrat * Entertainment(High)						0.759^{**}		
						(2.48)		
Bureaucrat * Conference(High)						()	0.736***	
							(2.75)	
Time since origination			-5.065***				()	
-			(-8.53)					
Controls				Yes				
FE			City, Delinquenc		ination quarter			
Observations	38,103	38,103	38,103	31,930	31,930	31,930	31,930	
R-squared	0.557	0.533	0.539	0.504	0.504	0.505	0.505	

Panel A Matched Sample

Panel B Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	Delinquency * 100								
Bureaucrat	0.613***		1.219^{***}	0.243	0.151	0.124	0.060		
	(3.04)		(4.59)	(0.83)	(0.42)	(0.40)	(0.22)		
High rank bureaucrat		1.956^{***}		. ,	. ,	. ,			
		(3.84)							
Low rank bureaucrat		0.327							
		(1.42)							
Bureaucrat * Time since origination			-0.180***						
			(-2.92)						
Bureaucrat * Government inefficiency				0.887^{***}					
				(2.67)					
Bureaucrat * Travel(High)					0.786^{**}				
					(2.03)				
Bureaucrat * Entertainment(High)						0.843^{**}			
						(2.47)			
Bureaucrat * Conference(High)							0.917^{*}		
							(2.97)		
Time since origination			-4.473***				()		
			(-10.77)						
Controls				Yes					
FE		(City, Delinquency	y quarter, Origi	nation quarter				
Observations	258,812	258,812	258,812	230,488	230,488	230,488	230,488		
R-squared	0.542	0.543	0.536	0.537	0.537	0.537	0.538		

Table 6 Probability of Reinstatement and Bureaucrats

The table studies whether bureaucrats' credit card accounts, conditional on delinquency, are more likely to be reinstated subsequently. The dependent variable is *Reinstatement*, a dummy equal to one if the delinquent account comes back to normal status (either current or carrying balance as shown in the data); zero otherwise. Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. Please refer to Appendix A for all variable definitions. In all specifications, we include the same controls as in Column 3 of Table 2, as well as the city, delinquency quarter and origination quarter fixed effects. Standard errors are clustered at 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)	(6)			
	Reinstatement								
	0.058^{**}		-0.002	0.011	-0.013	-0.013			
Bureaucrat	(2.14)		(-0.03)	(0.26)	(-0.33)	(-0.32)			
		0.098^{***}							
High rank bureaucrat		(3.49)							
		0.027							
Low rank bureaucrat		(0.93)							
			0.089^*						
Bureaucrat * Government inefficiency			(1.94)						
Bureaucrat * Travel(High)				0.073^{*}					
				(1.70)					
Bureaucrat * Entertainment(High)					0.116***				
					(2.89)				
Bureaucrat * Conference(High)					()	0.115***			
						(2.59)			
Controls			Y	es					
FE		City, Delir	nquency quar	ter, Originat	ion quarter				
Observations	1,363	1,363	1,143	1,143	1,143	1,143			
R-squared	0.252	0.307	0.264	0.266	0.269	0.269			

Panel A Matched Sample

Panel B Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)		
	Reinstatement							
Bureaucrat	0.047^{***}		-0.006	0.009	-0.011	-0.008		
	(2.98)		(-0.26)	(0.45)	(-0.57)	(-0.40)		
High rank bureaucrat		0.096***						
		(5.31)						
Low rank bureaucrat		0.001						
		(0.03)						
Bureaucrat * Government inefficiency			0.076^{***}					
			(2.59)					
Bureaucrat * Travel(High)								
				0.062^{***}				
Bureaucrat * Entertainment(High)				(3.21)				
					0.097^{***}			
Bureaucrat * Conference(High)					(3.63)			
						0.091***		
						(3.72)		
Controls			Y	es				
FE		City, Delii	nquency quar	rter, Originati	on quarter			
Observations	8,215	8,214	7,454	7,454	7,454	7,454		
R-squared	0.182	0.202	0.181	0.182	0.182	0.182		

Table 7 Time to Reinstatement and Bureaucrats

The table studies whether bureaucrats' credit card accounts, conditional on delinquency, take longer time before reinstatement. The dependent variable is the number of months between account delinquency and reinstatements conditional on the delinquent accounts that are subsequently reinstated. Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. Please refer to Appendix A for all variable definitions. In all specifications, we include the same controls as in Column 3 of Table 2, as well as the city, delinquency quarter and origination quarter fixed effects. Standard errors are clustered at 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)	(6)		
	Time to reinstatement (months)							
	a da da		ala ala ala					
Bureaucrat	0.690***		0.520^{***}	0.156	0.206	0.204		
	(4.19)		(3.51)	(0.83)	(1.16)	(1.14)		
High rank bureaucrat		1.310^{***}						
		(3.48)						
Low rank bureaucrat		-0.028						
		(-0.12)						
Bureaucrat * Government inefficiency			0.416*					
			(1.78)					
Bureaucrat * Travel(High)				0.557^{**}				
				(2.40)				
Bureaucrat * Entertainment(High)				× ,	0.508^{**}			
					(2.13)			
Bureaucrat * Conference(High)					()	0.513**		
						(2.31)		
						(2.31)		
Controls			Yes					
FE		City, Delinq	uency quarte	r, Originatic	n quarter			
Observations	1,068	1,068	888	888	888	888		
R-squared	0.251	0.308	0.182	0.181	0.179	0.179		

Panel A Matched Sample

Panel B Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)		
	Time to reinstatement (months)							
Bureaucrat	0.562***		0.405^{***}	0.109	0.107	0.130		
	(4.80)		(2.85)	(0.83)	(0.75)	(0.86)		
High rank bureaucrat		1.192***	. ,	(0.00)	(0110)	(0000)		
		(3.86)						
Low rank bureaucrat		-0.059						
		(-0.22)						
Bureaucrat * Government inefficiency			0.518***					
			(2.76)					
Bureaucrat * Travel(High)				0.585^{***}				
				(2.59)				
Bureaucrat * Entertainment(High)					0.597^{**}			
					(2.51)			
Bureaucrat * Conference(High)						0.567^{*}		
						(2.43)		
Controls			Ye	S				
FE		City, Delin	quency quart	er, Originatio	on quarter			
Observations	6,199	6,199	5,602	5,602	5,602	5,602		
R-squared	0.082	0.118	0.081	0.080	0.080	0.080		

Table 8 Government Deposits and the Bureaucrat Credit Line Premium

The table reports the regression estimates where the dependent variable is the natural logarithm of government deposits within this bank, for each of the 31 provinces in our sample and for each year from 2003 to 2005. We run the regression as in Colum 3 of Table 2 and Column 1 of Table 3 for each of the 31 provinces and for each year in the period of 2003-2005, and obtain the coefficients for *Bureaucrat* and *High rank bureaucrat* in each regression. Then we run panel regression to study how the government deposit is related to bureaucrat credit line premium in each province. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)	(4)		
	Ln(Government deposits within the bank)					
Coefficient on "Bureaucrat"	1.039***	0.790***				
	(3.48)	(2.97)				
Coefficient on "High rank bureaucrat"			0.552^{***}	0.367^{*}		
			(2.82)	(1.76)		
Ln(GDP per capita)		0.823***		0.640***		
		(5.58)		(3.98)		
Constant	2.560***	-5.104***	2.838***	-3.192**		
	(13.66)	(-3.67)	(16.64)	(-2.23)		
FE	Year, Province					
Observations	77	77	77	77		
R-squared	0.483	0.648	0.450	0.476		

Table 9 The Credit Line Discount 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 define the city as more corruptive (less corruptive) if the coefficient estimate of Bureaucrat in Panel A of Table 4 for the city is above the median of the cross-sectional distribution. We then match non-bureaucrat consumers residing in more corruptive and less corruptive cities, based on the one-to-one nearest neighbor propensity score matching on income, age, gender and GDP per capita of residence city. Panel A presents the matched-sample summary statistics of non-bureaucrats in the more corruptive vs. less corruptive areas. Panel B reports results of regressions that study, within the matched sample of non-bureaucrats, the association between the total credit line and corruption measures at the city level. City-level corruption measures include Coefficient on "Bureaucrat" and Coefficient on "High rank bureaucrat", which are coefficient estimates of Bureaucrat and High rank bureaucrat for each city in Table 4. Alternatively, we use as proxy for city-level corruption dummy variable Coefficient on "Bureaucrat"_Top50 (Coefficient on "High rank bureaucrat"_Top50), which equals one if the estimation coefficient for Bureaucrat (High rank bureaucrat) in Table 4 for the city is above the cross-sectional median. All regressions have the same controls as in Column 3 of Table 2. Origination year fixed effects are included in all specifications. Standard errors are clustered at city level. Robust t-statistics are reported in brackets. ***, **, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	(1)	(2)	(3)
	More corruptive	Less corruptive	Difference
Credit line	16,611	20,013	-3,402***
Income	4,710	4,813	-103
Age	35.9	36.3	-0.4
Female (%)	31.9	33.1	-1.2**
College (%)	31.4	33.7	-2.3***
Married (%)	70.9	70.3	0.6
GDP per capita	27,525	27,766	241^{**}
N	26,353	26,353	

Panel A: Summary Statistics of non-Bureaucrats in the Matched Sample

Panel B: non-Bureaucrat Credit Line Discount Regression

	(1)	(2)	(3)	(4)		
		Ln(Credit line)				
Coefficient on "Bureaucrat"	-0.466 ^{***} (-3.66)					
Coefficient on "Bureaucrat"_Top50		-0.159**				
		(-2.57)				
Coefficient on "High rank bureaucrat"			-0.332***			
			(-3.61)			
Coefficient on "High rank bureaucrat"_Top50				-0.157***		
				(-2.74)		
Controls		Ye	S			
FE		Originati	on year			
Observations	52,706	52,706	52,706	52,706		
R-squared	0.259	0.253	0.256	0.253		

Table 10 Income Underestimate by Bureaucrats: Further Robustness Checks

The table estimates the credit line difference between bureaucrats and the non-bureaucrats who are otherwise comparable but earn significantly higher income. The control groups are selected as those non-bureaucrats who are matched on other demographics within the subgroup of non-bureaucrats whose income is above the median of the empirical distribution. The matching is based on one-to-one nearest neighbor propensity score matching on age, gender and province. All regressions include city fixed effect. Standard errors are clustered at 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

	Bureaucrat	Non-Bureaucrat	Difference
Credit line	26,792	25,323	1,469***
Age	38.5	39.9	-1.4*
Income	5,463	6,841	-1,378***
Female (%)	26.0	25.5	0.5
College (%)	43.5	40.8	2.7^{***}
Married (%)	77.2	77.9	-0.7
N	13,610	13,610	

Panel B Regression Analysis

	(1)	(2)	(3)	(4)	(5)	(6)		
	Ln(Credit line)							
Bureaucrat	0.044***		0.087	0.039	-0.001	0.013		
	(4.09)		(1.60)	(0.75)	(-0.03)	(0.26)		
High rank Bureaucrat		0.195^{***}						
		(13.29)						
Low rank Bureaucrat		0.014						
		(1.13)						
Bureaucrat * Government inefficiency			0.181^{***}					
			(3.90)					
Bureaucrat * Travel(High)				0.142^{**}				
				(2.23)				
Bureaucrat * Entertainment(High)					0.190^{***}			
					(3.31)			
Bureaucrat * Conference(High)						0.174^{***}		
						(2.91)		
Controls			Yes	5				
FE			City, Origina	ation year				
Observations	24,245	24,245	20,887	20,887	20,887	20,887		
R-squared	0.318	0.323	0.352	0.351	0.351	0.350		

Table 11 Unobservable Determinants of the Credit Line: Evidence from Shanghai

The table estimates the credit line difference between bureaucrats and non-bureaucrats in Shanghai, where there exists a well-functioning credit scoring system in credit card approval decisions in our sample period. Compared with other cities, there is much less soft information in the bank's decision to grant credit line. Column 1 and 3 report the results for full sample of consumers in Shanghai, while Column 2 and 4 present results for the matched sample, using the same matching methodology as in Table 2 for Shanghai. Please refer to Appendix A for all variable definitions. All regressions include Origination Year and city fixed effect. Standard errors are clustered at city level. Robust t-statistics are reported in brackets. ***, ***, and * correspond to statistical significance at 1%, 5% and 10% level respectively.

	Matched Sample		Full	Sample
	(3)	(4)	(1)	(2)
	All	Tier Cities	All Cities	Tier Cities
		Ln(Cree	dit line)	
Bureaucrat	0.114***	0.123***	0.091**	0.128***
Bureaucrat * Shanghai	(5.05) 0.131 ^{***}	$(3.84) \\ 0.088^*$	(2.02) 0.175 ^{***}	(38.86) 0.123 ^{***}
	(3.88)	(1.90)	(3.55)	(16.34)
Controls		Y	es	
FE		City, Origi	nation year	
Observations	24,126	8,997	160,553	58,527
R-squared	0.385	0.3773	0.315	0.295

Table 12 Robustness: Banking Relationship and Sophistication

The table studies whether bureaucrats exhibit better banking relationship and sophistication in their financial decision behavior. The dependent variables in Column 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 Column 3 and 4 are *Sophistication*, defined as the total number of banks (including this one) the individual has opened credit or debit card accounts. Panel A presents the result using the matched sample that contains all bureaucrats and matched non-bureaucrats, and Panel B reports the full sample results. In all specifications, we include the same control variables as in Table 2, as well as city fixed effects. Standard errors are clustered at city level. Robust t-statistics are reported in brackets. ", ", and " correspond to statistical significance at 1%, 5% and 10% level respectively.

Panel A Matched Sample						
	(1)	(2)	(3)	(4)		
	Banking relationship		Sophistication			
Bureaucrat	0.076	0.119	0.097	0.086		
	(1.00)	(1.31)	(1.01)	(1.00)		
Controls			Yes			
FE	City					
Observations	27,106	24,126	27,106	24,126		
R-squared	0.060	0.062	0.115	0.123		

Panel B Full Sample

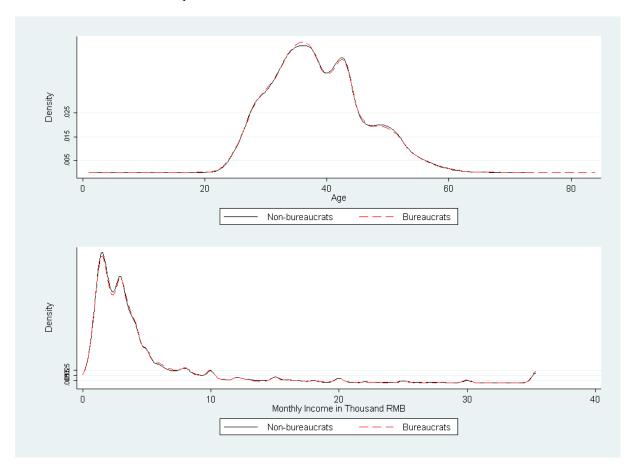
Bureaucrat	Banking	relationship	Sophistication		
	-0.013	0.048	0.099	0.095	
	(-0.21)	(0.61)	(0.84)	(0.95)	
Controls			Yes		
FE			City		
Observations	186,755	160,553	186,755	160,553	
R-squared	0.050	0.052	0.081	0.074	

Online Appendix

(Not Intended for Publication)

Figure A1 Kernel Density Plots of the Matched Sample

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



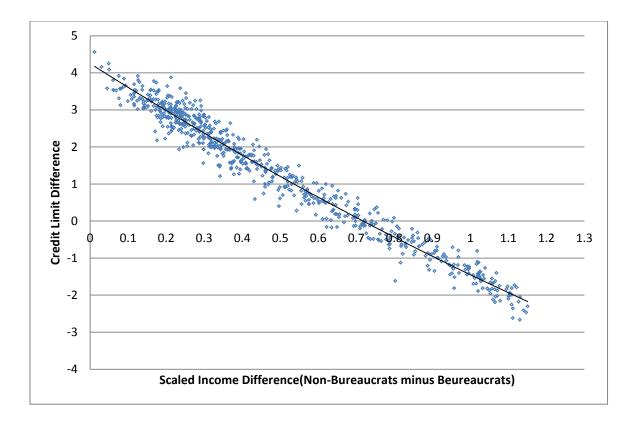


Figure A2 Income premiums to eliminate the credit line differential

The figure describes how much more income the non-bureaucrats should earn in order to have the same credit line with bureaucrats of similar characteristics. Income is scaled by the provincial median. For each point, the propensity score matching based on age, gender and residential province is firstly performed to obtain the matching sample. Then the sample mean of income and credit line difference is computed and plotted.

Table A1 Propensity Score Matching Logistic Regression

The table reports the results of the propensity score matching logistic regression. The dependent variable is a dummy variable that is equal to one if the individuals is a government bureaucrat and zero otherwise. The explanatory variables include income, age and gender. We include province fixed effects. Robust t-statistics are reported in brackets. ***,**, and * correspond to statistical significance at 1%,5% and 10% level respectively.

	(1)
	Bureaucrat
Log(Age)	0.048^{***}
	(5.38)
Log(Income)	1.295^{***}
	(31.83)
Female	-0.337***
	(18.20)
FE	Province
Observations	229,895
R-squared	0.069

Table A2 Weighted Least Square for Table 4

The table reports the regression estimates as in Table 4, weighted by standard error of estimated coefficient. 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)	(7)	(8)
	~ /		pefficient or					(-)
Ln(Travel)	0.110 ^{***} (3.45)	0.083 ^{**} (2.07)						
Ln(Entertainment)	(5.15)	(2.07)	0.143 ^{***} (3.61)	0.105^{*} (1.85)				
Ln(Conference)			(5.01)	(1.05)	0.063 [*] (1.83)	0.008 (0.20)		
Ln(ETC)					(1.85)	(0.20)	0.121 ^{***} (3.29)	0.063 (1.17)
Ln(GDP per capita)		0.105 (1.43)		0.061 (0.89)		0.138 ^{**} (2.06)	(3.29)	(1.17) 0.096 (1.30)
Constant	-0.507 ^{**} (-2.45)	-1.165 ^{**} (-2.28)	-0.667 ^{***} (-2.84)	-1.023 ^{**} (-2.18)	-0.090 (-0.57)	-1.175 ^{**} (-2.10)	-0.655 ^{**} (-2.52)	-1.183 ^{**} (-2.40)
Observations R-squared	(-2.43) 70 0.1297	(-2.28) 70 0.1845	(-2.84) 70 0.2063	(-2.18) 70 0.2210	(-0.37) 70 0.0581	(-2.10) 70 0.1669	(-2.32) 70 0.1472	(-2.40) 70 0.1887
Panel B	0.1297	0.1845	0.2003	0.2210	0.0381	0.1009	0.1472	0.1887
	(1)	(2) Coefficien	(3) nt on "Burea	(4) aucrat in hig	(5) gh rank" in	(6) Column 1 d	(7) of Table 4	(8)
Ln(Travel)	0.227 ^{***} (3.35)	0.186 ^{**} (2.47)						
Ln(Entertainment)	(3.35)	(2.47)	0.248 ^{***} (3.50)	0.224 ^{***} (2.65)				
Ln(Conference)			(5.50)	(2.00)	0.140^{**} (2.11)	0.078 (1.13)		
Ln(ETC)					(2.11)	(1.15)	0.232 ^{***} (3.23)	0.193 ^{**} (2.37)
Ln(GDP per capita)		0.076 (0.77)		0.039 (0.37)		0.159 (1.49)	(0.20)	(2.37) 0.067 (0.67)
Constant	-1.175 ^{***} (-2.68)	-1.642* (-1.96)	-1.193 ^{***} (-2.79)	-1.425 [*] (-1.67)	-0.356 (-1.15)	-1.604 [*] (-1.71)	-1.352 ^{**} (-2.63)	-1.724 ^{**} (-2.04)
Observations R-squared	(-2.03) 70 0.225	70 0.235	(-2.79) 70 0.244	(-1.07) 70 0.246	(1.13) 70 0.123	(-1.71) 70 0.174	(-2.03) 70 0.221	(-2.04) 70 0.229