What Makes Local Governments in Autocracies Accountable? Evidence from China*

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Abstract

Most citizens of China could file online queries and grievances to their county governments as of 2007. In 2012 the central government required pilot counties to use a standardized website platform that provided more data and improved information flows between citizens and county governments and between county and higher up governments. We find that mismanagement of public funds and bribes fell and entry of firms increased in the pilot versus other counties. We present evidence indicating that standardized and upgraded websites versus selection on county leaders is a more likely explanation for the success of the reform. Drawing on a study of local voting in China, we make preliminary comparisons between websites and voting as forces for local government accountability.

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1 Introduction

There is substantial evidence that local governments in middle and low income countries collect bribes and engage in rent seeking activity (Olken and Pande 2012). What policies can be used to make local governments more accountable to their citizens? These issues are of major relevance to China, where local government[1] officials collect rents from land deals and invest in socially wasteful public image projects (see Ang 2016; Cai, Fang, and Xu 2011; Chen and Kung 2016, 2019; Pan 2019). In China, local leaders are not elected and local newspapers and radio stations do not independently monitor the activities of local governments.[2] Instead, higher level leaders in the provinces and central government control the appointments and promotions of local government leaders; and, they use information gathered from various bureaucratic agencies to monitor the performance of local government officials (Qian, Roland, and Xu 2006; Xu 2011; Chen, Pan, and Xu 2016). King, Pan, and Roberts (2013) and Qin, Strömberg, and Wu (2017) document that citizen communications on local government websites provides additional information.

This paper studies a website reform enacted in China to understand how local governments in autocracies can become more accountable to their constituents. Before the enactment, most Chinese citizens could communicate with their county (i.e. local) government, for example, about social benefits or employment opportunities, using an online forum dubbed the Mayor's Mailbox. There was substantial variation in how county government responded to citizen queries and in how they provided data (Chen, Pan, and Xu 2016). However, in January of 2012, the central government required one hundred pilot county governments to set up communication links and post data on their websites in compliance with a set of uniform standards.[3] We document that the reform improved information flows between citizens and county officials and increased the flow of information between county and higher up governments. And, it made more county government data available, increasing transparency.

Because the county website reform enabled higher level governments to gather more information on the counties under their jurisdiction, we would expect that the pilot versus other county gov-

[1] For simplicity, throughout the paper, government refers to party and government agencies.

[2] For these reasons political institutions in China are extractive and not inclusive according to classification in Acemoglu and Robinson (2012).

[3] Based on our discussion with industry and government officials involved in the reform and our reading of relevant documents, all treated counties set up online forums and some also set up a link to the popular social media outlet Sina-Weibo.

ernments would become less corrupt and provide better public services for several reasons. First, the higher-level governments control the promotions of county officials and getting promoted is competitive (Ang 2016; Li and Zhou 2005; Manion 1985).[4] Second, a goal of the reform was for county governments to improve their delivery of public services. And, government corruption was a major concern for the central government and Chinese citizens around the time of this study (Qin, Strömberg, and Wu 2017).

Testing these predictions is in difference-in-differences setup is challenging for several reasons. First, the selection of pilot counties was not random: the central government gave the provincial governments rules for selecting counties under their jurisdiction under their treatment. Thus, we draw on the approach in Li, Lu and Wang (2016) and Cao, Liu and Zhou (2023) which builds on methods in Agarwal and Qian (2014) and Gentzkow (2006) and account for the rules that the central government gave to the its provincial governments including favoring counties that had good operating websites, strong public finances and an infrastructure and geography conducive for their public finances and e-capacity. We also construct the variable "Keywords" which captures a county's willingness to develop a transparent website pre-treatment. Controlling for these rules, we find that the group of pilot and control counties is balanced and our event studies satisfies the conditional parallel trends condition (see Abadie, 2005; Heckman et al., 1997). Our results are also robust to a propensity-score approach that matches pilot counties with control counties that would be almost equally likely to be selected.

Another threat to identification is the reform occurred at the same time the Communist party was enacting a massive anti-corruption campaign. Thus, we control for anti-corruption inspections in counties; and, we also control for leadership turnover in the governments overseeing a county as it accelerated during the anti-corruption campaign.

Finally, an additional concern is that ambitious and competent county leaders might select on pilot counties as this can provide a pathway to promotion. In this case, the quality of the county leaders and not the upgraded and standardized websites would be responsible for any improvements in pilot versus other counties. We use several strategies to address this concern. First, we document that there were no significant differences prior to the reform between leaders in pilot and other counties. Second, we limit the sample to counties that had a leadership change and control for

[4]Only 11% of county leaders were vertically promoted during the period of this study.

county leader fixed effects. Third, we test if younger and more competent county leaders who had strong promotion incentives drove improvements in pilot counties; and we find no evidence for this mechanism.[5] We also provide evidence suggesting that websites and the content of the reform mattered: following the enactment, the quality of websites improved in pilot counties; and citizens in pilot counties used online searches platforms to understand the reform and used social media to comment about the reform.

This study requires reliable measures of county-level corruption and public services. Our baseline corruption measure is the overall value of mismanagement in the state sector taken from annual county audits. These data are arguably reliable because the county auditors work under the supervision of auditing agencies in the higher level city (prefecture) governments and, thus, have strong incentives to obtain reliable information. Because there is a concern that county auditors might persuade the agencies in their higher level city government to under-report corruption after the enactment of the reform, we draw on Cai, Fang, and Xu (2012) and use business entertainment spending in state, private and foreign firms as a measure of bribes paid to the government. This data comes from an annual survey that the Ministry of Finance and the State Administration of Taxation oversee, and regional tax authorities implement the collection.[6] Our main measure of public services is firm entries. Influential studies document that inefficient government service can deter firm entry and perhaps generate more corruption (Ciccone and Papaioannou 2007; Djankov et al. 2002). On the other hand, efficient government is associated with more firm entry (Kaplan, Piedra, and Seira 2011; Alfaro and Chari 2014). This is a direct measure of county government performance because they administer the registration of new firms. Alternative measures including spending on education, charity and fixed investment are considered; however, because funds can be misspent it is unclear if more spending measures better public services.

Consistent with our expectations that the website would make county governments more accountable, we find that corruption-mismanagement and business entertainment expenses both declined by 16-percent of a sample standard deviation in pilot versus other counties; and, these effects

[5] In China a local leader's promotion prospects fall sharply once they are 55 or older. We use education level and prior performance as county-leaders to measure competence. See Li and Zhou (2006) and Wang, Zhang, and Zhou (2020).

[6] See Giannetti et al. (2021) for a detailed description of the data and its reliability. They note that the "survey is conducted in a specific time in each year and is based on a uniform, comprehensive survey system. Survey answers are collected and subsequently verified by local tax authorities. Information is subsequently further verified using technical algorithms to minimize potential reporting errors. A special tax force of the local tax authorities also audits survey respondents."

are precisely estimated. Regarding public services, new firm entries increased by 11-percent of a sample standard deviation in pilot versus all other counties; and these estimates are less precise. Moreover, the reform had no impact spending on fixed investment, education and charity. In a series of visualizations, we show that the pilot and all other counties have conditional parallel trends preceding the enactment of the reform for corruption and firm entries. Our results are robust to other checks including a placebo test for random assignment of counties to treatment and a falsified timing for the enactment of the reform. We also check if our results for corruption are robust to several different estimation procedures.

Our study builds on the detailed institutional analysis of the Mayor's Mailbox in Chen, Pan, and Xu (2016) and shows how the 2012 reform was designed to improve information flows and transparency. Using a field experiment, Chen, Pan, and Xu (2016) show that county governments are more likely to respond to requests for assistance that include some kind of threat to public order.[7] Our paper uses a policy change in order to understand the implications of better information for aggregate county-level outcomes.

This paper contributes to the literature on information and citizen-led accountability for local governments.[8] Andrabi, Das and Khwaja (2017) in a study of schools in Pakistan show that the random assignment of school report cards with test scores improved the quality of schooling along several dimensions including test scores and primary enrollments. However, in a study of schools in India, Banarjee et al. (2010) find that providing information to citizens about existing education institutions had limited effect on teacher effort and learning outcomes. In a study of Uganda, Rennika and Svensson (2004) provide suggestive evidence that giving citizens information about the public funding of their local schools can reduce the misuse of these funds. In a study of municipalities in Brazil, Ferraz and Finan (2012) find that local newspapers and radio stations that provide information to the public are associated with less corruption within municipal governments. This case in this paper is different since citizens do not elect their leaders in China.

Our study contributes to work on digital authoritarianism. Guriev and Treisman (2020) argue that modern authoritarian governments use information systems to "persuade citizens that they are competent and benevolent " (p.141). This paper shows that county websites are used to inform the

[7]Distelhorst and Hou (2017) conduct a similar field for Chinese cities (also called prefectures) which is the government level just above counties.

[8]We thank Priya Mukherjee for calling our attention to this connection.

public about the performance and activities of China's county governments. Egorov, Guriev, and Sonin (2009) show that leaders in non-democracies may allow for a free media because it provides detailed information about the performance of lower level officials; however, in a resource-rich non-democracy such as China,[9] the state is more likely to control the media because top leaders are more concerned about deriving resource rents than monitoring their lower level officials. Our study suggests that the Chinese central and provincial governments used county governments websites as a substitute for a free media.

Our paper is also related work on corruption in developing economies. In a study of village road projects in Indonesia, Olken (2007) finds that increasing the government's frequency of audits and also threatening social sanctions for misspending caused missing expenditures that are indicative of corruption to fall. Our study suggests the website reform increased the monitoring of county governments by their overseeing governments and this gave county governments incentives to reduce corruption and to improve public services.

The paper shows that county websites made county government more accountable even though citizens do not vote for these officials. However, we do not evaluate whether county websites are a good substitute for voting. Martinez-Bravo et al. (2022) study the impact of voting in rural China and we draw on their findings to make some preliminary comparisons of voting versus websites in the conclusion. We also provide evidence that the reform is scaleable.

The next section contains an overview of the website reform. Section three describes the data, section four describes the estimation framework and robustness checks, section five contains the empirical results and section six concludes.

2 Institutional Background

Since 1999 and in response to concerns about the growth in local government corruption, the Chinese central government has been requiring its local governments to post their data on the internet and, to be more transparent about their operations (Pan, 2019, on-line Appendix pp.1-3). For example, there is a general understanding that county governments collect unreported side-payments and bribes in negotiated land transactions with developers. Thus, as of August 31 2004, county governments were required to post information about their commercial land sales on

[9] In particular, China has massive reserves of coal and rare metals.

publicly accessible websites (Cai, Henderson, and Zhang 2013).

On April 5, 2007 the State Council issued the "Open Government Information Ordinance" (OGIO) that required county and higher level governments to operate more transparently[10] and the OGIO changes were enacted on May 1, 2008. However, the methods and procedures for complying with the OGIO were not specified in detail and counties were given substantial discretion. For example, county governments would be in compliance if they posted their data on their website; but, they would also be in compliance if they issued their data using newspapers, press briefings, and other methods. In addition, the rules for the release of information, for example about the county governments' catalogs and standards and the implementation status of their procurement projects, were vague. As a result, county governments could make their data available at a detailed or highly aggregated level. In response to the OGIO, most county governments developed websites containing "online forums where citizens can submit questions or comments" (Chen, Pan, and Xu 2016, pp.385-386). And, the head of the county government instructed the information management and agencies handling requests from the information management office "whether and how to respond complaints posted on forums, what types of information websites should contain," and what information should be directly sent to the top county leaders or relevant departments such as public affairs for an investigation and eventual response (Chen, Pan, and Xu 2016, p.386)

In a transparency initiative (TI) enacted January 4, 2012, the central government required that one hundred pilot counties standardize and upgrade the presentation of data and the communication links on their websites. In preparation for the TI, the Central government in early 2011 issued a document entitled, the "Opinions on Deepening the Disclosure of Government Affairs and Strengthening Administrative Services." Then, in September of 2011, the General Office of the State Council issued "Opinions of the National Government Affairs Openness Leading Group on Implementing the Electronic Platform to Strengthen the Openness of County Government Affairs and the Pilot Work of Administrative Services."

These documents required each province to select two to four counties that would participate in establishing a unified electronic government platform that would disclose data about the county's activities and performance and would also include a link that would enable the county residents and the county government to communicate with each other. In each province, the government affairs

[10] See http://www.gov.cn/zwgk/2007-04/24/content$_5$92937.*htm*

openness leadership team, the departments in charge of information disclosure and government websites, and the industrial and information departments were charged with selecting counties for this initiative that already had strong web-based information disclosure systems and government services in place. Figure I illustrates the spatial distribution of treated counties.

In preparation for the reform, treated counties were required to comprehensively sort out, clean up and strictly regulate the items that they were required to post on the e-platform. The government platform was comprised of the electronic government network, government websites, business management systems, data service centers and information security systems. Thus, information on government affairs and the government services directory in pilot counties was released through an electronic government platform that all Chinese citizens could easily access. The county's data in the Basic Directory required by the reform had three sections that are detailed in Appendix Table A6. The first section had sixty-five items including key policies, regulations, special funds, and government administrative powers. The second had 295 items related to administrative matters including development, reform, education, police civil administration, judicial administration, public finance, land resources, the environment, housing and urban construction, etc. The final part had twenty five items related to government services including marriage and unemployment registries and health insurance applications, etc. There is also evidence that information in pilot counties was more transparent because they were required to post 385 data items on their websites. Table A6 in the Appendix contains a complete list of the data.

Links on county websites typically named something like "interactions between citizens and government" allow county constituents to post inquiries and grievances which the county typically posts on the website along the government responses. Citizen grievances and inquiries and government responses to these filings can be read by the public.

The central government issued both the OGIO and the TI. The OGIO contained general instructions. And, the TI contained detailed instructions for standardizing the county websites and electronic data system following detailed direction laid out by the central government.

Figure A1 in the Appendix illustrates the home page for Shunde county's website about a year after the enactment (December 21, 2012).[11] Going from left to right on the top line, the home page contains the government transparency link, the on-line service link, the interaction

[11]Shunde is a well-off county with population of roughly 1.2 million; it is located in Guangdong, which is one of the richest provinces in China.

between government and citizens link, and additional links containing general information about Shunde county, directions for conducting searches, etc. Figure A2 shows the transparency link and sub-links that direct users to all of Shunde county's data including a regulations catalog, a description of the scope of government activities, transaction data for collective assets, auditing information, etc. Figure A3 is the on-line services link where county constituents make inquiries and complaints and where the relevant government agencies respond. Sub-links include government registration and inspection services, a personal link where one can review results of an application, etc. Figure A4 is the interaction link for the government and citizens. Sub-links include a mailbox to the county leader, a forum of government business, Sina Weibo posts, and a survey about public opinion and grievances. In Appendix B section 7 we document a link that allows citizens upload complaints about local government activities including accusations that could go to the Commission for Discipline and Inspection.

We have read the Shunde website and found that after the reform was enacted the county made its data available and its constituents made many inquires and received responses from the government.[12] The interaction between constituents grew over time. In 2012, the first year of the reform, in the online forum there were 5,166 posts (blogs) and 19,668 followed posts. The government responded to 80-percent (4,410) of the posts. By 2013 the number of posts on the online more than tripled 18,229 and the followed posts more than quadrupled to 86,363. While the overall number of government responses almost doubled to 7,964, the response rate fell to 44 percent. Reporting corruption is a sensitive issue in China, and a citizen that reports that somebody is corrupt must also submit supporting documentation. Nevertheless, in 2013 the procurator received 517 accusations of corruption with documentation, and handled all of them.

By 2014 in the pilot county Shunde, the county website had there was an active interaction between the county constituents and the government. For example, the Land and Urban Construction Bureau of Shunde had set up a "micro interview" platform through the social media link (Sina-Weibo) where it could easily receive inquiries and complaints from constituents and respond. This is significant, in particular, because this bureau is involved in land deals and, thus, is likely to be suspected of being corrupt. Nevertheless, in 2014 this bureau made all of its 133,760 files open

[12]Our source can be found through the link: http://zwgk.shunde.gov.cn/ind.php?UnitID=10gknb=1.While current events and news can be accessed from this website, cases in 2012 can only be accessed through internet archive, and the links for the sources are included in the appendix section B above each figure.

to the public and received 87,182 inquires about these files.

Appendix B contains several short case studies of communications about administrative procedures, public goods and services and corruption in Shunde. For communications about corruption, citizens were required to attach supporting documents using the email qzxx@shunde.gov.cn, and leave a contact number where they could could be reached during working hours by the relevant undertaking and processing units.

There is evidence that other treated county governments made their data available to their constituents. For example, in the Yongkong county in Zhejiang Province, the government installed a channel on the local cable TV that frequently reports their data; and, there are accounts of similar activities in Changsha County in the Hunan Province, the Anning County in the Yunan Province, the Meilan County in the Hainan Province, and the Yuexiu County in the Guangdong Province.

3 Data

The data for this study are collected from various official statistical publications and public databases. China contains thirty-one regions and three Special Administrative Regions (i.e., Hong Kong, Macau, and Tai Wan), for herein denoted provinces, that oversee 2,844 counties of which 100 were pilots assigned to treatment. Four of the provinces, Beijing,Tianjin, Shanghai and Chongqing, are centrally administrated municipalities and are dropped from the sample because these operate quite differently than the remaining twenty-seven provinces. The province Tibet is excluded because its data coverage is incomplete. The three Special Administrative Regions are also excluded due to missing data. The sample of twenty-six provinces oversee 2,596 counties of which 88 were selected to be pilots. Because we want to control for county-leader fixed effects in the empirical analysis, we drop counties that had no leadership change over the sample period of 2005-2016. The remaining sample contains 2,096 counties of which 82 were pilots assigned to treatment. Because there is some missing data we work with an unbalanced panel.

Table I contains summary statistics for the reform, county outcomes and the anti-corruption campaign. Regarding reform, the variable "Treatment" is one for the selected pilot counties and zero otherwise; the variable "Post" denotes the period when the reform was enacted is one in 2012 and all subsequent years, and zero otherwise.

Relevant outcomes include corruption measures, firm entries, county websites and social media

activity. The baseline corruption variable is "Corruption-mismanagement" and is taken from the China Audit Yearbooks (2006-2017) which report statistics for 2005-2016. In order to compare corruption between counties, we divide the value of mismanagement in the state sector by the county's general budget income which includes tax and non-tax fees. Mismanagement covers five broad items including: the implementation of the state budget and public finances; party and government officials' wasteful activities; specific projects such as poverty alleviation and affordable housing, social security, education, environmental remediation; fixed investment projects such as construction; and, activities of state owned enterprises with special attention paid to their loans.

Ideally the denominator for Corruption-mismanagement would also include the government fund budget that contains land rents, housing funds and special funds for infrastructure, the environment, social security, etc. However, data on government funds is not publicly available. Nevertheless using the ratio of mismanagement to the general budget income is reasonable because the audit can inspect the county government's total income. If we could include the government fund budget in the denominator the value of Corruption-mismanagement would be smaller. During 2005-2016 mismanaged funds on average accounted for 43-percent of general budgetary income and there was substantial variation across counties (standard deviation = 104-percent).

Because there is concern that "Corruption-mismanagement" might under-report actual corruption in treated counties after the enactment, we also use the variable "Entertainment expenses" developed by Cai, Fang, and Xu (2011). This is the sum of business entertainment expenses in state, private and foreign firms in a county divided by sales. This data comes from the Annual Tax Survey database 2007-2014, which the Ministry of Finance and the State Administration of Taxation of China reports annually. We can trace the location of each firm using its tax ID and 6-digit location code. The survey includes firms in agricultural, manufacturing and service sectors. We exclude firms in the financial industry, nonprofit organizations and social groups. The firms that have missing data for key variables and/or that record negative values for employees, sales, asset are excluded. Since this is an indirect measure of corruption, there is perhaps less concern that there will be strategic under-reporting in treated counties during the reform than with more direct data from the National Audit Office. During 2007-2014 entertainment expenses were on average 0.85-percent (standard deviation = 2.4 percent).

The variable "Firm entries" is a measure of the quality of public services. The source for this

administrative database was released by the Chinese State Administration for Market Regulation during 2004-2017. This database also includes firms' location, the year of establishment and exit and the value of their registered capital. "Firm entries" is measured in logs and its annual average during 2004-2017 was 5.68 (standard deviation = 0.87) or roughly 293 firms.

The variable "Website Construction" is a measure of the quality of a county website. This is simply the log of the number of words, links and images on the front page of a county website. Its source is the internet archive during 2008-2014 (https://archive.org/).

We provide suggestive evidence for citizen engagement using search and posts for keywords about the reform data on the Baidu search and Sina Weibo social media system. The variable "Baidu: keywords" measures the intensity of search for reform keywords using the Baidu Index (http://index.baidu.com/). The is similar to Google Trends, and has been widely used, for example, see Fisman et al. (2021). Baidu records daily searching behaviors of all users, and provides a search index at the city (prefecture) level and not at the county level. A typical city has about ten counties: thus, a treated city has at least one treated county and a control city has no treated counties. We count searches for reform keywords that include: Service-type government, E-government, Government openness and Government affairs informatization that are in government regulations for the website reform. Table B2 in Appendix Section B contains a detailed explanation of how the keywords are selected using Term Frequency-Inverse Document Frequency (TF-IDF).

During 2011-2016 the log of searches on Baidu for keywords in an average prefecture and year was 6.3 (standard deviation = 1.57) which is roughly 530 searches. Consistent with our expectations that people would search more frequently about the weather, the log of weather related searches was 9.34 (standard deviation = 1.74) or roughly 11,300 searches.

The variable "Sina Weibo: keywords" measures the incidence of social media posts about the reform during 2009-2018. During this period Sina Weibo does not provide the county or city of the account that made the post. However, there are posts that mention both the name of a county and reform keywords. Because these posts are rare events, we simply consider whether such posts occurred and Sina Weibo: keywords equals one if there is a post containing keywords and the county name and is zero otherwise. To construct this, we first download all the non-government posts including the keywords for posts that mentions both keywords from the reform documents ((Service-type government, E-government, Government openness, and Government Affair Informatization)

and the county name from Sina Weibo. To focus on citizen engagement, we exclude all the Sina Weibo accounts of local government or local government branch agencies. During 2009-2018 17-percent (standard deviation = 37.5 percent) of counties had a Sina Weibo post for keywords during an average year. And, consistent with our expectations, Sina Weibo posts about the weather were more frequent, i.e. 50-percent (standard deviation = 50-percent).

Eleven months after the county website reform was enacted, the newly installed central leadership initiated a massive anti-corruption campaign. To account for this, in our empirical analysis we include the variable "Inspection" that equals one if a county is investigated by the provincial government as part of the national anti-corruption campaign in a particular year and is zero otherwise. This variable was constructed using data from the website of the Commission for Discipline Inspection of each province. For example, the website of Guangdong province is http://www.gdjct.gd.gov.cn/xunshi/index.html. We list the website address of the Commission for Discipline Inspection of each province in Table A7 in the Appendix. The framework of this website in each province is similar and there is a subsection for political inspections, where we can find the date of the inspections and the lists of counties that would be inspected. Inspections are conducted for a subset of counties and to the best of our knowledge are not announced in advance.[13]

The inspection process has three stages. During the initiation stage, the inspector learns about the work of the county leaders by reading reports, emails, letters records of calls, files and conference records. The county leaders and people who know about their work are interviewed and surveys are conducted. In the second stage called feedback, the inspectors write a report summarizing the main findings and problems and proposing remedies. In the post-inspection rectification stage, the county governments are required to provide feedback and an action plan for dealing with problems raised in the inspectors' report within two months. If the inspectors find that local leaders have violated legal rules, this information would then be transferred to the legal department, or other related departments. The legal department would take corresponding actions and complete the procedures within three months. The investigation report can become part of a cadre evaluation. Consistent with the acceleration of he anti-corruption campaign after its enactment in November 2012, 54, 240 and 907 counties were investigated in 2012, 2013; and 306 and 573 were inspected in 2016 and 2017.

[13]See the document "Interpretation of the Regulations of the Communist Party of China on Inspection Work" written by the central inspection leading group in 2015.

The anti-corruption campaign accelerated the turnover of the leadership in the cities and provinces overseeing the county government. To account for this, we include city-year fixed effects and province-year fixed effects in the regression analysis. We also construct dummy variables indicating whether or not city and provincial leaders overseeing a county changed in a particular year. Information on city and provincial leaders comes from Baidu Encyclopedia (Baidu Baike).

Selection of Pilot Counties

The Central Government required each province to select two to four pilot counties following several rules. When possible, the rules are measured in 2010 which is two years prior to the enactment in 2012. Otherwise, the rules are measured in 2009 or 2008.

Pilot counties were required to have high quality websites in place. This is measured using the variable "Website construction, 2010," which is log of words, links and images on the front page of a county website in 2010. Selected counties should also have good public finances. This is measured using "Public deficit, 2009" which is budget income net of expenditures as a share of budget income (Source: National Prefecture and County Finance Statistics 2009). Pilots should also have an infrastructure and geographic conditions that would support their e-capacity and public finances which we measure with "Length of Highway, 2010" and "Telephone Users, 2010" (Source: China County Statistical Yearbook, 2006-2015) and the slope of their terrain ("Slope, 2010") (Source: Geospatial Data Cloud, http://www.gscloud.cn/).[14]

More generally, provincial governments should select counties that were most conducive to working with an electronic system that would be transparent and foster communication with its citizens and its higher up governments. To capture this, we construct the variable "Keywords, 2010" which measures the extent to which counties were concerned with the ideas in the website reform prior to the enactment. We measure this in two steps. We first take the four most frequently mentioned keywords in the website reform document including Service-type government, E-government,Government affairs openness, and Government affairs informatization. We then count the number of times these four keywords are mentioned in the 2010 county government report and divide by the total number of words in the report. Each level of government is required to submit an annual report to the deputies from the annual local People's Congress and Political

[14]In each grid of longitude and latitude, the original data provides one file of radar image data including slope and other geographical characteristics. We calculate the average slope for each county by executing the calculation in ArcGIS software.

Consultative Conference. When reform keywords are mentioned "x" times and there are "N" words in the annual county report, then "Keywords" equals x/N in that county. As this ratio increases, it becomes more likely that the county government is sympathetic to goals of the website reform. The average county's share of keywords in 2010 was 0.77 percent and there was substantial variation (standard deviation = 1.09 percent).

Table II Panel A reports the balance tests for the selection variables. Consistent with our expectations, treatment versus control counties have better websites, lower public deficits, better infrastructure and more favorable geographic conditions. And governments in treated versus control counties were amenable to a website reform as measured by "Keywords, 2010".

Table II Panel B reports the balance tests for our key outcome measures for their initial year including Corruption-mismanagement, Entertainment expenses and Firm entries. There are no significant differences between the group of pilot and control counties.

County Level Economic Variables

More generally, there may be other county-level variables that could plausibly affect selection into treatment. In Appendix Table A1 Panel A we compare the pilot and other counties for economic variables in 2010 including agricultural grain output (log), industrial output value (log) (Source: Annual Tax Survey Database). We also compare these counties by geography and administrative status pre-treatment including including whether the county is under the jurisdiction of the provincial capital , whether the county is located along the coast or in a mountain (Source: The China County Statistical Yearbook, 2010) and their number of government employees in 2009 (Source: the National Prefecture and County Finance Statistics 2009).

Treated counties have 24-percent less industrial output; and they have 27-percent more government employees. However, once we control for the selection variables from Panel A, these differences are no longer statistically significant. The other four variables are balanced unconditionally and when we control for the rules (selection variables).

Because we are concerned about selection on county-leaders, we compare them in treated versus control counties. In Appendix Table A1 Panel B the comparison variables include age, education, whether the leader is newly assigned, their job tenure, whether they are politically connected and their economic performance as a county leader prior to 2010.

Formally, the party secretary and the head of government (the mayor) are the joint political

leaders in a county. However, because, the party secretary, de facto, is in charge (Chen and Kung 2016) we collect data for party secretaries from the official website of each county and the Provincial Yearbook and the Baidu Encyclopedia (Baidu Baike).

The variable "Age, 2010" requires no explanation. The variable "Education, 2010" equals zero if a tertiary level was not completed, one if college has been completed, two if a graduate degree below the doctoral level was completed and, three if a doctoral degree was completed. The variable "Newly assigned county leader, 2010" equals one county leaders who did not serve as a county-leader prior to 2010 and is zero otherwise; "Job tenure, 2010" is the average years that a county leader has served as of 2010. The variable "Political connections, 2010" equals one if a county leader was born in the same county as the current leaders of his/her prefecture or province, and equals zero otherwise. We made a major effort to obtain information on three additional measures of political connections: shared places of employment, university ties, and factional affiliation. However, these are missing for many county leaders. "Economic performance of party secretary, 2010" leader's record of GDP growth prior to 2010 and is set to zero for county-leaders that were newly assigned as of 2010.

The only significant difference between leaders in treated versus control counties is that job tenure is roughly one-half year shorter in treated counties. However, all differences are statistically insignificant once we condition on the selection rules.

In summary, we have compared the pilot and control counties using pre-treatment outcomes, a set of county characteristics and county-leader characteristics. We find that all of these variables are balanced after we control for the selection rules. However, three of these variables including Industrial output (log), County government employees and county leader job tenure are not balanced if we do not control for selection.

4 Empirical Framework

To test our predictions about the impact of website reform we compare corruption and public services before and after the enactment for treated counties versus non-treated counties. The baseline differences-in-differences (DID) setup is:

$$Y_{ct} = \alpha + \beta Treat_c \times Post_t + X_c \times f(t) + \lambda Z_{ct} + \gamma_c + \mu_t + \theta_j + \epsilon_{it}, \quad (1)$$

where subscripts c and t indicate a county and a year and j indicates a county leader. The dependent variable, Y_{ct}, denotes corruption or public services. The variable $Treat_c$ is one if the county is a pilot and zero otherwise; and, $Post_t$ is one for the year 2012 or later and is zero otherwise. The vector Z_{ct} measures the anti-corruption campaign including county-level inspections and turnover of leaders in governments overseeing a county. And, γ_c is a county fixed effect, μ_t is a year fixed effect, θ_j is a county leader fixed effect and $\epsilon_{c,t}$ is the error term. The variable, X_c denotes the vector containing six selection variables that the provinces used to pick pilot counties; and $X_c \times f(t)$ is the selection function, which is described below. The DID estimator is β and it is attached to the interaction term $Treat_c \times Post_t$. If there are control counties that are "always takers" and volunteer for treatment, the estimate of β is a lower bound for the average treatment effect.

The identifying assumption for the differences-in-differences estimation is that the treated counties would have followed the same time trends as non-treated counties if the reform was not enacted as of January 2012. A challenge to this assumption is that treated counties are not randomly selected, and the divergence between treated and non-treated counties is generated from pre-existing differences between them. To deal with this, we use the approach of Cao, Liu and Zhou (2023) and Li, Lu, and Wang (2016) and chose variables capturing the selection rules that the central government issued to the provincial governments as discussed in the previous section. Thus, we interact the selection variables, X_c, with a third-order polynomial function of time, $f(t)$. The selection function, $X_c \times f(t)$, allows the relationship between the dependent variable and the control variables to change non-linearly. In the Appendix Table A2 we use the Imbens (2015) approach to choose variables in the selection function. In Appendix Table A4 we report the differences-in-differences estimates for the more general selection function and compare it to our key results.

As a further check of our identifying assumption, we conduct several robustness checks, including a graphic verification of whether treated counties and non-treated counties have similar trends in outcomes before treatment, placebo tests that have random assignment of treatment status and a falsified timing for the implementation of the reform. We also estimate the impact of treatment on corruption and firm entries using propensity score matching.

5 Results

5.1 Corruption and Public Services

Tables III contains results for the outcome variables when do not control for selection into treatment, county-leader fixed effects and the anti-corruption campaign. There are controls for county and year fixed effects and the regression for Corruption-entertainment expenses also includes firm fixed effects. Standard errors are clustered at the county-level,[15] In each case, the effects are strong and precisely estimates ($p < 0.01$). The enactment of the reform is associated with a 20-percent and an 18-percent of a sample standard deviation decline in Corruption-mismanagement and Entertainment expenses and a 17-percent of sample standard deviation increase in Firm entries in pilot versus control counties.

These effects are less profound once we control for selection into treatment, selection on country leaders and the anti-corruption campaign. Tables IV, V and VI contain our main findings and all the regressions include county and year fixed effects and "Inspections," "Selection for treatment" and county-leader fixed effects in order to control for the anti-corruption campaign, selection for treatment and selection on county leaders. Moreover, as previously discussed, county leaders are balanced conditional on the selection variables (see Appendix Table A1 Panel B). Column (1) contains province-year fixed effects in combination with year fixed effects for absorbing the turnover of provincial and central leaders overseeing the county.

In column (2) we measure turnover at the city-level using "Turnover of city leaders," which equals 1 if the party secretary or mayor in a city changes in a particular year and is 0 otherwise." and we still control for province-year fixed effects. Column (3) contains our baseline estimates: we drop province-year fixed effects and account for turnover at the city and province level by including "Turnover of city leaders" and "Turnover of province leaders" which equals 1 if the provincial party secretary or governor changes and is 0 otherwise. Column (4) contains a propensity-score estimate for the baseline regression in (3) (see Appendix Table A2 for the propensity score and Table A3 for the balance table).

The baseline estimates in column (3) of Tables IV-VI are very close to the results for columns (1) and (2). Following the enactment Tables IV-V show that corruption, whether measured with

[15]Since the pilot counties were drawn at the provincial level, we also cluster standard errors at the provincial level, and the results are similar.

mismanagement or entertainment expenses, fell by 16-percent of a sample standard deviation in pilot versus control counties ($p < 0.05$). Table VI shows that firm entries increased by roughly 11-percent of a sample standard deviation ($p < 0.10$). Thus, the quantitative impact of the reform on public services versus corruption is weaker and less precisely estimated. In results that are available upon request we show that the reform has no impact on alternative measures of public services including expenditures on education, charity and fixed investment.

The results in Tables IV-VI rely on the assumption that, *conditional on the selection variables for treatment*, the government does not select treated counties on the remaining factors. A necessary condition for the identifying assumption is treated and non-treated counties have similar time trends in corruption pre-treatment. If the time trends are roughly parallel pre-treatment and change post-treatment, we can be confident that the website reform caused these changes. Figures II and III contain plots of the time trends of differences in corruption during 2005-2014 for our baseline corruption measure, Corruption-mismanagement, and during 2007-2014 for Entertainment expenses. Figure IV plots similar time trends for Firm entries during 2004-2017. The Figures are based on the baseline estimations in column (3) of Tables III, IV and V, and we replace that dummy variable Post with year dummies. The small circles in Figure II, III and IV depict coefficients for treatment versus control counties interacted with year dummies, and the whiskers on the lines containing these circles are the upper and lower bounds of their 95-percent confidence intervals. The year just prior to treatment, 2011, is the baseline for comparison. Simple inspection indicates the parallel trends assumption holds: pre-treatment there are never significant differences in corruption in treated versus control counties (compared to the baseline year of 2011) and the point estimates are tightly centered around zero. However, the confidence intervals for the estimated yearly effects for are much wider and the estimates are noisier for Firm entries.

We also report a placebo test that randomly assigns treatment status to counties in the county. In our sample there are eighty treated counties. The test randomly selects 82 out of the 2,069 counties in the sample for treatment and randomly assigns the timing of enactment of the reform. If our identifying assumption is satisfied, the coefficient of $Treatment_c^{false} \times Post_t^{false}$ should be zero. To have sufficient power to reject the null that $Treatment_c^{false} \times Post_t^{false}$ is zero, we repeat this test one thousand times. In the Appendix, the distribution of the coefficients for $Treatment_c^{false} \times Post_t^{false}$ is plotted in Figures A5, A6 and A7. By inspection, it is clear that it is centered around

zero, indicating there are no substantial omitted variables in the specification.

Column (4) in Tables IV-VI report propensity score estimates for the baseline estimate in column (3). Pilot and control counties are matched 1-1 using a nearest neighbor approach without replacement. The results are qualitatively the same; however, the impact of the reform on corruption mismanagement is stronger for the much smaller propensity score sample.

5.2 Selection on County Leaders

In China ambitious and competent leaders seek positions in counties that are implementing a reform as this can provide a pathway to promotion. If there is selection on county leaders into pilot counties, then our estimates of treatment effects in Table IV-VI are upward biased in absolute terms. To deal with this issue we have shown that leaders in treated versus control counties are balanced and we have also controlled for leader fixed effects.

However, as an additional test for selection on county leaders, we interact the term $Treat_c \times Post_t$ in column (3) of Tables IV-VI with county leader characteristics capturing promotion incentives including the age dummy variable (age = 1 if the leader is younger than 55 and 1 otherwise), education and prior performance as a county leader. Because promotion incentives are weak for leaders who are older than 55, if selection was an issue we would expect to obtain a negative (positive) and statistically significant estimate for the effect of $Treat_c \times Post_t \times Age$ on corruption (Firm entries). Similarly, because promotion prospects are stronger for leaders who are well educated and have a good performance records, we would also expect to observe a negative (positive) and statistically significant effect of $Treat_c \times Post_t \times Education$ and $Treat_c \times Post_t \times Economic\ Performance$ on corruption (Firm entries). Tables A5, A6 and A7 in the appendix report these triple interaction results for Corruption-mismanagement, Entertainment expenses and Firm entries. And, we find no evidence that there is selection on young and competent leaders.

These results suggest the website reform is scaleable. The would not be the case if the success of the reform depended on county leaders who had strong promotion incentives. In this case the number of positions representing promotions to county leaders would be fixed and the number of county leader enacting the reform would be increasing, which would weaken their promotion prospects.

5.3 Websites and Citizen Engagement

Here we provide additional suggestive evidence that websites and the contents of the reform mattered in the pilot versus other counties. The first piece of evidence is that treated versus control counties provided better websites following the enactment. Using the DID setup, Table VII shows that the reform was associated with a 15.5 percent increase in words, links and images on the front page of treated versus control county websites.

Citizens in treated counties plausibly have strong incentives to become engaged with the reform because it provided effective tools for learning about their county government and for expressing their voice in the form of grievances, queries and requests. Our understanding, which is based on a reading of reform documents and interviews with experts in government and industry, is that very few counties provided these learning tools. Thus, if citizens in treated counties were engaged with the reform, we would expect that they used Baidu and Sina-Weibo to search for reform keywords and make postings more than citizens in control counties post versus pre-enactment.

Table VIII column (1) contains results for the Baidu search index in 278 cities (prefectures) for which we could collect data. We use the differences-in-differences setup at city instead of county level from equation (2) and control for selection of cities for treatment. Thus, a city is classified as treated if it has at least one pilot county and is classified as as control city otherwise. Consistent with our expectations, column (1) shows there was a 43-percent increase in keyword searches in a treated versus control cities post versus pre-enactment (p-value < 0.05). Column (2) reports the results of a placebo test where keywords related to weather is the outcome variable and, we find that the reform has no significant impact.

Table IX reports results for Sina-Weibo postings. Because postings about the reform keywords that also mention a county's name are rare events, the outcome variable "Sina Weibo posts in non-government accounts" equals one in a county and year when at least one such posting occurs and is zero otherwise. Consistent with the view that the reform catalyzed citizen engagement, we find that the probability of a posting post versus pre-treatment is almost 16-percent higher in treated versus control counties (p-value < 0.05). And, the placebo tests indicate that that the reform had no significant effect on searches for keywords related to weather.

6 Conclusions

Similar to Olken's (2007) study of local corruption on road projects and Duflo, Hanna, and Ryan's (2012) work on public school teachers who are chronically absent, our study show that monitoring can reduce corruption. Importantly, during the periods when Olken and Duflo, Hanna, and Ryan conducted their studies, there was at least a partly free press and some representative voting in India and Indonesia.

In democracies, competitive elections can push local governments to be accountable because rent seeking activities such as expropriating land and misappropriating local resources are unpopular with their constituents. An independent local media is also critical because local leaders who engage in rent-seeking activities understand that the media can expose these activities and, thus, lower their re-election prospects.

In authoritarian systems local leaders are not elected. And, while a free media is sometimes tolerated (Egorov, Guriev, and Sonin 2009), in many countries, including China the media is state owned and does not run independent investigations. In China there is evidence that county government websites have emerged as an institution which enable the higher level governments to monitor the county governments (King, Pan, and Roberts 2017; Qin, Strömberg, and Wu 2017). We have argued that because higher level government oversee the promotion of county leaders and because the Chinese public is concerned about their public services and corruption, county websites can make county governments more accountable to their constituents.

We make no claims that standardized county websites that improve transparency and information flows are a substitute for voting. However, we can make some preliminary comparisons of voting versus websites using the study of village elections in China during 1987-2003 by Martinez-Bravo et al. (2022). They find that elected leaders enacted relaxed one child policy restrictions and reduced land expropriations. Importantly, these policies were popular among local constituents but, were not necessarily congruent with the goals of the central leadership. In our study, pilot county leaders reduced corruption and facilitated entry; however, they did not make overtures to their broad constituency and increase spending on education and charity. Moreover, while elected leaders in the Martinez-Martinez-Bravo et al. (2022) had strong incentives to get re-elected, county leaders in China have strong incentives to get promoted to a higher-level position outside the county. Finally, Martinez-Bravo et al. (2022) find that rural village voting did not persist because it weakened

vertical control. Our study suggests that county websites may persist because they do not pose a threat to vertical control.

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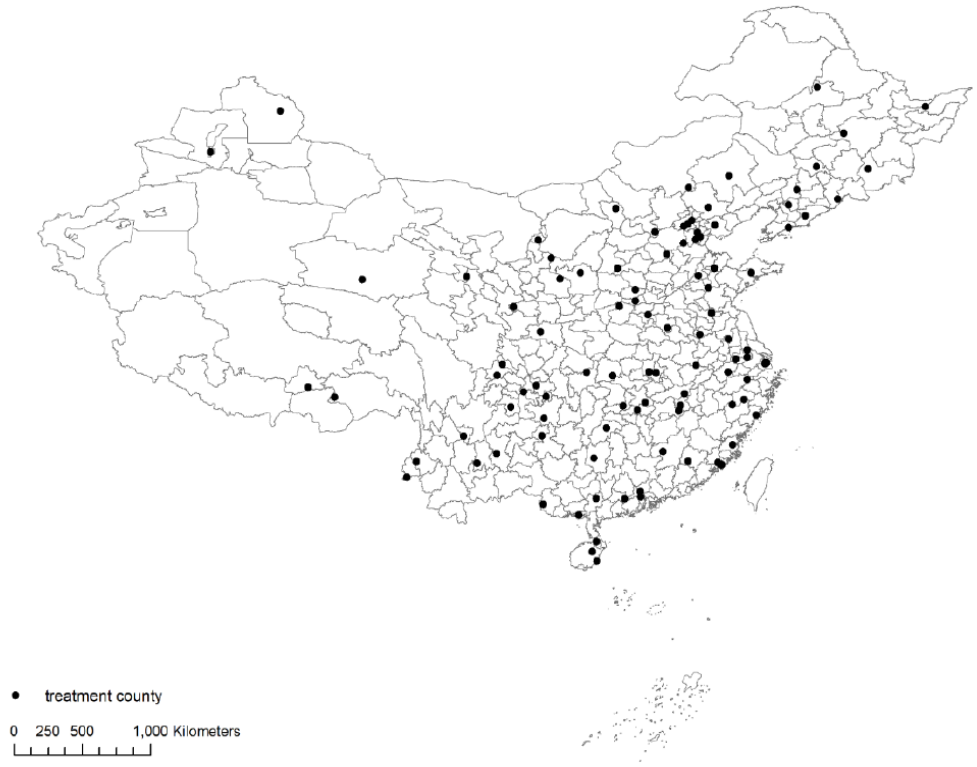
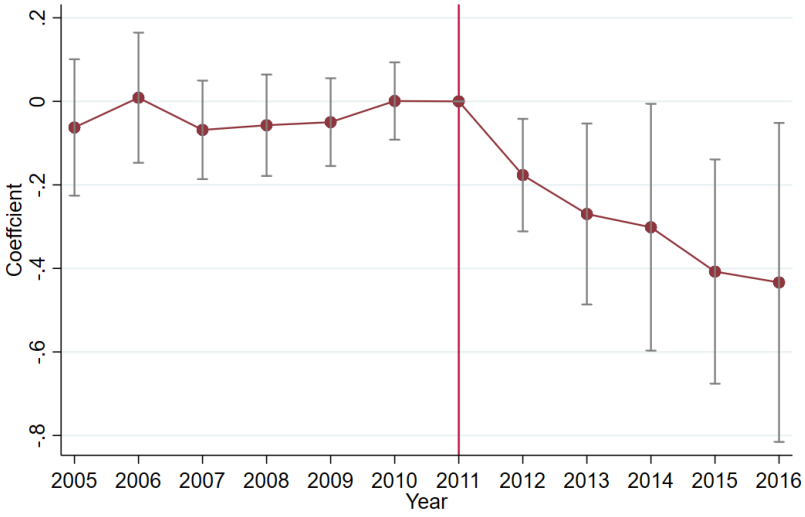


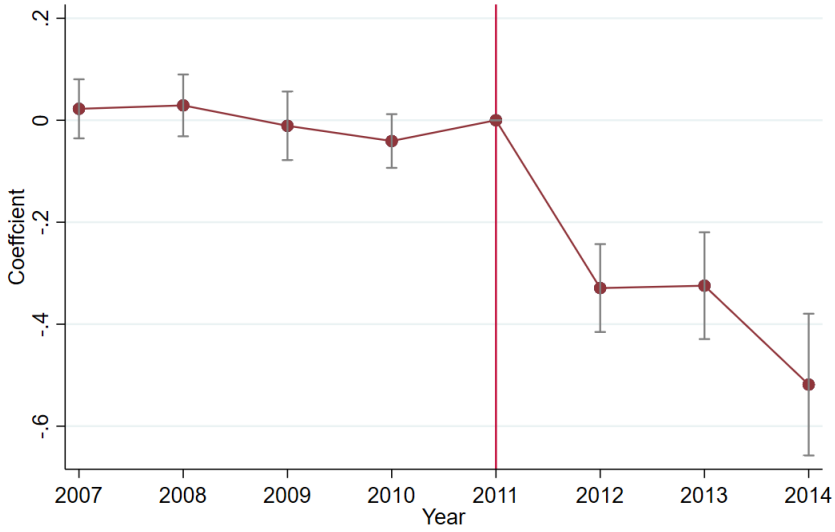
FIGURE I
Spatial Distribution of Treated Counties



Notes. The points represent coefficients of treatment interacted with year dummy variables; and, the surrounding whiskers are 95-percent confidence intervals. The default year is 2011. The dependent variable is corruption-mismanagement. The Figure is based on the estimations in Column (3) of Table Ⅳand we replace "Post" with year dummies.

Figure Ⅱ

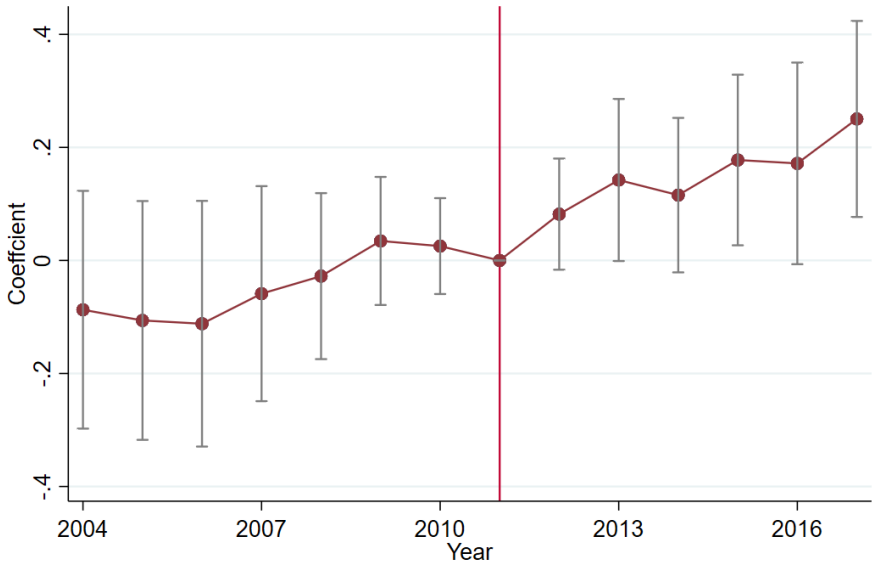
Estimated Coefficients for Corruption Outcomes



Notes. The points represent coefficients of treatment interacted with year dummy variables; and, the surrounding whiskers are 95-percent confidence intervals. The default year is 2011. The dependent variable is entertainment expenses. The Figure is based on the estimations in Column (3) of Table Ⅴ, and we replace "Post" with year dummies.

Figure Ⅲ

Estimated Coefficients for Corruption Outcomes: Entertainment expenses



Notes: The points represent coefficients of treatment interacted with Year dummy variables; and, the surrounding whiskers are 95-percent confidence intervals. The baseline year is 2011. The Figure is based on the estimations in Column (3) of Table 6 and we replace "Post" with year dummies. Use column (3) Table Ⅵ.

Figure Ⅳ.
Estimated Coefficients for Firm entries

TABLE I

SUMMARY STATISTICS

Variables	Definition	Mean	S.D	Coverage
County variables				
Reform				
Treatment	=1 for treated counties, and 0 otherwise	0.038	0.192	2005-2016
Post	=1 for year>=2012, and 0 otherwise	0.400	0.490	2005-2016
County Outcomes				
Corruption-mismanagement	Mismanagement (share of general budgetary income)	0.421	1.018	2005-2016
Entertainment expenditures	Business entertainment spending (percentage of sales)	0.85%	2.41%	2007-2014
Firm entries	Number of new firms in each county (log)	5.681	0.867	2004-2017
Website	Number of words, links and images on the front page of county website(log)	8.145	0.875	2008-2014
Baidu: keywords	Baidu search index for the keyword of E-government, Service-type Government, Government Affairs Openness, and Government Affairs Informatization at city level (log)	6.273	1.572	2011-2016
Baidu: weather	Baidu search index for the keyword at city level (log)	9.335	1.740	2011-2016
Sina Weibo: keywords	= 1 if the Sina Weibo post mentioned the keywords of E-government, Service-type Government, Government Affairs Openness, and Government Affairs Informatization, and 0 otherwise	0.301	0.459	2009-2018
Sina Weibo: weather	= 1 if the Sina Weibo post mentioned the keyword of weather, and 0 otherwise	0.812	0.390	2009-2018
Anti-corruption Campaign	Baidu search index for the keyword at city level (log)			
Inspection	Dummy variable indicating a county government was inspected by provincial government as part of the anti-corruption campaign	0.075	0.264	2005-2016
Turnover of city leaders	=1 if city leader was replaced in each city in each year, and 0 otherwise	0.287	0.452	2005-2016
Turnover of provincial leaders	=1 if province leader was replaced in each city in each year, and 0 otherwise	0.354	0.478	2005-2016

TABLE Ⅱ

BALANCE CHECKS FOR PREDETERMINED VARIABLES

Variable	Treatment	Control	Difference
Panel A. Selection variables			
Website construction, 2010	6.018	5.115	0.903***
	(2.697)	(3.149)	(0.334)
Public deficit, 2009	0.027	0.059	-0.032***
	(0.035)	(0.091)	(0.005)
Length of highway, 2010	2.785	1.712	1.074***
	(2.078)	(2.073)	(0.256)
Telephone users, 2010	11.449	9.672	1.777***
	(0.911)	(3.447)	(0.134)
Slope, 2010	0.689	1.030	-0.341***
	(0.839)	(1.174)	(0.105)
Keywords, 2010	1.588	0.746	0.842***
	(1.576)	(1.063)	(0.193)
Panel B: Pre-treatment dependent variables in initial year			
Corruption-mismanagement, 2005	0.239	0.275	-0.036
	(0.437)	(0.428)	(0.056)
Entertainment expenses,, 2007	0.887%	0.891%	-0.004
	(2.469%)	(2.335%)	(0.024)
Firm entries, 2004	5.173	5.324	-0.151
	(0.854)	(0.692)	(0.113)

Notes. Robust standard errors, clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The balance tests are cross-sectional and do not include fixed effects.

TABLE Ⅲ

OUTCOMES WITHOUT ONTROLS FOR

SELECTION, COUNTY LEADERS AND ANTI-CORRUPTION CAMPAIGN

	(1)	(2)	(3)
Dependent Variable	Corruption-mismanagement	Corruption-Entertainment expenses	Firm Entry
Treatment × Post	-0.201***	-0.435***	0.151***
	(0.052)	(0.043)	(0.055)
County fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	No	Yes	No
Province-year fixed effects	No	No	No
County-leader fixed effects	No	No	No
Observations	19,331	864,884	18,068
Mean of dependent variable	0.421	0.85%	5.681
R-squared	0.268	0.023	0.877
Number of clusters	1,862	1,863	1,859

Notes. Robust standard errors clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, *p<0.1. Observations are at the county-year level in Column (1) and (3), and it is at firm level in Column (2). The sample period is 2005-2016 in Column (1), 2007-2014 in Column (2), and 2004-2017 in Column (3). China has 31 regions that are denoted provinces. In this table and the analysis that follows we drop the four municipalities, Beijing, Shanghai, Tianjin, and Chongqing, because of their special status. We also drop the autonomous region Tibet due to missing data. Thus, we go from 31 provinces (100 and 2,744 pilot and control counties) to 26 provinces (88 and 2,596 pilot and control counties). Because we control for county leader fixed effects in subsequent regressions, we limit the sample to counties in the 26 provinces where the county Party secretary changed during the sample period (82 and 1,987 pilot and control counties). Our sample is unbalanced panel due to missing data in some counties.

TABLE Ⅳ

CORRUPTION-MISMANAGEMENT

	(1)	(2)	(3)	(4)
Dependent Variable	Corruption-mismanagement			
Treatment × Post	-0.158**	-0.159**	-0.160**	-0.213**
	(0.066)	(0.064)	(0.064)	(0.099)
Inspection	0.009	0.009	0.008	0.182
	(0.074)	(0.074)	(0.074)	(0.251)
Turnover of city leaders		-0.095	-0.049**	-0.041
		(0.058)	(0.020)	(0.032)
Turnover of provincial leaders			-0.097*	-0.191**
			(0.058)	(0.091)
County fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	No	No
Selection for treatment	Yes	Yes	Yes	No
P-score matching				Yes
Observations	19,331	19,331	19,331	1,506
R-squared	0.557	0.557	0.557	0.687
Number of clusters	1,862	1,862	1,862	154

Notes. Robust standard errors clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the county-year level. The sample period is 2005-2016. "Inspection" is a county-year dummy variables that indicates whether a county government was inspected as part of the anti-corruption campaign. County-leader fixed effects are included to account for their features that do not change over time. Province-year fixed effects capture the variations in each province across years, such as political turnovers of province leaders. In regressions that are available upon request we include city-year fixed effects to account for political turnover at the city-level and obtain very similar results. We measure political turnover for the higher-level governments overseeing the county government using two variables: "Turnover of city leaders" which equals 1 if the party secretary or mayor in a city change in a particular year and is 0 otherwise; and. "Turnover of provincial leaders" which equals 1 if the provincial party secretary or governor changes in a particular year and is 0 otherwise. China has 31 regions that are denoted provinces. In this table and the analysis that follows we drop the four municipalities, Beijing, Shanghai, Tianjin, and Chongqing, because of their special status. We also drop the autonomous region Tibet due to missing data. Thus, we go from 31 provinces (100 and 2,744 pilot and control counties) to 26 provinces (88 and 2,596 pilot and control counties). Because we control for county leader fixed effects, we limit the sample to counties in the 26 provinces where the county Party secretary changed during the sample period (82 and 1,987 pilot and control counties). Our sample is unbalanced panel due to missing data in some counties. The sample size has 77 pilot and control counties when we use the 1:1 propensity score matching with no replacement. We lose 5 pilot counties because their propensity score does not overlap with the distribution of control counties. The additional matching variables, the logit regression for the propensity score and the balance tables are contained Table A1, A2 and A3 in the Appendix.

TABLE V

CORRUPTION-ENTERTAINMENT EXPENSES

	(1)	(2)	(3)	(4)
Dependent Variable	Corruption-Entertainment expense			
Treatment × Post	-0.384***	-0.388***	-0.389***	-0.382***
	(0.043)	(0.051)	(0.050)	(0.107)
Inspection	-0.110	-0.088	-0.086	0.058
	(0.084)	(0.078)	(0.078)	(0.073)
Turnover of city leaders		-0.005	-0.003	0.047**
		(0.008)	(0.008)	(0.023)
Turnover of provincial leaders			0.033***	-0.000
			(0.008)	(0.023)
County fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	No	No
Selection for treatment	Yes	Yes	Yes	No
P-score matching	No	No	No	Yes
Observations	864,884	864,884	864,884	112,802
R-squared	0.031	0.030	0.030	0.030
Number of clusters	1,863	1,863	1,863	154

Notes. Robust standard errors clustered at the county level are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the firm-county-year level. The sample period is 2007-2014. See Notes to Table Ⅲ for definitions of the variables and fixed effects.

TABLE Ⅵ

FIRM ENTRIES

	(1)	(2)	(3)	(4)
Dependent Variable	Firm entry			
Treatment × Post	0.094*	0.094*	0.094*	0.085*
	(0.051)	(0.051)	(0.051)	(0.071)
Inspection	0.041***	0.041***	0.041***	0.033
	(0.015)	(0.015)	(0.015)	(0.054)
Turnover of city leaders		-0.038	-0.038	0.028
		(0.025)	(0.025)	(0.036)
Turnover of province leaders			0.000	0.004
			(0.005)	(0.020)
County fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	No	No
Selection for treatment	Yes	Yes	Yes	No
P-score matching				Yes
Observations	18,102	18,102	18,102	1,538
R-squared	0.944	0.944	0.944	0.978
Number of clusters	1,863	1,863	1,863	154

Notes. Robust standard errors clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the county-year level. The sample period is 2004-2017. See Notes to Table III for definitions of the variables "Inspection," "Turnover of provincial leaders," "Turnover of city leaders" and "County leader's characteristics" and for an explanation of Province-year fixed effects and county-leader fixed effects.

TABLE VII

EFFECT OF TREATMENT ON WEBISITE CONSTRUCTION AND QUALITY OF PRE-TREATMENT WEBSITES

Dependent variable Number of words, links and images on the front page of county website(log)		
	(1)	(2)
Treatment × Post	0.156*	0.155*
	(0.093)	(0.094)
Inspection	-0.220*	-0.227*
	(0.126)	(0.126)
Turnover of city leaders		-0.042**
		(0.020)
Turnover of provincial leaders		-0.003
		(0.094)
County fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
County-leader fixed effects	Yes	Yes
Province-year fixed effects	Yes	No
Selection for treatment	Yes	Yes
Observations	5,765	5,765
R-squared	0.818	0.819
Number of clusters	1,411	1,411

Notes. Robust standard errors, clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. All observations are at the county-year level. The dependent variable is measured by total number of links and images (log) in the front page of the website of each county. See Notes to Table III for definitions of the variables "Inspection," "Turnover of provincial leaders," "Turnover of city leaders" and "County leader's characteristics" and for an explanation of Province-year fixed effects and county-leader fixed effects. The sample size is smaller because of the missing values of the outcome variable. The sample period is 2008-2014.

TABLE VIII

BAIDU SERACH

	(1)	(2)
Dependent Variable	Sum of keywords	Placebo: Weather
Treatment × Post	0.437**	0.263
	(0.170)	(0.172)
Year fixed effects	Yes	Yes
City fixed effects	Yes	Yes
Selection for treatment	Yes	Yes
Observations	1,650	1,650
R-squared	0.159	0.435
Number of clusters	275	275

Notes. The dependent variable is the log number of times of the keywords (E-government, Service-type government, Government affairs openness, and Government affairs informatization) in the Baidu search index at the year-city (prefecture) level. Data on the Baidu search index is not available at the county level so we conduct the analysis at the city-level. Because the Baidu search index has been public since January 1 in 2011, the sample period is 2011-2016. Robust standard errors, clustered at city level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

TABLE IX

POSTS IN NON-GOVERNMENT SINA WEIBO ACCOUNTS

	(1)	(2)
Dependent Variable	Sina Weibo: keywords	Placebo: Weather
Treatment × Post	0.164***	-0.020
	(0.034)	(0.029)
Year fixed effects	Yes	Yes
County fixed effects	Yes	Yes
Selection for treatment	Yes	Yes
Inspections	Yes	Yes
Observations	16,659	16,659
R-squared	0.306	0.740
Number of clusters	1859	1859

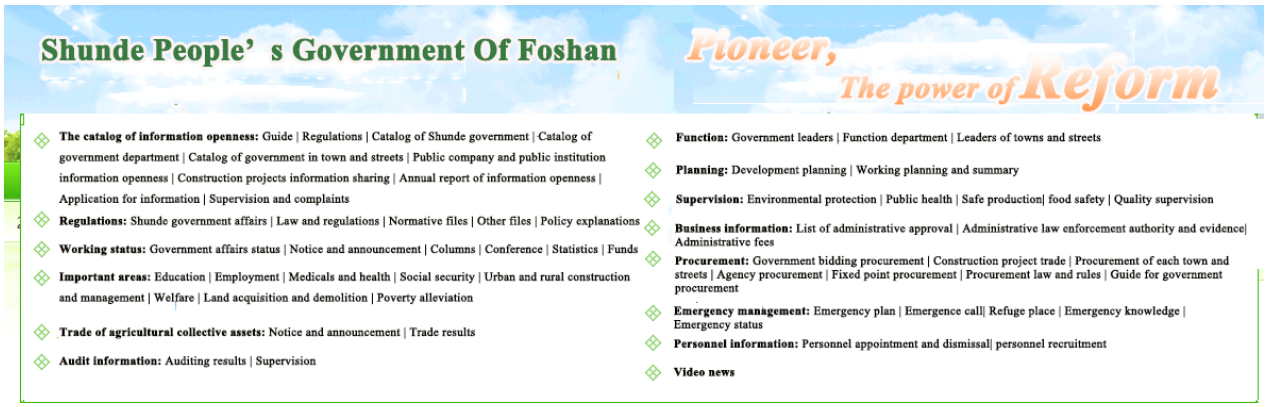
Notes. Observations are at the county-year level and the sample period is 2009-2018. Robust standard errors clustered at county level are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The dependent variable in Column (1) equals 1 if one or more Sina Weibo posts mentioned the keywords (E-government, Service-type government, Government affairs openness, and Government affairs informatization) and county simultaneously, and 0 otherwise. If there is no post in one county in one year, its value would be 0. The dependent variable in Column (2) equals 1 if one or more Sina Weibo posts mentioned the keyword of weather and county name simultaneously, and 0 otherwise. If there is no post in one county in one year, its value would be 0.

Online Appendix A

Figure A1: The Front Webpage of Shunde in Foshan in Guangdong Province on 21 Dec 2012

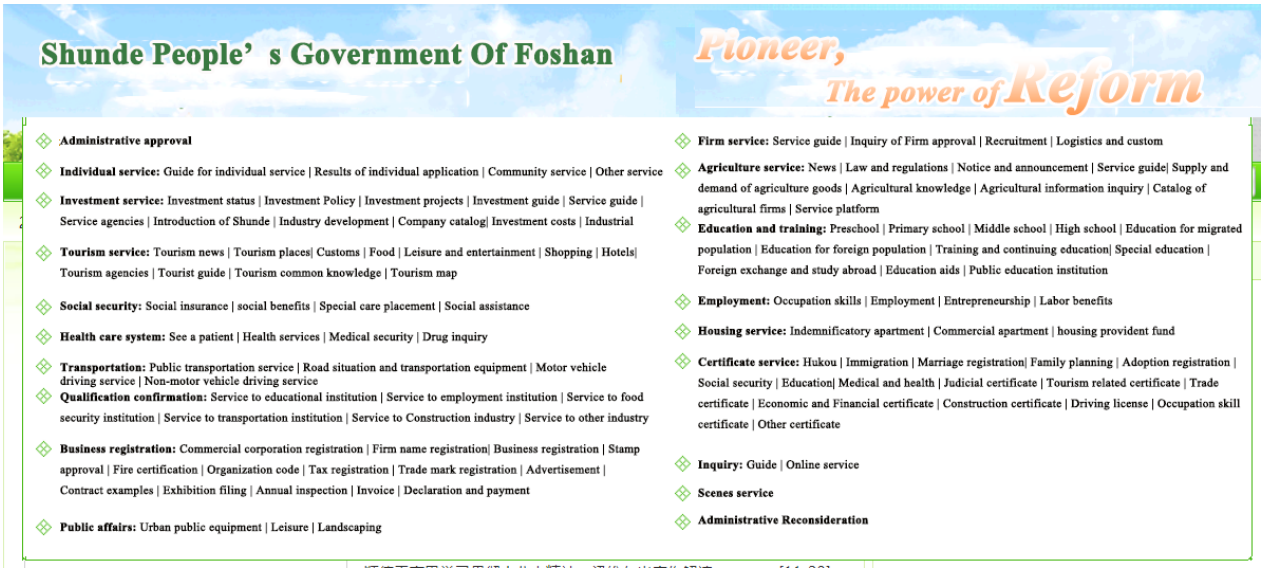
Source: https://web.archive.org/web/20121221103048/http://www.shunde.gov.cn/

Figure A2: The Transparency Link in the Front Webpage of Shunde in Foshan in Guangdong Province on 21 Dec 2012



Source: https://web.archive.org/web/20121221103048/http://www.shunde.gov.cn/

Figure A3: The Online Service Link in the Front Webpage of Shunde in Foshan in Guangdong Province on 21 Dec 2012

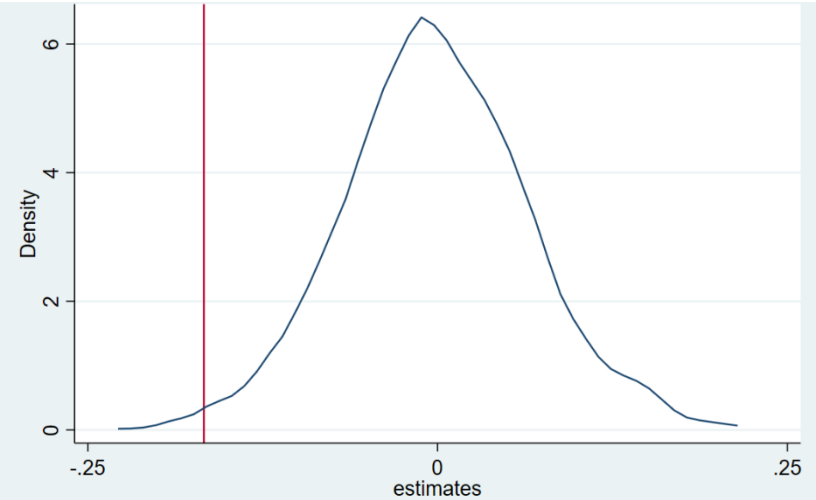


Source: https://web.archive.org/web/20121221103048/http://www.shunde.gov.cn/

Figure A4: The Interaction Between Government and Citizens in the Front Webpage of Shunde in Foshan in Guangdong Province on 21 Dec 2012

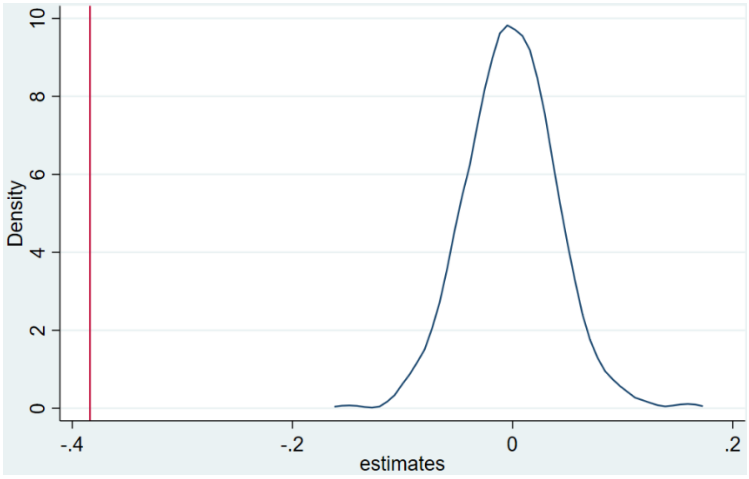
Source: https://web.archive.org/web/20121221103048/http://www.shunde.gov.cn/

Figure A5: Placebo Test for Corruption-mismanagement



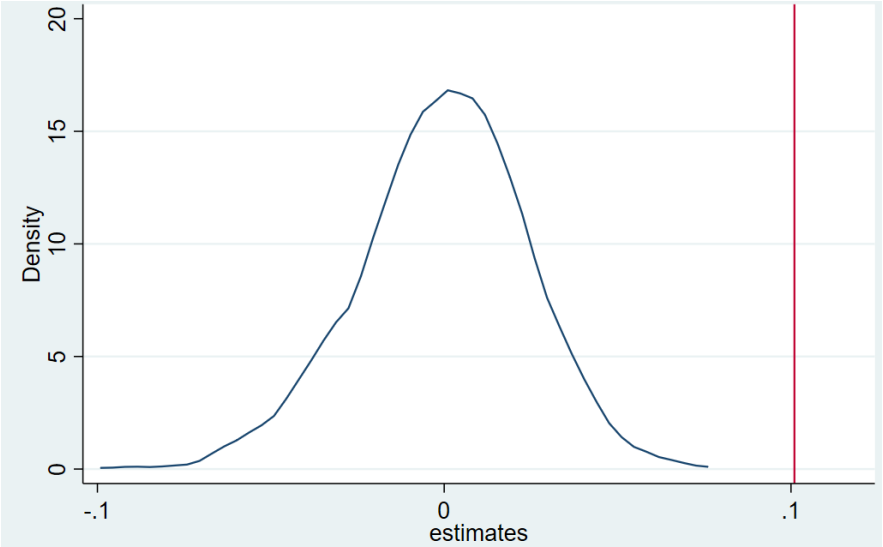
Notes. The figure shows the kernel density of the estimated coefficients from 1000 simulations randomly assigning treatment status to counties. The vertical line presents the point estimate from the treatment effect result of column 3 in Table Ⅳ. The mean for the p-value of placebo test is 0.410. The true estimate is -0.167.

Figure A6: Placebo Test for Entertainment Expenses



Notes. The figure shows the kernel density of the estimated coefficients from 1000 simulations randomly assigning treatment status to counties. The vertical line presents the point estimate from the treatment effect result of column 3 in Table Ⅴ, The mean for the p-value of the placebo test is 0.463. The true estimate is -0.384.

Figure A7: Placebo Test for Firm Entries



Notes. The figure shows the kernel density of the estimated coefficients from 1000 simulations randomly assigning treatment status to counties. The vertical line presents the point estimate from the treatment effect result of column 3 in Table Ⅵ. The mean for P-value of placebo test is 0.493. The true estimate is 0.101.

TABLE A1.

Balance test for additional county-level variables

Variable	Treatment	Control	Unconditional Difference	Conditional difference
Panel A. County level economic variables				
Agricultural grain output (log), 2010	8.034	8.062	-0.028	-0.078
	(0.649)	(0.582)	(0.080)	(0.080)
Industrial output value (log), 2010	7.857	8.098	-0.241***	-0.041
	(0.679)	(0.743)	(0.084)	(0.071)
County under provincial capital, 2010	0.090	0.077	0.013	-0.007
	(0.288)	(0.267)	(0.035)	(0.035)
Coastal county, 2010	0.104	0.089	0.015	-0.011
	(0.308)	(0.285)	(0.038)	(0.038)
Mountainous county, 2010	0.328	0.382	-0.054	0.011
	(0.473)	(0.486)	(0.058)	(0.053)
County government employees, 2009	9.639	9.365	0.274***	0.071
	(0.521)	(0.579)	(0.066)	(0.051)
Panel B: County leader characteristics				
Age, 2010	47.761	48.079	-0.318	-0.511
	(3.482)	(3.804)	(0.432)	(0.442)
Education, 2010	1.515	1.579	-0.064	-0.124
	(0.638)	(0.638)	(0.080)	(0.083)
Newly assigned county leaders, 2010	0.254	0.225	0.028	0.013
	(0.438)	(0.418)	(0.054)	(0.056)
Job tenure, 2010	2.925	3.450	-0.524***	-0.292
	(1.521)	(2.129)	(0.191)	(0.202)
Political connections, 2010	0.134	0.123	0.011	0.016
	(0.344)	(0.329)	(0.042)	(0.044)
Economic performance of party secretary, 2010	1.295	0.481	0.814	0.264
	(5.414)	(4.075)	(0.663)	(0.641)

Notes. Robust standard errors, clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The balance tests are cross-sectional and do not include fixed effects. We chose variables that cover all 82 pilot counties and a substantial share of the 1,987 control counties.

Table A2. Logit regression for the propensity score

	(2)
Dependent Variable is Treatment	
Public deficit, 2009	-102.952***
	(31.027)
Keywords, 2010	0.484***
	(0.094)
Website construction, 2010	0.243**
	(0.114)
Telephone users, 2010	0.620**
	(0.247)
Length of highway, 2010	-0.294
	(0.185)
Industrial output value (log), 2010	0.410
	(0.415)
County government employees, 2009	0.980*
	(0.507)
Slope	-0.211
	(0.334)
Public deficit, 2009 ×Website construction, 2010	-11.862***
	(4.079)
Length of highway, 2010×Website construction, 2010	-0.054**
	(0.027)

Notes. The dependent variable is Treatment and equals to one if the county is a pilot county and zero otherwise. We follow Imbens (2015) to select covariates and second-order terms to include in the propensity score matching using iterative procedures, based on the six selection variables at county level and other variables that are significant in Table A1, i.e., Industrial output value (log) 2010, county government employees 2009 and government leader's job tenure. Following this procedure, we add two additional covariates (Industrial output value (log), 2010 and County government employees, 2009) and we also add second-order terms. Using these variables, we estimate the propensity score. We use one-to-one nearest neighbor propensity score matching without replacement. Because the matching counties must fall in the common support of estimated propensity score, we drop five pilot counties from the sample.

Table A3: Balance table for matched sample

Variable	Mean: Treatment	Mean: Control	P value
Public deficit, 2009	0.018	0.026	0.537
Keywords, 2010	2.155	1.414	0.173
Website construction, 2010	6.383	5.697	0.460
Telephone users, 2010	11.924	11.422	0.164
Length of highway, 2010	3.517	2.702	0.313
Industrial output value (log), 2010	7.836	8.139	0.232
County government employees, 2009	9.644	9.714	0.718
Slope	0.700	0.891	0.574
Public deficit, 2009 ×Website construction, 2010	0.179	0.097	0.396
Length of highway, 2010×Website construction, 2010	20.843	17.819	0.624

Notes. We match each treated county to the untreated county based on their propensity scores. Among the potential control counties, we select the optimal match based on the one-to-one nearest neighbor propensity score matching without replacement to control for the differences in the key characteristics between treated and control counties. We require that the matching counties fall in the common support of estimated propensity scores. All P value are larger than 0.10, indicating that the matched sample is balanced.

Table A4: Robustness check for the selection variables

	(1)	(2)	(3)
Dependent Variable	Mismanagement	Entertainment spending	Firm entry
Treatment × Post	-0.154**	-0.389***	0.108**
	(0.067)	(0.051)	(0.051)
Inspection	0.004	-0.082	0.040***
	(0.073)	(0.078)	(0.015)
Turnover of provincial leaders	-0.099*	0.033***	-0.039
	(0.058)	(0.008)	(0.024)
Turnover of city leaders	-0.050**	-0.003	-0.000
	(0.020)	(0.008)	(0.005)
County fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	No	Yes	No
County-leader fixed effects	Yes	Yes	Yes
Selection for treatment	Yes	Yes	Yes
Observations	19,331	864,884	18,068
R-squared	0.558	0.030	0.945
Number of clusters	1,862	1,863	1,859

Notes. Robust standard errors clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the county-year level. Columns (1), (2) and (3) use the same setup as column (3) in Tables IV, VI and VII. However, the variables in the selection function are derived using the procedure in Imbens (2015) which are presented in Table A2 and Table A3. We obtain similar results if the selection function contains the six selection variables in Table 2 Panel A and other variables that are significant in Table A1, i.e., Industrial output value (log) 2010, county government employees 2009 and government leader's job tenure.

Table A5: Corruption Outcomes: Corruption-mismanagement

	(1)	(2)	(3)
Dependent Variable	Corruption-mismanagement		
Treatment × Post	-0.153	-0.209	-0.186**
	(0.109)	(0.146)	(0.080)
Treatment × Post × Age	-0.028		
	(0.125)		
Treatment × Post × Education		0.058	
		(0.153)	
Treatment × Post × Economic Performance			0.236
			(0.311)
Inspection	0.055	0.055	0.121*
	(0.081)	(0.081)	(0.068)
County fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	Yes
Selection for treatment	Yes	Yes	Yes
Observations	16,436	16,436	14,980
R-squared	0.557	0.557	0.528
Number of clusters	1,815	1,815	1805

Notes. Robust standard errors clustered at the county level, are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the county-year level. The sample period is 2005-2016. See Notes to Table 4 for definitions of the variables "Inspection," "Turnover of provincial leaders," "Turnover of city leaders" and "County leader's characteristics" and for an explanation of Province-year fixed effects and county-leader fixed effects. Age is dummy variable which is equal to one if county party secretary's age is younger than 55, and 0 otherwise. Education is a dummy variable which is equal to one if the education of county party secretary is bachelor or above, and zero otherwise. Economic Performance refers to the average GDP growth rate during the tenure.

Table A6: Corruption Outcomes: Entertainment Expenses

	(1)	(2)	(3)
Dependent Variable	Corruption-mismanagement		
Treatment × Post	-0.212***	-0.286***	-0.415***
	(0.055)	(0.066)	(0.067)
Treatment × Post × Age	-0.127		
	(0.082)		
Treatment × Post × Education		-0.043	
		(0.097)	
Treatment × Post ×Economic Performance			0.508*
			(0.283)
Inspection	-0.073	-0.075	-0.129
	(0.096)	(0.095)	(0.098)
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	Yes
Selection for treatment	Yes	Yes	Yes
Observations	646,706	646,706	603,639
R-squared	0.032	0.032	0.032
Number of clusters	1,660	1,660	1,659

Notes. Controls for firm fixed effects are always included. Robust standard errors clustered at the county level are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. Observations are at the firm-county-year level. The sample period is 2007-2014. See Notes to Table 4 for definitions of the variables "Inspection," "Turnover of provincial leaders," "Turnover of city leaders" and "County leader's characteristics" and for an explanation of Province-year fixed effects and county-leader fixed effects. Age refers to the age of county party secretary. Education is a dummy variable which is equal to one if the education of county party secretary is bachelor or above, and zero otherwise. Tenure refers to the tenure of county party secretary.

Table A6: Firm Entry

	(1)	(2)	(3)
Dependent Variable	Firm entry		
Treatment × Post	0.070	0.082	0.099*
	(0.086)	(0.056)	(0.056)
Treatment × Post × Age	0.041		
	(0.086)		
Treatment × Post × Education		0.041	
		(0.095)	
Treatment × Post × Economic Performance			0.078
			(0.267)
Inspection	5.699***	5.680***	5.700***
	(0.059)	(0.055)	(0.079)
County fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
County-leader fixed effects	Yes	Yes	Yes
Province-year fixed effects	Yes	Yes	Yes
Selection for treatment	Yes	Yes	Yes
Observations	15,437	15,437	12,013
R-squared	0.945	0.945	0.943
Number of clusters	1,807	1,807	1,773

Notes. Robust standard errors clustered at the county level are in parentheses: *** p<0.01, ** p<0.05, * p<0.1. See Notes to Table 4 for definitions of the variables "Inspection," "Turnover of provincial leaders," "Turnover of city leaders" and "County leader's characteristics" and for an explanation of Province-year fixed effects and county-leader fixed effects.

Appendix Section B.

Table B1: The Basic Catalogue of Information Posted in the Website (385)

Type 1 Government Information Disclosure (65)

Section 1: Government Information Disclosure Regulations
1. Administrative regulations, rules and normative documents;
2. National economic and social development plans, special plans, regional plans and related policies;
3. Statistics on national economic and social development;
4. Financial budget and final accounts report;
5. Items and standards of administrative charges;
6. The catalog, standards and implementation of centralized government procurement projects;
7. Items, conditions, quantities, procedures and time limit of administrative licensing, as well as the catalogue and process for administrative licensing;
8. Approval and implementation of major construction projects;
9. Policies and implementation of poverty alleviation, education, medical care, social security, employment promotion, etc.;
10. Emergency plans, early warning and response to public emergencies;
11. Supervision and inspection of environmental protection, public health, production safety, food and drug, and product quality;
12. Major matters in urban and rural construction and management;
13. The construction of social welfare projects;
14. Expropriation or requisition of land, house demolition, the distribution and use of compensation and subsidies;
15. Management, use and distribution of funds and materials such as emergency rescue and disaster relief, special care, social donations, and lottery funds;
16. Implementing the national policies on rural regions;
17. The review of the overall planning of the township land use and the use of homesteads;
18. The creditor's rights and debts, fund-raising and labor-raising of the township;
19. Township collective enterprises and other township economic entities contracting, leasing, auctioning, etc.;
20. The implementation of the family birth planning policy;
Section 2: Management and Use of Special Financial Funds
21. The management and use of financial subsidies will be discussed on a case-by-case basis for the construction of village-level public welfare projects;
22. The management and use of funds for the reform of the rural compulsory education funding;
23. Management and use of urban compulsory education funds;
24. The management and use of national scholarships and national student loan;
25. The management and use of tuition-free subsidy funds for secondary vocational schools;
26. The management and use of special funds for the program of popularizing science and benefiting the countryside and revitalizing the village;
27. The management and use of agricultural technology extension funds;
28. The management and use of rural labor training funds;
29. The management and use of special funds for the reward and assistance system for some family planning families in rural areas;

30. The management and use of special funds for the “Less Birth, More Wealth” project in the western region;
31. The management and use of special funds for the special assistance system for family planning families;
32. The management and use of special funds for the national free pre-pregnancy health examination project;
33. The management and use of subsidy funds for farmers’ professional cooperative economic organizations;
34. The management and use of safe drinking water funds in rural regions;
35. The management and use of rural biogas promotion subsidy funds;
36. The management and use of subsidy funds for the construction of small-scale farmland water conservancy facilities;
37. The management and use of subsidy funds for soil testing and formula fertilization;
38. The management and use of grain subsidies;
39. The management and use of comprehensive subsidies for agricultural materials;
40. The management and use of agricultural machinery purchase subsidies;
41. The management and use of subsidy for crop varieties;
42. The management and use of subsidies for improved livestock breeds;
43. The management and use of cash subsidy funds for returning farmland to forests (grass);
44. The management and use of grain subsidy funds for returning farmland to forests (grass);
45. The management and use of new rural cooperative medical subsidy funds;
46. The management and use of rural medical aid subsidy funds;
47. The management and use of new rural social endowment insurance subsidy funds;
48. The management and use of urban medical aid subsidy funds;
49. The management and use of subsidy funds for basic medical insurance for urban residents;
50. The management and use of rural minimum living subsidy funds;
51. The management and use of subsidized funds for urban residents' subsistence allowances;
52. The management and use of subsidy funds for the construction of public health service systems;
53. The management and use of other subsidy funds;
54. The management and use of poverty alleviation funds;
55. The management and use of agricultural comprehensive development funds;
56. The management and use of disaster funds for agricultural production;
57. The management and use of disaster funds for forestry production;
58. The management and use of central natural disaster living subsidy funds;
59. The management and use of funds for the project of home appliances going to the countryside;
60. The management and use of funds for cars and motorcycles going to the countryside;
61. The management and use of special subsidy funds for low-rent housing;
62. The management and use of special subsidy funds for urban shantytown renovation;
63. The management and use of special subsidy funds for public rental housing;
64. The management and use of subsidy funds for the renovation of dilapidated houses in rural areas;
65. The management and use of employment subsidy funds.

Type 2 Government Administrative Matters (295)

Section 1: Development and Reform Work

1. Permits for operations that may endanger the safety of power facilities;
2. Approval of enterprise investment projects handled by the county-level governments;
3. Approval of foreign-invested enterprises (industrial) handled by the county-level government;
4. Approval of government investment projects handled by the county-level government;
5. Filing of corporate investment projects;

Section 2: Education

6. Approval for the establishment, modification and termination of private schools of academic education, pre-school education and other cultural education at the compulsory education stage;
7. Recognition of teacher qualifications for kindergartens, primary schools and junior middle schools, qualification examination of teachers in senior middle schools, secondary vocational schools and internship instructors of secondary vocational schools;
8. Procedures for students' transfer and suspension;
9. Recording of enrollment brochures and advertisements of private schools that implement non-academic education other than vocational training;
10. For private schools that implement non-academic education other than vocational training to amend their constitutions for record;

Section 3: Public Security

11. Information security review of internet access business services;
12. Issuance of industry license for hotels;
13. Issuance of industry license for official seal engraving industry;
14. Fire protection design review and fire protection review of construction projects;
15. Fire safety inspection before business operation in public gathering places;
16. Filing of fire protection design and completion acceptance of construction projects;
17. Application and replacement of resident ID cards;
18. Temporary ID card processing;
19. Household registration (Hukou registration);
20. Establish collective Hukou registration;
21. Cancel Hukou for persons who have performed military service, settled abroad, died, or disappeared;
22. Filing of renewable resource recycling enterprises;
23. Hukou transfer;
24. Recording of engraved official seals;
25. Filing of entertainment venues;
26. Hotel change registration;
27. Recording of business changes of internet access service business premises;
28. Filing of internet services and users;
29. Recording of the establishment and staff of public security institutions in key public security units;
30. Motor vehicle driving licenses;
31. Examination of motor vehicle driving licenses;
32. Motor vehicle registration;
33. Motor vehicle ownership transfer and mortgage registration;

Section 4: Civil Affairs
34. The establishment (recording), modification and cancellation of social groups;
35. The establishment (recording), modification and cancellation of social groups of private non-enterprise units;
36. Approval for the construction of funeral service stations and columbarium;
37. Approval for setting up public welfare cemeteries in rural villages;
38. Adoption registration;
39. Approval of minimum living social benefits for urban and rural residents;
40. Approval of urban and rural medical assistance benefits;
41. Approval of old age (preferential treatment) certificate;
42. Approval of the five-guarantee support treatment in rural areas;
43. Approval of temporary aids;
Section 5: Judicial Administration
44. Change of notary institution (preliminary trial);
45. Annual inspection and assessment of law firms (preliminary trial);
46. Appointment and removal of notaries (initial trial);
47. Registration of legal service workers (preliminary trial);
48. Review of legal aid conditions;
49. Determination of the legal aid institution's practice institution;
Section 6: Public Finance
50. The establishment license of agency bookkeeping institutions other than accounting firms;
51. Issuance of accounting qualification certificate;
52. Fiscal registration of foreign-invested enterprises;

Section 7: Human Resources and Social Security
53. Approval of the comprehensive calculation of working hours and irregular working hours for enterprises;
54. Qualification accreditation of employment agencies;
55. Review of benefits for insured persons who died due to illness or other reasons;
56. Approval of employees' pension;
57. Approval of work-related injury insurance benefits;
58. Approval of employer's work-related injury insurance contribution rate;
59. Approval of maternity insurance benefits;
60. Review of labor employment;
61. Review of labor collective contracts;
62. Approval of designated medical institutions for medical insurance;
63. Approval of designated retail pharmacies for medical insurance;
64. Review of unemployment insurance benefits;
65. Review of loans and discounted interest for re-employment of laid-off and unemployed persons;
66. Agency services for labor security affairs;
67. Social insurance registration;
68. Social insurance changes and cancellation;
69. Approval of social insurance payment base;
70. Collection of social insurance premiums;
71. Transfer from employees to retirement;
72. Enterprise annuity filing;
73. Examination and approval for the establishment, modification and termination of private schools that implement vocational qualification training and vocational skills training focusing on vocational skills;
Section 8: Land and Resources
74. Approval of rural villagers' homestead;
75. Initial registration of the right to use homestead;
76. Approval of construction land for township enterprises, township (town) village public facilities and public welfare undertakings;
77. Approval of county-level registration and certification of mining;
78. Collection of cultivated land reclamation fees;
79. Collection of fees for using state-owned land;
80. Collection of land reclamation fees;
81. Collection of idle land fees;
82. Preliminary examination of land for construction projects;
83. Specific construction projects require the approval of the state-owned unused land identified in the overall land utilization plan;
84. Land registration;
85. Land use right mortgage registration;

Section 9: Environmental Protection

86. Approval of construction project environmental impact report (form) and environmental impact registration form;
87. Completion approval of environmental protection facilities;
88. Night construction permit for construction projects;
89. Pollutant discharge permit;
90. Permits for demolition or idleness of pollution control facilities;
91. Collection of pollution charges;
92. Examination and approval of hazardous waste collection and operation licenses;

Section 10: Housing and Urban-rural Construction Work

93. Recordation of safety construction measures for housing construction and municipal infrastructure projects;
94. Issuance of construction permits for construction projects;
95. Issuance of commercial housing pre-sale license;
96. Construction land planning permission;
97. Construction projects planning permit;
98. Rural construction project planning permit;
99. Approval for temporary occupation and excavation of urban roads;
100. Approval of various pipelines, poles and other facilities attached to urban roads;
101. Examination and approval of urban public water supply facilities that need to be modified, demolished or moved due to project construction;
102. Approval of stopping water supply due to engineering construction, equipment maintenance, etc.;
103. Approval for erecting various municipal pipelines on urban bridges;
104. Change the greening planning and approval of the use nature of greening land;
105. Approval for temporary occupation of urban green space;
106. Approval for pruning and felling of urban trees;
107. Review of the migration of ancient and famous trees;
108. Review of site selection plans for major construction projects such as cable cars and ropeways in scenic spots;
109. Urban drainage license issuance;
110. Approval for site selection of construction projects that require approval or approval in accordance with state regulations and provide state-owned land use rights in the form of allocations;
111. The use of urban topographic maps for paid service fees;
112. Review and registration of affordable housing applications;
113. Review and registration of low-rent housing applications;
114. Approval of municipal public utility franchise projects;
115. Approval of excavating urban roads due to special circumstances within the specified time limit;
116. Review of low-rent housing security;
117. Registration of house ownership;
118. Registration of housing mortgage;
119. Pre-announcement registration of houses;
120. Registration of house correction and objection;
121. House registration within the scope of collective land;
122. Organize and prepare detailed construction plans for important plots;
123. Recognition of construction project archives;
124. Special acceptance of construction project archives;
125. Quality supervision procedures for housing construction and municipal infrastructure projects;

126. Completion review and filing of housing construction and municipal infrastructure projects;
127. Real estate development enterprise qualification record;
128. Pre-sale filing of commercial housing;
129. Real estate development project manual filing;
130. Demolition construction record;
131. Completion review and filing of urban greening projects;
132. Qualification filing of construction labor subcontracting enterprises;
133. Approval for the commercial cleaning, collection, transportation and treatment of municipal solid waste;
134. Approval of urban construction waste disposal;
135. Permission to dismantle environmental sanitation facilities;
136. Approval of closing, idling, and dismantling domestic waste disposal facilities and sites;

Section 11: Transportation

137. Road passenger transport business license;
138. License to engage in the operation of road passenger transport stations (fields);
139. Road freight transport business license;
140. License to engage in the operation of road freight transport stations (fields);
141. Motor vehicle maintenance business license;
142. Approval of motor vehicle driver training business;
143. Approval of highway construction projects;
144. Approval for construction projects which need to occupy, excavate or change the road;
145. Renew permit for road protection forest;
146. Issuance of taxi operation qualification certificate, vehicle operation certificate and driver passenger qualification certificate;
147. Approval for road driving of iron-wheeled vehicles, crawler vehicles, over-gauge vehicles and other equipment or vehicles that may damage the road surface;

Section 12: Water Conservancy

148. Water drawing licenses for units and individuals that directly draw water resources from rivers, lakes or underground;
149. Approval of relevant activities within the scope of river management;
150. Approval of occupation of agricultural irrigation water sources, irrigation and drainage engineering facilities, and collection of development compensation fees;
151. Approval of preliminary design documents for water conservancy infrastructure projects;
152. Approval for the commencement of water conservancy projects;
153. Approval of water and soil conservation plans for development and construction projects;
154. Review of soil and water conservation facilities;
155. Collection of compensation fees for soil and water conservation;
156. Water fee collection for water conservancy projects;
157. Water resource fee collection;
158. Review of new construction, reconstruction or expansion of sewage outfalls into rivers;
159. Approval for the establishment for public welfare water conservancy project construction projects;
160. Approval of construction project water resources demonstration report;

Section 13: Agriculture and Forestry

161. Forest logging permit;
162. Issuance of forest tree seed production license;
163. Issuance of forest tree seed management license;
164. Issuance of crop seed production license;
165. Issuance of a crop seed business license;
166. Approval for temporary occupation of forest land;
167. Registration of ownership of forests, trees and woodlands and issuance of certificates;
168. Collection of forest vegetation restoration fees;
169. Collection of afforestation funds;
170. Phytosanitary administrative license;
171. Administrative license for timber transportation;
172. Administrative license for timber management (processing) (preliminary examination);
173. Review of animal epidemic prevention conditions;
174. Collection of quarantine fees for animals and animal products;
175. License for the production and operation of breeding livestock and poultry;
176. Registration of practicing veterinarians;
177. Recording of practicing assistant veterinarians;
178. Registration of village veterinarians;
179. Veterinary drug business license;
180. Animal diagnosis and treatment license;
181. Quarantine of animals and animal products;
182. Issuance of technical qualification certificates for agricultural machinery maintenance;
183. Tractor registration, license plate and driving license issuance;
184. Issuance of tractor driving license;
185. Combine harvester registration, license plate, driving license and combine harvester driving license issuance;
186. Examination and approval of fundraising and labor raising plans on a case-by-case basis;
187. Examination and approval of rural land contract adjustment;
188. Management of rural land contractual management rights and collective forest rights transfer management;
189. Safety inspection of agricultural machinery endangering personal and property safety;
190. Issuance of rural land contractual management right certificate;

Section 14: Business Work

191. Approval of foreign labor cooperation business qualifications handled by the county-level government;
192. Approval for the establishment, merger, division and modification of foreign-funded enterprises handled by the county-level government;
193. Approval for the dissolution and liquidation of foreign-funded enterprises handled by the county-level government;
194. Joint annual inspection of foreign-invested enterprises;

Section 15: Cultural Work

195. Permits for establishment and modification of domestic entertainment venues;
196. Licensing for the establishment and modification of literary and artistic performance groups, filing of domestic performance venue business units, individual actors, and individual performance brokers;
197. Approval of domestic commercial performance activities;
198. Permits for establishment and alteration of business premises operating units for internet access services;
199. Publication retail business license;
200. Examination and approval of engineering design plans within the construction control zone of cultural relics protection units handled by the county-level government;
201. Examination and approval of construction projects or blasting, drilling, excavation and other operations within the protection scope of cultural relics protection units handled by the county-level government;
202. Approval for changing the use of state-owned memorial buildings or ancient buildings approved as county-level cultural relics protection units;
203. Approval for establishment of printing enterprises handled by the county-level government;
204. Examination and approval for the repair of cultural relics protection units handled by the county-level government;
205. Approval for the repair of immovable cultural relics that have not been approved as cultural relics protection units;
206. Approval for county-level cultural relics protection units;
207. Filing of art business units;

Section 16: Health

208. Issuance of public place sanitation licenses;
209. Issuance of sanitary licenses for water supply units;
210. Practicing license for maternal and child health care technical services;
211. Issuance of qualification certificate for maternal and child health care technology assessment;
212. Examination and approval of medical and health care institutions engaged in family planning technical services;
213. Issuance of practice certificates for family planning technical service personnel;
214. Registration of medical practitioners;
215. Nurse Practitioner License;
216. Medical advertisement review;
217. Review for traditional medicine teachers and those who do have expertise;
218. Issuance of practice licenses for medical institutions;

Section 17: Population and Family Planning

219. Approval for rebirth (service);
220. Collection of social maintenance fees;
221. Issuance of "One Child Parent Glory Certificate";
222. Confirmation of the recipients of rewards and assistance for some family planning families in rural areas;
223. Confirmation of the project object of “Less births get rich faster” in the western region;
224. Confirmation of special assistance objects for family planning families;

Section 18: Taxes

225. Approval of the maximum invoicing limit of the VAT anti-counterfeiting tax control system;
226. VAT collection;
227. Collection of consumption tax;
228. Corporate income tax collection;
229. Vehicle purchase tax collection;
230. Imposing personal income tax on savings deposit interest;
231. Collection cost of special VAT invoices;
232. Tax preservation;
233. Tax reduction and exemption;
234. Export tax rebate (exemption);
235. The establishment, modification and cancellation of tax registration;
236. Permission to sell tax stamps;
237. Business tax collection;
238. Collection of corporate income tax;
239. Collection of personal income tax;
240. Urban maintenance and construction tax collection;
241. Stamp duty collection;
242. Resource tax collection;
243. Land use tax collection;
244. Land appreciation tax collection;
245. Collection of property tax;
246. Vehicle and vessel tax collection;
247. Educational surcharge and local education surcharge;
248. Collection of social insurance premiums;
249. Deed tax collection;
250. Collection of cultivated land occupation tax;
251. Tax reduction and exemption;
252. Tax refund;
253. The establishment, modification and cancellation of tax registration;

Section 19: Business Administration

254. Enterprise name pre-approval;
255. Enterprise registration;
256. Group registration;
257. Enterprise annual inspection;
258. Company equity pledge registration;
259. Registration of farmers' professional cooperatives;
260. Registration of individual industrial and commercial households;
261. Outdoor advertising registration;
262. Movable property mortgage registration;
263. Individual industrial and commercial household inspection license;

Section 20: Quality Supervision, Inspection and Quarantine
264. Assessment of special equipment operators;
265. Issuance, renewal and annual verification of organization code certificates; radio, film and television work
266. Review of setting up satellite TV broadcasting ground reception facilities (preliminary review);
267. Radio and television program production and operation license (preliminary examination);
268. Examination (preliminary examination) for the establishment of cable radio and television stations by townships, organs, troops, groups, enterprises and institutions;
269. Radio and television program transmission business license (preliminary examination);
270. Approval for the relocation of wireless radio and television facilities (preliminary examination);
271. Permits for establishment and alteration of film projection units;
Section 21: Sports
272. Recording the names, addresses, service items of public cultural and sports facilities;
273. Trial of operating high-risk sports;
Section 22: Production Safety Supervision and Management
274. Issuance of fireworks and firecrackers business (retail) licenses;
275. Permits granted by county governments include hazardous operations (issues without storage facilities);
276. The third category of non-pharmaceutical precursor chemicals business record;
277. Design review of safe mine construction projects and construction projects;
278. Completion review of construction project facilities for mine safety construction and production and storage projects;
279. Review of occupational disease protection facilities for construction projects with serious occupational disease hazards;
280. Review of occupational disease protection facilities;
281. Record of emergency rescue plans for production safety accidents of production and business units;
282. Declaration of occupational disease hazards by employers;
283. Recording of major hazard sources;
284. Review of occupational disease hazard pre-assessment reports;
Section 23: Statistics
285. Statistical qualification certification (preliminary examination);
Section 24: Archival Work
286. Examination and approval of the sale, transfer, gift of collectively-owned, individually-owned and other archives that are not owned by the state and have preservation value for the state and society or which should be kept secret;
city management
Section 25: Food Work
287. Grain purchase qualification license;
288. Recordation of cross-regional grain purchase activities;
Section 26: Tobacco
289. Tobacco retail license issuance;
Section 27: Food and Drug Supervision
290. Issuance of catering service licenses;
291. Approval and issuance of drug business licenses for drug retail enterprises;

Section 28: Civil Air Defense Work

292. Civil air defense project completion acceptance record;

Section 29: City Management

293. Permits for setting up outdoor advertisements;

294. Permits to hang and post publicity materials on urban buildings and facilities;

295. Temporary stacking of materials on both sides of the street and public places, and permission to erect buildings, structures or other temporary facilities.

Type 3 Convenience Services (25)

1. Consultation on laws, regulations and policies on population and family planning, land and civil affairs;
2. Apply for a one-child birth service certificate;
3. Issuance of birth control and reproductive health service cards;
4. Issuance of marriage and childbirth certificates for migrated population;
5. Construction business consultation and complaints;
6. Asset appraisal agency;
7. Accounting statement audit agency;
8. Open a cable TV account;
9. Cable TV viewing fees;
10. Review of advertising content within the specified scope;
11. Procedures for participation and renewal of basic medical insurance for employees;
12. Procedures for participation and renewal of medical insurance for urban residents;
13. Employment registration and unemployment registration;
14. Review of labor dispute mediation;
15. Inquiry about the vocational qualification certificate of skilled personnel;
16. Processing of social security card;
17. Review of the certificate of citizen adoption of children;
18. Policy consultation on new rural cooperative medical care;
19. Business consulting for enterprise establishment;
20. Agricultural insurance claims;
21. Annual inspection of cultural business license;
22. Temporary electricity use for village residents;
23. The installation and handling of electrical appliances in the village residents' houses;
24. Agricultural technology pre-production, in-production and post-production service consultation;
25. Review of civil dispute mediation.

Table B2: The Website Address of Commission for Discipline Inspection of Each Province

Province	Website
Hebei	http://www.hebcdi.gov.cn/
Shanxi	http://www.sxdi.gov.cn/
Liaoning	http://www.lnsjjjc.gov.cn/
Jilin	http://www.ccdijl.gov.cn/
Helongjiang	https://www.hljjjjc.gov.cn/
Jiangsu	http://www.jssjw.gov.cn/
Zhejiang	http://www.zjsjw.gov.cn/
Anhui	http://www.ahjjjc.gov.cn/
Fujian	http://www.fjcdi.gov.cn/
Jiangxi	http://www.jxdi.gov.cn/
Shandong	http://www.sdjj.gov.cn/
Henan	http://www.hnsjct.gov.cn/
Hubei	https://www.hbjwjc.gov.cn/
Hunan	http://www.sxfj.gov.cn/
Guangdong	http://www.gdjct.gd.gov.cn/
Hainan	https://www.hncdi.gov.cn/
Sichuan	http://www.scjc.gov.cn/
Guizhou	http://www.gzdis.gov.cn/
Yunnan	http://www.ynjjjc.gov.cn/
Shannxi	https://www.qinfeng.gov.cn/
Gansu	http://www.gsjw.gov.cn/
Qinghai	http://www.qhjc.gov.cn/
Inner Mongolia	http://www.nmgjjjc.gov.cn/
Guangxi	https://www.gxjjw.gov.cn/
Tibet	ttp://www.xzjjw.gov.cn
Ningxia	http://www.nxjjjc.gov.cn/
Xinjiang	http://www.xjjw.gov.cn/
Beijing	http://www.bjsupervision.gov.cn/
Tianjin	https://www.tjjw.gov.cn/
Shanghai	https://www.shjcw.gov.cn/
Chongqing	http://jjc.cq.gov.cn/

Appendix Section C.

Examples of Citizen Complaints and Government Responses.

1.Firm subsides application.

Title: Inquiry about subsidies for international market exploration for median and small firms.

Inquiry: From Mr Liao in Ronggui Town: Do exporting companies receive government support when they apply, register and advertise on online business platforms; and, what is procedure for applying for government subsidies?

Response from Bureau of Economic and Science Development: Citizens can click "http://sdet.gov.cn/portal/"→guide→approvement service→special funds→find《Notice of the Bureau of Economic and Science Development in Shunde District on Organizing the Declaration of 2012 Small and Medium Enterprises International Market Development Funds》(issued on 12 Sep 2012), and apply for grants and subsides according to the regulations.

Below is the screenshot on its website and the link to this webpage is: 佛山市顺德区人民政府网 (archive.org)

信访反馈

流水号	50057	类型	咨询
主题	中小企业国际市场开拓资金申报事宜		
来信内容	容桂廖先生来电咨询：具备进出口权的公司是否在展会的申办和电子商务平台上广告的推广等方面享有优惠政策，并咨询还有其他哪些方面能享有补贴。		
回复意见	区经济和科技促进局回复：市民可登陆顺德经济网（http://sdet.gov.cn/portal/）—→办事指南—→审批服务科—→专项资金栏目—→《佛山市顺德区经济和科技促进局关于组织申报2012年中小企业国际市场开拓资金的通知》（2012年9月12日印发）进行查询，符合条件的企业可根据实际发生的项目申报2012年中小企业国际市场开拓资金。		
来信时间	2012-10-22		

2.Firm Registration.

Title: How to register a new property management company?

Inquiry: What are the required materials for registering a new company and what are the specific procedures?

Response from Market Safety Supervision Bureau:

The materials include:

(1). The "Company Establishment Registration Application" signed by the legal representative of the company.

(2). "Certificate of Designated Representative or Jointly Entrusted Agent" signed by all shareholders.

(3). "Company Name Pre-Approval Notice".

(4). The articles of the company signed by all shareholders.

(5). The shareholder's qualification certificate or a copy of the natural person's ID card.

(6). A verification certificate issued by a legally established capital verification institution.

(7). If the shareholder's first capital contribution is non-monetary property, the proof that the property rights transfer formalities have been completed should be submitted.

(8). Copies of appointment documents and identity certificates: including the appointment documents of executive directors (or the board of directors), supervisors (or the board of supervisors), and managers.

(9). Proof of the company's residence (the ownership of the residence, the lease agreement and the certificate of the residence, and the copies should be submitted, and the original files should be checked).
(10). If the company applying for registration has scope of business including items that must be reported for approval before registration according to laws, administrative regulations and decisions of the State Council, then it should submit copies of relevant approval documents or licenses (for photocopies, originals must be provided for verification).
Note: The originals must be submitted together with the photocopies mentioned above; and, property management is not a pre-license according to the provisions of laws and regulations
The specific procedures:
1. Fill in the "Application for Pre-approval of Enterprise Name" (signed by all shareholders), and all shareholders entrust their representatives to bring the "Application for Pre-approval of Enterprise Name" and the original and photocopies of all shareholders' ID cards to the Market Safety Supervision Bureau branch (enterprise) where the company is located, or apply for the pre-approval of the company name at the window of the Market Safety Supervision Bureau of the East Block District of the District Administrative Service Center, and get the "Notice of Pre-Approval of the Company Name".
2. Shareholders should go to the bank to open a capital verification account and make capital contributions according to "Notice of Pre-Approval of Company Name" and entrust an accounting firm to issue the company's capital verification report.
3. Submit the above materials to the industry and commerce department for company establishment registration (if the company has a registered capital of 5 million yuan or less, go to the Market Safety Supervision Bureau branch where the company is located; if the company has a registered capital more than 5 million yuan, go to the window of the Market Safety Supervision Bureau of the East Block of the District Administrative Service Center).
Below is the screenshot on its website and the link to this webpage is: 佛山市顺德区人民政府论坛(shunde.gov.cn)

咨询注册物业管理公司流程 1楼

11993
135*******
2012-02-05 13:32

请问注册物业管理公司需要什么材料和申请的流程，谢谢。

回复 修改 管理

62374
138*******
2012-02-09 09:00

2楼

你好，关于注册物业管理公司需要的材料和申请的流程如下：
一、注册物业管理公司需要提交的材料
1、公司法定代表人签署的《公司设立登记申请书》。
2、全体股东签署的《指定代表或者共同委托代理人的证明》。
3、《公司名称预先核准通知书》。
4、全体股东签署的公司章程。
5、股东的主体资格证明或者自然人身份证复印件。
6、依法设立的验资机构出具的验资证明。
7、股东首次出资是非货币财产的，提交已办理财产权转移手续的证明文件。
8、任职文件及身份证明复印件：包括执行董事（或董事会）、监事（或监事会）、经理的任职文件。
9、公司住所使用证明（自有的住所提交产权证明，租赁的住所提交租赁协议及住所产权证明，提交复印件，需提供原件核对）。
10、公司申请登记的经营范围中有法律、行政法规和国务院决定规定必须在登记前报经批准的项目，提交有关的批准文件或者许可证书复印件（提交复印件，需提供原件核对）。
注：以上除注明提交复印件外，均需提交原件；物业管理按法律法规的规定不属前置许可

二、注册物业管理公司的申请流程
1、填写《企业名称预先核准申请书》（全体股东签字），全体股东委托代表带《企业名称预先核准申请书》及全体股东身份证原件及复印件到公司住所所在地的市场安全监管分局（企业名称冠区名），或区行政服务中心东座区市场安全监管局窗口办理公司名称预先核准（企业名称冠市名、省名），领取《公司名称预先核准通知书》。
2、股东凭《公司名称预先核准通知书》到银行办理验资户的开户、出资，并委托会计师事务所出具公司的验资报告。
3、提交上述第一点注册物业管理公司应提交的材料到工商部门办理公司设立登记（公司注册资本500万元及以下的，到公司住所所在地的市场安全监管分局办理；公司注册资本500万元以上的，到区行政服务中心东座区市场安全监管局窗口办理）。

顺德区市场安全监管局

3. Public Urban Infrastructure

Title: Desheng Plaza is under repair

Inquiries: The supporting facilities of Desheng Plaza in Xincheng District have been damaged for a long time, and the fitness equipment is in bad shape. I hope the relevant departments will repair it as soon as possible.

Responses from of Daliang Street office: After mediation by the Sub-district Urban Management Bureau, the district government has set up a special project for the outdated and damaged facilities of Desheng Plaza in the new urban area and appointed a professional organization to conduct comprehensive inspection and environmental approval. The sub-district Urban Management Bureau has removed some damaged sports and fitness facilities, and renovated some rest stone chairs and street lamps.

Below is the screenshot on its website and the link to this webpage is: 佛山市顺德区人民政府网(archive.org)

信访反馈

流水号	50532	类型	求决
主题	德胜广场正在修复受损的市政		
来信内容	大良钟女士反映：新城区德胜广场的配套设施损坏已久，健身器材破损不堪，希望有关部门尽快修复。		
回复意见	大良街道办事处回复：经街道城管分局调处，新城区德胜广场设施陈旧、损坏问题已由区政府专门立项，并委派专业机构对其进行全面检测和环批。街道城管分局根据美城行动的要求，已拆除部分损坏的体育健身设施，并对部分休息石椅、路灯等进行了翻新。		
来信时间	2012-11-22		

4. Road Construction

Title: When will Bigui Road be completed?

Inquiries: The part from Sanzhou to Guizhou on Bigui Road runs well, but after crossing the Xihai Bridge it seems to beome a dead end road. After the northern section of Bigui Road was sold to the expressway, the existing southern section of Bigui Road could not be used. The government plan was to build a north extension project of Bigui Road, leading to Chencun and directly to the South Station, so as to give full play to the role of Bigui Road. What is the specific direction? What stage is the plan in now? When will it be completed?

Responses from Development Planning and Statistics Bureau: Bigui Road is an important north-south expressway in our district. After the Beijiao section of Bigui Road is transformed into the Guangzhu West Expressway, the current Bigui Road can only be connected to the Sanle intersection, and the conversion function can be realized through Qunli Road. Since the alternative road Qunli Road does not have corresponding grades and connections, it will cause traffic restrictions in this area and affect the road network structure of our area.

According to the work arrangement of the district government, our bureau carried out a traffic connection plan for the northern section of Bigui Road in 2010, focusing on improving the regional road network and further exerting the function of the north-south express channel of Bigui Road. The plan is based on the "Comprehensive Traffic Planning of Foshan City" and "Shunde District Transportation Plan" to cooperate the current construction status and land use planning along the line and put forward a recommended plan for the northern section of Bigui Road (the plan is to make full use of the original Bigui Road, and divide two roads from Sanle intersection along both sides of the Guangzhu West Line, forming a consistent channel). The line will cross the planned Hengwu Road Guangzhu West Expressway to the north, and then re-merge to form a unified road width, extending to the 321 National Road in the South China Sea. Considering the construction scale and focusing on solving the problem of the north exit of Bigui Road, the planning plan also proposes a short run construction plan for the section from Sanle Road to National Highway 105. The plan has been issued to relevant departments in 2011. The district government has comprehensively considered factors such as capital investment, urban demolition and construction timing, and the project has not been included in the recent construction project plan.

Below is the screenshot on its website and the link to this webpage is: 佛山市顺德区人民政府论坛（shunde.gov.cn)

5. Social Insurance

Title: The types and regulations of social insurance.

Inquires: I am a 48-year-old woman who has never participated in the social security system. I recently came to the social security office for consultation. I was firstly told to buy a retirement plan for 55-year-old. I then went to the local tax bureau to go through the formalities and was told to buy a plan for 60-year-old. Which policy is appropriate for me?

Responses from Social Security Fund Administration:

First. According to the "Notice on Improving the Provisions on Continuing Payment of Basic Pension Insurance for Enterprise Employees", if one of the following conditions is met, you can choose to continue to pay the social insurance agency and apply for a one-time lump sum pension insurance premium:

(1) Men must be at least 65 years old and women must be at least 60 years old.

(2) Participating in the basic endowment insurance for enterprise employees before June 30, 1998, the cumulative payment period (including the deemed payment period) shall be 10 years or more when reaching the retirement age stipulated by the state, and the cumulative payment period shall be continued on a monthly basis by 1 year and above.

Second. If one has participated in social insurance from now on, and the payment is still less than 15 years when he reaches the legal retirement age (50 years old for women), he must continue to pay until he is 60 years old. At that time, if the cumulative payment is still less than 15 years, the insured person can apply for a one-time lump sum pension insurance premium.

Third. The document is made public and along with a policy interpretation in the social security column of each issue of "Pearl River Commercial Daily". You can pay attention to the social security policy information in each issue of "Pearl River Business Daily".

If you still have questions, you can call the district social security bureau at 86-22222555 and follow the voice prompts to transfer to the insurance relations department, or go to the local social security office for consultation.

Below is the screenshot on its website and the link to this webpage is: 佛山市顺德区人民政府论坛_(shunde.gov.cn)

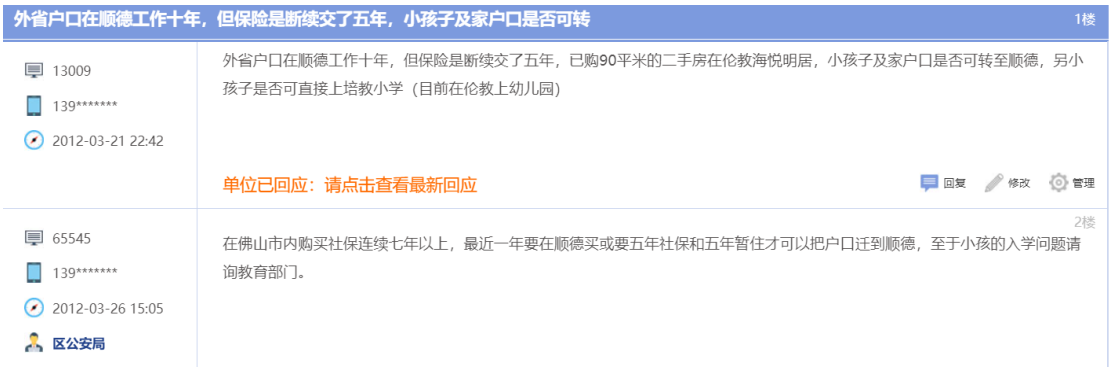
6. Hukou Transfer

Title：Children’s hukou transfer

Inquires：I have worked in Shunde for ten years, but the insurance has been paid intermittently for five years. I have purchased a 90-square-meter second-hand house in Lunjiao Haiyue Mingju. Can the children and their Hukou be transferred to Shunde, and whether the other children can directly go to Peijiao Primary School (currently attending kindergarten in Lunjiao)

Response from the local Police Station: If you have purchased social security in Foshan for more than seven consecutive years, you also need to buy social security in Shunde in the last year, or five years of social security and five years of temporary residence in Shunde before you can move your Hukou to Shunde. As for your children's enrollment in primary school, please contact the education department.

Below is the screenshot on its website and the link to this webpage is: [佛山市顺德区人民政府论坛（shunde.gov.cn)](shunde.gov.cn)



7. Citizen participation and email box of local leaders

Sincerely welcome your suggestions for the development of Shunde, and criticize the shortcomings in our work. Please understand and abide by the "Regulations on Letters and Visits" promulgated by the State Council of the People's Republic of China. Please fill in the information correctly and in detail. In particular, leave a contact number where you can be reached during working hours, so that the relevant undertaking and processing units can contact and reply to you. You can also send it directly to qzxx@shunde.gov.cn, which also achieves the effect of reflecting opinions and suggestions.

The topics of the citizen participation include accusations, monitor, report to Commission for Discipline Inspection, consultation, appeal, suggestions, administrative service, local leaders.

Below is the screenshot on its website and the link to this webpage is: https://web.archive.org/web/20131213164021/http://www.shunde.gov.cn/zmhd/?id=101

Appendix Section D.

Term Frequency-Inverse Document Frequency (TF-IDF) is used to assess the importance of a word to a document in a document set or corpus (Salton and Buckley, 1988). TF is used to calculate the ability of a word to describe the content of a document. IDF is used to calculate the ability of a word to distinguish the documents. A reasonable measure of term importance is obtained by the product of the term frequency and the inverse document frequency (TF*IDF). The specific calculation is as follows,

$$tf_i = \frac{n_{ij}}{\sum_k n_{kj}}$$

$$idf_i = log\frac{|D|}{|D_i| + 1}$$

$$w_{ij} = tfidf_{ij} = tf_i \times idf_i$$

Where, n_{ij} is the number of times of word t_i in the document d_j. $|D|$ is the total number of documents in the corpus. $|D_i|$ is the number of documents which includes the word t_i. w_{ij} is the weight of word t_i in the document d_j.

If one word in the document appears more times and appears less time in other documents in the corpus, this word would be important to distinguish this document and its weight would be large. We use the software Python to complete the procedures of TF-IDF.

First, we collect all the government files issued by the State Council of China (http://www.gov.cn/zhengce/zhengcewenjianku/). The total number of files is 23411.
Second, we use Language Technology Platform (LTP) to obtain the list of words. We also use the list of "jieba" that is affiliated to Python. Third, we drop the words that is meaningless, such as particle. Fourth, we calculate the value of TF-IDF for the important words.

TF-IDF can be obtained fast and easily, however, it is based on lists of short words instead of phrases, which can be more important and meaningful for the documents. To deal with this issue, we use Bidirectional Encoder Representation from Transformers (BERT) according to Devlin et al. (2019). We use the KeyBert model to obtain the keywords in the document. KeyBert is created as a quick and easy method to obtain keywords and key phrases. The general procedures include: First, document embeddings are processed with BERT model to get a document-level vector representation; Second, word embeddings are processed using N-gram model; Finally, we use cosine similarity to find the words/phrases that are the most similar to the document. The most similar words could then be identified as the words that describe the entire document best.

The specific procedures for KeyBert are as follows and we use the software Python to complete them. First, we use pre-trained language models of RoBERTa-wwm-ext based on whole word masking for Chinese characters issued by Laboratory of HIT and iFLYTEK Research (Cui et al., 2021). We complete the pre-training for the government documents issued by the State Council of China. Second, we embed the pre-trained language model into KeyBert model, and we use Language Technology Platform (LTP) to obtain the list of words. Finally, we use the cosine vector similarity formula to obtain the keywords.

The keywords for the document “Opinions of the National Government Affairs Openness Leading Group on Implementing the Electronic Platform to Strengthen the Openness of County Government Affairs and the Pilot Work of Administrative Services” (January, 2012) based on TF-IDF and KeyBert model are presented in the following table.

Keywords	KeyBert	TF-IDF
	Cosine vector similarity	w_{ij}
Service-type government	0.3616	0.0180
E-government	0.3553	0.0469
Government affair openness	0.3492	0.0617
Government affair informatization	0.3039	0.0290

References:

Salton Gerard, Buckley Christopher, 1988. Term-Weighting approaches in automatic text retrieval. Information Processing & Management, 24(5): 513-523.

Devlin Jacob, Ming-Wei Chang, Kenton Lee, Kristina Toutanova, 2019. BERT: Pre-Training of deep bidirectional transformers for language understanding. arXiv Preprint, arXiv: 1810.04805.

Cui Yiming, Wangxiang Che, Ting Liu, Bin Qin, Ziqing Yang, 2021. Pre-training with whole word masking for Chinese BERT. IEEE/ACM Transactions on Audio, Speech, and Language Processing, 29, 3504-3514.