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# Fiscal Pressure and Judicial Decisions:

## Evidence from Financial Penalties for Official Corruption in China

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### Abstract

The connection between court resources and judicial behavior has long been acknowledged. This article examines the linkages between local governments' fiscal pressures and Chinese judges' decisions on financial sanctions. Based on data from criminal verdicts of official corruption and county government expenditures, this study finds that Chinese judges are more likely to impose financial penalties, especially fines, when judicial expenditures in a region are low. The conclusion remains unchanged after accounting for the endogeneity problem using the age of the county party secretary and the per capita financial expenditure lagged for one period as instrumental variables. Finally, the imprisonment penalty without increasing revenue is used to test the placebo, and no effect of fiscal pressure on the imprisonment penalty is found.

*JEL classification:*

Bureaucracy; Administrative Processes in Public Organizations; Corruption, D73;

Illegal Behavior and the Enforcement of Law, K42

Legal Institutions; Illegal Behavior, P37

*Keywords:* Corruption Punishment; Financial Penalty; Judicial Expenditure; Fiscal Pressure

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## 1 Introduction

Economic punishment has been widely used by the criminal justice system since the 20th century. Studies have shown that economic punishment can help curb crime (Hillsman et al., 1984; Ruback & Bergstrom, 2006). Others have noted that the social cost of economic punishment is small and can also make up for some societal losses due to crime (Becker, 1968). In addition, these fines and fees can generate revenue for the courts, jurisdictions and states that collect them (Fernandes et al., 2019; Henricks & Harvey, 2017; Mai & Rafael, 2020). Therefore, the prevalence and amounts of economic punishment have grown over the recent decades (Sobol, 2017).

Nonetheless, scholars have also argued that monetary sanctions are cruel and unfair, favoring

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people with financial means and discriminating against poor and racialized people (Harris, 2016; Harris et al., 2010). Most studies surrounding the effect of financial penalties seem to be more focused on their pernicious consequences, such as high recidivism rates (Martire et al., 2011; Piquero & Jennings, 2017), serious probation violations (Iratzoqui & Metcalfe, 2017), a barrier to successful reintegration (Evans, 2014; Harris et al., 2010; Link & Roman, 2017), and social inequality (Beckett et al., 2008; Harris, 2022; Harris et al., 2010).

What is less known in the literature is the factors related to the judicial utilization of financial sanctions against offenders. Link (2019) assesses the personal characteristics of the offender and offense-type factors associated with financial penalties. More researchers pay attention to the social and economic factors. Many studies derive that fiscal pressure may cause increasing monetary sanctions in criminal justice and courts (Harris, 2016). However, there is no empirical evidence in support of this claim because of the high-quality data limitations. Edwards (2020) evaluates the relationships between local government finances and the imposition of debt through the criminal justice system during and after the recession based on the data from all courts of limited jurisdiction in Washington State. However, he doesn't find that court sentencing practices in Washington are shifted by fiscal pressures from local governments.

The existing literature on the revenue-generating functions of economic punishment has been limited in several ways. First, the conclusion is limited to some statistical data and interviews and has not been empirically tested and supported. Second, most studies focus on a few states of the United States, but it rarely involves the judicial utilization of financial sanctions in civil law countries. Whether completely different court management and financial model still support the revenue-generating functions of monetary sanctions remains to be tested. Last, few studies go deep into different incentives of different components of monetary sanctions, which will be conducive to a deeper understanding of the court sentencing practices on financial penalties.

The primary purpose of this study is to examine the potential connection between local governments' fiscal pressures and Chinese judges' financial punishment. Since November 2015, China has increased economic penalties for criminal cases involving embezzlement and bribery. However, researchers have yet to adequately assess the factors influencing the economic punishment of official corruption. Based on the data about the corruption cases matched with the per capita financial expenditures of counties in China, we will empirically test the impact of fiscal pressure on judges' financial punishment against corrupt officials. The study increases our understanding of the system to trying politicians in China. Also, it has theoretical implications as it adds to the academic discourse on judicial independence and explores the importance of reducing the intervention from external forces to build a fair and just judicial system.

This study makes contributions to the literature in three areas. First, it expands the existing research on punishing corruption by focusing on financial sanctions against corrupt government officials, which have rarely been assessed in previous studies. Studies conducted in China have focused on the certainty of punishment using the number of corruption cases<sup>1</sup> or arrests of corrupt officials as indicators of anti-corruption efforts, with little attention given to financial penalties imposed on offenders. Others touching on the severity of imprisonment in corruption cases also failed to take financial sanctions into consideration as the totality of punishment (Chu, 2017; Gong

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<sup>1</sup> Occupational Crime refers crimes committed by employees of the governments, state-owned companies, and public institutions who take advantage of their powers to embezzle, take bribes, practice favoritism, abuse their powers, neglect their duties, infringe on citizens' rights, undermine the regulations and norms of the state on official activities, and should be criminally punished under Chinese criminal law.

et al., 2019; Zhu, 2015). This article fills our knowledge gap by investigating factors related to the economic punishment of corrupt officials.

Second, this article extends the existing research on fiscal pressure by linking it to judicial decisions. Previous studies have shown that finance has some impacts on criminal justice. For example, scholars have analyzed the relationship between court expenditure and litigation access (Heaton & Helland, 2011) and the effect of local governments' revenue on traffic fines (Su, 2020). The connection between court funding and judicial corruption in China was examined (Wang, 2013). This article continues this vial line of research by focusing on the effect of fiscal pressure on Chinese judges' decisions on financial penalty judgments against corrupt officials. The findings of this study broaden our understanding of China's effort to fight corruption, which has surfaced as the primary purpose underlying the recent national campaign against organized crime (Li et al., 2021).

Finally, although judges' motivations have been investigated in studies of judicial decision making, little is known about how Chinese individuals could be motivated by various incentives. Relevant incentives not only have a powerful influence on judicial efficiency but are also involved in normalizing and balancing local government behavior, which subsequently affects economic growth (North, 1990). Studies conducted in Western countries focus primarily on election incentives and analyze the impact of election incentives on sentencing outcomes (Gordon & Huber, 2007; Lim, 2013). Others have analyzed the impact of judge career incentives on court performance (Schneider, 2005). Nevertheless, judges' incentives have received little research attention in China. This study could shed light on the potential of economic incentives in motivating Chinese judges' sentencing decisions.

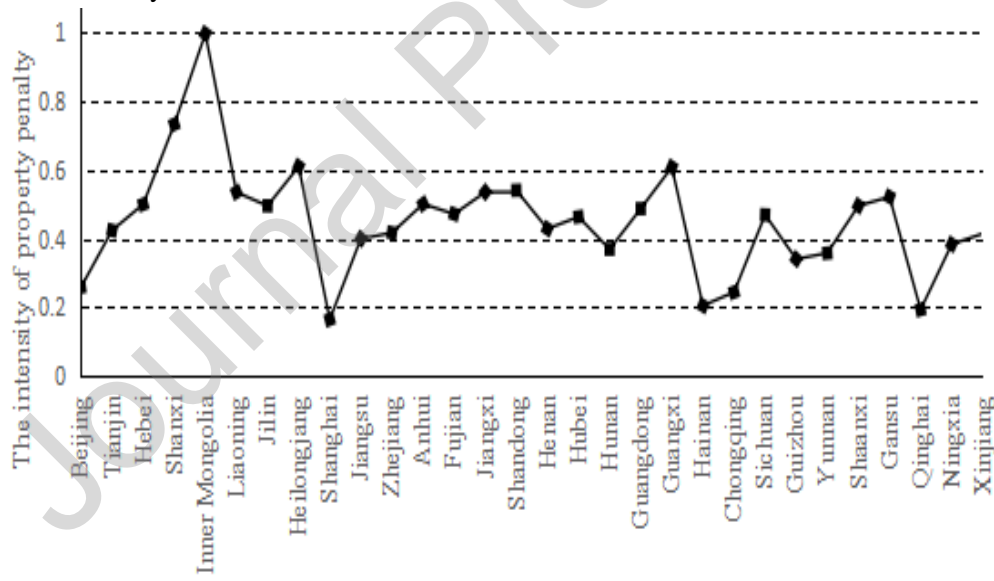
The rest of article is organized as follows. Section 2 introduces the institutional background of fiscal pressure and sentences for the crimes of embezzlement and bribery and derives the hypotheses. Section 3 describes the model and data. Section 4 contains the empirical analysis and estimated results. Section 5 presents the robustness test and placebo test. The final section is the conclusion and suggestions.

## 2 Literature Review and Hypotheses

In China, financial punishments for officials convicted of corruption are executed according to the provisions of criminal law of using fines and property confiscation in embezzlement and bribery cases. The 1997 criminal law stipulated that an individual who embezzled or accepted bribes of more than 50,000 yuan (US\$7,000) should be sentenced to property confiscation. However, there is no specific provision on how much property should be confiscated. It is stated only in Article 59 of the law that "confiscated property is part or all of the personal property of criminals". No specific numbers are given to guide judicial interpretations or stated in other provisions. In 2015, the criminal law amendment (IX) stipulated that anyone who was found guilty of criminal embezzlement or bribery (the amount of corruption was relatively large or there were other relatively serious circumstances) should be sentenced with a fine. In addition, if the level of corruption is extreme, the defendant should be sentenced to a fine or property confiscation. Article 52 of the criminal law stipulated that the fine amount should be determined according to the circumstances of the crime. Moreover, the judicial interpretation in April 2016 introduced more explicit provisions: An individual sentenced to a fixed-term imprisonment of not more than

three years or criminal detention for embezzlement or bribery should be fined not less than 100,000 yuan (US\$14,000) but no more than 500,000 yuan (US\$70,000). An individual who is sentenced to fixed-term imprisonment of not less than three years but no more than 10 years should also be fined not less than 200,000 yuan (US\$28,000) but no more than twice the amount of money involved in the crime or should be sentenced with property confiscation. An individual who is sentenced to fixed-term imprisonment of more than 10 years should be fined not less than 500,000 yuan but no more than twice the amount of money involved in the crime or should be sentenced to property confiscation.

This amendment has increased the fine penalty for corrupt officials. Moreover, fine penalties have also become increasingly standardized. Nevertheless, judges still have great discretion in determining financial penalties, and there are very different financial penalties for crimes involving the same amount of money and similar circumstances in different Chinese provinces. In this study, we calculate the average intensity of property penalties in various provinces in China based on data about embezzlement and bribery criminal judgments in the first instance from 2014 to 2016. The reason for using such data will be explained in detail later. Generally, the more money involved in the crime, the more property will be confiscated. Therefore, we use the level of corruption to standardize the property penalty. The specific calculation method is (value of confiscated property and fines)/(amount of money involved in the crime). As shown in Figure 1, Inner Mongolia has the highest property penalty intensity, with a ratio of 0.99, and Shanghai has the lowest intensity, 0.16.



**Fig. 1** The intensity of property penalties for corruption in all provinces in China

Note: There are 30 provinces, including all autonomous regions and municipalities directly under the central government except Tibet, which misses data.

Such a large difference in utilizing financial sanctions raises the question about the rationality and fairness of judicial decisions. It is plausible that sentencing is made to maximize economic benefits (Blumenson & Nilsen, 1998; Holcomb et al., 2011; Miller & Selva, 1994). We thus speculate that there may be certain incentives driving judges in some provinces to favor property penalties, and these incentives may come from fiscal pressure as well as characteristics of the specific cases and convicted officials.

On the one hand, local governments are under fiscal pressure. Since the tax sharing system

was implemented in 1994, a series of major fiscal and tax system reforms have greatly weakened the financial power of local governments, exacerbating local fiscal pressure. Therefore, local governments are forced to increase revenues by using a multirange and multichannel approach, including expanding nontax revenues. The courts have a strong ability to bring in nontax revenues from litigation costs, fines, and property confiscation. On the other hand, Chinese courts experience chronic funding pressure. In China, the budgetary funds of courts are still mainly supported by the corresponding level of government, despite several reforms in the political and legal funding guarantee system. The funds for the grassroot courts are allocated by the corresponding county or district governments, the intermediate courts are funded by local municipal governments, and the high courts' funds come from provincial governments. In 2014, the central government initiated the judicial reform of unified management of staff, funds and physical resources of local courts below the provincial level, which requires that the funds of the local courts are allocated by the provincial government rather than local governments. Many of the decisions on judiciary staffing and budgeting have been elevated to the provincial level. Nonetheless, the difficulties of insufficient provincial finance, the uneven distribution of the financial resources of local courts, and historical contexts have hindered efforts to reform the centralized funding management of local courts (Yu, 2018; Guo, 2019). Most provinces don't completely implement the unified management of court funds, and the typical joint management mode of the provincial and local government remains popular, where the performance bonuses of the judicial personnel and the salaries of the contracted auxiliary judicial personnel are still supported by local financial funds or nontax revenues (Tang, 2018). The local government and party committee retain their control of the financial and personnel matters of judges and procurators (Li, 2016). The courts still need local governments' support in securing infrastructure and support staff (He, 2021). Thus, linking court funds to litigation fees, fines, and property confiscation remains an important solution employed by local governments.

The system of linking court funds to litigation fees, fines, and property confiscation benefits both the local governments and courts. The local governments can increase the overall revenue, and the courts get more budgetary funds from the local governments. Since the promulgation of "Measures on Charging Civil Litigation Fees (for Trial Implementation)" (Minshi Susong Shoufei Banfa (Shixing)) in 1984, local courts have a solid ability to charge more fees to generate income, and they have a strong incentive to do that when budgetary funds are less than adequate. To curb this trend, the Chinese central government launched a policy separating state agency revenues from expenditures (Shouzhi Liangtiaoxian) in 1999, which requires that the courts turn the received fees to the local government and then the local government allocates budgetary funds to the courts. However, it has been dramatically prevalent to secretly link the court funds to litigation fees, fines, and property confiscation. Local governments encourage local courts to collect more fees and impose more fines and confiscations. The more the collected fees and imposed fines and confiscations from the courts, the more allocations of budgetary funds to the courts from local governments. All or the majority of financial penalties of financial penalties imposed by the judiciary will eventually flow into the court's purse and help to alleviate the court's budgetary distress (He, 2009). The central government has repeatedly banned such practices between expenditures and revenues, but this prohibition has had little effect on local operations<sup>2</sup>. When the

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<sup>2</sup> This policy has failed because it only changes how the limited revenues are distributed between the courts and the local governments. The budgetary funds of courts are still inadequate and mainly supported by the corresponding level of government, and there is still interest connection between the court and the local government. Only when the courts are independent and



allocated budgetary funds of the courts are not correlated to the fees and fines, the courts lose their incentive to collect fees and impose the fines and turn them in, resulting in a corresponding reduction in overall revenues of the local governments. Therefore, the local government has to allocate a certain amount of fees collected and fines imposed by the courts back to the courts. The revenue from fines and confiscations resulting from occupational and economic crimes constitutes one of the vital court funding sources, particularly in areas with weak financial capacity (Li, 2014). The ultimate result of this game is a return to the original situation in which expenses and income are linked (He, 2009). Many local governments seem to decouple superficially revenue and expenditure but surreptitiously retain the link between them (Zuo, 2015).

The fiscal pressure on local governments and courts is transformed into the financial incentive of linking expenditure with revenue, significantly impacting the behavior of judges. Studies have shown that the confiscation of property produces strong financial incentives, affecting the decisions of legal authorities (Blumenson & Nilsen, 1998; Holcomb et al., 2011; Luna, 2020; Miller & Selva, 1994). To obtain the financial benefits stemming from the confiscation of property and financial penalty, legal authorities even make decisions to maximize their own financial rewards, leading to many cases being pursued for their own profits rather than to punish the perpetrators. Courts can increase their financial revenue through litigation costs, fines and property confiscation. They first hand over the revenue to the local government and then receive it back in part or in whole. The courts enact various incentive and punishment measures to obtain more returned funds, which are decided based on the value of the fines and confiscated property dictated by judges during sentencing. The returned funds, in addition to the caseloads and judicial qualities, have even become an important factor in assessing judges' performance and a vital source of income in addition to judges' base salary, thus forming a financial incentive and generating competition (Wang, 2010). Judges are likely to use financial penalties to maximize their benefits when their judicial work is tied to the economic interests of the courts and judicial personnel. We analyzed the correlation between property penalties and financial incentives after matching the per capita financial expenditure data of each county with data on property penalty judgments in cases involving embezzlement and bribery. As shown in Figure 2, the higher the per capita financial expenditure is, the lower the intensity of property penalties.

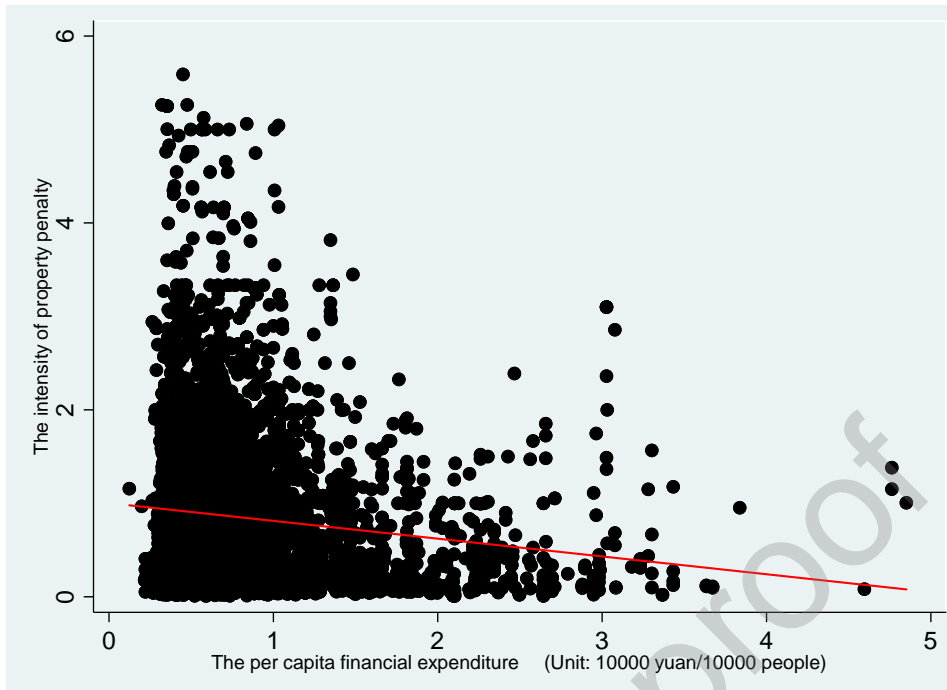


Fig. 2 Per capita financial expenditure and property penalty intensity

Therefore, Hypothesis 1 is proposed:

Hypothesis 1: All other factors being equal, the higher the fiscal pressure is, the more likely judges are to employ financial penalties.

Confiscation of illegal gains, confiscation of property, and fine penalties can all bring revenue to the court, thus providing financial incentives by having a share of these fines and confiscations. However, they differ in the applicable object, content, and execution of penalties, thus having different effects on courts' financial incentives.

In China, corruption cases are generally initiated by the Commission for Discipline Inspection and the Supervision Commission (CDI-SC); then, they undergo public prosecution through the People's Procuratorate and are finally judged in court. The CDI-SC is the special anti-corruption agency of China<sup>3</sup>, mainly responsible for combating corruption and malfeasance of Communist Party members and public officials exercising public power. It conducts investigations of duty-related violations and crimes, makes decisions on sanctions against public officials who have duty-related violations, and transfers investigation results on suspected duty-related crimes to the People's Procuratorate, which will be responsible for the prosecutorial investigation and legal prosecution by the law. For example, an official who accepts a bribe of 25,000 yuan violates the National Supervision Law but has not yet constituted a criminal offense. In this case, the CDI-SC may impose administrative sanctions on the corrupt official. But suppose this official accepts a bribe of 30,000 yuan, which reaches the threshold for corruption crime. Then, this case investigated by the CDI-SC should be transferred to the procuratorate, which will decide whether to file a lawsuit as a public prosecutor. When the procuratorate litigates, the court hears and decides the case, and its decision is criminal sanction. Both the CDI-SC and the procuratorate may

<sup>3</sup> In China, anti-corruption work has been charged by The Commission for Discipline Inspection(CDI) and The Supervision Commission (SC) since 2018. The CDI and the SC work jointly under an arrangement called *heshubangong*, whereby CDI and SC staff work in the same physical office space and share resources. The joint CDI-SC can investigate any public official exercising public power irrespective of their party status, which expands the CDI's jurisdiction previously limited to Communist Party members.



collect, seize or impound the property of any official who is suspected of breaking the law or committing a crime related to corruption during the investigation, shall establish special accounts and places to confiscate and recover any illegally obtained property or order the violator to return the property or make compensation in accordance with the law. Generally, after corrupt officials are investigated and confirmed to have committed a crime but before being transferred to the court, most illegal gains through corruption are impounded in the special accounts of the CDI-SC or the procuratorate. The law stipulates that illegally obtained property shall be transferred to the courts with the crime cases trial, and confiscation must only be enforced after an effective judgment or ruling is made by the courts. However, the CDI-SC and the procuratorate are unwilling to transfer the illegal gains to the courts for their respective benefits. They have as same financial incentive as the court. To get more return funds from the local governments, they retain these illegal gains and turn them over to the local government from their special accounts. Of course, not all corrupt officials turn in all or portion of the embezzled or bribery money during the investigations of the CDI-SC or the procuratorate. They may leave some illegal gains to the court to get a lighter sentence from the court. However, the courts can't decide how much illegal gains are left and have few options for confiscating illegal gains to their particular accounts.

Since most illegal gains have already been taken away from the culprit official before the case even arrives at the court, it seems that the little property can be left to the courts. However, courts can impose the financial penalty (confiscation of property or fine), which the CDI-SC and the procuratorate can't impose. Financial penalties may be executed from the property of corrupt officials other than the illegal property convicted by the court. And these corrupt officials have a certain financial ability to pay (Zhu, 2023). In practice, because corruption cases are tough to gather evidence and convict, the amount of money involved in the corruption convicted by the court is only a part of the actual amount due to the hidden nature of corruption (Hao, 2016; Rose-Ackreman, 2010; Zhao, 2014). And the corrupt officials have a few incentives to pay up the fines. In Chinese judicial practice, whether a property penalty is paid in advance directly affects the court's sentencing decision on the convicts. Usually, the corrupt officials or their family members are conveyed that "advance payment of penalty" (Fajin Yujiao) may lead to a lighter sentence<sup>4</sup>. Therefore, they are willing to pay up the fines and sometimes even pay more than the amount of the financial penalty to reduce or avoid the punishment (Hao, 2016).

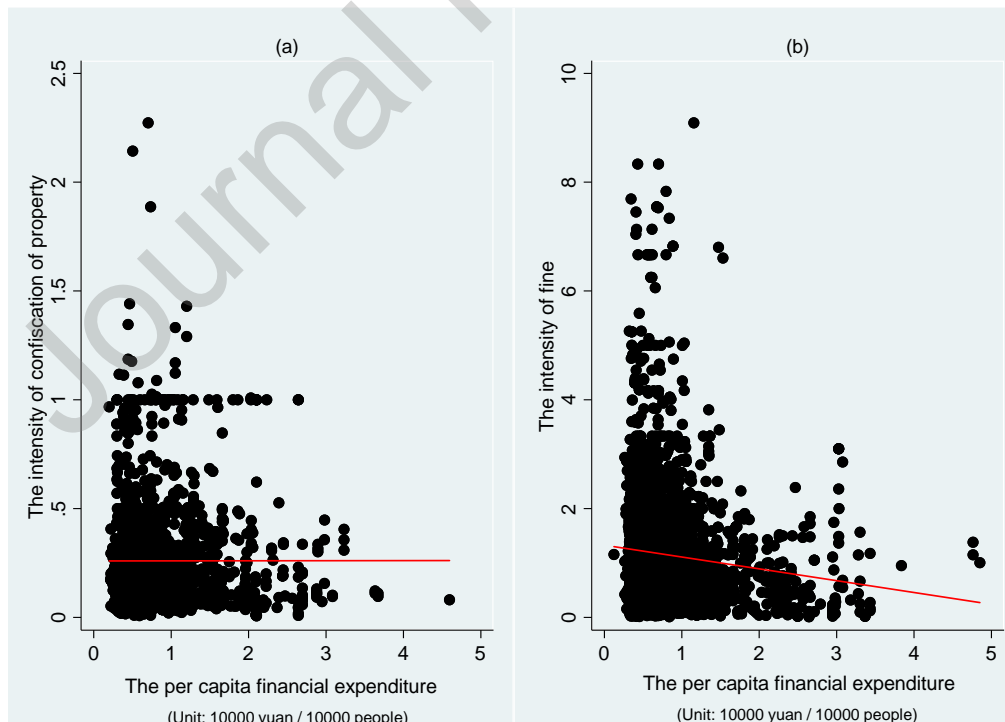
Between confiscation of property and fines, judges tend to use fine penalties. First, the fine applies to greed-driven crimes with minor circumstances, and confiscation of property applies to crimes against national security and other serious crimes. While sentencing severe crimes, judges focus more on imprisonment and overlook confiscation of property. The applicable rate of confiscation of property penalty is meager in China. Some scholars even advocate for the abolition of the confiscation of property penalty, and it has gradually been abandoned by many countries and replaced with a fine penalty (Li, 2002; Xie, 2009). Second, the execution cost of fines is lower than the confiscation of property penalty. There are two forms of property confiscation: the confiscation of monetary property or the confiscation of nonmonetary forms of property, such as real estate, cars, and other physical assets. In such cases, the incentive for judges is small due to the transaction costs in seizing physical assets. We conducted statistics on the judges' sentences to

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<sup>4</sup> Collecting fines in advance before sentencing is illegal, but it is a common practice for grassroots courts to collect fine penalties (Zhu, 2023). The research team of Chongqing First Intermediate People's Court has also investigated the practice of fine collection, confirming that grassroots courts are more likely to collect fines in advance.

property penalties for embezzlement and bribery crimes and found a low applicable proportion of confiscation of property penalty and a high proportion of fine penalty. The revision of the Criminal Law in 2015 added the fine penalty for embezzlement and bribery crimes, stipulating that fines or confiscation of property can be used when the amount of corruption is vast or there are other severe circumstances. However, in reality, fines account for 78.13% of all relevant sentences, while property confiscation accounts for only 0.27%, according to sentencing data in all samples in which the criminal law amendment (IX) implemented in November 2015 was applied. The proportion of sentences involving fines is as high as 94.93%, and the proportion of those involving property confiscation is only 0.86% when the sample includes only particularly serious cases of embezzlement (bribery) in which the sentences involved fines or confiscation of property.

The ability of the court to increase revenue by confiscating illegal gains and property is relatively limited compared to its ability to benefit by imposing fines. The financial returns for the court will be limited if the revenue increase is limited, thus greatly restricting the impact of fiscal pressure on property confiscation sentences. The courts have a greater ability to increase revenue via fines, and judges can themselves profit by maximizing the fines when there is insufficient judicial expenditure. Therefore, the impact of fiscal pressure on different forms of property penalties may vary. We developed preliminary statistics on the relationship between per capita financial expenditure and the intensity of property confiscation and fines. As shown in Figure 3, when judges use different forms of property penalties, there is no significant relationship between per capita financial expenditure and the intensity of property confiscation (see Figure 3(a)). However, there is a significant negative correlation between per capita fiscal expenditure and the intensity of fines (see Figure 3(b)).



**Fig. 3** Per capita financial expenditure and intensity of property penalties involving different forms

Therefore, Hypothesis 2 is proposed:

Hypothesis 2: Fiscal pressure on judges is more likely to lead to fines than to confiscation of illegal gains and property, all other conditions being equal.

### 3 Model Design and Index Instruction

#### 3.1 Model Design

To verify and test the effect of fiscal pressure on financial penalty sentences, the following model is designed.

$$propp_{ict} = \alpha + \beta finapre_{ct} + \gamma X_{ict} + \mu_t + \mu_c + \varepsilon_{ict} \quad (1)$$

The explained variable ( $propp_{ict}$ ) is the economic punishment of the  $i$ th corrupt official in county ( $c$ ) in year  $t$  for embezzlement/bribery;  $finapre_{ct}$  represents the per capita financial expenditure in county  $c$  in year  $t$  with  $\alpha$  as the constant. The control variables, represented by  $X$ , are the factors that may affect the judge's decision, as indicated in the literature; these mainly relate to the characteristics of the case, the court and the person being prosecuted (Anwar et al., 2014; Mustard, 2001; Waldfogel, 1995; Yang, 2015).  $\varepsilon$  is the interference, and  $\mu_t$  and  $\mu_c$  represent the fixed effects of year and county, respectively.

#### 3.2 Data Sources

The data came from Zhongguo Caipan Wenshu Wang [China Judgments Online] and included the financial penalty (fine and confiscation of property) imposed by the judge, the date of the judgment, and the name and organizational form of the trial court as well as the characteristics of the case and the personal characteristics of the corrupt official that may have affected the judge's decision. We collected data on first criminal trial verdict documents related to the crimes of embezzlement and bribery from 2014 to 2016.

The reason for using data from 2014 to 2016 is that the Supreme People's Court has published the judgments of Chinese courts since 2014, and few data are available before 2014; the reform of the judicial system, including the unified management of staff, funds and physical resources of local courts below the provincial level, was partially completed in 2017, at which point, the financial sources of the court came from the provincial government instead of the government at the same level as the court, and the financial incentives of local courts were changed. However, the actual situation of the reform in various regions was very chaotic, and the information on the reform's progress obtained from interviews with the judges is completely different from official claims. Therefore, we do not use data from after 2017 to obtain cleaner analysis results regarding the relationship between fiscal pressure and judges' decisions.

We chose embezzlement and bribery to analyze financial penalty judgments for three reasons. First, analyzing a more representative single case can enable researchers to more accurately control the details. Financial penalties are mainly applied in cases involving crimes endangering national security, seriously disrupting the order of the socialist market economy, violating property, obstructing the administration of public order in China and embezzlement or bribery. However, there are large differences in the characteristics of cases involving different crimes on which the sentences are based, and these characteristics cannot be controlled very accurately. Therefore, it is better to choose a representative crime for research, and the crimes of embezzlement and bribery are the most popular types of corruption in China. Second, the provisions on property punishments for embezzlement and bribery have been revised since 2015. The increase in fines for embezzlement and bribery in the Amendment to Criminal Law (IX) in 2015 provides us with a research opportunity. We can get more data and know more about the judges' decisions regarding financial penalties against corrupt officials. Third, the court may be incentivized by the prospect of

obtaining kickbacks only when a financial penalty imposed is actually collectable. There are still very serious difficulties with collecting fines in China and worldwide. However, the collection of fines for crimes of embezzlement and bribery is relatively good<sup>5</sup>. Officials convicted of corruption can actively pay using confiscated property or fines to obtain lighter sentences or commutations because they have relatively good economic conditions.

Before the amendment of criminal law in 2015, the confiscation of property was implemented only for corruption cases involving more than 50,000 yuan. Therefore, we excluded cases in which the amount of corruption was less than 50,000 yuan, in accordance with the 1997 criminal law. There were 12,768 valid corruption cases. Additionally, we collected and sorted the financial expenditure data of various counties mainly from the China County Statistical Yearbooks from 2014 to 2016. The number of cases that could be matched with their corresponding corruption case data was only 9058 due to the lack of county-level data in some county statistical yearbooks. In addition, Chinese people's courts can be divided into ordinary courts (local courts) and special courts. Generally, local courts are established according to administrative divisions, while special courts are established according to specific organizations or cases with specific scopes, including railway transportation courts, forest courts, agricultural reclamation courts, intellectual property courts, military courts, maritime courts, etc. In view of the complex financial ownership of special courts, this article considered only local courts. The final sample size excluding special courts was 8,930.

### 3.3 Variable Design and Explanation

#### 3.3.1 The explained variable: Financial penalties for corruption

Financial penalties for corrupt officials were measured by the value of confiscated property and fines imposed by judges. We used the amount of money involved in the crime to standardize the value of confiscated property and fines (value of confiscated property and fines/amount of money involved in the crime), which is the intensity of the financial penalty to analyze financial punishments more accurately<sup>6</sup>. A greater value indicates a greater intensity of the application of financial penalties. We also directly used the debt of confiscated property and fines to measure financial penalties and considered the amount of money involved in the crime as the control variables. In addition, there were many differences in the applicable object, content and implementation between sentences involving the confiscation of property and fines, and we also distinguished and analyzed these components separately.

In the sample, the amount of money involved in the crime was the total amount of the embezzled money or the bribe affirmed in the judgment document, and the value of confiscated property and fines was measured according to the judge's sentence. It should be noted that the value of the fine (confiscated property) was 0 if the judgment document did not explicitly mention the fine or confiscation of property; the value of the confiscated property was measured as the total amount of the embezzled money or the bribe in the case due to the lack of specific data on all

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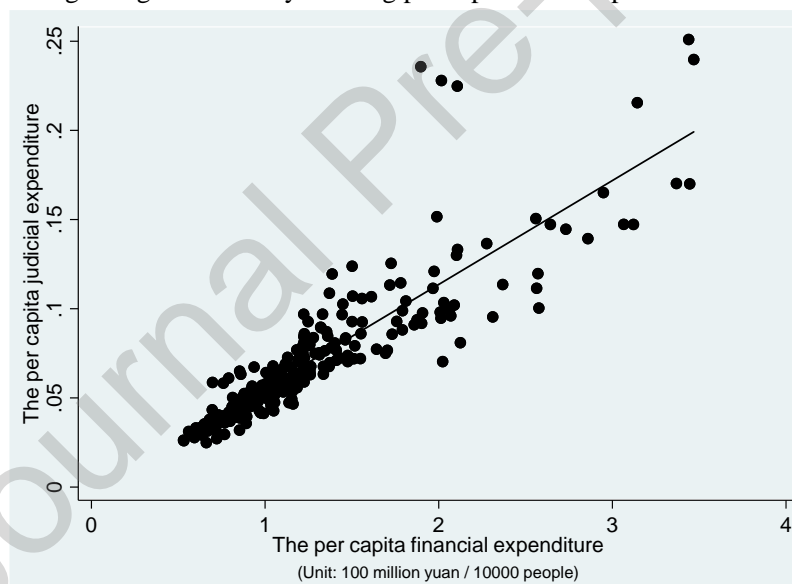
<sup>5</sup> In 2019, Liu Guixiang, a deputy minister of the Judicial Committee of the Supreme People's Court, counted the judgments of people's courts against corrupt officials at the governor levels since the 18th National Congress of the Communist Party of China. He found that all financial penalties (the confiscation of property and fines) had been fully executed, and the vast majority of criminal's illegal gains had been fully recovered. Source: [http://www.china.com.cn/lianghui/news/2019-03/12/content\\_74562781.shtml](http://www.china.com.cn/lianghui/news/2019-03/12/content_74562781.shtml)

<sup>6</sup> Generally, the judge's issues a financial penalty judgment of either confiscating property or paying a fine. When property is confiscated, the fine amount is set to 0; when a fine is charged, the amount of confiscated property is set to 0. In the rare cases in which both penalties are issued in the same judgment, the two amounts are added together.

property if the sentence was the confiscation of all properties<sup>7</sup>.

### 3.3.2 The key variable: Fiscal pressure

The lower the court's funding is, the greater the fiscal pressure it faces and thus the greater the financial incentives to obtain funds through monetary returns. Berkowitz and Clay (2006) and Heaton and Helland (2011) used per capita judicial expenditure and per capita judicial budget to measure the distribution of judicial resources in each state. However, data on court funds in each county (district) in China from 2014 to 2016 were not available. Therefore, we used the per capita financial expenditure of each county (district) for an approximate measure. Figure 4 shows a clear positive correlation between per capita judicial expenditure and per capita financial expenditure at the provincial level. The per capita judicial expenditure is greater in areas with higher per capita financial expenditures. We also calculated the Pearson correlation coefficient between the two, which was significant and positive at 0.9162<sup>8</sup>. Therefore, we used per capita financial expenditure to measure fiscal pressure, positing that the higher the per capita financial expenditure was, the higher the per capita judicial expenditure and the lower the financial incentives for the court to increase revenue. Considering the cost of living in various areas, we used the per capita income of the urban population to standard per capita financial expenditure. In addition, we also used data on the judicial expenditure of provinces and the court expenditure in prefecture-level cities to conduct a robustness test regarding the accuracy of using per capita court expenditure as a measurement.



**Fig. 4** The relationship between per capita financial expenditure and per capita judicial expenditure in provinces

### 3.3.3 The control variables

The judge's decision is affected by the characteristics of the case (Mustard, 2001; Yang, 2015), including extenuating circumstances such as voluntary surrender, voluntary forfeiture of the embezzled or bribe money, meritorious performance, accessory criminal activity, attempted crimes, extortion, disciplinary or administrative sanctions, and other specific

<sup>7</sup> There are 27 cases of confiscation of all properties in our samples. It is easy to doubt the accuracy of the valuation method for the confiscation of all property, so we also use the samples excluding the confiscation of all property for robustness analysis, and the results are basically unchanged. However, this process is not listed in the article due to the limited space.

<sup>8</sup> We also run a regression of the per capita financial expenditure and the per capita judicial expenditure. There is a significant correlation between the two, and the coefficient is 0.048.

aggravating circumstances stipulated in the 2016 judicial interpretation. A judge may also take into account the financial resources of the convicted official when sentencing (Waldfoegel, 1995), which can be estimated from his or her personal characteristics, such as gender (female or not), nationality (member of a minority ethnic group or not), age (age in the year of judgment), educational background (high school or below, undergraduate, graduate), position rank (it is divided into 10 levels: village cadre; staff member or clerk; at the township level: chief or deputy; at the county level: chief or deputy; at the city level: mayor or deputy mayor; at the provincial level: governor or vice-governor). We also control for the characteristics of the court where the judge works (including trial organization forms such as collegiate benches and people's assessors), which may affect the judge's decision (Anwar et al., 2014). In addition, we also control the type of corruption (embezzlement=0, bribery=1), whether the defendant committed other crimes (no=0; yes=1) and whether the legal amendment was in place (1 if the date of the judgment was after November 2015, otherwise 0).

Table 1 describes the name and statistical characteristics of each variable.

**Table 1**

Variable indicators and statistics

Variable	Name of Variable	Variable Declaration	Sample Size	Mean Value	Standard Deviations	MIN	MAX
propp	Intensity of financial penalty	The value of confiscated property and fines/amount of money involved in the crime	8930	0.4955	0.8418	0	10
Inprop	Financial penalties	Log(1+the value of confiscated property and fines)	8930	1.3395	1.3790	0	10.859
finapre	Fiscal pressure	Per capita financial expenditure/per capita income of urban population	8930	0.3938	0.2445	0.0711	3.9261
Inbribe	Amount of money involved in the corruption	Log(amount of money involved in the corruption)	8930	2.6897	1.2755	-1.897	10.859
jail	Imprisonment	Length of sentence (months)/amount of money involved in the crime	8930	2.806	2.816	0	35
surr	Voluntary surrender	Yes=1, no=0	8930	0.4925	0.5000	0	1
meri	Meritorious performance	Yes=1, no=0	8930	0.0674	0.2508	0	1
illg	Extortion Bribery	Yes=1, no=0	8930	0.9000	0.3000	0	1
acce	Voluntary forfeiture of the money gained from the crime	Yes=1, no=0	8930	0.0973	0.2964	0	1
atte	Attempted crime	Yes=1, no=0	8930	0.0074	0.0857	0	1
exto	Multiple attempts at extortion bribery	Yes=1, no=0	8930	0.0306	0.1722	0	1
once	Disciplinary or administrative sanctions	Yes=1, no=0	8930	0.0010	0.0317	0	1
spec	Specific aggravating	Yes=1, no=0	8930	0.0177	0.1119	0	1



	circumstances						
other	Committing multiple crimes	Two or more charges=1, otherwise 0	8930	0.0701	0.2553	0	1
inte	Level of the court	The intermediate court is 1 and the local level is 0	8930	0.0566	0.2310	0	1
coll	Collegiate bench	Yes=1, no=0	8930	0.9716	0.1662	0	1
asse	People's assessor	Yes=1, no=0	8930	0.7833	0.4120	0	1
fema	Gender	Female=1, male=0	8930	0.0689	0.2532	0	1
age	Age	Year of sentence-year of birth	8930	48.86	8.2567	22	77
educ	Education	High school or below=0, college=1, graduate school or above=2	8930	0.8363	0.9247	0	2
minor	Nationality	Member of a minority ethnic group=1, Han=0	8930	0.0834	0.2766	0	1
title	Position rank of the convicted politicians	Village cadre=12 staff member or clerk=11, deputy township head=10, and so on, governor=3	8865	10.681	1.5480	3	12
type	Type of corruption	bribery=1, embezzlement=0	8930	0.4657	0.4989	0	1
amend	Criminal law revision	Revised criminal law in place (after Nov 2015)=1, otherwise 0	8930	0.5113	0.4999	0	1

Note. ①The unit of analysis of variables involved in the money is 10,000 yuan, including *lnprop*, *lnbribe*, *finapre*.

②There are 27 cases of life imprisonment, 3 cases of the death penalty with a suspension of the execution of the sentence, and 2 cases of capital punishment in our samples, where we assign life imprisonment for 20 years (240 months) in prison, the death penalty with a suspension of the execution of the sentence for 22 years (264 months) and capital punishment for 40 years (480 months)<sup>9</sup>.

## 4 Empirical Analysis and Estimated Results

### 4.1 The basic regression of the influence of fiscal pressure on financial penalty judgments

Table 2 shows the regression results of the effect of per capita financial expenditure on the judge's decision to impose a financial penalty. Column (1) shows how per capita financial

<sup>9</sup> Life imprisonment is a type of punishment that deprives a criminal of living a free life from the date of sentencing to the time of his death; we can thus deduce the life imprisonment period from the average age of the criminal (Abrams et al., 2012). The average age in our sample is 48.9 years, which is far higher than other types of criminals. Because the average life expectancy of men and women is different in China, we take the weighted average method of gender and arrive at a life sentence in prison of 20 years (240 months). Meanwhile, according to the rules on the concrete application of the law for the commutation and parole cases, which were issued by the Supreme People's Court of China in 1997, if life imprisonment criminals show true repentance or have rendered meritorious service during the period of sentence execution of at least two years, their life imprisonment generally can be reduced to 18 to 20 years in prison. Therefore, our assignment of 20 years to life imprisonment is roughly equivalent to its practical implementation in China.

The death penalty is rare in other countries, so we do not find an empirical analysis of the death penalty value assignment. Jianjun Bai (2001) argued that the death penalty could generally be thought of as two life sentences. So, we assign the length of the death penalty for 40 years (480 months). In addition, persons convicted of a bribery crime could be sentenced to the death penalty with a suspension of the execution of the sentence, which is commuted to life imprisonment after the expiration of two years if there are no intentional crimes that are committed during the period of the death penalty probation. Therefore, we assign 22 years (264 months) to a death sentence with a reprieve.



expenditure (*finapre*) influences financial penalty judgment. The coefficient of *finapre* is significant at -0.160. This means that the greater the per capita financial expenditure is, the lower the intensity of property penalty sentences. The characteristics of the case may directly affect the judge's decision to impose a financial penalty. Therefore, we add the control variables related to the characteristics of the case, and the regression results are shown in column (2) of Table 2. The coefficient of *finapre* is still significantly negative. The judge's decision to impose a property penalty may also be affected by the income of the offender (Waldfogel, 1995). When we cannot obtain accurate data on the specific financial situation of the convicted official, this information can be approximated from his or her age, gender, education, nationality, position rank, and department. Therefore, we control the personal characteristics of the convicted official. The regression results after adding the control variables of the characteristics of corrupt officials are shown in column (3) of Table 2. The coefficient of *finapre* is still significantly negative. The different court characteristics in the trial of cases may also affect the judge's decision (Anwar et al., 2014). Therefore, we also control the trial organization form of the court. The regression results are shown in column (4) of Table 2, and the results remain a robust relationship between the financial expenditure per capita and the intensity of property penalty. However, there are alternative explanations for this observed correlation to use the intensity of property penalty as the dependent variable. In wealthier regions, it is possible that less fine payments due to the insufficient legitimate income sources with excessive fines lead to the lower numerator, and the more significant sums of money of corruption invested and discovered lead to a higher denominator in the calculation of intensity, which make the intensity lower. Therefore, we use values of confiscation of property and fines as the dependent variable instead of the intensity of property penalty and add the amount of money involved in the crime as the control variable. The regression results are shown in column (5) of Table 2, both of these two variables are used in the log form in the regression<sup>10</sup>. The basic regression results show that the greater the financial expenditure per capita is, the lower the intensity of property penalty sentencing. In other words, the judge's decision to impose a financial penalty is affected by financial incentives in addition to the legal characteristics of the case. The lower court funds are, the greater the value of the financial penalty.

**Table 2**

The empirical results of financial pressure on financial penalty judgment

Variable	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	OLS	OLS	OLS
	propp	propp	propp	propp	lnprop
<i>finapre</i>	-0.160*** (0.0369)	-0.149*** (0.0372)	-0.104*** (0.0368)	-0.110*** (0.0376)	-0.126* (0.0656)
<i>lnbribe</i>					0.494*** (0.0180)
Control for characteristics of the case	No	Yes	Yes	Yes	Yes
Control for characteristics of the convicted official	No	No	Yes	Yes	Yes

<sup>10</sup> We use the form of  $\log(1+\text{financial penalty})$  to run the regression according to the usual assigning method of taking the log form on the variable with the value of 0. We also only use the samples applicable to the financial penalty in the judgment, that is, the value of the confiscated property and fines greater than 0, to run the regression. The results have remained basically unchanged.

Control for characteristics of the court	No	No	No	Yes	Yes
Control for the year fixed effect	Yes	Yes	Yes	Yes	Yes
Control for the county fixed effect	Yes	Yes	Yes	Yes	Yes
N	8,930	8,930	8,762	8,762	8,762
R-squared	0.268	0.285	0.296	0.297	0.567

Note. Robust standard errors are in parentheses, clustered at county level. \* Significant at the 10% level, \*\*Significant at the 5% level, \*\*\*Significant at the 1% level.

#### 4.2 Endogenous treatment and instrumental variable estimation results

Fines and confiscation of property as a type of revenue for local governments will in turn affect local financial expenditures, including judicial expenditures, which violates the strict exogenous assumption of OLS regression, resulting in biased estimates. Therefore, we use the instrumental variable method for endogenous processing. Local leaders in China can influence financial expenditure through the strong control they have over their jurisdiction. Previous studies have shown that the personal characteristics of local leaders have a significant impact on local financial expenditures (Yang & Pang, 2014; Zhao & Gu, 2018). Leaders of different ages have different promotion incentives, thus making their financial incentives different as well. In China, court funds are determined by the local government, so government leaders can definitely influence the financial expenditures of courts. In addition, lag variables are often used as instrumental variables for panel data. The financial expenditures of the previous year will affect those of the current period, and the intervention of local leaders in financial expenditures will also be constrained by existing conditions. Therefore, we take the age of the county party secretary and the per capita financial expenditure in the previous period as instrumental variables<sup>11</sup>. These variables may affect the current financial expenditure in the region but will not directly affect financial penalty sentences. On the other hand, financial penalty sentences do not affect the personal characteristics of local leaders or the previous year's financial expenditures. The interaction term of the two (*lfinapre\_secage*) is used as the instrumental variable of financial expenditure to run the regression for financial penalty application. The results of the first-stage regression are shown in column (1) of Table 3. The coefficient of *lfinapre\_secage* is significantly positive at 0.0199. The Kleibergen-Raap Wald rk F statistical value is 844.2, well above the 10% threshold of 16.38, which means there is no weak instrumental variable problem. The second-stage estimated results are shown in column (2) of Table 3. The coefficient of *finapre* is -0.1374, and the negative effect of per capita financial expenditure on financial penalty sentencing still exists. This value (absolute value) is greater than the coefficient value of the OLS estimated results: -0.110. A higher per capita financial expenditure causes a lower property penalty for corrupt officials, which in turn increases financial expenditures. This reverse causality with the opposite sign will bias the coefficient value estimated by OLS toward zero. Therefore, when IV is used, the coefficient value of 2SLS should be larger than that of the OLS estimate. That is, the negative impact of per capita financial expenditure on property penalty sentencing is greater.

**Table 3**

Instrumental variable regression results

<sup>11</sup> If the trial court is a local court and the court funds are from the county or district government, the county party secretary may influence court finances. If the trial court is an intermediate or higher people's court, it is directly funded by the municipal or provincial government, and the secretary of the county party committee will not have such influence. Therefore, we take the instrumental variable of the age of provincial or municipal secretaries corresponding to the level of court and use the interaction between the age of secretaries at the corresponding level and the per capita financial expenditure of the previous year as the instrumental variable for the same regression.

Variable	(1)	(2)
	First-stage estimated results	Second-stage estimated results
	finapre	propp
finapre		-0.1374** (0.0505)
lfinapre_secage	0.0199*** (0.0007)	
Control for the characteristics of the case	Yes	Yes
Control for the characteristics of the convicted official	Yes	Yes
Control for the characteristics of the court	Yes	Yes
Control for the year fixed effect	Yes	Yes
Control for the county fixed effect	Yes	Yes
N	4,613	4,613
R-squared		0.0238
Kleibergen-Raap Wald rk F statistical value	844.2	

### 4.3 Selection bias

China Judgments Online (CJO) is documented to be prone to non-random missing data (NRMD) problem (Ahl et al, 2019; Liebman et al, 2020). NRMD is perhaps more acute for corruption cases as more sensitive and public focused cases than for 'routine' civil and commercial cases. We checked the data statistics of court cases concluded from 2014 to 2016 based on China statistical yearbook and used the number of cases of embezzlement and bribery crimes from CJO to calculate the disclosure rate of corruption case judgments, which is less than 20% shown in Table 4<sup>12</sup>, lower than average upload rate of 40% documented by Ma et al. (2016), Liebman et al. (2020).

**Table 4**

The disclosure rate of corruption case judgments

Year	The number of concluded corruption cases	The number of cases of embezzlement and bribery crimes from CJO	The disclosure rate of corruption case judgments(%)
2014	25583	4857	18.99
2015	19493	2453	12.58
2016	32063	5704	17.79

Note. The data of the number of concluded corrupt cases come from the China Statistical Yearbook. The disclosure rate of corruption case judgments is calculated by the authors.

Which corruption cases have not been uploaded to CJO? Records of politically sensitive cases are frequently missing from online databases, especially for some major cases with

<sup>12</sup> The disclosure rate of corruption cases we calculated is the lower bound. The corruption cases concluded in the statistical yearbook refer to other duty crimes more than the embezzlement and bribery crime cases. And we excluded cases in which the amount of money involved in the crime was less than 50,000 yuan before the amendment of criminal law in 2015 because the confiscation of property was implemented only for corruption cases involving more than 50,000 yuan. That is to say, the disclosure rate of corruption cases we calculated is lower than the actual uploads rate. Ye (2019) studied the partial internet access of Criminal Judicial Documents and found that the average disclosure rate of the embezzlement and bribery crime cases is about 40%, which is similar to the average disclosure rate of all the cases documented by Ma et al. (2016), Liebman et al. (2020), but lower than that of other criminal cases other than dereliction of duty.

significant social influence, such as corruption cases involving high-ranking officials (Liebman et al., 2020; Tang, 2018). The judges also tend to upload and disclose relatively simple and fair cases because these judgment documents online are examined and supervised by the public (Tang, 2018). We can't clearly measure the distribution of these missing sensitive and unfair cases across provinces. However, Ma et al. (2016) and Tang (2018) show a statistically significant positive correlation between per capita GDP and the interprovincial disclosure rate, which means more missing records from online databases in underdeveloped regions. Therefore, after more case samples from the lower per capita GDP with stronger fiscal pressure are included in the analysis, the negative impact of fiscal pressure on judges' judgments will be greater, and the coefficient value may be larger.

#### 4.4 Heterogeneity analysis of the effect of fiscal pressure on financial penalty sentences

When there is fiscal pressure, a court can impose a sentence of either property confiscation or a fine to obtain financial returns. Most illegal gains of corrupt officials have already been confiscated, recovered, returned or otherwise compensated for by the CDI-SC or the procuratorate before the case reaches the court. Therefore, there is little existing illegal gains and property left for the court to deal with, which limits the court's ability to increase its revenue through the confiscation of illegal gains and property but has almost no impact on its ability to impose fines. In addition, fines have higher applicability and lower execution cost than the confiscation of property. Therefore, financial pressure may affect judges' property penalty decisions in different ways because of these different revenue-increasing capabilities. We used the variable '*exrp*' to measure the intensity of property confiscation sentences and '*finp*' to measure the intensity of fines and then treated these as the explained variables for regression<sup>13</sup>. The results are shown in column (1) and column (2) of Table 5. Column (1) shows the estimation results of the intensity of confiscated property as an explained variable. The coefficient of per capita financial expenditure is still negative, but it is no longer significant. This shows that the effect of fiscal pressure on property confiscation sentences as a way to increase revenue is not particularly obvious. Because property confiscation is often poorly enforced and provides little revenue for the court, such sentences ultimately provide few financial returns. However, it can be seen that the relationship between the decision to impose a fine and per capita financial expenditure is significantly negative in the estimation results indicated in column (2) of Table 5. This shows that fiscal pressure has a more obvious effect on sentences imposing fines, which have a greater ability to increase revenue. We interact the per capita financial expenditure with the dummy variable *proptype* (1=fine, 0=property confiscation) to run the regression, and the results are shown in column (3) of Table 5. The interaction coefficient is significantly negative, which means that the negative impact of per capita financial expenditure on the decision to impose a fine is more obvious than that on the decision to sentence the convicted official to property confiscation. The same instrumental variable is used to run the regression for the intensity of confiscated property and fine sentences, and the two-stage regression results are shown in columns (4) and (5) of Table 5. Similarly, it can be concluded that per capita financial expenditure has no significant impact on the decision to sentence property confiscation but a greater impact on the decision to impose a fine.

**Table 5**

Heterogeneity analysis of the effect of fiscal pressure on property penalty sentences

<sup>13</sup> There are some situations where the judge dictates both property confiscation and a fine for the same case. However, the regression focuses only on the samples of one or the other punishment, as this study aims to determine the different effects of property confiscation and fines.

Variable	(1)	(2)	(3)	(4)	(5)
	OLS	OLS	OLS	2SLS	2SLS
	exprp	finep	propp	exprp	finep
finapre	0.00334 (0.0137)	-0.113*** (0.0358)	0.132* (0.0762)	0.00213 (0.0176)	-0.140*** (0.0475)
finapre_proptype			-0.435*** (0.103)		
proptype			0.0732 (0.0647)		
All control variables	Yes	Yes	Yes	Yes	Yes
Control for the year fixed effect	Yes	Yes	Yes	Yes	Yes
Control for the county fixed effect	Yes	Yes	Yes	Yes	Yes
N	8,762	8,762	4,903	4,613	4,613
R-squared	0.080	0.348	0.292	0.023	0.036

Note. Robust standard errors are in parentheses, clustered at county level. \* Significant at the 10% level, \*\*Significant at the 5% level, \*\*\*Significant at the 1% level.

## 5. Robustness Test

### 5.1 Replacement of samples and indicators

#### 5.1.1 Using the indicator of provincial per capita judicial expenditure

The higher the financial expenditure per capita is, the more judicial expenditure per capita there is. However, financial expenditures are used for many different public sectors, and the court is only one of them. The judicial budgets of regions with similar financial expenditures may vary. Therefore, we ran the regression using the per capita judicial expenditure of the province instead of per capita financial expenditure as a measurement of fiscal pressure. Similarly, the interactive term of the age of the provincial party secretary and the lag term of judicial expenditure was again used as the instrumental variable for regression to account for potential endogeneity problems. The second-stage results are shown in column (1) of Table 6. The coefficient of the variable *perpubsex* is significantly negative, which shows that the higher judicial expenditures are, the lower the intensity of property penalty application.

#### 5.1.2 Using the indicator of per capita court expenditure

Judicial expenditures include the budgets of the police, the procuratorate, the court and other judicial departments, and judicial expenditure indicators cannot accurately measure the designated court budget. We used only the court expenditure data for robustness testing to eliminate the interference caused by judicial expenditures related to the police, procuratorial and other judicial departments. However, there were many missing values in the data on court expenditures because the information on court expenditures in few cities was released between 2014 and 2016. Finally, only the available court expenditure data were analyzed for the robustness test. Additionally, to further verify that fiscal pressure plays a more important role in fine sentencing than property confiscation sentencing, we used the per capita court expenditure (*percourtex*) to directly measure the fiscal pressure in the sample of prefecture-level cities and run the regression for the fine intensity. We also used the interaction term of the age of the municipal party secretary and the lag term of court expenditure as the instrumental variable, and the second-stage results are shown in

column (2) of Table 6. The per capita court expenditure coefficient is significantly negative, which is consistent with the previous conclusion.

## 5.2 Considering the variable of offsite trials

Since the 'Muma' case in Liaoning Province, China, in 2001, it has gradually become the norm that corruption cases involving high-ranking officials are tried in a place other than the one in which the crime was committed to prevent the interference of local officials; this situation is called an offsite trial (Yidi Shenli), which is alternative jurisdiction designated by the superior judicial authorities as an exception in the criminal litigation jurisdiction system. Generally, the cases involving corrupt officials with governor rank are designated to try in another province, the corruption cases involving the officials with the prefecture mayor rank are designated to another city, and those with county head rank are designated to another county<sup>14</sup>. Financial penalties in offsite trials are executed by the Court of First Instance in accordance with the provisions of the 2014 ruling by the Supreme People's Court regarding the execution of property-related sentences. In other words, the court where the case is tried will impose a financial penalty whether the corrupt official is local or foreign. A politician working in X province is often moved to Y province for trial. Financial sanctions levied on that politician, if convicted for corruption, would in turn satisfy the fiscal needs of province Y, instead of being returned to province X where the corruption takes place. And alternative jurisdiction also happens on the city or county level. Because of this, many courts have great enthusiasm for offsite duty crime cases. Some court leaders even bid for the designated jurisdiction over offsite corruption cases from the superior court, the CDI-SC, or the procuratorate (Long, 2012). Thus, fiscal pressure should also be relevant in offsite trial cases. However, the court of offsite trial may entrust the case to a people's court at the same level in a city or county, in which the property of the corrupt official is located, to facilitate the execution of the financial penalty; in such cases, the incentive of the trial court reduces because of the execution costs, which may then affect the sentence. Therefore, we excluded offsite trial cases in the robustness test. The 2SLS estimated results are shown in column (3) of Table 6, indicating that the coefficient of the variable *finapre* is still significantly negative.

Given that there are fiscal incentives for holding offsite trial cases but the incentives may differ from those of regular trial cases, we used only the offsite trial case sample for the regression. There were a total of 1671 samples of offsite trial cases in this study, but the sample size was reduced to 651 after the available per capita financial expenditure and the age data of local leaders were matched<sup>15</sup>. The 2SLS regression results of the offsite trial sample are shown in Column (4) of Table 6, and the coefficient of the variable *finapre* is not significant. This may be related to the different financial incentives of the entrusted court. The trial court often needs an entrusted court to help with the actual confiscation of property because corrupt officials may misrepresent the value of their property, and the financial motivations of the entrusted court are limited. However, the collection of fines is not subject to the same concerns; criminals can ask their family to pay the fines imposed by the court in cases where a relatively flexible payment method is possible. That is, financial penalties in the form of a fine can be executed without involving the court located in the jurisdiction where the convicted person's property is. Therefore, fines are easier to impose and

<sup>14</sup> The designated jurisdiction of cases on embezzlement and bribery crime is only usual practice, not mandatory by law. It varies considerably in practice from province to province because there are no clearer regulations on which officials and cases are designated for other jurisdiction, how to determine alternative jurisdiction to try.

<sup>15</sup> Only the year fixed effect and province fixed effect are controlled in the regression because the sample size of offsite trials is relatively small, but there are cases of transprovincial and transcity offsite trials.



collect, and the fiscal incentives of the courts imposing fines are stronger than those of courts issuing property confiscation sentences. We used the intensity of fine as an explained variable for regression, and the 2SLS estimated results are shown in column (5) of Table 6. The coefficient of per capita financial expenditure is again negative, indicating that the sentencing decision regarding financial penalties is affected only when both a shortage of court funds and the possibility of increasing revenue exist at the same time, thus providing financial incentives for the court.

All the robustness tests show that judges' financial penalty sentences are indeed affected by fiscal pressure. The lower the judicial expenditure in the region is, the greater the fiscal incentive for the court to seek funding through financial return, and the more inclined judges are to impose financial penalties.

### 5.3 Placebo Test

#### 5.3.1 A placebo test for corruption cases randomly assigned by county

We do not match the county of the trial court with its per capita financial expenditure. The court hearing corruption cases are randomly matched with another county with different per capita financial expenditures, and this randomization process is repeated 500 times. Thus, the randomly processed per capita financial expenditure should no longer affect the fiscal incentives for the trial court, nor should it have an impact on the judge's financial penalty decision. We use the randomly matched per capita financial expenditure to run a regression of the intensity of property penalties and obtain the mean of the estimated coefficient after 500 random allocations. It can be seen in column (6) of Table 6 that the coefficient value is 0.00043, which is very close to zero and not significant and thus indicates that previous estimates were robust.

#### 5.3.2 A placebo test for imprisonment

If fiscal pressure has an impact on judges' financial penalty sentencing, it is because such sentences can increase financial revenue. There should be no effect on imprisonment sentences, which do not increase revenue. We use imprisonment (*jail*) for the placebo test. Imprisonment is calculated as the length of imprisonment (months)/amount of money involved in the crime. The results of using imprisonment rather than property value as the explained variable for regression are shown in Column (7) of Table 6. It is found that the coefficient of per capita financial expenditure is no longer significant, which verifies the previous judgment that fiscal incentives have no significant effect on prison sentencing. The 2SLS estimated result for imprisonment using the same instrumental variables is shown in column (8) of Table 6. The coefficient of per capita financial expenditure is still not significant, which proves once again that fiscal pressure has an impact only on judges' financial penalty sentencing and does not affect imprisonment sentencing.

**Table 6**

Robustness test

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	2SLS	2SLS	2SLS	2SLS	2SLS	OLS	OLS	2SLS
	propp	finep	propp	propp	finep	propp	jail	jail
perpubsex	-9.181*** (2.898)							
percourtex		-45.22* (25.52)						
random_expe						0.00043 (0.0190)		



finapre				-0.210**	0.0299	-0.165**		-0.0880	-0.2081
				(0.105)	(0.0266)	(0.0654)		(0.150)	(0.264)
All variables	control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for province/county fixed effects	Province	Province	County	Province	Province	County	County	County	County
Control for the year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	7,136	549	3,954	655	655	6365	8,762	4613	
R-squared	0.106	0.361	0.048	0.173	0.169	0.302	0.360	0.1486	

**Note.** Robust standard errors are in parentheses, clustered at county/province level; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . The first-stage estimation results in all 2SLS regressions are not listed in this table due to space limitations. The first-stage coefficient of IV in column (1) is significantly positive at 0.0037, with a P value of 0.000, and it is significant at 0.0160 in column (2), with a P value of 0.000; it is 0.0199 in column (3), with a P value of 0.000; it is 0.0195 in column (4), with a P value of 0.000; it is 0.0195 in column (5), with a P value of 0.000; and it is 0.0199 in column (8), with a p value of 0.000. There is no problem of weak instrumental variables.

## 6 Conclusion and Suggestions

We organize data regarding the first trial of criminal cases on embezzlement and bribery crimes published by courts, matching them with the per capita financial expenditures of counties in China. Then, we empirically test the influence of fiscal pressure on judges' financial penalty decisions. It is found that China's courts exhibit great differences in their economic punishment of corrupt officials, which is related to the financial incentives caused by local fiscal pressure. When court funds in a region are lower, the judges there have stronger incentives to issue financial penalties to maximize court revenue, part of which comes from commissions from the local government according to the value of financial penalties judged and executed by each court. This phenomenon is more obvious for fines, which have a stronger ability to increase revenue for the court.

This phenomenon of fiscal incentives caused by fiscal pressure is more prominent in regulatory agencies, including the police force, procuratorates and courts, which have a strong ability to increase revenue. Incomes from fines and confiscations have become an important source of increased local revenue, are included in budget management and decomposed to criminal justice personnel at various levels, and are even used as an indicator in evaluations. The Ministry of Finance issued the "Measures for the Administration of Fines and Confiscated Property" to the Supreme People's Court, the Supreme People's Procuratorate, the Supervisory Commission, and the Department (Bureau) of Finance in various provinces and cities as well as other relevant departments on December 17th, 2020, emphasizing once again that the budget of fines and confiscations in the government budget revenue is a predictive index and is not issued as a revenue task index. The funds for criminal justice agencies to handle cases are guaranteed to be provided by the budget of the government at the corresponding level, and the budget arrangements for law enforcement agencies should not be linked to the fines and confiscation cases they handle in any year. This indicates that there is indeed a clear phenomenon in which the value of fines and

confiscated property is taken as an evaluation index in judicial practice. Economic incentives and competition forge a close link between the behavior of judicial personnel and economic interests, leading them to selectively enforce the law, expand the scope of punishment for some crimes, and even identify one crime as another crime to increase the benefits derived from fines and confiscated property. This common judicial injustice is driven by the desire to obtain more income from financial penalties (Smercina et al., 2022). If the behavior of judicial personnel is not only linked to criminal activities but also affected by local finances and economic interests, then the justice offered by the courts will be in doubt, harming judicial credibility and therefore causing serious damage to social justice. Therefore, the legal system should be improved, the reform of the financial system should be accelerated, and the judicial reform process should be promoted. The joint results of these changes can achieve the goal of judicial fairness and justice.

Three policy implications should be considered. First, full funding for the judicial branch should be ensured, and the reform of unified financial management of the judiciary should be further accelerated. In particular, the government should speed up the financial reform in the regions where financial management is jointly administered by the provincial and local governments and the traditional management of local government is maintained. Historical problems, such as the complicated staffing of courts, large regional differences in the salaries of judicial personnel within a province, and confusion about the court property belonging to judicial agencies or the government, need to be resolved, as these are enormous obstacles to the centralized management of the financial resources of local courts below the provincial level (Xu, 2021). Second, the legal system related to financial penalties should be improved, and the sentencing standards for financial penalties should be clarified, especially in terms of the differences between property confiscation and fine penalty provisions. Third, the income from fines and confiscations should be handed over directly to the central government, a special fund system for fines and confiscations with specified purposes should be designated, and the expenditure of fines and confiscations should be made public.

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## Author statement

The corresponding author is responsible for ensuring that the descriptions are accurate and agreed by all authors.

**Hongli Chu:** Writing- original draft, Reviewing and Editing

**Shengmin Sun:** Methodology, Software

**Jian Wei:** Conceptualization, Investigation, Data curation, Supervision

### Highlights:

1. There are sentencing disparities in provincial-level prevalence rate of financial punishment in China.
2. Chinese judges are more likely to impose property penalties when judicial expenditures in a region are low.
3. Fiscal pressure on judges is more likely to lead to fines than to property confiscation.
4. Fiscal pressure has an impact only on judges' property penalty sentencing and does not affect imprisonment sentencing.