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Finance and Ideology: The Firm-level Channels

Working Paper N° 642/2019 July 2022

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#### **Abstract**

We provide firm-level evidence on how politicians' ideologies affect economic outcomes and financial development by exploring a unique setting of ideological discontinuity in China from Maoism to Dengism around 1978. We find the ideological exposure during a politician's early adulthood has an enduring effect on contemporary firm and city policies. Firms governed by "Mao's mayors" have more stakeholder spending, lower pay inequality, and less internationalization than those governed by Deng's. Further evidence suggests politicians' ideology may affect economic activities through channels other than economic policy. Selection bias, endogenous matching and mayor age effect are unlikely to drive our results.

Keywords: Ideology, Politician, Corporate Policy, China

JEL Classifications: G30, M14, P16

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Why am I talking to the youth about the core socialist values? It is because the values of the youth determine the values of the entire society in the future, and the youth are in the period of the formation and establishment of values.

Xi Jinping (2014), speech at Peking University

#### 1. Introduction

Throughout history, socio-economic development has been fundamentally shaped by ideology, which is "a set of a priori plausible ideas and discourses describing how society should be structured." (Piketty 2020:3) Ideology has social, economic, and political dimensions, and operates through language with the aim of producing specific effects that form the basis of policymaking (Larrain 1979; Thompson 1984). In economics, Benabou (2008) considers ideologies as collectively sustained distortions regarding the proper scope of governments versus markets. A growing literature has documented significant impact of politicians' ideology on economic policies such as taxation, public expenditure, employment regulation, and immigration policy (Potrafke 2018). However, there lacks systematic analysis in the literature on how politicians' ideology affects economic activities at the firm level, and how such ideological effects on firms may happen beyond the economic policy channel.<sup>2</sup>

The objective of this paper is to examine the causal effect of politicians' ideology on corporate policies, and to identify potential channels through which such ideological influence happens. Such an investigation is crucial for understanding resource allocation across projects and social groups. We focus on the ideology of local politicians, as they make policies and intervention specifically to local firms' operations (Amore and

<sup>&</sup>lt;sup>1</sup> Other scholars consider ideology as encompassing "subjective mental constructs" that generate social cognitions resting on distorted perceptions of reality (e.g., North 1990; Benabou 2008). The Merriam-Webster dictionary defines ideology as a systematic body of concepts, especially those of a particular group or political party, about human life and culture. Other definitions include (a) a manner or the content of thinking characteristic of an individual, group, or culture; (b) the integrated assertions, theories, and aims that constitute a socio-political program.

<sup>&</sup>lt;sup>2</sup> A sparse literature in economics and management has found that different ideologies (typically coarsely classified into left, center, or right) affect corporate investment (Gupta, Briscoe and Hambrick 2017), within-firm gender inequality (Carnahan and Greenwood 2018), and individual risk-taking (Laudenbach, Malmendier, Niessen-Ruenzi 2018). However, these studies either focus on specific macroeconomic policy and individual behavior or investigate corporate behavior without an empirically compelling causal identification. In addition, they do not link these firm-level policies to macro-level economic and financial development.

Bennedsen 2013; Cingano and Pinotti 2013; Bradley, Pantzalis and Yuan 2016). Identifying potential channels other than economic policy unveils a more complete picture of the ideological impact on economic activity. While politicians may be biased by their ideologies in their decisions, economic agents such as firms can anticipate such biases and behave accordingly. Therefore, one cannot fully grasp the ideological influence in an economy without understanding firm-level reactions.

Studying the impact of politicians' ideology can be empirically challenging. First, it is notoriously difficult to measure ideology. The present-day ideology transcends traditional boundaries between the political right and left (Walsh 2012; Jacoby 2014). In the literature, it is often measured by political party affiliation or donations to political campaigns (e.g., Chin, Hambrick and Trevino 2013; Di Giuli and Kostovetsky 2014; Gupta, Briscoe and Hambrick 2017; Patil 2018). These *ex post* measures usually capture not only the effects of ideology as a behavioral bias but also that of politicians' political and economic incentives, which impede studies from discovering the true ideological impact on economic agents. Second, both ideology and economic activities are likely to be endogenously formed. Reverse causality may arise since ideology can reflect, rather than affect, certain economic activity. In addition, omitted variables in the cross-section such as education and social norms can simultaneously affect both (Cantoni et al. 2017).

We try to overcome these empirical challenges by exploring a unique setting in China: a sharp change in Chinese political ideology that occurred around 1978. During the Mao Zedong era (1949–1978),<sup>3</sup> the Communist ideology in China embraced traditional "Marxist-Leninist doctrine" and rejected capitalism. After Mao, however, the Communist government of China, led by Deng Xiaoping, dramatically changed course with the "Reform and Opening-Up" policy. Since then, China has headed to a market economy and legitimated profit seeking, entrepreneurship, and foreign direct investment. These changes contrast sharply with the rhetoric and propaganda of Maoism. A textual analysis visualized in Figure I based on the content of the *People's Daily*, the official media voice of the Chinese Communist Party (CCP) and a key source of training materials during the indoctrination of CCP members, shows a sharp decline in the frequency of keywords representing Mao's ideology after 1978.

One important factor which enduringly shapes the ideology of CCP members is the intensive indoctrination process—usually featured by the country's contemporary

<sup>&</sup>lt;sup>3</sup> Many consider the era of Mao's ideology ending in 1978, although Mao passed away in 1976. Within two years after Mao's death, the prevailing ideology in China did not change significantly until Deng emerged to be the new leader.

supreme leader's ideology—that one receives upon and after joining the CCP (Marquis and Qiao 2020). In our full sample, politicians joined the CCP party on average at an age of 24.33. The impressionable years hypothesis posits that individuals form durable political attitudes during late adolescence and early adulthood (Mannheim 1929), even though later they may be indoctrinated with other ideologies (Krosnick and Alwin 1989; Alwin and Krosnick 1991). Given the drastic ideological change around the emergence of Deng as the new leader, politicians joining the CCP before and after 1978 would be exposed to different indoctrination contents. Therefore, our primary measure of politician's ideology is an indicator for *when* an individual joined the CCP. We consider a CCP member to be influenced more by Mao's ideology ("Maoist") if she joined the Party before 1978, and otherwise to be influenced more by Deng's ideology ("Dengist"), conditional on having similar age and other characteristics.

Compared with other ideology measures, ours is *ex ante* in nature, as it captures the source, rather than the consequence of politicians' ideological differences. This alleviates the concerns in the literature regarding the use of *ex post* political characteristics as proxies for ideology and disentangles the impact of ideology from other political and economic incentives.

In addition, the swift and sharp ideological change allows us to adopt a regression discontinuity design (RDD) approach, in the spirit of Marquis and Qiao (2020), to address the potential endogeneity issues such as unobservable factors that explains both politician ideology and firm behavior. The basic tenet of RDD is that an exogenously determined cutoff in some explanatory variable can lead to a significant discontinuity in the outcome, which helps researchers identify a (local) causal effect. In our context, the age qualification of an individual is an exogenous and predetermined cutoff: since the inception of the CCP, individuals younger than 18 are not allowed to join the party (with very few exceptions). Therefore, individuals who did not join the CCP before 1978 because of the age limitation (e.g., the 17-year-old cohort) but became members shortly thereafter (e.g., in 1979 or 1980) constitute the control group, whereas those who were already above 18 years old (e.g., 18–19) and a CCP member in 1978 constitute the treatment group. In this restricted sample of individuals within a small age range, it is reasonable to assume that they share similar personal characteristics with the exception of ideology. In our empirical section, we compare a whole battery of observable characteristics between the

<sup>&</sup>lt;sup>4</sup> Similarly, Mullainathan and Washington (2009) compare the presidential opinion ratings of people who just turned into 18 years old and voted in the president's election to those who were 17 years old and couldn't vote in the president's election due to the minimum voting age restrictions in the US.

two groups and do not find significant difference. Therefore, the age (i.e., whether someone was above 18 years old and joined the CCP) around 1978 captures the difference in politicians' ideology, which is distinct from other dispositional factors as well as city and firm characteristics.

We focus on the ideology of a city's mayor, who is the chief responsible person for the city's economic development. Each city in China is also led by a CCP secretary (or "party secretary"), who is mainly responsible for personnel organization and propaganda to ensure CCP's reign and social stability. Various studies in the Chinese context have shown that it is the mayor, rather than the party secretary, that profoundly influences the economic policies and corporate behavior in the city (Bai, Song and Hsieh 2019; Chen and Kung 2020; Wang, Du and Marquis 2019). Such distinction also applies to governors and party secretaries at the provincial level (e.g., Jia 2017). Therefore, in this paper we link economic policies to the ideology of the mayor rather than the party secretary.

To validate our measure of ideology, we collect the articles bylined by mayors in our RDD sample during their terms and identify each mayor's 100 most frequently used words in their articles. Each word is then rated by surveyees based on its leaning toward Maoism or Dengism. We then calculate the ideological leaning of an article based on the frequency of these rated Maoist or Dengist keywords. We find significantly more Maoist words in bylines of mayors who joined the CCP before 1978, suggesting that joining the CCP during the Mao era is indeed strongly related to speaking and writing in a more Maoist way today. We provide more details on this validation test in Section 4.1.

Many scholars (e.g., Naughton 1993; Lotta 1994; Chang 1996; Naughton 1996) classify the differences between Mao's and Deng's ideologies and the corresponding economic policies into three categories: (1) the trade-off between social and economic development, (2) the gap between the rich and the poor, and (3) the choice between being self-sustained and leveraging foreign capitalism. We follow the literature and map these pillars into corporate policies by testing how a mayor's ideology affects a firm's social contribution, wage inequality, and its degree of internationalization.

Our results show that the ideological difference among local politicians has had a lasting effect on contemporary firm and city policies. After controlling for mayor-level characteristics such as age, firm- and city-level variables, and various fixed effects, we find that firms in cities governed by Maoist mayors have more spending on stakeholders (e.g., tax contributions, employee payments, and donations) and show lower within-firm wage inequality (e.g., the ratio of average top-three executives to average employees' salary) and less internationalization (e.g., the proportion of foreign assets and foreign

sales). In addition, our ideology measure does not appear to be correlated with a mayor's political tie with higher-level government officials or the *ex post* political promotion, suggesting that our results are less likely to be driven by political incentives. Further analysis shows that the effects of a mayor's ideology are free of possible confounding factors such as mayor age, city party secretary's ideology, firm CEO's ideology, and the college admission reform in 1977. Similar results are also found at the city level.

An ideology-biased mayor can influence the policies of firms in her city through several channels, such as providing special deals to those that comply with her ideology, directly influencing corporate decision-making through private connections, and promulgating distorted regulations. To identify the economic mechanisms underlying the ideological effects, we partition our RDD sample based on several firm and region characteristics that are related to the propagation of ideology. We find that the effects are stronger in firms with political connections, lower cost of debt, and more government subsidies, as well as in regions with greater degree of market-orientation and relatively vacuous of existing CCP ideology. These results suggest that, in addition to the well-documented economic policy channel, ideology affects corporate policy through more implicit relationship-based channels. Importantly, the effects remain statistically significant in most subsamples, suggesting that our results cannot be fully explained by other political and economic factors. Finally, we show that firms governed by Dengist mayors are associated with better financial performance, and their cities experience greater financial development.

Two potential issues with our empirical framework may hinder the interpretation of the above results. First, the decision of joining the CCP can be driven by two types of selection: the CCP might change its criteria in recruiting new members after 1978, and individuals who were willing to join the CCP before and after 1978 might be fundamentally different as a result of their self-selection. These concerns are alleviated in our RDD sample, where we do not find significant difference between the two groups of mayors along observable characteristics including minority status, work experience, education background, political connections, and the likelihood of future promotion. Nevertheless, it is still possible that these two groups of mayors are different along some unobservable characteristics such as their intrinsic values and beliefs. However, as long as such selection is not driven by characteristics other than their ideology, it will not invalidate our approach. As the focus of study is on the difference in ideology, the source of difference does not change the interpretation.

Second, our results may be driven by the endogenous matching between cities and mayors, as mayors in China are usually appointed by the provincial or central government. For example, a Dengist politician may be more likely to be appointed as the mayor of a city that prioritizes economic growth. Although this does not materially change our conclusion on the effects of political ideology, we still make a few efforts to alleviate this concern. (a) Our various fixed effects in the OLS regressions (e.g., mayor native place × firm location fixed effects, city administrative rank or economic zone × year fixed effects) account for the possibility that a mayor is assigned to a city based on their ideological congruence. (b) A plot of geographic distribution shows that mayors' ideologies in our sample are evenly distributed across regions. (c) We fail to find significant differences in firm, CEO, and city characteristics between the control and treatment groups in our RDD sample, nor do these characteristics predict the ideology of city mayors in a logit regression. (d) Our results are upheld in a subsample of largely exogeneous mayor turnovers which are related to anti-corruption investigation of politicians at the higher levels, instead of the city's economic conditions.

An important contribution we aim to make to the study on the political economy of finance is disentangling ideological effects from that of other well documented political factors, such as government ownership (Megginson, Nash and Randenborgh 1994; Shleifer 1998; Megginson and Netter 2001; Boubakri, El Ghoul, Guedhami and Megginson 2017; Bortolotti, Fotak and Megginson 2015), political connection (Shleifer and Vishny 1994; Faccio 2006), political uncertainty (Julio and Yook 2012; Hassan, Hollander, van Lent and Tahoun 2019), lobbying and activism (Zingales 2017; Ferracuti, Michaely and Wellman 2019; Neretina 2019), as well as political institutions such as the electoral system (Roe 2003; Pagano and Volpin 2001, 2005; Perotti 2014). We find that politicians with similar political incentives can adopt strikingly different economic policies and political preferences depending on their ideologies, which lead to differential corporate policies by local firms. Our study therefore joins the emerging literature on ideology as another important yet largely unexplored political determinant of individual and corporate behavior, with its impact lasting over the long run (e.g., Laudenbach, Malmendier and Niessen-Ruenzi 2018; Marquis and Qiao 2020).

Our findings also illuminate the growing literature of behavioral corporate finance, especially on biased third parties other than managers and investors. Malmendier (2018) highlights the importance of taking such perspective in understanding puzzling corporate behavior, which is relatively underrepresented but the most cited in the corporate finance literature compared to "biased investors" or "biased managers." These third parties may

include financial intermediaries, rating agencies, regulators, lawmakers, or central bankers (Malmendier, Nagel and Yan 2021). Our assumption is similar to those made in this literature, in that the biased third party (i.e., local politicians) provide distorted incentives that firms rationally react to.

Finally, our paper adds to the growing literature on how ideology shapes economic activities by providing systematic evidence at both the firm and city levels and documenting that such ideological influence can happen through channels other than economic policy. Existing studies mostly investigate *whether* ideology matters, <sup>5</sup> and coarsely classify it into left and right, or liberal and conservative. Yet empirical evidence is limited on *how* ideology matters in shaping the behavior of firms, which lie at the center of the economic activities. By contrasting the fundamental differences between Maoism and Dengism regarding the relative merits of the market and the state, we develop systematic and nuanced predictions on firm-level policies and the direction of the effect. In addition, different from studies focusing on *explicit* economic policies, we argue that the ideological influence on firm behavior can be implicit, taking place through personal connection, special deals, and other subtle channels. Such a broader focus deepens the understanding of how ideology drives economic activities and growth.

The paper proceeds as fellows. Section 2 introduces the institutional background of ideological transition in China and develops our hypothesis. Section 3 describes the data and our empirical strategy. Section 4 discusses the main results and investigates potential mechanisms that drive the effect of politicians' ideology on corporate policies, as well as its implications on financial performance at the firm and the city levels. Section 5 shows robustness tests. The final section concludes.

### 2. Conceptual Framework and Hypothesis Development

To understand how politicians' ideology affect firms in our setting, one needs to first understand the fundamental differences in ideology between Maoism and Dengism as well as their institutional roots during China's economic and social transitions, which we review in this section.

generalizable.

<sup>&</sup>lt;sup>5</sup> For example, some studies have found that, in tax cases, conservative judges are more likely to rule in favor of corporations (in terms of lower taxes) than for the government or the public, compared to liberal judges (Howard and Nixon 2002; Staudt, Epstein and Wiedenbeck 2006; Epstein, Landes and Posner 2013). Others find that, in the context of litigation risk, firms affiliated with liberal judges are more likely to face securities class-action lawsuits (e.g., Huang, Hui and Li 2019). Such classification of ideology appears to be too simplistic, and the results may not be

#### 2.1. Institutional transition and the economic thoughts of Mao vs. Deng

In 1958, nine years after proclaiming the founding of the People's Republic of China, Mao Zedong launched the "Great Leap Forward," a five-year economic plan which collectivized farming and introduced labor-intensive industries. The drive resulted in an economic breakdown and was abandoned after two years but was then followed by the "Cultural Revolution," Mao's 10-year political and ideological campaign, which lasted until Mao died in 1976. Maoism that prevailed in China from the 1950s to the late 1970s is considered orthodox socialism in that it stresses class struggle, central planning, and public ownership. Following Mao's death, Deng Xiaoping emerged as the dominant figure among pragmatists in the Chinese leadership. Since the end of 1978, Deng set out the nationwide far-reaching economic reforms with the "Reform and Opening-Up" policy, inaugurating a period when China began establishing a market economy and gradually opened to the outside world.

Scholars have characterized the ideological differences between Maoism and Dengism in terms of their economic policy into three broad categories (Naughton 1993; Lotta 1994; Chang 1996; Naughton 1996). First, compared to Deng, Mao placed strong priority on social development and stakeholder spending over economic efficiency and growth. Contrary to the Leninist vanguard model, employed by the Bolsheviks, Mao firmly believed that that the Communist Party must not be separate from the popular masses and based his revolution upon the peasants, because they were poor and a political blank slate. These beliefs led to the Cultural Revolution, which aimed to wipe out bourgeois ideology through the dictatorship of the proletariat, and stressed the continuing and even intensifying class struggle.

Second, Mao and Deng differed in their views on equality, a fundamental characteristic of socialism rooted in the Marxist doctrine which stresses that economic exploitation determines the class structure of every social order. Maoism prioritized

words.

deliver the idea of reform and the "socialist market economy," avoiding "capitalism" and related

<sup>&</sup>lt;sup>6</sup> Mao's ideology did not fade immediately upon his death. In 1976, the "Gang of Four", jockeyed for power, continuing abusing Mao's ideology. In 1977, Hua Guofeng, the president then, published the so-called "Two Whatevers" propaganda campaign: Whatever Mao had said and whatever Mao had done should be treated as a binding precedent.

<sup>&</sup>lt;sup>7</sup> A decisive turning point was the Third Plenary Session of the 11th Central Committee of the CCP held from December 18 to December 22, 1978. The conference marked the wholesale repudiation of Mao's "Cultural Revolution" policies and the beginning of the "Reform and Opening Up" policy and is widely seen as the moment when Deng became the paramount leader of China. <sup>8</sup> Despite its sharp contrast in content, the ideological transition from Maoism to Dengism was subtle. When Deng introduced a market economy into China, the government carefully communicated this reform in a way that was ideologically congruent with communism. The government chose words to

equality and service to the people (Sen 2013) and moved beyond the orthodox Marxism and Leninism by recognizing class, status, and power as equally distinctive aspects of social inequality (Young 1973). In contrast, even though Deng never abandoned the idea of equality, he believed that economic incentives motivate people to work harder and better (Chang 1996). Deng was convinced that egalitarianism would not work and proposed to reward talented and higher achieving individuals with promotions and pay raises. In 1992, Deng proclaimed the necessity to "let some people get rich first," which sidelined distributional considerations in exchange for greater economic growth and led to raising income inequality in China from as egalitarian as Nordic countries to that approaches the U.S. inequality level (Piketty, Yang and Zucman 2019).

Third, Mao and Deng differed in their attitudes toward foreign capital and capitalists. A tenet of Maoism was the dichotomization of the world into "capitalist" and "communist/socialist" camps, leading to antagonism toward the outside world (Di 1994; Raynard, Lounsbury and Greenwood 2013; Marquis and Qiao 2020). Mao emphasized self-reliance and downplayed international cooperation in almost any form. Chinese who joined the CCP in that period were indoctrinated with a negative perception of most foreign countries, and "foreign capitalists" were described as exploitative, mercenary, greedy, and ruthless. In contrast, Deng advocated the opening of China to trade, investment, and other contacts with the outside world, and avoid xenophobia. Under Deng's vision, China would import capital and technology from foreign countries and learned from advanced foreign experience through establishing special economic zones and open cities (Naughton 1993).

#### 2.2. Hypothesis development

Based on the systematic differences in ideology between Mao and Deng, we next develop several testable hypotheses on how politicians inheriting these distinct ideologies affect firms in their cities differently. We classify these ideological influences at the firm-level into three key areas, which map the three fundamental differences between Maoism and Dengism.

The first concerns social and economic coordination, which leads to different beliefs about how businesses and entrepreneurs are rooted in the popular masses and how much one should contribute to society. This can translate into the amount a company's revenue contributed to social causes, such as taxes, employee welfare, and community donations.

The second difference concerns inequality, which can be reflected in within-firm wage pay difference. Firms governed by Maoist mayors would stress equality and thus a smaller difference in pay would exist between the top earners (e.g., CEOs) and the average

employee. In contrast, firms governed by Dengist mayors would focus more on monetary incentives and thus may have a much larger difference in pay between the top earners and the average employee.

The third difference—the attitude toward foreign capitalists—should have left different imprints on firms' internationalization, which involves both the inward process of bringing in foreign capital and management and the outward process emphasizing global expansion. Firms influenced by Mao's ideology—that is, with antagonism toward foreign capitalists and a focus on self-reliance—would be less open to foreign direct investment (FDI). This belief would contrast with that of firms governed by Dengist mayors who would prioritize international cooperation and globalization.

As we focus on the ideology of city mayors but investigate the policies primarily at the firm level, it is important to delineate the transmission mechanism from city mayors to companies. Based on Malmendier's (2018) biased third party framework, we argue that politicians (i.e., mayors) may be biased by their ideologies when making policies and expressing preferences, while firms or corporate managers may react accordingly to cater to politicians' ideology-biased preferences. Along this line, we explore three possible channels. First, mayors usually control important resources and can wield their political power and administrative capacity to provide "special deals" in the form of cheaper credit and subsidies for favored firms (Bai, Hsieh and Song 2019). In order to obtain such special deals, managers rationally exploit politicians' biases by catering to mayors' ideologies. Second, ideology-biased local politicians may introduce distorted policies and regulations that force firms in their cities to make nonvalue-maximizing investments (Cohen, Coval and Malloy 2011; Kalt and Zupan 1984; Potrafke 2018). Third, local politicians may directly influence firm decision-making and behavior through private and personal connections with corporate executives—perhaps the most subtle but efficient way to influence corporate policies.

Based on these arguments, we hypothesize that firms governed by Maoist mayors have more social contribution, lower within-firm wage inequality, and lower level of internationalization than firms governed by Dengist mayors. We will formally test these hypotheses as well as the potential channels in the next section.

#### 3. Data and Methods

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<sup>&</sup>lt;sup>9</sup> Starting in the late 1970s, foreign capital entering China was primarily from the U.S., Canada, and Western Europe, and the major overseas markets for Chinese firms were developed countries, such as the U.S., Australia, and Canada (Marquis and Qiao 2020).

#### 3.1. Data

The primary data source for our study is the China Stock Market & Accounting Research (CSMAR) Database, one of the most comprehensive databases for Chinese business research, which covers data on the stock market, financial statements, and corporate governance of companies listed in China. It also provides information about city politicians' characteristics, firm characteristics, and city-level macroeconomic indicators. We supplement the data on firm characteristics by using Datastream and collect additional city-level data from the National Bureau of Statistics of China website. Our sample period spans 2007–2017, as data for our key dependent variables such as stakeholder spending (from CSMAR) start from 2007.

# 3.2. Main ideology measure

Our main explanatory variable is a mayor's ideology, which is an indicator for whether she joined the CCP before or after 1978. A CCP member is influenced more by Mao's ideology if she joined the Party before 1978 and otherwise is influenced more by Deng's ideology.

Our ideology measure is motivated by two reasons. First, there is a sharp change in ideology from Mao's to Deng's around 1978. Figure I shows the average annual frequency of some strong Maoist words, such as "Class (*Jie Ji*)," "Imperialism (*Diguo Zhuyi*)," "Solidarity (*Tuan Jie*)," "Revolution (*Ge Ming*)", appearing in *People's Daily* (the key training material during the indoctrination) from 1969-2003. There is indeed a sharp decline in the frequency of these keywords around 1978.<sup>10</sup>

Second, as argued by Marquis and Qiao (2020), the intensive training that a person receives when joining the CCP can fundamentally shapes her ideology, especially when such indoctrination happens in late adolescence and early adulthood. Numerous studies across different literatures have shown that early-life experience can have enduring impacts on individuals' attitudes and behavior despite later countervailing factors (Erikson 1982; Roberts et al. 2003; Caspi et al. 2005, also see Malmendier (2021) and Malmendier and Wachter (2022) for detailed reviews on the economics and finance literatures). With regard to ideology more specifically, the impressionable years hypothesis posits that this is the period individuals form their political attitudes which

of words on People's Daily t, the total number of Chinese characters in People's Daily in that day.

<sup>&</sup>lt;sup>10</sup> The frequency of an ideology-related word is defined as  $(nr. of appearance_{it} \times length_i)/total nr. of words on People's Daily_t; where <math>nr. of appearance_{it}$  is the number of times a keyword i appears in People's Daily in a given day t;  $length_i$  is the total length in words of the keyword i; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the total length in words of the keyword l; and  $longth_i$  is the length  $longth_i$  is the length  $longth_i$  in  $longth_i$  in  $longth_i$  in  $longth_i$  is the length  $longth_i$  in  $longth_i$  in

then remain fixed even after they become older (Krosnick and Alwin 1989; Alwin and Krosnick 1991; Bianchi 2014). In our full sample, mayors on average join the CCP at the age of 24 (the earliest is 18 years old), a sensitive period when individuals form their worldviews and political beliefs. Therefore, although individuals who joined the CCP before 1978 may adjust their ideology towards Dengism after 1978 (i.e., ideological reindoctrination and decay), Mao's ideological imprint can still have a strong impact on them due to the intensity and sensitive timing (i.e., early adulthood) of the indoctrination.

#### 3.3. Dependent and control variables

Our main dependent variables are three sets of firm-level policies that map the three fundamental ideological differences between Mao and Deng: stakeholder spending, wage inequality, and the degree of internationalization. First, CSMAR measures a firm's stakeholder spending as the ratio of the sum of total tax contribution, employee payment, interest expense, and donations over its total book value of equity. For robustness, we also exclude interest expenses from the calculation of social contribution as an alternative measure, as one may argue interest might not be motivated by a firm's caring about social welfare. These items capture different aspects of a firm's contribution to stakeholders and the society at large. Second, following Mueller, Ouimet and Simintzi (2017), we measure wage inequality as the ratio of the average top three executives' income to average employee's income within a firm. A higher ratio implies a larger within-firm income inequality. Third, we construct two measures of a firm's internationalization—foreign assets ratio and foreign sales ratio. Foreign assets ratio is calculated as the assets of a firm's overseas subsidiaries over its total assets, and foreign sales ratio is defined as the ratio of a firm's revenue from international sales to its total revenue.

Table I reports the summary statistics of the main variables. Our final sample includes 26,345 firm-year observations, consisting of 3,532 firms during the period of 2007–2017. About 14% of firm-year observations are in cities with Maoist mayors. The mean (median) value of social-contribution-to-equity ratio is 0.21 (0.17). The average value of the wage inequality is 7.40, suggesting that the salary of the top three executives on average is about six times higher than that of an average employee. Interestingly, the minimum wage inequality ratio is 0.49. In addition, less than 50% of firm-year observations in our sample have positive foreign sales or foreign assets.

<sup>&</sup>lt;sup>11</sup> However, since there are many missing values of interest expense, we report results of using the original definition in CSMAR for most of the tests.

 $<sup>^{12}</sup>$  Available data on foreign assets in CSMAR start from 2013. We obtain data on foreign sales from Datastream for better coverage.

There are 1,037 unique mayors in our sample, of whom 12% are Maoist, 6% are females, 11% are non-Han Chinese, and 29% have worked at state-owned firms. The average age of politicians is 51. At the city level, the mean and median GDP are about 211 billion Chinese *yuan* (approximately 30 billion USD) and 121 billion Chinese *yuan* (approximately 17.3 billion USD). The average city population is about 4.6 million. The distribution of the amount of annual foreign investment in a city is quite skewed, with a mean of 5.9 billion USD and a median of 1.7 billion USD.

#### 3.4. Empirical methodology

To test the impact of mayor ideology on corporate policies, we adopt two empirical methods. First, we use an ordinary least squares (OLS) regression on a panel dataset. Our empirical model is specified as follows:

```
Y_{i,t} = a_0 + a_1 Mao \ ideology_{i,t} + a_2 X_{i,t} + a_3 City \ mayor \ characteristics  + a_4 City \ macro \ controls + Firm \ FE + Year \ FE + City \ secretary \ FE  + Industry \times Year \ FE + City \ admin. \ rank \times Year \ FE  + Economic \ zone \times Year \ FE + Native \ place \ \times Province \ FE + \epsilon_{i,t} \ \ (1)
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The dependent variable  $Y_{i,t}$  represents different firm policies: social contribution, wage inequality, and internationalization (foreign assets ratio and foreign sales ratio). The key independent variable is  $Mao\ ideology$ , which takes the value of 1 if the mayor of the city where firm i is located joined the CCP before 1978 and 0 otherwise. The subscripts i and t index firm and year, respectively.  $X_{i,t}$  contains a vector of firm characteristics, such as size, ROA, leverage, Tobin's Q, and revenue growth.  $City\ mayor\ characteristics$  and  $City\ macro\ controls$  represent vectors of mayor's characteristics and city-level macroeconomic factors, respectively. Mayor characteristics include age bin,  $^{13}$  gender, minority status, education degree, college major, work experience in state-owned or private enterprises. City-level controls include GDP per capita, number of individual labors, and total employee wages.

In addition, we control for firm fixed effects, year fixed effects, city party secretary fixed effects, industry-year pair fixed effects, city administrative rank-year pair fixed effects <sup>14</sup>, economic zone-year pair fixed effects, and the native place (of the mayor)-province (of the firm) pair fixed effects. Controlling for city administrative rank-year and

 $<sup>^{13}</sup>$  As mayor's age is highly correlated with the year of joining the CCP, we instead control for age using three age bins: 40-49, 50-59, and 60 or above.

<sup>&</sup>lt;sup>14</sup> In our sample, cities have three administrative ranks from the highest to the lowest: subprovincial city, prefecture-level city, and municipality. Cities with higher administrative rank are typically larger and have more direct access to the central government.

economic zone-year pair fixed effects absorbs unobserved local economic and political trends that can affect a mayor's appointment to a certain city. Similarly, controlling for the native place-province fixed effects can mitigate the potential concern on the endogenous matching between politicians' background and their workplace. We discuss these issues in more details in Section 4.3. All standard errors are clustered at the mayor level. It is important to note that as we control for firm fixed effects, the coefficient on *Mao ideology* should be interpreted as the effect of a *change* in mayor's ideology on firm policies.

Despite the inclusion of extensive control variables and fixed effects, other endogeneity concerns may still arise. For example, one may be worried that the variable *Mao ideology* could be correlated with other unobservable factors may affect both the year of joining the CCP and firm policies. We further address such concern using an RDD analysis in the spirit of Marquis and Qiao (2020) and Mullainathan and Washington (2009) by exploiting an exogenously determined discontinuity in ideology due to age qualification for joining the CCP.

At its outset, the CCP established that one had to be at least 18 years old to join the Party. Upon joining, almost all members needed to go through an extended "probation" period and received intensive indoctrination. As such, a discontinuity in political beliefs exists between members joining the Party before and after 1978 due to the sharp difference in the content of their ideological training. Politicians who joined shortly after 1978, because of the age limit such that they could not join earlier, are considered being inculcated with Deng's ideology and serve as our control group. In contrast, those who were already 18 or a few years older and had joined the CCP by 1978 are considered being inculcated with Mao's ideology and serve as the treatment group. In this restricted sample of politicians with a small age difference, 17 it is reasonable to assume they have similar personal characteristics except their ideology.

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<sup>&</sup>lt;sup>15</sup> The economic zones are defined by the Development Research Center of the State Council in 2005. The four zones are 1) Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, and Hainan; 2) Shanxi, Anhui, Jiangxi, Henan, Hubei, and Hunan; 3) Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang; And 4) Liaoning, Jilin, and Heilongjiang.

<sup>&</sup>lt;sup>16</sup> This process includes attending classes that promote communist beliefs, writing reports expressing their strong and firm belief in communism and opinions on the CCP, attending socialization events with CCP leaders who extol communist principles, and watching documentaries advocating communism (Bian, Shu and Logan 2001). After the candidates demonstrate loyalty to the CCP through these activities and oral interviews, they take an oath to devote their lives to the communist cause. Such a selection process has mostly remained stable over the last few decades (Li and Walder 2001; Shambaugh and Brinley 2008).

 $<sup>^{17}</sup>$  Ideally, the control group would be politicians who were 17 years old in 1978 and joined the CCP in 1979, and the ideal treatment group would be politicians who were 18 years old in 1978 and had already joined the CCP. However, this would result in too few observations in the RDD sample. To

Figure II shows that various mayors' characteristics are continuous around the age cutoff, which are consonant with the test results on covariate balance in Table II. In addition, the McCrary's density test (Figure OA.1 of Online Appendix) fails to find discontinuity in the distribution of mayors' age in 1978 at 18, suggesting no manipulation of the running variable. Both tests validate our RDD setting.

#### 3.5. Selection into the CCP

Another empirical concern is that the decision of joining the CCP can be a result of selection. There are two potential selection issues. First, the process of how a person is selected into the CCP might be different before and after 1978. Politicians could be selected by the Party based on their pre-existing ideologies and other characteristics. However, as described in Section 2.1, the Chinese government carefully communicated the reforms in a way that was ideologically congruent with the Communist doctrine. This suggests that the decision of who, whether, and when to join the CCP is unlikely to differ significantly around 1978. Notwithstanding, we control for their credentials in our OLS regressions.

Second, politicians who are willing to join the CCP may be different before and after 1978 due to their self-selection. We argue that this concern should be minimized by our RDD setting, where individuals have a very narrow age gap and join the Party within a short period. Both Table II and Figure II show that there is no significant difference across all mayor characteristics—minority status, work experience, education, major of study, future promotion, education/ hometown/ political ties—except age, 18 suggesting that the selection effect is limited in our RDD sample. We also fail to find significant difference between the two groups in firm-, CEO-, and city-level variables in the year right before the politician became the mayor of a city.

In summary, selection issues are unlikely to be major concerns for the RDD sample. Although it is still possible that politicians were selected into the CCP based on unobservable characteristics such as their intrinsic beliefs, this possibility does not invalidate our interpretation, as long as such selection is not driven by characteristics other than their ideology. As the focus of our empirical identification is on how the difference in politicians' ideology leads to different corporate policies, the source of the

increase the number of observations, in some analyses, the control group includes the 14– to 17-year-old cohort, and the treatment group includes the 18– to 21-year-old cohort in 1978.

<sup>&</sup>lt;sup>18</sup> Mayors who joined the CCP before 1978 are on average 1.6 years older than those who joined the CCP after 1978. This difference is expected and consistent with how we construct our RDD sample.

ideological difference (i.e., indoctrination or self-selection based on intrinsic belief) will not change our interpretation.

#### 4. Results

In this section, we first conduct a textual analysis using the frequencies of Maoist and Dengist words appearing in each mayor's speeches and articles to validate that our ideology measure based on the year of joining the CCP indeed captures a mayor's ideology today. We then present the empirical results from testing the impact of mayor ideology on the hypothesized corporate policies and addressing the issue of endogenous matching between mayors and cities. Finally, we explore the potential channels through which a city mayor's ideology affect firms. We also present city-level results.

# 4.1. Textual analysis on media articles bylined by mayors

To show that the year of a politician joining the CCP indeed has a long-lasting effect on her ideology, we conduct a textual analysis using articles bylined by mayors published on official newspapers of the CCP and governments at all levels (e.g., People's Daily, provincial and municipal dailies). To infer the ideology of each mayor, we first identify the 100 most frequently used keywords (excluding preposition and auxiliary words) across all articles of a given mayor. We then asked ten native Chinese speaking faculty members and graduate students with relevant background to rate the ideological tendency of each keyword based on whether it is leaning toward Maoist (assigned a rating of +1), Dengist (assigned a rating of -1), or neutral (assigned a rating of 0). The ideology rating of a keyword ("keyword ideology") is taken as the value given by the majority of raters. We then gauge the extent of Maoism or Dengism of a mayor based on her bylined articles ("mayor article ideology") by multiplying the frequency of a keyword by its ideology rating and then scaled by total number of words (or keywords) in all articles bylined by the mayor. By construction, a higher ideology rating of an article written by a mayor reflects stronger influence of Mao's ideology on her. Given the sheer amount of work, we restrict the manual collection and textual analysis to our RDD sample only, which results in 433 articled bylined by 75 mayors during their tenure as mayors.

Panel A of Table III reports the summary statistics on this mayor article ideology measure. The average number of articles bylined by each mayor is about 6, and the average number of keywords (excluding preposition and auxiliary words) and total words appeared in all articles per mayor are 5,325 and 44,384, respectively. Among 75 mayors, 32 of them joined the Party before 1978. The mayor article ideology scaled by total number

of keywords has an average value of -0.15 with a standard deviation of 0.11, suggesting that an average article has more Dengist-leaning keywords and there is considerable variation in ideology across articles by different mayors. Panel B of Table III presents the results of regressing a mayor's article ideology on our main ideology measure. Both columns show that mayors who joined the CCP before 1978 use significantly more Maoist keywords in their speech or writing in later life compared with those who joined the CCP after 1978. These results provide direct evidence that mayors who joined the Party before 1978 are more influenced by Mao's ideology.

It's worth noting that our ideology measure differs from other ideology measures by focusing on one's ideological exposure, rather than the *ex post* action which may be an outcome of her own political incentive. In fact, given that politicians in China typically face the same political incentives designed by the Central Committee of CCP, our measure better captures the difference in ideology rather than incentive. In addition, we examine a mayor's political tie with higher level politicians and the likelihood of her promotion to higher rank positions. The insignificant difference between the two groups reported in Table II also suggests that our ideology measure is not contaminated by the effects of mayors' political incentives.

#### 4.2. The impact of ideology on firm policies

We next present results of regressing the three sets of outcome variables on the *Mao ideology* dummy in Table IV. Panel A shows the results of firm social contribution as the dependent variable. Column (1) presents the OLS regression results of Model (1), with the coefficient on the *Mao ideology* variable being significantly positive at the 1% level. Since we control for firm fixed effects, our results accentuate the within firm variations. In particular, the coefficient on the *Mao ideology* captures the impact of change in ideology due to mayor turnover. The economic magnitude of the coefficient implies that firms governed by Maoist mayors on average make 1.3 percentage points more stakeholder spending than firms governed by Dengist mayors. Given that the average social contribution to equity ratio is 0.21, this represents about a non-trivial 6% (=0.013/0.21) increase. When we exclude interest expense from the calculation of stakeholder spending, the coefficient is 0.011 (t-statistics = 2.83), which does not change our interpretations.

Columns (2) and (3) of Panel A present the RDD results with a bandwidth of 3 or 4, respectively. That is, our control group includes politicians who were aged 15–17

<sup>&</sup>lt;sup>19</sup> We also conduct the RDD tests with a bandwidth of 2, which results in too few observations. Nevertheless, we find similar results for stakeholder spending, wage inequality, and foreign sales.

(Column (2)) or 14–17 (Column (3)) in 1978 and joined the CCP soon after 1978, and our treatment group includes those who were aged 18–20 (Column (2)) or 18–21 (Column (3)) and were CCP members in 1978. The RDD approach provides a causal estimation on the impact of politicians' ideologies on firms' stakeholder spending. The results are again consistent with our prediction. The effects are stronger both statistically and economically than that in Column (1), which is unsurprising as the RDD estimate captures the local average treatment effect. Excluding interest expense from the calculation of stakeholder spending yields a coefficient estimate of 0.286 (t-statistics = 1.70) with a bandwidth of 3, and 0.301 (t-statistics = 3.38) with a bandwidth of 4. These are both statistically and economically similar to the results in Columns (2) and (3). Overall, our results in Panel A of Table IV support the notion that, on average, firms in cities with Maoist mayors make larger stakeholder spending.

Our second prediction is that firms governed by Maoist mayors have a lower level of within-firm wage inequality (the ratio of the top three executives' average income over the average employee income) than those governed by Dengist mayors. Panel B of Table IV presents the results. Column (1) reports the OLS regression results, and Columns (2) and (3) report the RDD results with bandwidth of 3 and 4, respectively. In all three columns, the coefficient on *Mao ideology* is significantly negative, consistent with our prediction. Economically, given that the average wage inequality ratio is 7.4, the coefficient in Column (1) represents an 8.4% (=0.628/7.4) reduction in wage inequality if the mayor changes from Dengist to Maoist.

Panels C and D of Table IV present the results of testing whether firms in cities with Maoist mayors have a lower degree of internationalization as measured by their foreign assets (sales) ratio. The overseas assets are weighted by the percentage of ownership in each foreign subsidiary. Column (1) in Panels C and D shows the results of the OLS regressions, with the coefficient on *Mao ideology* being significantly negative. This indicates that firms located in cities with Maoist mayors have lower foreign asset ratios. The results are generally stronger when estimated using RDD, as shown in Columns (2)–(3). Except for the result in Column (3) of Panel C, the coefficients on *Mao ideology* are all significantly negative, which support the hypothesis that firms are more internationalized when governed by Dengist mayors.

Figure III plots the RDD results with a bandwidth 4 to visualize the change in firm policies around the cutoff. Panels A–D show that firms influenced by politicians in the treatment group (i.e., Maoist mayors) indeed have a higher stakeholder spending, less wage inequality, and less internationalization around the age cutoff.

#### 4.3. Matching between mayors, firms, and cities

The appointment of mayors in China usually follows a mixed approach combining local nomination with the selection by politicians at higher levels (Jia, Kudamatsu and Seim 2015; Fisman et al. 2020). One concern with our setting is that mayors and cities may be purposely matched based on the economic development of cities. For example, a politician with Dengist ideology may be more likely appointed as the mayor of a city that prioritizes economic growth. Although ideology-based appointment confirms our story, we nevertheless conduct several tests to alleviate this concern.

First, our various fixed effects in OLS regressions help address the issue of endogenous matching between a mayor and a city. For example, *Native place* × *Province* fixed effects take into account that mayors growing up in different places may inherently have different beliefs as a result of being exposed to different environments. *Native place* is the province of a mayor's family origin and aims to capture her early-life exposures to various cultures and historical events such as the Japanese occupation, the Civil War, the Great Famine, and the Cultural Revolution, which vary in intensity across regions and could shape her connate ideology. *Province* refers to the province where the firm is located and aims to capture contemporaneous local economic conditions. The interaction therefore absorbs the latent effect of a mayor being assigned to a place due to where she grows up and her early-life experience. Additionally, *City admin. rank* × *Year* and *Economic zone* × *Year* fixed effects absorb the time-varying differences in regional administrative ranks and economic development that may affect mayor appointment decision.

Second, we plot the geographic distribution of mayors' ideology over our sample period. In Figure B.1 of Appendix B, cities in red are those with both Maoist and Dengist mayors. Cities in green are the ones with only Dengist mayors. We do not have cities with only Maoist mayors, because toward the end of our sample period all cities in our sample have had at least a mayor with Deng's ideology. Cities with missing data are colored in gray. Overall, we have data on mayor ideology for 250 cities and among them 147 cities with only Dengist mayors. Across our sample, cities with different ideologies appear to be distributed evenly. For instance, not all coastal cities (which tend to be more economically developed) are governed by Dengist mayors. It alleviates the concern that the appointment of a mayor with a certain ideology is purely dependent on city-level characteristics, such as economic development.

Third, besides various demographic characteristics (except for age) of mayors, Table II also shows the likelihood of promotion and the existence of political ties with superior politicians are similar for politicians in the treatment and the control groups, implying that they share similar political incentives. We further check the covariates balance in city-level economic variables in the year right before a politician became a city's mayor and fail to find any significant difference between two groups of cities. This is consistent with the visual evidence in Figure B.1.

Fourth, we examine if firm, CEO, and city characteristics can predict the ideology of city mayors by conducting a logit regression. Specifically, we use ROA, firm leverage, firm size, revenue growth, CEO age, CEO gender, CEO government relation, city-level GDP, GDP per capita, population and administrative rank to predict a mayor's ideology in the same year (t), the following year (t+1), and three years later (t+3). The coefficients reported in Table OA.1. of Online Appendix imply no significant predictability of economic factors on mayors' ideology, suggesting that the appointment of a mayor with particular ideology does not depend on her personal characteristics or the city's economic condition.

#### 4.4. Evidence from anti-corruption investigations

To further alleviate the potential endogenous matching, we repeat the OLS analysis on a subsample of city mayors with turnovers related to the recent anticorruption campaign in China starting in 2012. Specifically, we exploit the setting in which a mayor is replaced because of her superior being investigated and dismissed during the campaign. As the timing of the investigation is exogenous to a city's economic conditions and the replacement is appointed within a short time, it is reasonable to assume that the subsample does not suffer severely from the endogenous matching problem. We first manually collect information on all anti-corruption investigations on government officials at the provincial level or above during our sample period.<sup>20</sup> We label a mayor turnover as a "related turnover" if it happened in the same province and during a 3-year period around an anti-corruption investigation on a higher-level politician. Overall, we identify 175 mayor turnovers which are related to 95 anti-corruption investigations. We then repeat our OLS analysis on the subsample of firm-year observations with both the former and the replacement mayors for all related turnovers. Results reported in Appendix Table B.1 are qualitatively similar to previous results.

#### 4.5. Economic mechanisms

In this section, we explore the potential economic mechanisms through which a mayor's ideology affects a firm's policies. First, we study how the connection between a firm's CEO and the mayor transmits the ideological effect on corporate policies. Studies

<sup>&</sup>lt;sup>20</sup> The information on the anti-corruption investigation is collected from <a href="https://www.ccdi.gov.cn/">https://www.ccdi.gov.cn/</a>.

have shown that sharing previous working experience, coming from the same hometown, and attending the same schools build strong connections between CEOs and politicians in China. In addition, CEOs who are former or current bureaucrats tend to appoint other bureaucrats as board directors to strengthen political connection (Fan, Wong and Zhang 2007).<sup>21</sup> As a result, connected CEOs may share similar ideologies with politicians who were former colleagues, fellow townsmen, or alumni. Moreover, political connection per se allows the government and politicians to directly interfere in a firm's decision-making (Faccio 2006; Bortolotti and Faccio 2009). Similarly, if a firm's CEO is connected to the mayor in the city where the firm is located, it is easier for the mayor to exert ideological influence on the CEO. Therefore, we expect a stronger impact of a mayor's ideology on a firm's policies when the mayor and the CEO are connected.

To test this prediction, we define a CEO to be politically connected if she has worked in any government organization or if she has shared educational institution, birthplace or workplace with the mayor of the city where her company is located. Data on CEOs' and politicians' birthplaces, educational experience and CEO's past work experience are manually collected from their CVs in CSMAR. We then partition our sample firms into two groups, based on whether a firm's CEO is politically connected, and repeat our baseline tests on these two subsamples separately. Results are reported in Panel A of Table V. First, Mao ideology is significantly correlated with all three corporate policy measures in the expected direction, regardless of whether its CEO is politically connected. This suggests that our baseline results cannot be entirely explained by CEOs' political connection. Second, the ideological effect on corporate policy is economically larger in firms with politically connected CEOs. For example, the coefficient on Mao ideology is -35.88 in Column (3), compared with -6.17 in Column (4), which are economically different from each other. These results corroborate our conjecture that the CEO's political connection can partially explain our results thus serve as a channel through which a mayor's ideology affects local firms.

Second, local politicians in China can influence firms through "special deals" for achieving their socio-economic goals (Bai, Hsieh and Song 2019).<sup>22</sup> Many Chinese firms,

<sup>21</sup> In the U.S. context, Cohen et al. (2008) find that mutual fund managers place larger bets on firms when they are connected to board members of these firms. Cohen et al. (2010) likewise find that analysts with school ties to senior corporate officers have comparative information advantages and produce superior research reports.

<sup>&</sup>lt;sup>22</sup> Chinese government attempts to use subsidies to accomplish their social objectives, such as more equitable distributions of income, or a lower unemployment rate. The 12th Five-Year Plan (2011-2015), announced by the Central Committee, proposed to address rising inequality and create an environment for greater sustainable growth by prioritizing more equitable wealth distribution, increased domestic consumption, improved social infrastructure and better social safety nets.

especially private ones, succeed in part by obtaining such deals that enable them to either break formal rules or receive favorable access to resources. These deals may come in the forms of better access to government procurement contracts (Schoenherr 2019), cheaper credit with implicit debt guarantee (Borisova, Fotak, Holland and Megginson 2015), and more subsidies (Lee, Walker and Zeng 2014), which help relax recipients' budget constraints and enhance their profitability. Therefore, we expect that politicians are more likely to grant "special deals" to firms which comply with their ideologies.

To test this channel, we partition our sample into two groups with high and low levels of subsidies based on whether they are above or below the median amount of government subsidies received by the firm in our sample. We expect a mayor's ideology to have a greater impact on firm policies in the high subsidies group. Results reported in Panel B of Table V largely confirm our expectation. Across specifications, the effect of the mayor's ideology is mainly significant in the subsample of firms with higher government subsidies. For the subsample of firms with low subsidies, the coefficients on *Mao ideology* are significant in only half of the cases and with much smaller magnitudes. These results comport with the view that mayor ideology has a stronger impact on firms receiving special deals from the local government. In Panel C of Table V, we also partition our sample based on the sample median of a firm's cost of debt, defined as the ratio of interest payments over total amount of debt.<sup>23</sup> We find that the ideological effect is stronger in firms with a lower cost of debt, again corroborating the "special deals" channel.

#### 4.6. Cross-sectional variations

We next explore other cross-sectional variations of the ideological effect. First, we investigate the role of marketization in the local economy. With a well-developed market and legal system, the government has less leeway to directly interfere in a firm's operation, as various parties can easily resort to enforceable contracts. Instead, government influence is more likely to occur through the subtler ideological channel. In contrast, when market intermediary and legal environment are underdeveloped, the government can adopt an administrative model by directly intervening firm-level operational decisions thus rely less on ideological influence. We expect that a mayor's ideology has a stronger impact on corporate policies in regions that are more market-oriented. We use the

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Lorentzen (2014) discusses that the authority closely watches and sometime censors information revealing inequality. And Chinese firms FDIs are highly credit dependent (Lin and Ye 2018). <sup>23</sup> We do not directly observe the interest rates of a firm's bank loans. As a proxy, we compute the ratio of average interest payments over total debt for each firm. We argue that firms with lower cost of debt are more likely to be recipients of subsidized loans from state banks.

National Economic Research Institute (NERI) Index of Marketization for Chinese provinces, which is created by Fan et al. (2003) and updated annually, to measure the degree of market-orientation in each Chinese province. Specifically, the index describes the development of market intermediary and the legal environment.<sup>24</sup> We sort firms into either a High or a Low group based on whether the marketization index score for the province it situates in is above or below the sample median in each year.

Panel A of Table VI reports the results. First, coefficients on *Mao ideology* are significant and the signs of the coefficients are consistent with previous results in six out of eight specifications. This suggests that our baseline results cannot be entirely explained by the market-orientation of the region. In addition, a mayor's ideology has significantly larger effects on wage inequality, foreign assets ratio, and foreign sales ratio in the high group than that in the low group.

Second, we investigate how the effect of a mayor's ideology differs between regions with and without locally ingrained Maoist ideology. 25 We expect that the ideological influence on corporate policies should be weaker in regions where Maoism has taken strong root. The proxy for a Maoism-ingrained region is whether it was a revolutionary base of the CCP during the Sino-Japan War and the Civil War. Revolutionary base areas, such as Yan'an, are where the CCP established its initial power, and they have a long tradition of collaboration between the CCP and local citizens. The development of revolutionary base areas was crucial to the CCP's ascendance to power in China, and Mao's ideology is more strongly rooted in these areas (Chen and Kung 2020). Even today, many memorial halls are established in such places, serving to educate people about the history of Mao and the CCP. In general, people who grow up in a revolutionary base area tend to believe more strongly in Maoism and are less tuned by other ideologies. Therefore, we expect that, if a city mayor grew up in a revolutionary base area, the year of joining the CCP will have less impact on her ideology, as she was already inculcated with Maoism. Similarly, if a firm is located in a revolutionary base area, it will be less influenced by its mayor's ideology.

To test this prediction, we sort firms into two groups. The revolutionary base (RB) group includes firms located in revolutionary base areas or cities whose mayors grow up in revolutionary base areas, and the non-revolutionary-base (nonRB) group includes the

<sup>&</sup>lt;sup>24</sup> The index is constructed based on the proportion of lawyers to local population, the proportion of registered accountants to population, producer protection, and customer protection. A higher level of index indicates better development of intermediaries and legal system (i.e., a higher degree of market orientation) of the local (provincial) economy.

<sup>&</sup>lt;sup>25</sup> The complete list of the CCP revolutionary base areas is available upon request.

rest of the firms. Results in Panel B of Table VI largely confirm our prediction. We find that the coefficients on *Mao ideology* have a larger magnitude for the nonRB subsample than for the RB sample in all regressions.

Finally, we compare the effects of mayor ideology on state-owned enterprises (SOEs) with that on non-state-owned enterprises (non-SOEs). SOEs are firms in which a government is the controlling shareholder. The government usually appoints the management team of a SOE to guarantee the firm acts in its own interests. In contrast, the government has much less direct control over non-SOEs. Instead, it can influence non-SOEs through a subtler "invisible hand" such as ideology. Therefore, we expect that a mayor's ideology would have a greater impact on non-SOEs.

Results in Panel C of Table VI mostly support our conjecture. First, almost all coefficients on *Mao ideology* are statistically significant, and the signs of the coefficients are consistent with previous results across all subsamples. These results suggest that the ideological effects on corporate policies are prominent among both SOEs and non-SOEs. Second, except for the results on social contribution, the magnitude of coefficients on *Mao ideology* is significantly larger in the subsample of non-SOEs than that of SOEs. For example, it is –23.81 in Column (4), compared to –15.16 in Column (3). The finding that SOEs under Mao's ideological influence make more stakeholder spending than non-SOEs may be a result of SOEs providing better employee welfare on average. But across the board, a mayor's ideological influence seems to be more important in non-SOEs, where direct intervention in decision-making is less likely.

Overall, results in Table VI suggest that the effects of politicians' ideology on firms are stronger in regions or firms that they have indirect control and without existing ideological imprint.

## 4.7. City-level results

All results presented so far are at the firm level. Intuitively, mayors' ideologies should also directly affect city policies. Due to data limitations, it is infeasible to find the exact city-level equivalents to firm-level policies or to simply aggregate them to the city level (as the majority of the firms in China are not publicly listed, whereas our sample consists of only listed firms). Nevertheless, we collect city-level data on social spending,<sup>26</sup> the urban-rural income gap from the website of National Bureau of Statistics of China,<sup>27</sup>

<sup>&</sup>lt;sup>26</sup> City-level social spending mainly includes the following items: the social insurance fund subsidy, retirement expenses of administrative institutions, the employment subsidy, the minimum living allowance for urban and rural residents, and living support expenditures for natural disasters.

<sup>&</sup>lt;sup>27</sup> See: <a href="http://www.stats.gov.cn/">http://www.stats.gov.cn/</a>

and the amount of foreign investment from CSMAR. We believe these are the best city-level equivalents to the three types of firm policies we test earlier. Analogous to the hypotheses on firm policies, we expect that cities with Maoist mayors have higher social spending, lower urban-rural income gaps, and less foreign investments. Table VII reports the RDD results with bandwidths of 3 and 4, with the coefficients on *Mao ideology* being positive in the first two columns while negative in the last four columns. These results are consistent with our expectations.<sup>28</sup>

#### 4.8. Ideology and financial performance

So far, our results suggest that a mayor's ideology affects corporate and city-level policies. A natural question that arises is whether such ideology-induced policy differences have persistent impact on the financial performance of a firm and a city. On the one hand, it is reasonable to expect ideology-induced policy distortion to have real impact on firms as well as financial institutions and markets. On the other hand, neither firms nor politicians with a consistently poor financial performance are likely to "survive" in the long run. Over time, politicians with a particular type of ideology that is related to poor financial outcomes may be replaced, and firms might also adjust their policies or develop alternative mechanisms to offset the adverse ideological effects. Therefore, it is *ex ante* unclear whether one should expect to observe significant differences in firm- and city-level financial performance between Maoist and Dengist firms and cities.

We test this by regressing financial performance measures on the lagged *Mao ideology* dummy using the RDD approach. The coefficients on *Mao ideology* capture the overall impact of ideology on firm- and city-level performance. Results are reported in Table VIII. Panel A reports the results on a firm's asset growth, return on assets and market value growth. We find that firms governed by Maoist mayors on average have less growth and lower profitability, possibly because of their higher social contribution, lower monetary incentives to top managers, and lower internationalization level.

Panel B reports the results on a city's financial development, which is measured by the ratio of aggregated market capitalization of listed firms to GDP, the ratio of the aggregated credit from financial institutions to GDP, and the number of listed firms in the city. It is worth noting that these city-level measures aim to capture the financial outcomes of politicians' ideology rather than a city's economic development. We argue that while the appointment of a mayor does not depend on the city's economic development

 $<sup>^{28}</sup>$  We obtain qualitatively similar results using OLS estimations, which are reported in Table OA.2 in the Online Appendix.

such as GDP and GDP per capita, it will have a direct impact on how firms in the city raise external finance because the functioning of ideology crucially hinges on the marketization of the region as shown in Table VI. This is also in line with La Porta et al. (1997). Similar to firm-level results, we find that cities influenced more by Mao's ideology on average have weaker financial development. Results are qualitatively similar when we use OLS estimations, which are reported in Table OA.3 of Online Appendix.

#### 5. Robustness Tests

To further rule out alternative explanations of our results, we conduct additional robustness tests, mostly in the RDD setting for sharper identification.

The timing of university education. The Culture Revolution (1966-1976) disrupted university education in China, and during that period university admission was based on political recommendation rather than academic merits. China restored the university entrance exam in 1977 to allow citizens to receive proper university education (Vogel 2011). One can expect that people who received university education during the Culture Revolution have different ability, skill, and career path than those who entered the universities after 1977. Given that the change in university admission system in 1977 coincides with the timing of the drastic ideological transition, it is important to distinguish these two effects. To do so, we repeat our baseline analysis in Table IV but now include only mayors who received university education after 1977. Data on mayors' university education backgrounds are manually collected from their CVs on CSMAR. Panel A of Table IX reports the RDD results, which are consistent with what we documented previously, implying that the change in ideology instead of the education shift is the main driver of our findings. In unreported tests we find similar results using OLS estimations with mayors who joined the CCP after 1977.

The ideology of the CEO. Another concern is that our results mostly reflect the ideology of corporate CEOs rather than of mayors. Since data on the year in which a CEO joined the CCP is unavailable for most firms, it is infeasible to classify a CEO's ideology into Maoism or Dengism in the same way as we did for mayors. Nevertheless, two tests suggest that our results are unlikely driven by the CEO's ideology. First, in Table II, we find various CEO characteristics (including CEO's age, which could be a crude proxy for CEO's ideology, as an older CEO is more likely to be influenced by Mao) between Maoist mayors and Dengist mayors are not significantly different from each other. Second, taking CEO age as a proxy for her ideology, we divide the RDD sample based on whether the age of a firm's CEO is above or below the sample average. Results are reported in Panel B of

Table IX. We find that a mayor's ideology is significantly correlated with various corporate policies regardless of the CEO's age. The evidence suggests that our results are mainly driven by the difference in mayors' ideology instead of CEOs'.

<u>The ideology of city party secretary.</u> We further address the omitted variable bias related to other politicians' ideology by explicitly controlling for whether the party secretary joined the CCP before 1978 in the RDD setting. Our results are similar as before, suggesting that they are unlikely to be driven by the ideology of the city party secretary, who is not directly in charge of economic activities. In unreported results, we find similar effects when controlling for city party secretary fixed effects in OLS regressions.

A continuous measure of ideology. One may be concerned that the indoctrination of Mao's ideology on an individual can decay over time, especially with the subsequent influence of Deng's ideology. However, such ideology decay will only work against us finding significant result. Nevertheless, to further capture the decaying effect, we construct a continuous variable, *Deng's exposure*, as an alternative proxy for ideological influence. Specifically, the variable is calculated as the ratio of the number of years since 1978 over the total number of years since an individual joined the CCP in case she joined before 1978, and takes the value of 1 if she joined after 1978. A smaller value implies a greater Maoist ideological influence on the individual. Individuals who joined the CCP after 1978 are mostly influenced by Deng's ideology. We repeat our analyses with this continuous measure. The OLS results, reported in Panel D of Table IX, still hold when using this continuous measure.

<u>Falsifications</u>. Furthermore, we do not find statistical significance or the same pattern in our results when we conduct placebo tests on other cutoff years (e.g., 1986, 1987) when no major ideological change occurred.<sup>29</sup>

#### 6. Discussions and Conclusions

As Piketty (2020) argues, the economy is not a natural fact; instead, markets, profits, and capital are all historical constructs that depend on choices. The nature of property rights and their distribution is largely driven by prevailing ideology. Despite numerous studies on the link between ideology and economic policies, we know very little about how ideology affects economic activity through the firm-level channels, and how such ideology-biased corporate behavior translates into financial performance and development.

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<sup>&</sup>lt;sup>29</sup> These results are reported in online appendix Table OA.4.

In this paper, we investigate the impact of politicians' ideology on corporate policies by exploring a unique setting of ideological change in China from Maoism to Dengism around the economic reform in 1978. We find that the discontinuity in ideology around 1978 has had a lasting effect on contemporary firm- and city-level policies. Specially, firms in cities with mayors who joined the CCP under the ideological regime of Mao make more stakeholder spending, have lower within-firm pay inequality and are less internationalized. These effects are stronger in firms with political connections, higher government subsidies, lower costs of debt, and without the state as the controlling shareholder, and in regions that are more market-oriented and without strong pre-existing ideology. We also find that some ideology-induced biases in corporate policies seem to persist and affect firm growth and profitability, as well as city-level financial development in the long run.

Our findings have important implications for the distortionary effects of ideologies on resource allocation within and across firms and economies. First, with regard to the financial and economic development in China, many scholars have investigated the institutional factors underlying the country's economy (e.g., Allen, Qian and Qian 2005; Song, Storesletten and Zilibotti 2011; Bai, Hsieh and Song 2019). Others have attempted to understand the driving forces of the systematic differences across regions in cultures and norms (e.g., Talhelm et al. 2014), political attitudes (e.g., Cantoni, Chen, Yang, Yuchtman and Zhang 2017), as well as different development models employed by the government (Huang 2008; Xu 2011). We show that such systematic differences can be partially attributed to local politicians' ideological difference and provide firm-level evidence. We believe this approach not only helps us better understand the development patterns of China, but also provides a plausible explanation for the enormous variation in corporate policy and management practice around the world.

Second and perhaps more broadly, our study illuminates how ideologies can shape corporate policies and financial performance, besides socioeconomic policies and individual behaviors that have been documented in the literature. We not only show that ideology matters, but also investigate *when* and *how* it matters by testing its causal influence on firm policies. As we have shown, ideology as an "invisible hand" substitute for the "visible hand" of government ownership and administrative rules. These findings are particularly pertinent today, given the increasingly intensive ideological conflicts worldwide as well as the resulting anti-globalization sentiments, trade wars and political instability. Ideology is often context-specific and only by examining different settings and

organizational practices, we can develop a full understanding of its role in shaping economic activities over the long run.

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#### **Table I. Summary Statistics**

This table presents the summary statistics of firm and city politician characteristics, as well as macro-economic variables for the whole sample. Our sample period spans from 2007 to 2017. Statistics are reported at the firm-year level for firm characteristics, at the individual level for politician characteristics, and at the city-year level

for macro-economic conditions. All variable definitions are provided in Appendix A.

ior macro-economic conditions. An variable del	N Mean Median St. dev. Min Max											
Firm characteristics	11	Wear	Wicalan	St. dev.	141111	With						
Mao ideology	26,345	0.14	0.00	0.35	0.00	1.00						
Stakeholder spending	25,973	0.21	0.17	0.16	0.03	1.04						
Wage inequality	26,243	7.40	5.60	6.32	0.49	39.31						
Foreign assets ratio (%)	14,576	1.40	0.00	3.72	0.00	14.71						
Foreign sales ratio (%)	20,701	10.95	0.00	20.28	0.00	94.53						
TobinQ	25,033	3.31	2.61	2.13	1.37	14.36						
Market value growth (%)	21,005	22.01	11.70	44.10	-36.13	133.44						
Return on assets (%)	26,342	3.93	3.73	5.98	-22.48	21.37						
Revenue growth (%)	24,215	7.00	10.76	34.32	-179.40	84.43						
Leverage (%)	22,750	48.20	26.20	66.54	0.00	401.59						
Ln(total assets)	26,345	21.94	21.75	1.42	19.07	26.87						
Total assets growth (%)	22,802	11.43	9.37	19.69	-53.00	80.27						
Politician characteristics												
Mao ideology (mayor level)	1,037	0.12	0	0.32	0	1						
Gender (1 = female)	1,037	0.06	0	0.24	0	1						
Minority $(1 = non-Han)$	1,036	0.11	0	0.31	0	1						
SOE experience	1,036	0.29	0	0.45	0	1						
POE experience	1,036	0.00	0	0.04	0	1						
Education degree (1 = graduate)	1,037	0.81	1	0.39	0	1						
Education major (1 = arts)	1,019	0.62	1	0.49	0	1						
Age	1,036	50.97	51	3.73	40	63						
Promotion	1,037	0.77	1	0.42	0	1						
Post-1977 education	1,037	0.97	1	0.18	0	1						
Education tie (with higher-level politician)	1,037	0.38	0	0.49	0	1						
Hometown tie (with higher-level politician)	1,032	0.04	0	0.19	0	1						
Political tie	1,037	0.40	0	0.49	0	1						
Mao ideology - CCP secretary	1,037	0.24	0	0.43	0	1						
<u>City-level economic variables</u>												
City GDP (billion CNY)	2,311	211	121	280	7	2,818						
City GDP per capita (1 CNY)	2,311	47,851	32,682	48,075	1,489	506,301						
City population $(1 = 1000)$	2,313	4,630	3,850	3,280	180	33,920						
Individual labor $(1 = 1000)$	2,267	551	305	771	0	9,517						
Total employee wages (billion CNY)	2,303	26	12	57	1	900						
Social spending to GDP ratio (%)	2,061	2.09	1.77	1.37	0.39	7.85						
Urban-rural income gap (1 CNY)	1,761	112.37	107.86	34.90	49.16	212.77						
Foreign investment (million USD)	2,224	5,879	1,712	11,372	19	69,836						
Market cap to GDP ratio (%)	2,311	0.67	0.23	3.23	0.00	77.05						
Nr. of listed firms	2,844	9.26	3.00	23.86	1.00	310						
Credit to GDP ratio (%)	2,311	0.86	0.70	0.50	0.28	2.96						

### Table II. Summary Statistics of RDD Sample - Covariates Balance

The table provides subsample summary statistics of city politicians', firms' and CEOs' characteristics, as well as city macro-economic variables for the RDD sample with a bandwidth of 4 (i.e. mayors aged between 14 and 21 in 1978). Specifically, we report the number of observations and the mean value of various variables for the subsample of mayors who joined the CCP in or before 1978 ( $Mao\ ideology=1$ ) at an age between 18 and 21 in 1978 and the subsample of mayors who joined CCP after 1978 ( $Mao\ ideology=0$ ) at an age between 14 and 17 in 1978, respectively. We compare firm, CEO, city macro-economic variables between the two subsamples in the year before the mayor turnover. We report the difference and the t-statistics of these variables across the two subsamples. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. Variable definitions are provided in Appendix A.

	Mao ide	eology = 1	Mao id	leology = 0		
	N	Mean	N	Mean	Difference	t-stat
Politician characteristics						
Gender (1 = female)	34	0.059	<b>5</b> 3	0.113	-0.054	0.85
Age	34	52.235	<b>5</b> 3	50.604	1.631	2.54***
Minority $(1 = non-Han)$	34	0.147	<b>5</b> 3	0.113	0.034	0.46
SOE experience	34	0.206	<b>5</b> 3	0.208	-0.002	0.02
POE experience	34	0.029	<b>5</b> 3	0	0.029	1.25
Education degree (1 = graduate)	34	0.882	<b>5</b> 3	0.755	0.127	1.47
Education major (1 = arts)	34	0.706	<b>5</b> 3	0.566	0.14	1.31
Mao ideology - CCP secretary	34	0.382	<b>5</b> 3	0.226	0.156	1.57
Promotion	34	0.853	<b>5</b> 3	0.736	0.117	1.29
Post-1977 education	34	0.971	<b>5</b> 3	1	-0.029	1.25
Education tie (with higher-level)	34	0.5	<b>5</b> 3	0.415	0.085	0.77
Hometown tie (with higher-level)	34	0.059	53	0.038	0.021	0.45
Political tie	34	0.5	53	0.434	0.066	0.60
Firm and CEO characteristics (t-1)						
Return on assets (%)	224	3.781	437	3.696	0.085	0.17
Revenue growth (%)	202	6.658	385	2.162	4.495	1.37
Leverage (%)	210	57.183	428	48.658	8.525	1.46
Ln(total assets)	225	21.654	437	21.699	-0.045	0.38
CEO age	199	47.477	377	47.981	-0.504	0.88
CEO gender	199	0.045	377	0.053	-0.008	0.41
CEO government relation	224	0.196	434	0.207	-0.011	0.33
City-level economic variables (t-1)						
City GDP (billion CNY)	16	228	41	187	41	0.68
City GDP per capita (CNY)	16	58,140	41	46,456	11,684	0.75
Employee to population ratio (%)	16	14.29	41	11.59	2.70	0.81
Indi. labor to population ratio (%)	14	15.92	41	13.42	2.49	0.52

#### Table III. Ideology Imprinting and Mayor Ideology – Textual Analysis

This table reports the validation tests of our main ideology measure using textual analysis. Panel A reports summary statistics for several variables used for the textual analysis. The key variable of interest, *Mayor article ideology*, is a continuous variable measuring the ideology of a politician based on all her bylines published on *People's Daily* and local official media during her term as a mayor. We collect the top 100 most frequent words used in all the articles bylined by a mayor for the RDD sample with a bandwidth of 4. Each of these keywords is then rated by ten native Chinese speaking faculty members and graduate students based on whether it is leaning toward Maoist (assigned a rating of +1), Dengist (assigned a rating of -1), or neutral (assigned a rating of 0). The ideology rating of a keyword ("keyword ideology") takes the value given by the majority of raters. For a given mayor, we compute her overall "article ideology" using the following formula:

$$Mayor\ article\ ideology_i = \frac{\sum frequency\ of\ a\ keyword\times keyword\ ideology}{Total\ \#\ of\ keywords\ (or\ words)}$$

Panel B reports the results of regressing mayor article ideology on *Mao ideology*, a dummy variable equal to 1 if the city mayor joins the Chinese Communist Party in or before 1978, and 0 otherwise. The *Article ideology* measure is scaled by the total number of keywords and the total number of words in all articles bylined by the mayor in columns (1) and (2), respectively. Robust standard errors are reported in the parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	Pan	el A. Sumi	nary statis	stics				
	N	mean	$\mathbf{sd}$	<b>p</b> 1	p25	p50	p75	p99
No. of articles per mayor	75	5.77	4.97	1	3	$\overline{4}$	9	33
No. of keywords in articles per mayor	75	5,325	3,773	235	2,441	4,532	7,761	15,652
No. of words in articles per mayor	75	44,384	33,418	1,314	19,692	39,741	63,069	138,659
Mao ideology	75	0.43	0.50	0.00	0.00	0.00	1.00	1.00
Mayor article ideology (scaled by keywords)	75	-0.15	0.11	-0.45	-0.23	-0.16	-0.08	0.20
Mayor article ideology (scaled by words)	75	-0.02	0.02	-0.08	-0.03	-0.02	-0.01	0.03

Panel B. Mayor article ideology and main ideology measures

Mayor articles ideology	Scaled by keywords	Scaled by words
	(1)	(2)
Mao ideology	0.062**	0.007**
	(0.025)	(0.004)
Obs.	75	75
$\mathrm{R}^2$	0.08	0.05
Economic magnitude	41.84%	39.87%

#### Table IV. The Impact of Ideology on Corporate Policies

This table reports results from the regression of a firm's stakeholder spending (Panel A), wage inequality (Panel B), foreign assets ratio (%) (Panel C), and foreign sales ratio (%) (Panel D) on an indicator variable *Mao ideology* which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. In each panel, Column (1) report OLS regression results. The OLS regression includes control variables for firm-level, city politician-level, and city macro-economic characteristics. Firm Controls include firm size, ROA, leverage, revenue growth rate and Tobin's Q. City Politician Controls include city mayor's gender, age bin, minority status, education degree, major, work experience in state-owned or privately owned enterprises, and city party secretary fixed effects. City Macro Controls include a city's GDP per capita, number of individual labor, and total employee wages. In addition, we control for firm fixed effects, year fixed effects, industry-year pair fixed effects, city administrative rank-year pair fixed effects, economic zone-year pair fixed effects, and native place (of the mayor)-province (of the firm) fixed effects. Columns (2)-(3) report RDD results with bandwidth at 3 and 4, respectively. Standard errors are clustered at the mayor level for OLS regressions and at the firm level for RDD analysis, and are reported in the parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	Panel A	A. Stakeholder s	pending	Pan	el B. Wage inequ	ıality
	OLS	R	DD	OLS	R	DD
	(1)	(2)	(3)	(1)	(2)	(3)
Mao ideology	0.013***	0.278*	0.293***	-0.628**	-7.569***	-12.155***
	(0.004)	(0.168)	(0.089)	(0.289)	(2.417)	(2.401)
Firm controls	Y	N	N	Y	N	N
City politician age and other controls	Y	N	N	Y	N	N
City macro controls	Y	N	N	Y	N	N
Firm FE and Year FE	Y	N	N	Y	N	N
Industry × Year FE	Y	N	N	Y	N	N
City admin. rank × Year FE	Y	N	N	Y	N	N
Economic zone × Year FE	Y	N	N	Y	N	N
Native place × Province FE	Y	N	N	Y	N	N
Obs.	17,594			17,571		
$\mathbb{R}^2$	0.84			0.76		
Obs. left		2,376	2,409		2,398	2,431
Obs. right		220	641		230	656
Bandwidth		3	4		3	4

Table IV (Continued). The Impact of Ideology on Corporate Policies

	Panel C	. Foreign assets r	atio (%)	Panel	D. Foreign sales r	atio (%)
	OLS	RD	D	OLS	RI	)D
	(1)	(2)	(3)	(1)	(2)	(3)
Mao ideology	-0.828***	-2.685***	-0.048	-1.360*	-23.082***	-28.710***
	(0.259)	(0.380)	(0.785)	(0.650)	(2.288)	(5.184)
Firm controls	Y	N	N	Y	N	N
City politician age and other controls	Y	N	N	Y	N	N
City macro controls	Y	N	N	Y	N	N
Firm FE and Year FE	Y	N	N	Y	N	N
Industry × Year FE	Y	N	N	Y	N	N
City admin. rank × Year FE	Y	N	N	Y	N	N
Economic zone × Year FE	Y			Y		
Native place × Province FE	Y			Y		
Obs.	8,037			13,241		
$\mathbb{R}^2$	0.81			0.88		
Obs. left		1,476	1,509		1,968	2,000
Obs. right		7	49		97	376
Bandwidth		3	4		3	4

#### Table V. Economic Mechanisms

This table reports the RDD results of testing the cross-firm heterogeneity in the ideological impact on a firm's stakeholder spending, wage inequality and internationalization (foreign assets ratio and foreign sales ratio) following the same specification in Column (3) of Table IV. We use the RDD sample with a bandwidth of 4 in all models. The key explanatory variable *Mao ideology* is a dummy variable which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. Panel A shows the results of partitioning the sample into subsamples of "Connected" and of "Unconnected" firms. A firm is defined as being connected if its CEO has worked in government organizations before, or shared the same birthplace, workplace or educational institution with the city mayor. Panel B shows the results of partitioning the sample into subsamples based on whether a firm's government subsidies to total asset ratio is above or below the sample median. Panel C shows the results of partitioning the sample into subsamples based on whether a firm's average interest expense to total debt ratio (cost of debt) is above or below the sample median. Standard errors reported in the parentheses are clustered at the firm level. \*, \*\*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	THE CAPE STATE		A. Subsample res							
	Stakeholde	er spending	Wage in	equality	Foreign a	ssets ratio	Foreign s	sales ratio		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	Connected	Unconnected	Connected	Unconnected	Connected	Unconnected	Connected	Unconnected		
Mao ideology	1.164***	0.149*	-35.875***	-6.167**	-5.206**	-3.680*	-30.575***	-26.944***		
	(0.124)	(0.085)	(3.749)	(2.646)	(2.446)	(2.006)	(6.651)	(8.354)		
Obs. left	973	1,436	980	1,451	475	1,033	748	1,252		
Obs. right	293	348	296	360	20	29	168	208		
Panel B. Subsample results based on government subsidies received by the firm										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	High subsidy	Low subsidy	High subsidy	Low subsidy	High subsidy	Low subsidy	High subsidy	Low subsidy		
Mao ideology	1.412***	0.084	-24.984***	-9.134***	-4.723***	-5.804*	-52.631***	-7.304		
	(0.164)	(0.068)	(3.117)	(2.948)	(1.511)	(3.331)	(6.517)	(6.457)		
Obs. left	1,080	1,329	1,084	1,347	694	815	885	1,115		
Obs. right	264	377	270	386	22	27	126	250		
		Panel C. S	ubsample result	s based on firm'	s average cost o	f debt (COD)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	High COD	Low COD	High COD	Low COD	High COD	Low COD	High COD	Low COD		
Mao ideology	0.134	1.091***	-15.243***	-29.383***	2.254	-5.188**	-12.472*	-40.450***		
	(0.100)	(0.098)	(2.428)	(3.520)	(2.318)	(2.263)	(6.758)	(6.085)		
Obs. left	816	1,593	833	1598	554	955	724	1,276		
Obs. right	219	422	231	425	19	30	145	231		

#### Table VI. Cross-sectional Variation

This table reports the RDD results of testing the cross-sectional heterogeneity in the ideological impact on a firm's stakeholder spending, wage inequality and internationalization (foreign assets ratio and foreign sales ratio) following the same specification in Table V. Panel A shows the results of partitioning the sample into two subsamples based on the development of financial intermediary and legal environment in their headquarter cities. High/Low indicates firms whose cities have above/below the median level of development in financial intermediary and legal environment in our sample. Panel B shows the results of partitioning the sample into two subsamples based on whether the firm is located in, or the city mayor comes from, a former CCP revolutionary base (RB) area or not (Non-RB). Panel C shows the results of partitioning the sample into subsamples of state-owned enterprises (SOEs) and non-SOEs. SOEs are those firms with the government as the controlling shareholder (defined by CSMAR). Standard errors reported in the parentheses are clustered at the firm level. \*, \*\*\*, and \*\*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

F	Panel A. Subsa	mple results ba	ased on the dev	elopment in fin	ancial interme	diary and lega	al environment	
	Stakeholde	er spending	Wage in	nequality	Foreign a	ssets ratio	Foreign s	ales ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	High	Low	High	Low	High	Low	High	Low
Mao ideology	0.137**	0.307	-23.359***	4.153	-9.940***	-5.410***	-33.022***	-21.527***
	(0.056)	(0.196)	(2.334)	(3.691)	(2.657)	(1.891)	(5.756)	(7.435)
Obs. left	2,141	268	2,155	276	1,401	108	1,799	201
Obs. right	540	101	550	106	26	23	304	72
		Panel	B. Subsample r	esults based on	revolutionary	base		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	RB	Non-RB	RB	Non-RB	RB	Non-RB	RB	Non-RB
Mao ideology	0.231***	1.358***	-1.277	-29.325***	-2.278**	-5.791***	-1.457	-42.409***
	(0.056)	(0.160)	(2.590)	(4.106)	(0.974)	(1.716)	(10.979)	(4.678)
Obs. left	490	1,919	491	1,940	410	1,099	443	1,557
Obs. right	249	392	262	394	4	45	145	231
		Pane	el C. Subsample	results based o	n state owners	ship		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SOE	nonSOE	SOE	nonSOE	SOE	nonSOE	SOE	nonSOE
Mao ideology	0.353***	0.080	-15.157***	-23.809***	-3.520***	-8.235**	-49.980***	-56.062***
	(0.136)	(0.063)	(3.378)	(2.798)	(0.782)	(3.221)	(8.431)	(7.924)
Obs. left	669	1,740	673	1,758	384	1,125	579	1,421
Obs. right	262	379	263	393	15	34	159	217

#### Table VII. The Impact of Ideology on City Policies

This table reports the RDD results of testing the ideological impact on the city-level social security expense, inequality, and internationalization. The dependent variables are the social spending to GDP ratio in Columns (1)-(2), the urban-rural income gap in Columns (3)-(4), and the natural logarithm of foreign investment amount in Columns (5)-(6) at the city level. The key explanatory variable *Mao ideology* is a dummy variable which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. Standard errors reported in the parentheses are clustered at the city level. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	Social spending to GDP ratio			l income gap	Ln(1+foreign inv. Amt)		
	(1)	(2)	(3)	(4)	(5)	(6)	
Mao ideology	0.654	1.713***	-0.097***		-2.824***		
	(0.411)	(0.599)	(0.016)	(0.017)	(0.562)	(1.020)	
Obs. left	112	112	98	98	127	127	
Obs. right	33	80	33	81	35	81	
Bandwidth	3	4	3	4	3	4	

#### Table VIII. Ideology and Performance at Firm and City Levels

This table reports the RDD results of testing the ideological impact on firm-level performance (Panel A) and city-level financial development (Panel B) following the same specifications in Columns (2) and (3) of Table IV. In Panel A, firm performance is measured as a firm's one-year forward assets growth rate (Columns (1)-(2)), return on assets (Columns (3)-(4)), and market value growth rate (Columns (5)-(6)). In Panel B, city financial development is measured as a city's one-year forward market capitalization to GDP ratio (Columns (1)-(2)), credit to GDP ratio (Columns (3)-(4)), and log-transformed number of listed firms (Columns ((5)-(6))). Standard errors reported in the parentheses are clustered at the firm level in Panel A, and clustered at the city level in Panel B. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

		Panel A	A. Firm performa	nce			
	Assets gr	rowth (t+1)	Return on a	assets (t+1)	Market value growth (t+1)		
Mao ideology	(1) -16.449**	(2) -22.163***	(3) -5.677***	(4) -8.812***	(5) -26.959***	(6) -32.495***	
	(8.022)	(5.458)	(1.377)	(1.600)	(8.931)	(9.403)	
Obs. left	$2,\!258$	2,258	2,258	2,258	2,076	2,076	
Obs. right	233	658	233	658	205	603	
Bandwidth	3	4	3	4	3	4	

	Panel B. City financial development										
	Market cap to	GDP ratio (t+1)	Credit to G	DP ratio (t+1)	Ln(1+nr. of listed firms) (t+1)						
	(1)	(2)	(3)	(4)	(5)	(6)					
Mao ideology	-2.524**	-3.518*	-0.732***	-0.810***	-2.601***	-3.411***					
	(1.133)	(1.952)	(0.192)	(0.278)	(0.609)	(1.042)					
Obs. left	121	121	121	121	143	143					
Obs. right	35	82	35	82	45	93					
Bandwidth	3	4	3	4	3	4					

#### Table IX. Additional Robustness Tests

This table reports results of robustness test on the ideological impact on firm policies. Panel A shows the results from RDD analysis similar to that in Columns (2) and (3) of Table IV, but on a subsample of mayors who received college education after 1977 only. Panel B shows the results from RDD analysis with the sample partitioned into two subgroups based on whether the age of the firm's CEO is above or below the sample average. Panel C reports the results of RDD analysis similar to those in Columns (2) and (3) of Table IV but additionally controls for mayor age and an indicator for whether the city party secretary joined the CCP before 1978. In Panel D, we follow the same OLS specification as in Table IV, but define the explanatory variable as the ratio of the number of years since 1978 to the total number of years since she became a CCP member if she joined before 1978, and as 1 if she joined after 1978. \*, \*\*\*, and \*\*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

		holder iding	Wage in	equality		Foreign assets ratio		Foreign sales ratio	
	Pa	nel A. RDD	Only mayo	rs with coll	ege educatio	n after 1977	,		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Mao ideology	0.278*	0.293***	-7.569***	-12.23***	-2.685***	-0.048	-23.08***	-30.41***	
	(0.169)	(0.092)	(2.417)	(2.472)	(0.380)	(0.785)	(2.288)	(5.288)	
Obs. left	2,376	2,409	2,398	2,431	1,476	1,509	1,968	2,000	
Obs. right	220	561	230	576	7	49	97	325	
Bandwidth	3	4	3	4	3	4	3	4	
		Panel B.	RDD: Subs	amples of yo	oung and old	CEOs			
_	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
_	Old	Young	Old	Young	Old	Young	Old	Young	
Mao ideology	0.261**	0.295**	-9.743***	-16.99***	-2.898**	-6.327**	-32.36***	-20.48***	
	(0.116)	(0.137)	(2.882)	(2.681)	(1.399)	(2.648)	(6.449)	(6.922)	
Obs. left	1,669	766	1,688	775	1,115	414	1,410	618	
Obs. right	412	272	417	278	39	14	224	158	
		Panel C. R	DD: Control	lling for par	ty secretary	ideology			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Mao ideology	0.288*	0.300***	-6.590***	-11.30***	-2.089***	-0.062	-23.39***	-40.21***	
	(0.170)	(0.089)	(2.321)	(2.258)	(0.516)	(0.819)	(4.227)	(5.657)	
Mayor age &									
CCP secretary ideology	Y	Y	Y	Y	Y	Y	Y	Y	
Obs. left	2,376	2,409	2,398	2,431	1,476	1,509	1,968	2,000	
Obs. right	220	641	230	656	7	49	97	376	
Bandwidth	3	4	3	4	3	4	3	4	
Panel	D. OLS:	Continuous	ideology m	easure base	d on the exp	osure to De	ng's ideology	7	
	(	1)	(	2)	(3	)	(-	4)	
Deng's exposure	-0.00	01***	0.0	56**	0.054	1***	0.12	26**	
	(0.0	000)	(0.0	023)	(0.0)	19)	(0.0	054)	
Controls	-	Y	,	Y	Y	,	,	Y	
Obs.	17,	,594	17,	571	8,0	37	13,	241	
$\mathbb{R}^2$	0.	.84	0.	76	0.0	31	0.	0.88	



Fig. I. Frequency of Ideological Keywords on *People's Daily* over Time

This figure plots the scaled frequency of four major Maoism keywords on *People's Daily* over the period of 1969-2003. The scaled frequency measure is defined in the Appendix A.

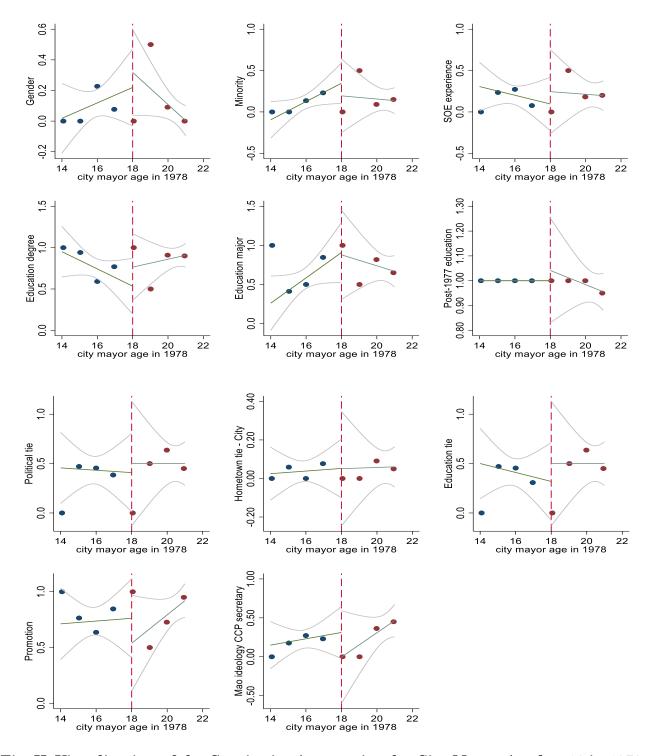


Fig. II. Visualization of the Continuity Assumption for City Mayor Aged at 18 in 1978 This figure presents the graphical representation on the local continuity assumption of the RDD test in terms of mayors' gender, minority status, working experience, education degree, major, and higher education timing, as well as political tie to higher level politicians (hometown tie and/or education tie), expost promotion to positions on the higher administrative level, and the city party secretaries' ideology. 95% confidence intervals are drawn around the linear fitted line.

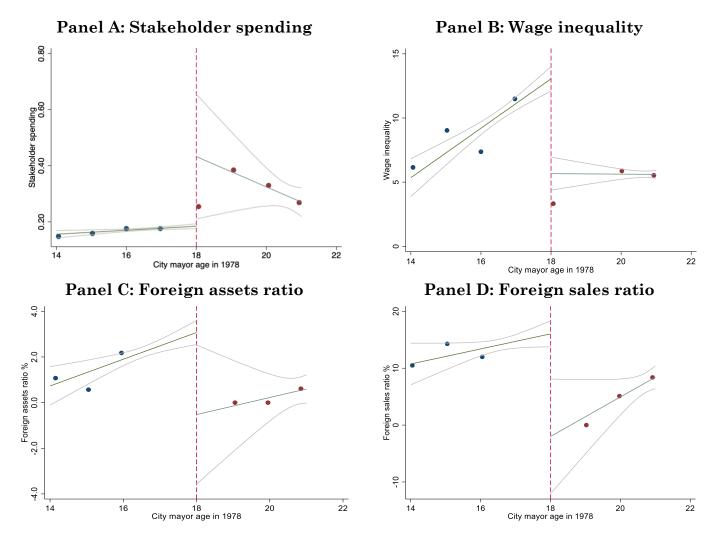


Fig. III. Visualization of Regression Discontinuity for City Mayor Aged at 18 in 1978 These figures plot the distribution of firm-level policies around the cutoff age (i.e., 18 years old) of being eligible to join the Chinese Communist Party in 1978 for contemporary city mayors. A discontinuity is shown in an average firm's stakeholder spending to equity ratio (Panel A), wage inequality (Panel B), foreign assets ratio (Panel C) and foreign sales ratio (Panel D). 95% confidence intervals are drawn around the linear fitted line.

## Appendix A: Variables Definition

### Table A1. Variable Definition

Promotion

Variable name	Description		
Dependent varial	<u>bles</u>		
Stakeholder spending	The amount of a firm's stakeholder spending (the sum total tax contribution, employee payment, interest expense, and donations) divided by the book value of equity of the firm. Note that this is the definition provided by CSMAR database. For robustness, we also exclude interest expense or tax payment from the calculation of stakeholder spending as an alternative measure. Source: CSMAR.		
Wage inequality	The ratio of the average income of the top three executives to the average employee income within a company. Source: CSMAR.		
Foreign assets ratio	The ratio of the assets of a firm's overseas subsidiaries to its total assets. The total assets of overseas subsidiaries are weighted by the parent company's ownership (%). Source: CSMAR.		
Foreign sales ratio	The ratio of a firm's foreign sales to its total sales revenue (%). Source: CSMAR & Datastream.		
Politician charac	<u>cteristics</u>		
Mao ideology	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered joined the Chinese Communist Party in or before 1978, and 0 otherwise. Source: CSMAR.		
Gender	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered is female, and 0 otherwise. Source: CSMAR.		
Minority	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered is ethnically a non-Han minority, and 0 otherwise. Source: CSMAR.		
SOE experience	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered had past work experience in a state-owned enterprise, and 0 otherwise. Source: CSMAR.		
POE experience	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered had past work experience in a non-state-owned enterprise and did not work in a state-owned firm before, and 0 otherwise. Source: CSMAR.		
Age	The age of the city mayor. Source: CSMAR.		
Age bins	Three dummy variables indicating a mayor's age range: 40-50, 50-60, 60 or above. An age bin dummy takes a value of 1 when a city mayor's age falls into the range, and 0 otherwise. Source: CSMAR.		
Education degree	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered obtained a master or higher educational degree, and 0 otherwise. Source: CSMAR.		
Education major	An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered majored in liberal arts or economics, and 0 otherwise (i.e., majored in science and technology subjects). Source: CSMAR.		
Duomotion	An indicator variable that equals 1 if the mayor of the city where the listed firm is		

Source: CSMAR & manual collection.

headquartered was promoted to a higher level of political position, and 0 otherwise.

Post-1977 education An indicator variable that equals 1 if the mayor of the city where the listed firm is headquartered attended college after 1977, and 0 otherwise. Source: CSMAR.

Education tie

An indicator variable that equals 1 if the mayor attended the same school as her immediate superior government official, and 0 otherwise. An education tie can be between a provincial governor or party secretary and the mayor of the sub-provincial city or of the prefecture-level city; or between a member of the Politburo Standing Committee of the CCP and the mayor of a municipality directly under the central government. Source: CSMAR & manual collection.

Hometown tie

An indicator variable that equals 1 if a mayor's birthplace is in the same city as the birthplace of her immediate superior government official, and 0 otherwise. A hometown tie can be between a provincial governor or party secretary and the mayor of the sub-provincial city or of the prefecture-level city; or between a member of the Politburo Standing Committee of the CCP and the mayor of a municipality directly under the central government. Source: CSMAR & manual collection.

Political tie

An indicator variable that equals 1 if the mayor has either an education tie or a hometown tie (at the city level) with her immediate superior government official, and 0 otherwise. Source: CSMAR & manual collection.

Native place

The province of the mayor's family origin (which is often the hometown of one's grandfather, and may or may not be the same as where the mayor was born). Source:

CSMAR.

Deng's exposure

The ratio of the number of years since 1978 over the total number of years since an individual joined the CCP in case she joined before 1978, and equals 1 if she joined after 1978. Source: CSMAR.

#### Firm and CEO characteristics

Size The natural logarithm of the firm's total assets. Source: CSMAR.

TobinQ

The ratio of the sum of market value of equity and liability to the firm's total book

value of assets. Source: CSMAR.

Return on assets

The ratio of net profit to total assets (%). Source: CSMAR.

Market value growth

The annual growth rate of the firm's market capitalization (%). Source: CSMAR.

Revenue growth

The annual growth rate of the firm's sales revenue (%). Source: CSMAR.

Leverage

The ratio of debt to book equity of the firm (%). Source: CSMAR.

Total assets growth

The annual growth rate of the firm's total assets (%). Source: CSMAR.

Subsidy

The ratio of government subsidies to total assets of the firm (%). Source: CSMAR.

Connected

An indicator variable that equals 1 if the CEO of the firm used to work in a government organization, or had the workplace, birthplace, and school experience

with the contemporary city mayor, and 0 otherwise. Source: CSMAR.

SOE

An indicator variable that equals 1 if a firm's direct controlling shareholder is the

government in a given year, and 0 otherwise. Source: CSMAR.

Legal

environment High

An indicator variable that equals 1 if the province where the listed firm is located has an above-median rating on market intermediary organization development and legal environment, otherwise 0. Source: NERI.

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Revolutionary

base

An indicator variable that equals 1 if the city was formerly a communist

revolutionary base during the Sino-Japan War or the Civil War, and 0 otherwise.

Source: self-collection.

The age of the CEO. Source: CSMAR. CEO age

An indicator variable that equals 1 if the CEO is a female, and 0 otherwise. Source: CEO gender

CSMAR.

CEO government

relation

An indicator variable that equals 1 if the CEO used to work in a government

organization, and 0 otherwise. Source: CSMAR.

#### City level variables

City GDP The natural logarithm of the GDP of the city in a given year. Source: CSMAR.

City GDP per capita

The natural logarithm of per capita GDP of the city in a given year. Source: CSMAR.

City population

The natural logarithm of the population of the city in a given year. Source: CSMAR.

Individual labor

The natural logarithm of the number of individual labor of the city in a given year.

Source: CSMAR.

Total employee wages

The natural logarithm of the total wages of all employees in the city in a given year.

Source: CSMAR.

Employee to population ratio

The ratio of the number of employees to the total population of the city in a given

year. Source: CSMAR.

Individual labor to population ratio

The ratio of the number of individual labor to the total population of the city in a

given year. Source: CSMAR.

Foreign

investment amount

The foreign investment amount of the city in a given year. Source: CSMAR.

Social spending to GDP ratio

The ratio of the social security and employment expenditure to GDP of the city in a given year. Source: CSMAR.

Urban-rural

income gap

The difference between CPI-adjusted average per person urban income and CPIadjusted average per person rural income. Source: CSMAR.

Market cap to GDP ratio

The ratio of the aggregated market capitalization of listed firms headquartered in a city to the GDP of the city in a given year. Source: CSMAR.

Credit to GDP ratio

The ratio of the aggregated credit from financial institutions in a city to the GDP of the city in a given year. Source: CSMAR.

Ln(1+nr. of listed firms)

The natural logarithm of the number of listed firms of the city plus one in a given year. Source: CSMAR.

City administrative

level

An ordinal indicator variable that equals 1 if the administrative level of a city is ranked as sub-provincial city; equals 2 if the administrative level of a city is ranked as prefecture level city; equals 3 if the administrative level of a city is ranked as municipality. Source: Development Research Center of the State Council.

An ordinal indicator variable representing the four economic zones defined by the Development Research Center of the State Council in 2005. It takes the value of 1 for Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong,

Economic zone

and Hainan; 2 for Shanxi, Anhui, Jiangxi, Henan, Hubei, and Hunan; 3 for Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu,

Qinghai, Ningxia, Xinjiang; 4 for Liaoning, Jilin, and Heilongjiang. Source:

Development Research Center of the State Council.

#### Other variables

Frequency indexes for a set of ideological keywords appear in *People's Daily*: "Class (*Jie Ji*)", "Imperialism (*Diguo Zhuyi*), "Solidarity (*Tuan Jie*)", "Revolution (*Ge Ming*)". For each keyword, the frequency index is calculated using the following formula:

Ideological keyword frequency

$$frequency_{it} = \frac{nr. of \ appearance_{it} \times length_i \times 10000}{total \ nr. of \ words \ on \ People's \ Daily_t}$$

where nr.of appearance<sub>it</sub> is the total number of times a keyword i appears on People's Daily on a given day t;  $length_i$  is the total length in words of the keyword i; and total nr.of words on People's  $Daily_t$  is the total number of words on People's Daily on that day. This measure is expressed as basis point by multiplying the frequency measure by 10,000 for better readability. Source: People's Daily.

A continuous variable measuring the ideology of a politician based on a textual analysis using articles published during her term as the mayor. We collect the top 100 most frequent keywords used in all the articles bylined by a mayor for the RDD sample with a bandwidth of 4. Each of these keywords is then rated by ten native Chinese speaking faculty members and graduate students based on whether it is leaning toward Maoist (assigned a rating of +1), Dengist (assigned a rating of -1), or neutral (assigned a rating of 0). The ideology rating of a keyword ("keyword ideology") takes the value given by the majority of the ten raters. For a given mayor, we compute her "article ideology" using the following formula:

Mayor article ideology

Mayor article ideology<sub>i</sub> =  $\frac{\sum frequency\ of\ a\ keyword\times keyword\ ideology}{Total\ \#\ of\ keywords\ (or\ words)}$ 

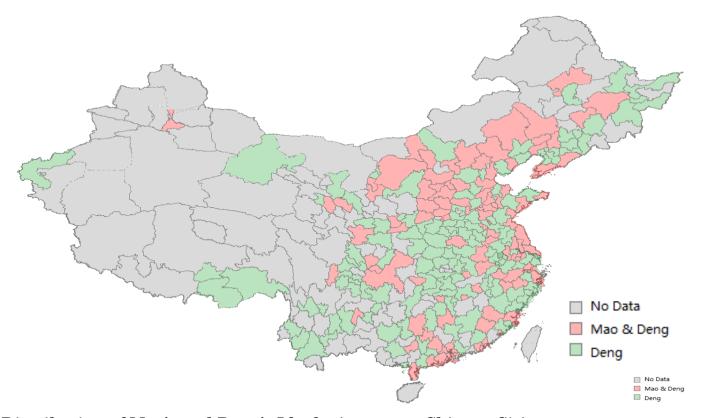


Fig. B.1: Distribution of Mao's and Deng's Ideologies across Chinese Cities

This figure plots the distribution of Chinese cities with mayors having different ideologies over our sample period based on whether they joined the CCP before or after 1978. We classify cities into three groups. The group marked in red consists of cities with both Maoist mayors and Dengist mayors. The group marked in green consists cities with only Dengist mayors. Cities with missing data are marked in grey.

#### Table B.1: The Impact of Ideology on Corporate Policies - Subsample

This table reports the results of the ideological impact on a firm's policies following the regression specifications similar to those in Column (1) Table IV. We restrict the sample to mayors who experienced turnover related to anti-corruption investigations by the Central Commission for Discipline Inspection. A mayor's turnover in our sample is because of her superior being investigated and removed during the campaign. In all specifications, we control for firm size, ROA, leverage, revenue growth rate and Tobin's Q, city mayor's gender, age bin, minority status, education degree, major, work experience in state-owned or privately owned enterprises, and city party secretary fixed effects. We further control for city macro conditions including a city's GDP per capita, number of individual labor, and total employee wages. In addition, we control for firm fixed effects, year fixed effects, industry-year pair fixed effects, city administrative rank-year pair fixed effects, and economic zone-year pair fixed effects. Standard errors reported in the parentheses are clustered on the mayor level. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	Stakeholder spending	Wage inequality	Foreign assets ratio (%)	Foreign sales ratio (%)
	(1)	(2)	(3)	(4)
Mao ideology	0.016*	-0.243	-0.505**	-2.336*
	(0.008)	(0.330)	(0.205)	(1.199)
Controls	Y	Y	Y	Y
Obs.	4,861	4,859	2,829	3,966
$ m R^2$	0.88	0.82	0.85	0.87

## ONLINE APPENDIX

Finance and Ideology: The Firm-level Channels

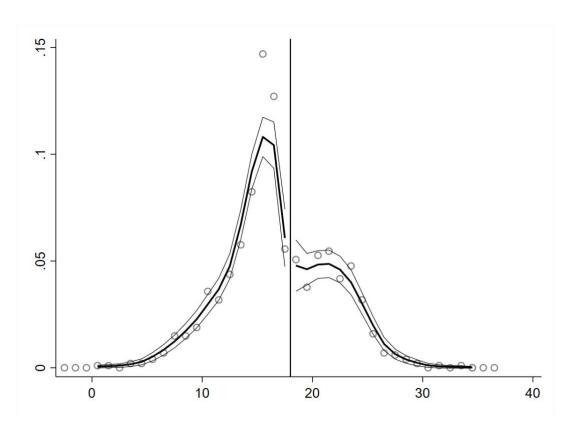


Fig. OA.1. Sample Smoothness at the Cutoff Point: McCrary's Density Test (2008) This figure plots the age distribution of city mayors in our sample in 1978. We use McCrary's density test (2008) and show that the sample distribution of city mayors is smooth around the cutoff point of 18 years old.

#### Table OA.1. Ideology and Economic Covariates

This table reports the logit regression results of regressing a mayor's ideology on a set of economic variables at firm- and city-levels for the RDD sample. The dependent variable, Mao ideology, is a dummy variable which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. Columns (1) to (3) include the dependent variable at t, t+1 and t+3. The set of economic variables include both firm and city characteristics. Firm characteristics include firm size, ROA, leverage, revenue growth rate, CEO age, CEO gender, and CEO government relation. City characteristics include a city's GDP, population, GDP per capita, and city's administrative rank. Standard errors are clustered at the city mayor level. Standard errors are reported in the parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	(1)	(2)	(3)
	Mao ideology	Mao ideology	Mao ideology
	(t)	(t+1)	(t+3)
Return on assets	0.006	0.013	0.010
	(0.014)	(0.016)	(0.019)
Leverage	0.001	0.001	0.000
	(0.001)	(0.001)	(0.001)
Ln(total assets)	0.041	0.015	0.103
	(0.051)	(0.050)	(0.094)
Revenue growth	-0.002	-0.000	-0.002
	(0.002)	(0.003)	(0.003)
CEO age	-0.016	-0.015	-0.010
	(0.011)	(0.014)	(0.017)
CEO gender	-0.152	0.015	0.629
	(0.261)	(0.272)	(0.511)
CEO government relation	-0.268	-0.226	-0.381
	(0.300)	(0.242)	(0.331)
Ln(City GDP per capita)	0.675	-3.415	-1.881
	(1.809)	(3.497)	(2.684)
Ln(City GDP)	-1.666	2.403	0.417
	(1.948)	(2.955)	(2.735)
Ln(City population)	0.872	-3.388	-1.172
	(2.010)	(3.358)	(2.434)
City administrative rank	-0.956	-1.243	-1.539
	(2.191)	(2.270)	(2.140)
Intercept	3.388	23.523	12.199
	(11.743)	(21.572)	(13.346)
Log likelihood	-1,004	-937	-519
Obs.	2,143	2,103	1,595

#### Table OA.2. OLS: The Impact of Ideology on City Policies

This table reports results of regressing city-level policies on a mayor's ideology, using the following model:

City policy<sub>f,t</sub> = 
$$\alpha + \beta \times Mao ideology_{f,t} + \gamma' x_{f,t} + \epsilon_{ft}$$

The dependent variables are the ratio of social spending to GDP in Column (1), the urban-rural income gap in Column (2), and the natural logarithm of total foreign investment amount in Column (3), all at the city level. *Mao ideology* is a dummy variable which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. Politician Controls include the mayor's gender, age bin, minority status, education degree, major, and work experience in state-owned or privately owned enterprises. Macro Controls include a province's GDP per capita, province GDP per capita growth. In addition, we control for province fixed effects, year fixed effects, and city administrative rank-year pair fixed effects. Standard errors reported in the parentheses are clustered at the city mayor level. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

	Social spending to GDP ratio	Urban-rural income gap	Ln(1+foreign inv. amt)
	(1)	(2)	(3)
Mao ideology	0.190**	-0.006**	-0.064
	(0.080)	(0.002)	(0.114)
Politician Controls	Y	Y	Y
Macro Controls	Y	Y	Y
Province FE	Y	Y	Y
Year FE	Y	Y	Y
City Admin. Rank × Year FE	Y	Y	Y
Obs.	1,830	$1,\!554$	1,973
$\mathbb{R}^2$	0.92	0.94	0.93

#### Table OA.3. OLS: Ideology and Performance at Firm and City Levels

This table reports results from regressing firm performance (Panel A) or city-level financial development (Panel B) on a mayor's ideology, using the following model:

$$Performance_{f,t+1} = \alpha + \beta \times Mao\ ideology_{f,t} + \gamma' x_{f,t} + \epsilon_{ft}$$

In Panel A, we measure firm performance as a firm's assets growth rate (Column (1)), return on assets (Column (2)), and market value growth rate (Column (3)), all at t+1. All regressions control for the same set of control variables and fixed effects as those in Tables IV. In Panel B, city development outcome is measured as the city's market cap to GDP ratio (Column (1)), credit to GDP ratio (Column (2)), and the natural logarithm of number of listed firms (Column ((3)), all at t+1. All regressions control for the same set of control variables and fixed effects as those in Tables OA.1. Standard errors reported in parentheses are clustered at the city mayor level. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

Panel A. Firm performance $(t+1)$			
	Assets growth	Return on assets	Market value growth
	(1)	(2)	(3)
Mao ideology	-3.315***	-0.350	-3.746**
	(1.001)	(0.306)	(1.781)
Firm Controls	Y	Y	Y
City Politician age and other controls	Y	Y	Y
City Macro Controls	Y	Y	Y
Firm FE and Year FE	Y	Y	Y
Industry × Year FE	Y	Y	Y
City Admin. Rank × Year FE	Y	Y	Y
Economic zone × Year FE	Y	Y	Y
Native place × Province FE	Y	Y	Y
Obs.	17,599	17,599	17,019
$\mathbb{R}^2$	0.40	0.59	0.63

Panel B. City development outcome (t+1)			
	Market cap to GDP	Credit to GDP	Ln(1 + No. of listed
	ratio	ratio	firms)
	(1)	(2)	(3)
Mao ideology	-0.072*	-0.115**	-0.010
	(0.041)	(0.047)	(0.041)
Politician Controls			
Macro Controls	Y	Y	Y
Province FE	Y	Y	Y
Year FE	Y	Y	Y
City Admin. Rank × Year FE	Y	Y	Y
Obs.	1,874	1,874	2,081
$\mathrm{R}^2$	0.96	0.89	0.97

### Table OA.4. The Impact of Ideology on Corporate Policies with Alternative Cutoff Years

This table reports results from RDD analysis following the same specifications in Column (2) of Table IV (with bandwidth of 3), but with Year 1986 (Panel A) and Year 1987 (Panel B) as the alternative cutoff year. The key explanatory variable *Mao ideology* is a dummy variable which takes a value of 1 if the city mayor was a member of the Chinese Communist Party by 1978, and 0 otherwise. Standard errors are reported in the parentheses and are clustered at the firm level. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1%, respectively. All variable definitions are provided in Appendix A.

Panel A. Cutoff year 1986				
	Stakeholder spending	Wage inequality	Foreign assets ratio (%)	Foreign sales ratio (%)
	(1)	(2)	(3)	(4)
Mao ideology	-0.010	-0.548	-0.082	-10.269
	(0.040)	(2.450)	(0.895)	(6.275)
Obs. Left	235	236	225	230
Obs. Right	467	467	380	441
Bandwidth	3	3	3	3

Panel B. Cutoff year 1987				
	Stakeholder spending	Wage inequality	Foreign assets ratio (%)	Foreign sales ratio (%)
	(1)	(2)	(3)	(4)
Mao ideology	-0.041	-1.058	0.195	-1.32
	(0.041)	(1.888)	(2.268)	(7.286)
Obs. Left	289	288	277	284
Obs. Right	113	113	86	104
Bandwidth	3	3	3	3

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