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Can Alcohol Facilitate Information Manipulation in China? A Social Norm Perspective

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We examine whether information manipulation by firms may reflect fundamental cooperation conventions induced by social norms in China. Consistent with this notion, we find that China's leading social norms related to alcohol consumption and social drinking enhance earnings manipulation. An analysis of toxic alcohol scandals supports a causal interpretation. Further evidence suggests that the influence of alcohol may come from the negative externality it creates, which is propagated by corporate leaders and can be attenuated only by government campaigns rather than market-oriented institutions. Our results manifest a social norm externality that may resist market-based cooperation, which has important normative implications.

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Introduction

The recent pandemic has returned focus to the issue of information disclosure and its influence on China. Rule-based information disclosure is the foundation of modern financial markets, the lack of which may impede price efficiency and shatter resource allocation (e.g., Healy and Palepu 2001; David, Hopenhayn, and Venkateswaran 2016). Despite the importance of disclosure, a fundamental dilemma faced by China is that some necessary information is notoriously hard to obtain therein. While researchers often attribute this issue to censorship as its top-down political origin,[1] a surprisingly ignored question has been the extent to which the cooperation conventions of *the bottom* are ripe for or against disclosure. The decadent self-censorship of some Chinese people (Chen and Yang 2019) and the deficiency of firm-level information (which gives rise to the recent disclosure pressure on US-listed Chinese companies[2]) suggest that there could exist a broad social root behind the issue. Do market participants (e.g., firms and investors as opposed to governments) have incentives to provide information in line with market-based cooperation—or do they conceal and distort information when applicable? Could a pro-market, bottom-up convention constrain top-down frictions, or could the lack thereof allow the latter to impede China's economic progress? Crucial as these issues are to China, we know very little about them.

Our paper aims to shed light on China's information dilemma by proposing that—since social norms (e.g., customs and conventions) gauge bottom-up cooperation—a social norm perspective is perhaps needed to decipher the issue. The importance of this perspective lies in both the influence and controversy of social norms: although culture helps to foster cooperation in general (Weber 1905; North 1991), social norm-based cooperation, once established, often exhibits long periods of inertia and can become inferior over time to constrain the effectiveness of formal institutions (Guiso, Sapienza, and Zingales 2004, 2008; Acemoglu and Jackson 2017). Worse, norms can even resist necessary social transitions until some critical "tipping point" punctuates them (Schelling 1960, 1978; Young 1998; Burke and Young 2011). Due to these properties, how social norms play out vis-a-vis the market rule of disclosure—i.e., to induce firms to abide by the rule or violate it via information manipulation—may profoundly influence China's economic transition and market development.

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[1] See, for instance, King, Pan, and Roberts (2013, 2014) and Lorentzen (2014) for empirical evidence and theorical modeling of censorship in China focusing on the role of government. More generally, Schedler (2010), Shadmehr and Bernhardt (2015), and Guriev and Treisman (2020) also model censorship as the government obstructing access to valuable information.

[2] Expressing concerns about insufficient disclosure of legal and operational risks, the Securities and Exchange Commission (SEC) has recently stepped up the disclosure pressure on China-based companies listed in the US. For instance, on Dec. 20, 2021, it stated that "more prominent, specific, and tailored disclosure… is warranted to provide investors with the information they need to make informed investment decisions and for companies to comply with their disclosure obligations under the federal securities laws" (https://www.sec.gov/corpfin/sample-letter-china-based-companies#_ftn1).

To implement this perspective, we examine how China's leading social norm related to alcohol and social drinking affects firm incentives in disclosing information. When China initiated its economic reform, it lacked institutions to protect property rights and contracts. Consistent with North (1991), Chinese firms resorted to alcohol-related social norms in subsequent decades to build *informal* social networks (i.e., *guanxi*) to foster cooperation—to exchange information, facilitate business activities, execute contracts, etc. (Szto, 2013).[3] Since then, as the Economist (May 28, 2016) summarized, "*Drinking vast quantities of…the local brew has long been an unavoidable part of doing business in China*". The dark side of this cooperation norm was that firms could thrive without the burden of disclosing information to the public. Indeed, to reap private benefits, firms with powerful alcohol-facilitated *guanxi* had incentives to manipulate public information (e.g., to suppress harmful news and propagate favorable ones) to avoid public scrutiny, giving rise to *social norm-induced manipulation*.

The historical development of such a practice is not surprising from a social norm perspective. According to Granoveetter (2005), social structure, including norms, can affect economic outcomes in three main pillars: information flow, social control (using the terminology of Coleman 1990), and confidence in reciprocal social behavior (e.g., trust). As detailed in our later hypothesis section, what alcohol had established in China was precisely a synchronization of the three: it created a cooperation norm allowing firms to implement *social control over information*. I.e., information was disseminated and utilized only within the network closure—among participants whose mutual trust was built via exclusive networking activities, of which expensive liquor was often essential and symbolic—but not disclosed to the public to avoid unexpected troubles.

Although this cooperation norm had lubricated China's early-stage development when the general public (e.g., market-based retail investors) was less involved in business activities, it crafts resistance to market cooperation deep down in its spirit.[4] China's transition toward a market economy requires the punctuation of this norm and replacing it with a pro-market social structure to facilitate information and rule-based market cooperation.[5] Hence, from the social norm perspective, whether *social norm-induced manipulation* gets punctuated during China's economic reform or remains prominent even in more recent periods is perhaps among the most fundamental questions for deciphering China.

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[3] Social drinking-related etiquette and rites can be traced back to the Analects of Confucius (540 BC), the core ethical foundation of China's clan-focused culture. However, their association with Confucian ideology and clan-based ethics faded when the traditional social values and family structure shattered. Instead, contemporary alcohol-related norms pragmatically resort to reinforced hierarchy (e.g., showing obedience by drunkness) and benefit-exchange to reduce cooperation frictions.

[4] Market cooperation is based on information and rules. I.e., firms obey the rule to disclose information as a starting point of various contracts—the market and its formal rules discipline firms failing to do so (e.g., Shleifer and Vishny 1997).

[5] James Coleman, in his 1993 President Address to the American Sociology Association, attributes the *Great Transition* of Europe from primordial to modern society to the replacement of *norm-based* social structure with market *rule-based* "corporate actors."

We therefore link alcohol to firm manipulation in China's post-World Trade Organization (WTO) period from 2002 to 2017. We are interested in this period because China achieved its highest growth rate therein and should have developed its most pro-market cooperation conventions. Next, although we do not directly observe the social networks facilitated by alcohol, we can proxy for the *intensity* of its local conformity using the willingness to spend, i.e., the percentage of household income spent on alcohol consumption in a Chinese province. More alcohol spending indicates a more dominant role of alcohol-related social norms in the local society. Meanwhile, since earnings manipulation represents one of the "most tangible signs" of distorted information in global markets (e.g., Leuz, Nanda, and Wysocki 2003), it lays out an ideal testing ground for exploring norm-based cooperation that may violate the disclosure rule. In line with the literature (Jones 1991; Dechow, Sloan and Sweeney 1995; Dechow, Ge, and Schrand 2010; Hirshleifer, Teoh, and Yu 2011), we use Dechow and Dichev (2002) as our main proxy for firm's manipulation incentives. Our results are highly robust to alternative measures.

Our baseline finding is that alcohol is positively associated with manipulation in China's post-WTO period. A one-standard-deviation increase in alcohol is related to a 9% increase in manipulation (scaled by the full-sample standard deviation) in the following year. Moreover, a hallmark of China's top-down censorship has been to conceal sensitive news and propagate government ideology simultaneously. Firms seem to follow this legacy by using political propaganda to substitute for the more sensitive information they want to hide. Hence, an initial glance at China's leading social norm reveals a gloomy picture that alcohol leans firms toward manipulation rather than abiding by the market rule.

To examine whether the above social norm-manipulation relationship implies causality, we next exploit a unique set of scandals in China in which liquor products were detected as toxic. A telling example occurred in 2012 when China's national quality supervisor found excessive toxic plasticizer in products made by the Jiugui Liquor Company, a famous liquor producer in China. This so-called *plasticizer scandal* was widely reported and heatedly discussed in almost all national newspapers, leading to a steep decline in liquor sales and consumption (including the very top brand in China—Moutai[6]). Liquor consumption also decreased more drastically in regions closer to the location of the scandal (mid-southern China), in part because more toxic liquor was sold and consumed there. The confidence of nearby consumers might also have been shaken by concerns that liquor producers located closer to this firm might have had similar (albeit undetected) problems. To the extent that luxury liquor

[6] According to *China Daily*, China's official government newspaper on Feb. 8, 2013, Moutai's annual sales might have declined by 50% due to this scandal (http://www.chinadaily.com.cn/bizchina/chinadata/2013-02/08/content_16254749.htm).

is at the core of business activities, the plasticizer scandal essentially created a local tipping point (e.g., Burke and Young 2011) to punctuate alcohol consumption and the influence of its related social norms.[7]

Since the distance to the scandal is plausibly exogenous to firms' manipulation incentives, we can employ a difference-in-differences (DiD) analysis to identify the influence of alcohol-related social norms. After the scandal, treated (i.e., nearby) firms exhibited significantly lower levels of alcohol-related expenditures and manipulation than control (i.e., farther away but otherwise identical) firms. In terms of economic magnitude, the scandal leads to a 20% reduction in nearby manipulation and a comparable (though slightly larger) drop in local alcohol consumption. These observations support the notion that the toxic tipping point punctuates both alcohol-facilitated cooperation norms and its influence on firm incentives.

The intuition of the above example allows us to more formally address endogeneity concerns by hand-collecting all of the alcohol scandals detected by China's national quality supervisor. Severe alcohol scandals have occurred fairly frequently over the years and across locations. The leading scandal in 2013), for instance, occurred in northernmost China, far from the location of the 2012 plasticizer scandal. The scattered distribution of liquor scandals presents a desirable econometric feature for endogeneity tests since local tipping points are triggered in a staggered manner. Hence, we expand our DiD analysis to include the top three scandals of each year when applicable. Our main conclusions remain highly robust in this DiD and additional instrumental variable (IV) specifications.

Since it is implausible that any omitted variable replicates the scattered locations of alcohol scandals in the same sequence, our results are unlikely to be contaminated by spurious correlations. In particular, top three anti-corruption scandals in general and the 2012 Bo scandal in particular (e.g., Griffin, Liu, and Shu 2021; Liu, Su, and Wei 2017) do not generate a similar effect. This placebo test highlights a fundamental role played by social norms in influencing firm incentives in China. Meanwhile, the timing of our test is also remarkable. The 2012 scandal test, for instance, implies that critical pro-market tipping points had not occurred until this very recent period (particularly the post-scandal period of 2013-2015). Otherwise, there would have been no alcohol-induced manipulation to be punctuated by alcohol scandals.

After mitigating the endogeneity concern, we next investigate the economic mechanisms through which alcohol affects firm incentives. The literature suggests that social norms often achieve influences

[7] As summarized in Burke and Young (2011), social norms feature local conformity and global diversity. As such, incremental changes in external conditions are often not enough to overcome the externality that hold the norm in place. Instead, punctuation triggered by large external shocks (i.e., tipping points) is often needed to displace an existing treatment norm in favor of a new one. The disastrous drop in liquor consumption in nearby regions, including that for the top brand of Moutai, suggests that the plasticizer scandal created a local tipping point to puncturate the local conformity created by alcohol-related social norms.

via externality or strategic complementarity (see, among others, North 1991; Guiso, Sapienza, and Zingales 2008; Tabellini 2008; Burke and Young 2011; Acemoglu and Jackson 2017). Our analysis supports a social-norm externality channel. More explicitly, conditioning on concealed public information, alcohol-related social norms allow firms to reap private benefits (e.g., through asset tunneling) on the one hand and *reduce* market-based litigation risk on the other. While the side-by-side occurrence of the two effects may appear surprising in a market economy, it reveals the power of alcohol-facilitated *guanxi* networks in China. For instance, these networks often penetrate regulation and law enforcement—and social control over information helps evade public scrutiny of the process. By providing private benefits and weakening disciplining, alcohol-facilitated cooperation essentially poses a *negative externality* inducing a large group of firms to practice social norm-induced manipulation as opposed to rule-based disclosure.

Since the externality channel reflects a norm-based cooperation convention from the bottom (i.e., by firms), an interesting question is whether top-down social structures and institutions can somehow constrain the negative influence. We find that formal institutions and informal social values that are known to foster market collaboration, such as property rights and social trust (e.g., LaPorta et al. 1998, 2000; Acemoglu and Johnson 2005; Guiso, Sapienza, and Zingales 2004, 2008, 2015, 2016), fail to achieve this goal. In contrast, the 2012 anti-corruption campaign of the central government was able to absorb alcohol-induced manipulation for state-owned enterprises (SOEs) but not for private firms. Hence, the alcohol externality can be partially constrained only by the command economy device of government campaigns, casting doubts on the social foundation of China's financial markets.

One crucial implication of the externality channel is that alcohol-induced manipulation should be widely promoted by people who benefit from it. Our further analysis supports this prediction. More explicitly, we find that more alcohol-exposed firms select more alcohol-imprinted CEOs (based on birth-place alcohol norms) and that these CEOs manipulate more. Given the power of corporate leaders in shaping cooperation conventions (Acemoglu and Jackson, 2015), these observations not only depict how the norm is propagated in society but also imply substantial bottom-up social resistance to information-based market cooperation in China.

We finally provide additional tests to assess the robustness of our results. Using absolute alcohol spending (rather than a fraction of household income) as an alternative demand-side measure does not change our results. Furthermore, our results are robust to two alternative proxies for alcohol from the supply or social cost side—i.e., the number of famous liquor producers nearby a firm and the number of regional alcohol intoxication cases. By contrast, other social norms with a similar spirit (i.e., sex, smoking, and gambling, which together with alcohol form the so-called "sin culture") lack a similar

influence. These results jointly confirm a unique role played by alcohol-related social norms in influencing firm incentives.

Our results speak to several branches of the literature. We build on and contribute to studies about disclosure and earnings manipulation. Beyer, Cohen, Lys, and Walther (2010) provide an excellent review on voluntary and required (i.e., by regulation) disclosure. Several recent papers (e.g., Bagnoli and Watts 2001, 2010; Kedia, Koh, and Rajgopal 2015; Heinle and Verrecchia 2016; Gao and Zhang 2019) examine the peer effect of information manipulation, which can arise due to strategic complementarity (e.g., Bulow, Geanakoplos, and Klemperer 1985) or within-organization norms (e.g., Fischer and Huddart 2008). We differ by exploring the social norm root of manipulation and its implications.[8]

In doing so, we propose that the inertia/punctuation of social norms and convensions (e.g., Schelling 1960, 1978; Young 1998; Burke and Young 2011; Young, 2015 provides a survey) can serve as a benchmark to decipher China. The literature indicates that, in history, China's clan-focused conventions hindered its transition to an industrial society (Greif and Tabellini 2010; de la Croix, Doepke, and Mokyr 2018). We show that the more recent *social control over information* embedded in China's alcohol-related social norms may hinder market-based cooperation, urging a social structure reform for China's future development. Consistent with the "local conformity and global diversity" feature of social norms (Burke and Young 2011), although social drinking is universal, its social implication in China is somewhat unique. Our approach is thus novel and extends studies on social norms and the two-way interaction between culture and formal institutions (e.g., Acemoglu and Jackson 2017; Guiso, Sapienza, and Zingales 2004, 2008, 2015, 2016; see Alesina and Giuliano 2015 for a survey). That said, our methodology and its normative implications are general and may apply to other transition economies.

Our findings also help explain the widely observed misbehavior of Chinese firms. The literature has offered vast evidence on such wrongdoing (e.g., Jiang, Lee, and Yue 2010; Fan, Wei, and Xu 2010; Fisman and Wang 2015), but has typically attributed it to top-down mechanisms (Wong 2016 provides an excellent recent survey on these mechanisms in China).[9] Our results, instead, add to the importance of culture in understanding China (e.g., Greif and Tabellini, 2010; Piotroski and Wong 2012; de la Croix,

[8] A large literature also relates earnings manipulation to firm operating and financial characteristics (DeFond and Park 1997; Watts and Zimmerman 1986; Nissim and Penman 2001), auditing and financial reporting practices (DeAngelo 1981; Barth, Landsman, and Lang 2008), market pressure (Das and Zhang 2003; Morsfield and Tan 2006), and investor protection and regulations (Leuz, Nanda, and Wysocki 2003; Dechow, Ge, and Schrand 2010).

[9] Examples of top-down mechanisms include formal institutions (e.g., Allen, Qian, and Qian 2005), state ownership, political connections (e.g., Liao, Liu, and Wang 2014; Calomiris, Fisman, and Wang 2010; Megginson and Netter 2001), etc.

Doepke, and Mokyr 2018). Perhaps just as Landes (2000) stated, "If we learn anything from the history of economic development, it is that culture makes almost all of the difference."

The remainder of the paper is organized as follows. Section I discusses the detailed intuitional background and potential influences of alcohol-related social norms in China. Section II presents our variables and summary statistics. Sections III and IV identify the influence of Alcohol on earnings manipulation. Section V examines the mechanisms and implications of such norm-based cooperation. Finally, Section VI presents additional tests, followed by a short conclusion.

I. Institutional Background and Related Literature

This section provides detailed institutional background on the formation and impact of alcohol-related social norms vis-à-vis the disclosure rule of market cooperation. Corporate behavior during China's early-stage reform and its post-WTO market transition is undoubtedly complex. Hence, we draw intuitions from four interconnected threads related to accounting, sociology, economics, and finance. Our goal is to sketch a cross-disciplinary foundation to formulate how *social control over information* can arise in China and lead to social norm-induced information manipulation. This foundation illustrates how information disclosure, social control, and social norms intersect to shape the way firms cooperate, allowing us to describe a list of hypotheses to guide our empirical analysis.

A. Alcohol-facilitated social control over information

We start with sociology, as social norms are a key topic in this literature. In particular, modern sociology extensively examines how social structure, the patterned social arrangements (e.g., institutions, norms, and social networks) that guide participant activities, may affect economic outcomes. Granoveetter (2005) particularizes three main pillars of influence. First, social structure can affect the flow and quality of information. Second, it provides a source of reward and punishment, which can be more generally interpreted as the modes of social control (e.g., Coleman 1990, 1993).[10] Finally, it provides confidence that others will do the "right" thing. This sociology view is in line with the economic insight that institutions and culture can foster cooperation by gauging expected behavior in repeated games (North 1991) and strategic complementarity (Tabellini 2008). It offers an intuitive conceptual framework to decipher China.

[10] Coleman (1993) resorts to modes of social control—e.g., whether it is social norm based or rule based—to differenciate the primodernary social structure and the modern social organization, as we will see shortly. Portes (1998) views informal social control as the consequence of social capital. As an illustration of its importance, Hagan, Merkens, and Boenhke (1995) show that social control helped restrain the right-wing extremism among Berlin youth.

In the decades following the initiation of China's economic reform in the late 1970s, Chinese firms resorted to alcohol-related activities to do business, which became a dominating norm in China.[11] By guiding the "right" behavior, including rituals, vast alcohol drinking via "Ganbei" (empty one's cup), and drunkenness, alcohol had provided trust and network connections to facilitate business activities in the lack of formal protection (Szto 2013).

A less recognized yet similarly fundamental outcome came from the first two pillars: the two intertwined to create a new model of *social control over information*, when the legacy of China's authoritarian political system, which featured an unbounded control over everything, met the economic consequence of China's reform, which rendered information as an important social resource to reap benefits. For instance, China had adopted a dual-price system to maintain its central-planning system with limited market penetration before it joined the WTO, incentivizing firms to use alcohol-facilitated *guanxi* to expropriate the system.

Importantly, firms expropriating such a system had the incentives to suppress sensitive public information that could lead to competition and, particularly, public scrutiny—and alcohol helped achieve this goal by restricting information flows within its network closure. Indeed, firms could easily profit by purchasing goods at a lower planned price and selling them at a higher market price, as long as their alcohol acilitated *guanxi* network allowed them to identify and reach both sides. A dual-function of the *guanxi* network arose to exploit the system. On the one hand, the *guanxi* network reduced the within-network cooperation frictions by resorting to exclusive networking activities, of which expensive liquor was essential and symbolic, to reinforce mutual trust and gauge expected behavior (e.g., showing obedience by drunkness). On the other hand, confining information flows within a restrictive network closure can create necessary frictions and barriers to defer newcomers. More importantly, the expropriation of the dual-price system was widespread but illegal in many cases.[12] A stringent control of information reduced public scrutiny and related litigation risk.

Alcohol-facilitated *guanxi* and social control over information had historically lubricated China's early-stage developments when China had just emerged from a command economy and was unfamiliar with market-based cooperation. The question is whether such a norm may become obsolete over time to resist necessary social changes (Schelling 1960, 1978; Guiso, Sapienza, and Zingales 2004, 2008; Acemoglu and Jackson 2017). Since the most profound social change in China's post-WTO period is

[11] As noted by Weber (1951), China's historical lack of religion and the rule of law allows secular norms such as social drinking to play a prominent role in society.

[12] The expropriation, popular in the 70s and 80s, was punishable under the *Crime of Speculation* in China's criminal law (1979, items 117-119). The *Crime* phased out in 1997, with the items describign such expropriation abolished in as late as 2008.

its market transition, it is crucial to investigate whether alcohol may hinder the market cooperation required by this transition.

B. Modern Corporate Actors and China's Practice

To understand the far-reaching influence of norm-based cooperation on firm incentives and China's business practices, we can start with the social structure difference between the primordial and modern societies. In sociology, James Coleman attributes this difference to the arising of "*corporate actors*" who make and follow formal rules—e.g., constitutions, laws, and property rights—instead of resorting to norms and moral forces (Coleman 1990, 1993; also see Swedberg 2003 and Scott 2004).[13] Coleman's insight fits nicely into economics studies documenting the historical importance of formal rules and rule-based market cooperation among corporations (e.g., North 1991).

Although both sociology and economics point to the importance of rule-based corporate actors in a modern economy, China had not developed a similar social structure and cooperation convention. Instead, China's cooperation was clan-focused in history (Greif and Tabellini 2010; de la Croix, Doepke, and Mokyr 2018) and, as discussed above, social norm driven more recently. This divergence gives rise to several important implications for our analysis.

First, China's potential success in developming its market economy is subject to replacing obsolete social norms with market rules. Of course, whether a norm is obsolete or not depends on how well it works vis-à-vis the modern economy's social structure. From a social norm perspective, the market transition mainly requires, in the spirit of Schelling (1960, 1978), the punctuation of cooperation norms if they contradict the social structure of rule-based *corporate actors*.

Second, social control over information presents perhaps the most striking contradiction between alcohol-facilitated and formal rule-based cooperation. Information plays a fundamental role in rule-based market cooperation (North 1991), rendering rule-based information disclosure the foremost duty of modern *corporate actors.* In contrast, alcohol-facilitated cooperation induces firms to forgo this duty by manipulating information. Although earnings manipulation is widely observed for Chinese firms (Chen and Yuan 2004; Chen et al. 2011; Hou et al. 2015), our new intuition is that such manipulation may have a social-norm root in China, which opposes the social structure of a market economy.

[13] For instance, corporate actors emerged in Italy's thirteenth century and gradually gained popularity in Europe till the *Great Transformation*—featured by the French Revolution and the Industrial Revolution—established their rule-based social control modes and behavior as the dominating social structure of the modern society.

Finally, the above contradiction may raise a negative externality to hinder market cooperation in China. On the one hand, the manipulation of information resulted in the lack or inability of public scrutiny, allowing firms to seek norm-based expropriation by colluding on private benefits at the cost of rule-based participants (e.g., minority shareholders).[14] On the other hand, alcohol-facilitated social networks often included government officers, judges, and regulators to reduce the litigation risk of expropriation. The two properties create a negative externality inducing firms to adopt norm-based cooperation. Consistent with known economic mechanisms of social norms (e.g., North 1991; Guiso, Sapienza, and Zingales 2008; Tabellini 2008; Burke and Young 2011; Acemoglu and Jackson 2017), such externality may provide an economic channel for alcohol-related social norms to prevail in the economy. The inertia of the same externality may also prevent norm-based firms from transforming into rule-based corporate actors if not punctuated.

C. Hypotheses of the Social Norm Perspective

The above comparison, particularly the pivotal role of information manipulation in distinguishing between alcohol-influenced firms and rule-based corporate actors, paves the way to decipher China in a social norm perspective. The two fundamental questions are whether there are widely observed social norm contradictions to market-based cooperation and whether such negative impacts prevail or get punctuated. The above discussions allow us to summarize the social norm perspective of information manipulation in the following hypotheses.

H1 (Social Norm Facilitated Manipulation): Alcohol-related social norms facilitate earnings manipulations in China.

H2 (The Externality Channel): Alcohol-facilitated cooperation may achieve influence via the negative externality it creates by 1) allowing firms to expropriate rule-based minority investors and 2) reducing firms' litigation risk.

The presence of the above negative externality raises a critical question of whether *top-down* institutions can help constrain it. Suppose rule-based institutions can curb the influence of alcohol in the short run. In that case, it is reasonable to expect the latter to be punctuated in the long run despite its short-term externality. In contrast, if alcohol's anti-market influence can be attenuated only by more command economy devices, such as central government campaigns, then the goal of replacing alcohol

[14] This expropriation effect was not different from the complaint of Adam Smith (1776, p. 232) that meetings of merchants could end up as a conspiracy against those excluded from their networks or the observed contaminating effect of social networks on corporate governance (Güner, Malmendier, and Tate 2008, Kuhnen 2009, and Fracassi and Tate 2012). The difference is that the expropriation became notoriously backed by the alcohol-related social norm and its induced information manipulation in China.

with rule-based institutions is likely challenging. Hence, it is crucial to examine the following alternative hypotheses, which can also shed light on China long-run development:

H3a (Social Norm vs. Rule-based Institutions): Rule-based institutions can constrain the influence of alcohol-facilitated cooperation.

H3b (Social Norm vs. Government Campaigns): Central government campaigns can help constrain the influence of alcohol-facilitated cooperation.

Finally, one crucial implication of alcohol-induced negative externality is that manipulation must be widely promoted by people who benefit from it. Corporate leaders such as CEOs are natural candidates to benefit from and promote such a norm. However, alcohol-related social norms may also affect the mental and physical health of exposed persons (WHO 2004). Intuitively, an alcoholic or "drunk" CEO may be more distracted from firm operations and therefore disclose less information. To differentiate norm-based manipulation from alcohol-induced sickness, we can revisit Coleman's (1993) intuition that externality and sufficient social resources in maintaining social control suffice to create a social norm. In economic terms (e.g., Tabellini 2008), it means that a norm arises as an equilibrium when its externality induces a large group of people to spend resources promoting it. In contrast, people seldom spend resources to "promote" sickness.

Hence, we can validate the social norm channel by testing two interconnected propagation effects related to CEO's cultural imprints (i.e., birth-place alcohol norms). First, culture can provide a matching mechanism (Schneider 1987; Liu 2016) through which alcohol-exposed firms select more alcohol-imprinted CEOs. This selection mechanism is difficult to explain by alcohol-induced personal traits. For instance, if alcohol-imprinted CEOs are associated with sickness or incapability, all firms want to avoid them. Likewise, if corporate greed is why firms hire alcohol-imprinted CEOs who can bring expropriation benefits, all firms should do so regardless of their local culture. Second, CEOs are exposed to alcohol-induced externality and have social resources to implement information manipulation.[15] If CEOs with high alcohol imprints promote information manipulation, their promotion suffices to create a norm. Hence, the following hypothesis helps nail down the channel:

H4 (The Propogation of Social Norm): Alcohol-exposed firms are more likely to select (i.e., hire) alcohol-imprinted CEOs, who promote information control.

[15] The literature shows that culture has a persistent impact on individuals when they emigrate to different countries and cultures (Guiso, Sapienza, and Zingales 2006; Fisman and Miguel 2007; DeBacker et al. 2015; and Liu 2016). In this case, heterogeneity in cultural imprints introduces exogenous variations in their exposure to alcohol-related social norms and thus their manipulation incentives.

II. Data and Variable Construction

We now describe the sources of our data and the construction of our main variables. Since China became a member of WTO on Dec. 11, 2001, we focus on the post-WTO period from 2002 to 2017 for our main analysis. We collect data (in many cases manually) from multiple sources. Alcohol consumption data come from the National Bureau of Statistics (NBS) and Provincial Statistical Yearbooks (PSYs), and household income data come from China Statistical Yearbooks (CSYs). Specifically, the NBS provides regional urban residents' alcohol consumption data in China from 2002 to 2012. For information from 2013 to 2017, we manually collect alcohol-related information from PSYs and use the 2012 NBS information as a proxy for values when the (regional) data are not available in PSYs. From CSYs and the NBS, we also collect development-related information, such as GDP per capita, GDP growth, population growth, and consumption per capita. We then collect the data on social trust and the geographic origin of culture from various resources, which we specify in later sections.

Our firm-level data come from two leading resources: the China Stock Market and Accounting Research (CSMAR) database and the Wind Financial Database (WIND). Specifically, we obtain financial and stock return data from the CSMAR database, which we cross-reference with WIND. We obtain institutional ownership from WIND as well. We then match firm-level data with regional information. Our initial sample contains 26,187 firm-year observations. We then exclude financial service firms and exclude firm-year observations without sufficient financial information to calculate the related variables. Our final sample consists of 18,469 firm-year observations and 1,911 firms across 31 provinces in China.

A. Main Variables for Alcohol and Manipulation

We now describe our main dependent and independent variables. Our main proxy for alcohol-related social norms is the alcohol consumption of a region (hereafter *Alcohol Consumption* or simply *Alcohol*), which is defined as the per capita annual average alcohol consumption of the urban residents of a province divided by the per capita annual income of the same population, multiplied by 100. This variable is available annually. Roughly speaking, *alcohol* can be interpreted as the percentage of household income spent on alcohol consumption, which captures the intensity of alcohol-related social norms from the demand side (i.e., the willingness of households to spend on it).

We also check that our results remain the same if we do not scale alcohol consumption by income.[16] To alleviate any potential concerns about the consumption data, we also supplement this consumption-side proxy with a production-side proxy, the number of famous distilled liquor brands nearby (*#Famous Brands*) and a third proxy related to the social cost of alcohol-related social norms based on the intensity of alcohol intoxication (*Intoxication*). We provide detailed definitions of these measures in the Online Appendix.

We use the measure of Dechow and Dichev (2002) as the main proxy to examine the intensity of *manipulation* and two other popular measures of a similar spirit as robustness checks.[17] These proxies focus on abnormal discretionary accruals, a common source for Chinese firms to manipulate in concealing news (e.g., Chen and Yuan 2004; Chen et al. 2011; Hou et al. 2015). Moreover, we further explore two types of measures that are immune to any particular features of China's disclosure rules (China has adopted the International Financial Reporting Standards, or IFRS since 2002): earnings restatements and target beating. These measures and results are detailed in the Online Appendix.

In addition to these main variables, we also construct a list of variables to control for the characteristics of firms and regions. Appendix A provides details about these variables.

B. Summary Statistics

Table 1 presents summary statistics for our sample. Panel A tabulates the distribution of the main variables, which we winsorize at the 1% level in both tails (our results are robust when we use different thresholds). On average, households spend approximately 0.754% of their income on alcohol, and the standard deviation is 0.196%, suggesting that there are significant differences across regions. Figure 1 visualizes the distribution of alcohol consumption across different provinces of China (the number 0.59 indicates that 0.59% of income is spent on alcohol). Furthermore, the main dependent variable, *manipulation*, exhibits significant cross-sectional variations (with a standard deviation of 0.050). Firms located in the 75% quantile of the distribution have a value more than double that of firms located in the 25% quantile of the distribution (recall that we use the absolute value of discretionary accruals). Other variables exhibit similarly large cross-sectional variations.

[16] This similarity arises because both absolute and relative alcohol expenditures are heavily influenced by the consumption of luxury liquors. This feature is what we want because important social activities in China typically feature luxury liquors (and to a lesser extent, expensive wines) as opposed to less expensive ones.

[17] We use Dechow and Dichev (2002) as our main proxy because they employed the most complete firm controls among the three measures. More discussions are provided in the Online Appendix. Moreover, since reporting both inflated and deflated earnings distorts information, we follow the literature (e.g., Bergstresser and Philippon 2006; Cohen, Dey, and Lys 2008, among others) to use the absolute value of discretionary accruals to measure the quality of information.

The Online Appendix (in the full specification of Table 1) provides the correlation structure of our main variables. The correlation between *Alcohol* and *Manipulation* is positive and significant at the 1% level. Below, we use multivariate regressions to inspect this relationship.

III. The Baseline Results of Alcohol-Related Social Norms

We start by investigating the following panel specification:

$$Manipulation_{i,p,t} = \alpha + \beta \times Alcohol_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t}, \quad (1)$$

where $Manipulation_{i,p,t}$ refers to our dependent variable for firm i located in province p in year t; $Alcohol_{p,t-1}$ is the alcohol consumption of the region in the previous year (using contemporaneous culture variables only enhances our results); and $M_{i,p,t-1}$ refers to a list of lagged firm-level and regional-level control variables. The firm-level control variables include the logarithm of firm size (*Size*), financial leverage (*LEV*), return on assets (*ROA*), stock return volatility (*Cret_volatility*), institutional ownership (*Totinsholdper*), log-number of analysts following the firm (*Analyst*), book-to-market ratio (*BM*), annual stock return (*RET*), turnover ratio (*Turnover*), dual role for the board chair (*Dual*), and an indicators of state-owned enterprises (*SOE*), CEO age (*Age_Ceo*), CEO salary (*Salary_Ceo*) and shares of the largest shareholder (*Top1*). The regional-level variables include GDP per capita (*GDP_percapita*), GDP growth (*GDP_growth*), population growth (*Pop_growth*), and the logarithm of residential consumption per capita (*Consume_percap*ita). We control for fixed effects of industry and year and follow Petersen (2009) to cluster the errors at the province and year levels to control for within-cluster dependence not captured by other control variables.

Table 2 tabulates the results. Model (1) controls for firm-level characteristics, and Model (2) further controls for region-level variables. Unless otherwise specified, we use Model (2) as our baseline specification for future tests. We see that alcohol consumption is positively associated with manipulation, consistent with the existence of alcohol-induced manipulation. In Models (1) and (2), a one-standard-deviation increase in *alcohol* is associated with 9.41% and 8.23% increases in *manipulation*, respectively.[18] Note that the magnitude of the influence becomes more substantial in later sections when we better identify plausibly exogenous shocks of alcohol-related social norms.

[18] The economic magnitude for the regression model of $y = \alpha + \beta \times x + \epsilon$ is estimated as $\beta \times \sigma_x/\sigma_y$, where y and x are the dependent and independent variables, respectively, β is the regression coefficient, and σ_y and σ_x are the standard deviations of the dependent and independent variables in the full sample, respectively. Hence, in Model (1), the economic magnitude is estimated as $0.024 \times 0.196/0.050 = 9.41\%$.

We next apply alternative empirical specifications to the estimation of Eq. (1). In particular, Model (3) adopts a Fama-MacBeth specification. Model (4) adopts a cross-sectional regression that examines the relationship between the average value of *manipulation* for a firm over the entire testing period and the average alcohol consumption of the region (all control variables are averaged over the testing period as well). Model (5) links *manipulation* to the residuals of alcohol consumption (*Alcohol_Residual*) when we regress it against a list of regional variables that can affect consumption: GDP per capita, GDP growth, population growth, and consumption per capita. Our results remain robust and significant in all of these alternative specifications.[19]

Model (6) explores another interesting question on how alcohol may influence firm information: if firms hide their own information, are there other types of information they are willing to supply (as a potential substitute)? The answer could be yes. Since alcohol-facilitated social control *over information* is partially shaped by the legacy of China's authoritarian political system in its commend economy, the same norm may also incentivize firms to adopt the hallmark of the legacy of not only concealing sensitive news but also propagating government ideology. In other words, firms may have incentives to supply some general and politically correct information as a substitute for the more sensitive information they want to hide. We can interpret this effect as (alcohol-induced) cheap talk.

Although the cheap talk effect is not our main focus, it can nevertheless shed further light on alcohol-facilitated information control. Hence, we use textual analysis to identify political propaganda in the annual reports of firms and calculate the proportion of sentences containing such propaganda, which we refer to as *Political Propaganda*. Online Appendix B reports the detailed list of such political propaganda: it mainly propagates the importance of the CCP leadership and its socialist ideology. From Model (6), we find that firms located in regions of more intensified alcohol consumption indeed propagate more *Party* slogans instead of reporting proper information. Indeed, as tabulated by the Online Appendix, the pairwise correlations among alcohol, manipulation, and firm propaganda are all highly positive (significant at 1% level). This effect enriches our main economic picture regarding how social norms may affect the supply of information.

Overall, our baseline analysis indicates a striking relationship between alcohol and manipulation (H1), giving rise to the potential concern that alcohol may create a negative externality to hinder information

[19] Figure IN1 in the Online Appendix further visualizes the relationship between the average *Manipulation* of all firms in a region during the entire testing period and the average level of alcohol consumption in the same region. Although the plot is univariate, it clearly demonstrates a highly positive and significant relationship between the two variables. Unreported tests further show that our baseline results are robust when we control for alternative components of culture, such as religion, individualism, and social trust.

and rule-based market cooperation. But before we move on to externality, we need to prove that social norm causally affects firm incentives.

IV. The Causal Influence of Social Norms: Scandal-Induced Tipping Points

To address this issue of endogeneity, we exploit the occurrence of devastating liquor scandals, which can introduce tipping points to punctuate alcohol-related social norms. We first focus on the 2012 plasticizer scandal, the largest liquor scandal of the last two decades. Since the liquor producer involved was among the most famous brand names in China, this scandal was widely covered in the public media and largely shook consumer confidence. The disastrous drop in liquor consumption in nearby regions, including that for the top brand of Moutai, suggests that the plasticizer scandal created a local tipping point punctuating alcohol-related social norms.

A. The Impact of the Plasticizer Scandal on Manipulation Incentives in DiD Tests

Since the distance to the scandal is plausibly exogenous to the manipulation incentives of a firm, we design a DiD analysis to demonstrate the influence of alcohol-related social norms on corporate behavior. More explicitly, we first sort firms into three terciles based on their geographic proximity to the location of the scandal, excluding firms located in the scandal region.[20] For each "treated" (i.e., nearby) firm in the top tercile, we then employ a propensity-score matching algorithm to identify a control (i.e., far away) firm in the bottom tercile. This propensity score matching (PSM) is based on firm characteristics, regional conditions, and the average growth rates of manipulations in the three-year period prior to the scandal. The Online Appendix (the full specification of Table 3, Panel D) shows that firm characteristics and the growth rate of manipulations are indistinguishable between treated and control firms before the scandal.

We then apply the following analysis to the sample of treated and control firms during the testing period, which ranges from three years before the scandal to three years after the scandal:

$$Manipulation_{i,p,t} = \alpha + \gamma \times Treat_{i,p} \times Post + C \times M_{i,p,t-1} + \epsilon_{i,p,t}, \quad (2)$$

where $Treat_{i,p}$ is a dummy variable that takes the value of 1 (0) when a firm is in the treated (control) group, and $Post$ refers to a dummy variable that takes the value of 1 for years after the scandal (including the scandal year) and 0 for years before the scandal. $M_{i,p,t-1}$ stacks the list of lagged control variables as before. We consider three years before and after the scandal to capture the potential

[20] We exclude these firms to eliminate the potential concern that local law enforcement and government regulations could change after the scandal. Including these firms does not change our results.

influence of alcohol before and after the incident. We control for firm and year fixed effects and double cluster the errors by province and time to control for variations therein. The parameter of interest is γ. Since the scandal punctuates alcohol-related social norms in nearby regions, γ should be significantly negative if alcohol can causally affect manipulation.

Table 3 reports the results. Model (1) tabulates the major results of the tests when firm characteristics and regional conditions are controlled for. Since firm and year fixed effects are explicitly controlled for, Model (1) does not include the two variables $Treat_i$ and $Post$ but directly tabulates the effect of the interaction term. To emphasize the main results, we only report the coefficient of interest in this and later tables; our Online Appendix provides the full specification of the analysis with all of the coefficients of the control variables tabulated.

We find that nearby (treated) firms indeed exhibit significantly lower levels of manipulation in the three-year period after the scandal compared to the control sample. To be more specific, Model (1) suggests that firms influenced the most by the scandal on average exhibit 20% fewer manipulations (the impact of the scandal is computed as the coefficient γ times the post-scandal dummy and is then scaled by the standard deviation of *manipulation*, or $-0.010 \times 1/0.050 = -20\%$). This economic magnitude is larger than what we see in our baseline analysis because the 2012 plasticizer scandal is the most influential event to punctuate alcohol consumption (supplementary evidence is provided shortly) and its related social norms.

Model (2) further examines the year-by-year influence of the scandal by interacting $Treat_i$ with a list of year dummies. The practice of information manipulation is indistinguishable between treated and control firms prior to the scandal, confirming that the parallel trend assumption is satisfied for our DiD test. After the scandal, however, treated (nearby) firms exhibit significantly lower levels of *manipulation*. Moreover, such influence starts one year after the scandal and remains highly significant for at least two more years. This persistence is consistent with the inertia-punctuation feature of social norms: once punctuated, the social norm will remain at a low status for a while before its recovery, allowing its influence to be detected in the data.

In Models (3) and (4), we further enhance the DiD test by augmenting our propensity score matching. While in Models (1) and (2), PSM is based on firm characteristics, regional conditions, and the average growth rates of manipulations in the three-year period prior to the scandal, in Models (3) and (4), we also include pre-scandal alcohol as an additional matching criterion. Hence, not only are the treated and control firms identical in their characteristics, but they are also exposed to the same level of alcohol-related social norms as well. Our results remain highly robust. Figure 2 visualizes the test, from which

we can see a parallel trend before the scandal and a sharp drop in treated-firm manipulation after the scandal.

Thus far, we have shown that the plasticizer scandal largely reduced the manipulation incentives of treated firms in manipulating information, which is the main focus of our paper. We can also examine the alcohol-induced cheap talk effect by replacing *Manipulation* with *Political Propaganda* in Equation (2). For brevity, we report the Model (3) version of the test in Model (5), Panel B. We can see that treated firms also reduce their propagating of CCP political propaganda after the scandal.

The economic magnitude of the impact on political propaganda, however, is approximately half of that on manipulation ($-0.004 \times 1/0.041 = -9.8\%$). The significance level is also reduced (*t-stat*$= 1.85$). The Online Appendix further tabulates the Model (4) version of this test, from which we can see that the parallel trend assumption is satisfied and that the reduction in propaganda occurs mostly in the 2nd and 3rd years after the scandal. Both the reduced magnitude and delayed response suggest that firms are more ready to supply information than reducing cheap talk after the punctuation of alcohol-related social norms by the scandal.

In other words, although alcohol induces firms to both manipulate their own information and propagate the party ideology as a substitute, the two impacts are asymmetric. In our DiD test, social norm clearly influences more of the manipulation side, suggesting that firms' propaganda incentives could have a more complex social and political basis. For this reason, our remaining analysis focuses on the manipulation of information—we leave the task of investigating the social foundations of firm propaganda and cheap talk to future research.

B. Firm Expenditure around the Plasticizer Scandal

Since scandals can influence firm behavior only through their punctuation of alcohol-related social norms, to complete our analysis, we must provide direct evidence that such punctuation did occur. Models (6) and (7) in Panel B achieve this goal, in which we examine how the plasticizer scandal influenced both regional alcohol consumption and firm expenditures on alcohol-related activities. These two models are based on the second (and more restrictive) PSM methodology. The Online Appendix shows that using the first method yields similar results.

To construct the second variable, we follow Cai, Fang, and Xu (2011) and Gul, Cheng, and Yan (2011) to focus on the total cost of entertainment and travel. All of these expenditures can help to build *guanxi* networks via the lubrication of alcohol-related activities. For instance, firms can use travel expenditures to arrange meetings, followed by dinner banquets and after-dinner activities—of which expensive liquor

is typically an important and symbolic part—which can be expensed via the "entertainment" category. Hence, we measure firm expenditures on alcohol-related social norms using the sum of these items divided by revenue (labeled *Firm Entertain Cost*). Adding more costs in the same spirit (e.g., administration, meetings, board meetings, telephone, and even overseas training) does not change our results.

We see that, after the scandal, both alcohol consumption and corporate entertainment costs are reduced significantly more in regions closer to the plasticizer scandal than in farther away regions. Moreover, Model (6) suggests that alcohol consumption in treated regions decreased by approximately 24.5% in the post-scandal period (i.e., the coefficient scaled by the standard deviation of alcohol consumption). In Model (7), the reduction in corporate entertainment costs is of a similar magnitude (24.4%). The degree of punctuation in alcohol-related consumption and expenditure, therefore, is on par with (and slightly larger than) the magnitude of the observed reduction in manipulation.

Jointly, the above results lend support to the notion that the plasticizer scandal punctuated local alcohol-facilitated cooperation and, consequently, the manipulation incentives of treated firms. However, to push these results into a causal interpretation, we note that our results are still subject to one remaining concern: the plasticizer scandal could be spuriously correlated with some omitted events that occurred at the same time and in the same location. Corruption provides a notable example and a powerful alternative explanation, as anti-corruption scandals (e.g., Griffin, Liu, and Shu 2021； Lie, Su, and Wei 2017) may also punctuate the social network created by alcohol. This concern is challenging if we only know the impacts of one alcohol scandal. However, we can address this issue based on the staggered occurrence of all national alcohol scandals in China.

C. The Impact of the Top Three Alcohol Scandals

To address the general concern about spurious correlations due to omitted variables, we hand-collect all of the alcohol scandals detected by China's national quality supervisor. The Online Appendix (Table IN1) describes the data collection process and tabulates the information that we identified on the top scandals and the locations of the associated liquor producers. For instance, China's largest alcohol scandal in 2012 was the plasticizer scandal, which occurred in mid-China. However, the largest scandal of the following year occurred in the northernmost part of China. The only years in our sample for which we did not find alcohol scandals were 2002 and 2005. Figure IN2 in the Online Appendix further visualizes the locations of the top scandal for each year. These locations were widely scattered throughout the country, ranging from the northernmost province of China to mid-east China and southwestern China.

Although the scattered distribution of liquor scandals is unfortunate for consumers, it presents a desirable feature for endogeneity testing because local tipping points are triggered in a staggered manner. A firm close to the 2012 plasticizer scandal (Hunan Province in mid-south China), for instance, is far from the location of the top scandal in 2013) (Heilongjiang, the northernmost province in China).[21] Due to the staggered nature of scandal locations, it is unlikely that any omitted variable could replicate the scattered locations of alcohol scandals in exactly the same sequence. In this regard, alcohol scandals introduce punctuations in alcohol-related social norms that are plausibly exogenous to a firm's manipulation incentives.

In Models (8) of Table 3, we expand our DiD analysis to pool all top three scandals of each year when applicable. For each year, we first measure the average geographic distance between the location of a public firm and that of the liquor producer at the center of the top scandals during the year. We then follow the previous PSM approach with pre-scandal alcohol to identify treated and control firms for each year when applicable. (We again exclude public firms in the scandal regions; including these firms does not change our conclusions.) Finally, we examine seven years of observations around any particular scandal and conduct a pooled DiD test.

Model (8) shows that our main results remain highly significant. Specifically, firms geographically closer to the top three scandals of a given year exhibit more attenuated manipulation in the post-scandal years. The economic magnitude of the effect is approximately 10%, which is on par with what we observe in our baseline analysis. Unreported tests show that similar punctuation of alcohol consumption and expenditures following the top three scandals.

Overall, the impact of the top three scandals on social norms and manipulation incentives is very similar to that of the plasticizer scandal. All results are also robust for the use of the *topmost* scandal of each year. Importantly, this set of results is unlikely to be contaminated by spurious correlations due to the staggered nature of scandal locations.

D. The Placebo Tests on Political (Anti-corruption) Scandals

Since alcohol-facilitated *guanxi* networks often include government officials, it can also give rise to corruption. In the literature, most studies take corruption as an inheritable "culture."[22] In other words,

[21] It is also difficult for the public to predict a scandal or its location for any particular year because the official uncovering of any large scandal involves both conflicts of interest (since the government tends to suppress the news about scandals) and uncertainty (e.g., scandals can be announced with unpredictable delays).

[22] For instance, Fisman and Miguel (2007) and DeBacker et al. (2015) document that parking violations by diplomats in Manhattan and corporate tax evasion by foreign owners in the U.S. can be traced back to corruption norms in the country of origin. Mironov (2015) shows that Russian CEOs with poor driving records divert more money from their companies and pay more money under the table. Liu (2016) uses immigrants' native country to infer corporate corruption culture.

we can view both manipulation and corruption as the consequences of alcohol-facilitated cooperation. But there could be an alternative explanation of these economic variables. Instead of social norms facilitating manipulation and corruption, corruption could be the more fundamental social structure to influence the other two.

To differentiate, we exploit the punctuations in corruption caused by anti-corruption scandals (see Griffin, Liu, and Shu 2021 and Liu, Su, and Wei 2017 for more details of the anti-corruption events in China) in placebo tests. Model (9) provides the first placebo test in which we replace the top three alcohol scandals with the top three (based on search volume) political scandals involving the investigation of high-ranking regional party or government leaders. A similar DiD test fails to detect a significant influence.

Given the importance and timing of the Bo scandal (which also occurred in 2012 but in a different location compared to the Plasticizer scandal), we further apply Equation (2) to scrutinize the impact of this scandal. The results are reported in Model (10). We again find that proximity to this political scandal had little power to explain manipulation.

Overall, our placebo tests do not find a similar influence of anti-corruption political scandals in our setup. Hence, although political connections present a substantial distortion of firm incentives in China (e.g., Liao, Liu, and Wang 2014; Calomiris, Fisman, and Wang 2010; Megginson and Netter 2001), social norms play a different role in shaping the censorship incentives of firms from the bottom.

E. Instrumental Variable Approach

We can also identify the causal impact of scandal-punctuated alcohol based on a two-stage instrumental variable (IV) approach exploiting the staggered occurrence of nationwide alcohol scandals. One benefit of this approach is to further examine and control for the geographic origin of the social norms. Hence, we next present the results of this approach.

To conduct the test, we construct the instrument of *Proximity-to-scandal* based on the sample of the top national scandals in each year. For each year, we first measure the average geographic distance between the location of a public firm and that of the liquor producers involved in the topmost scandals. We then rank these distance measures into deciles, whereby deciles 1 and 10 consist of firms with the longest and shortest distances from the liquor producer involved in the topmost scandal during the year. Finally, *Proximity-to-scandal* is defined as these decile ranks scaled by 10. In this case, this proximity variable takes a value from 0.1 to 1 (closest to the liquor producer involved in the topmost scandal). We then estimate the following IV specification:

First stage: $Alcohol_{p,t-1} = a + b \times IV_{i\in p,t-1} + c \times M_{i,p,t-1} + \delta_{p,t-1}$, (3)

Second stage: $Manipulation_{i,p,t} = \alpha + \beta \times \widehat{Alcohol}_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t}$, (4)

where $IV_{i\in p,t-1}$ denotes the average *Proximity-to-scandal* for firm i located in province p to the top scandals occurring from year $t-3$ to $t-1$, and $\widehat{Alcohol}_{p,t-1}$ refers to the projected value of alcohol consumption obtained from the first-stage regression.[23]

We report the coefficients of interest (i.e., b and β) in Table 4. Models (1) and (2) show that *Proximity-to-scandal* has a significant, negative impact on alcohol consumption in the first stage, while projected alcohol significantly influences manipulation in the second stage. For the economic magnitude, local alcohol consumption in the region of an average firm drops by approximately 10.8% (i.e., $0.241 \times 0.45 = 10.8\%$, where 0.45 is the average *Proximity-to-scandal*), further transforming into an 11.9% standard deviation decrease in *manipulation* in the second stage (i.e., $0.241 \times 0.45 \times 0.055/0.050 = 11.9\%$). This magnitude is consistent with what we obtain from the baseline analysis.

We then augment the main proximity proxy with geographic and climate instruments. The idea that geographic and climate variations affect culture dates back to as early as Aristotle and is also supported by the most recent academic studies (e.g., Ostrom 1990; and Durante 2009; also see Castillo and Carter 2011; and Zylberberg 2011 on the influence of climate catastrophes). Building on these insights, we augment our scandal-based instruments with several proxies of geographic "shocks" to capture the geographic origin of the drinking culture.[24]

The first is the latitude of a region (hereafter *Latitude*), with a larger value indicating more northern areas. We use this variable to capture the seasonal/daylight conditions of a region, which can significantly affect alcohol-related culture through its influence on local agricultural, brewing, and living environments (e.g., London and Teague 1985). The second is the fraction of areas suffering from *abnormal* snowstorms and other natural disasters (e.g., wind and hail). The third is the *abnormal* temperature of a region.[25] More snowy weather and lower temperatures can encourage alcohol-related activities, for instance, because of the widely held view that alcohol can help "warm up" the body. Hence, these variables can also introduce plausibly exogenous variations in alcohol consumption and alcohol-related social norms.

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[23] The average *Proximity-to-scandal* captures the multiyear influence of alcohol scandals as exhibited in the DiD tests. Using other time conventions does not change our results, while since no alcohol scandals were detected for 2002 and 2005, alcohol consumption in these two years and information manipulation in the years afterward are not included in this analysis.

[24] Latitude and temperature data come from CSYs. Snow, wind, and hail data come from China Civil Affairs' Statistical Yearbooks.

[25] By "*abnormal*" we mean to take the difference between the concurrent year's weather conditions and its average value in the whole sample period (using a rolling window to adjust it does not change our results), which we use to capture unexpected changes in the weather conditions of a region, in the spirit of Giroud et al. (2011).

A caveat is that these variables can affect other norms in society. Nonetheless, they are unlikely to affect manipulation directly and, in this regard, can help to identify the geographic/climate roots of alcohol-related social norms. Hence, we jointly use *Proximity-to-scandal* and these variables in our next set of IV tests. In the first stage (Models (3), (5), and (7)), we observe that higher *Latitude* (more northern areas), snowier weather, and lower temperatures can significantly increase alcohol consumption. Importantly, the influence of *Proximity-to-scandal* remains highly significant to the inclusion of geographic/climate variables. In the second stage (Models (4), (6), and (8)), we find that instrumented alcohol consumption significantly enhances manipulation.

To further verify the quality of our instruments, we provide weak-instrument and overidentification tests. The results are tabulated at the bottom of the respective columns. The *F*-statistics are highly significant, suggesting that our IVs are not weak instruments, while Hansen's *J* statistics are all insignificant at the 10% level, confirming that the IV specification is not overidentified. The two sets of instruments, in this regard, introduce variations to alcohol due to different grounds. The IV tests further support a causal influence of alcohol on manipulation.

V. Mechanisms and Implications: Social Norms as a Negative Externality

This section formally examines whether alcohol-induced manipulation could posit a potential negative externality to market cooperation.

A. Alcohol vs. Market-Based Cooperation

We first examine whether manipulation allows firms to reap private benefits by exploiting market-based cooperation. We address this issue by examining whether minority investors, who rely entirely on market-based cooperation, suffer from welfare loss and are exposed to excessive risk.

Since asset tunneling is a prominent method that firms use to exploit minority shareholders in China, we follow Cheung, Rau, and Stouraitisn (2006) and Jiang, Lee, and Yue (2010) to examine two proxies of asset tunneling: *Related-party Transaction* and *Other Receivable.* The first variable calculates the total net value of the firm's transactions with its related parties, often involving the tunneling of assets from firms to their related parties at unfair prices that benefit the related parties. The second variable covers intercorporate loans that a firm lends to its related parties. To the extent that the related parties often default on their loan payments, financial assets can be tunneled to them through loans. Both variables are scaled by the total net assets of a firm.

In Models (1) and (2) of Table 5, we link these two proxies of asset tunneling to alcohol. Firms more exposed to alcohol-related social norms, on average, exhibit more asset tunneling. These results suggest that the wealth of market-based investors in the firm is essentially transferred to the related parties. Moreover, since related parties are often controlled by the top management team or the large shareholders of a firm in China—in many cases, the related parties are created to receive such tunneled assets—the wealth is ultimately transferred to the managers and large shareholders of the firm. Our results, therefore, suggest that alcohol allows the top management team and controlling shareholders to reap private benefits by exploiting market-based investors.

In addition to the welfare loss due to asset tunneling, investors might also face excessive risk in their stock investments. Since manipulation promotes positive news and hides negative news, stock prices might exhibit more crash risk—i.e., negative skewness (Hong and Stein 2003)—and reflect less firm-specific information—i.e., higher price synchronicity (Morck, Yeung, and Yu 2000; Jin and Myers 2006). In Models (3) and (4), therefore, we link negative skewness (*Neg_Skew*) and price synchronicity (*Synch*) to alcohol. We find that alcohol-related social norms significantly enhance crash risk and reduce firm-specific information.

Note that, while market-based investors suffer from manipulation, participants in alcohol-facilitated *guanxi* networks have access to proper information and share rents. This effect resembles two of the most important effects of social networks in facilitating information (Hochberg, Ljungqvist, and Lu 2007, Fracassi 2017, and Cohen, Frazzini, and Malloy 2008, 2010) and contaminating corporate governance (Güner, Malmendier, and Tate 2008, Kuhnen 2009, and Fracassi and Tate 2012 for the latter). The difference is that the *guanxi* network is famously fueled by alcohol and that contaminated governance is notoriously related to information manipulation in China.

To illustrate that firms might purposefully enhance local cooperation at the cost of market-based investors, we examine how alcohol affects the likelihood of firms hiring small and local auditors (*Small_Local_Auditor*). These auditors are not only of lower quality (e.g., Wang, Wong, and Xia 2008) but are also good candidates with which to collude. This dark incentive is confirmed in Model (5), in which more alcohol-exposed firms exhibit a greater likelihood to hire small, local auditors. In this regard, the cooperation that alcohol promotes involves not only manipulation but also local collusion as a reinforcement to implement manipulation.

B. Alcohol vs. Top-Down Institutions: The Rise of the Negative Externality

Since the alcohol-facilitated norm hinders market-based cooperation, a crucial question is whether formal institutions can help to constrain its influence. Hence, we explore the relative importance of

social norms and the three most important top-down institutions and pro-market social value in China, involving the central government, the rule of law, and the social value of trust, in the following specification:

$$Manipulation_{i,p,t} = \alpha + \beta_1 \times Alcohol_{p,t-1} + \beta_2 \times Institution_{p,t-1} + \gamma \times Alcohol_{p,t-1} \times Institution_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t}, \quad (5)$$

where $Institution_{p,t-1}$ denotes the influence of institutions, which we specify in detail.

We first consider the 2012 anticorruption campaign implemented by the Dec. 4, 2012, meeting of the Central Committee of the Political Bureau of the Communist Party of China (CPC), the Party's top-ruling body. Although the purpose of the campaign is subject to debate, its eight specific requests explicitly prohibit "grand receptions," which are typically associated with alcohol, which could directly disrupt alcohol-related social activities.[26] Hence, we investigate the influence of alcohol interacted with a dummy variable, *PostMeeting*, which takes the value of 1 for post-2012 meeting periods and 0 otherwise.

The results are tabulated in Table 6, in which Models (1)–(3) report how the influence of alcohol changes after the government campaign in the whole sample of firms, in the subsample of SOEs, and in the subsample of non-SOE firms, respectively. The influence of Alcohol on SOEs is absorbed, but non-SOE firms are unaffected. The difference between SOEs and non-SOEs is consistent with an important feature of the campaign: that it was a Party rule and applied to Party members (top executives of large SOEs are typically Party members.).[27] On average, the post-meeting effect absorbs approximately two-thirds of the original impact of alcohol (i.e., $\gamma/\beta_1 = 0.013/0.020 = 65\%$) in Model 1.

The second (and cross-sectional) variation concerns property rights as a proxy for the rule of law, which is perhaps the most important type of formal institution that fosters market-based collaboration and economic development (e.g., LaPorta et al. 1998, 2000; Acemoglu and Johnson 2005). The data come from Fan, Wang, and Zhu (2011) and Wang, Fan, and Yu (2016), who reported the property rights scores for producers in different regions of China. A higher score for *Property Rights* represents better legal institutions. From Models (4)–(6), we see that the influence of this variable is almost negligible.

[26] The anticorruption campaign imposes an eight-point request on government officials. Two are directly related to alcohol: (1) Request 1: "There should be no welcome banners, no red carpets, no floral arrangements and no grand receptions for officials' visits"; (2) Request 8: "Leaders must practice thrift and strictly follow relevant regulations on accommodations and cars." More details can be found at http://cpcchina.chinadaily.com.cn/2012-12/05/content_15992256.htm.

[27] The influence of the campaign on non-Party members and firms run by non-Party members (i.e., non-SOE firms) is indirect.

To further understand the influence of the rule of law in China, we examine public and private law enforcement. For public enforcement, we consider two major types of government-led fraud detection: tax-related fraud detected by the State Taxation Administration of China (firms often manipulate information to hide taxable income); and corporate fraud detected by China's Securities Regulatory Commission and stock exchanges regarding a list of disclosure-related items. For private enforcement, we consider lawsuits from other companies or individuals. Since our main finding—that alcohol *reduces* the efficiency of law enforcement—echoes that regarding property rights, we report the results in the Online Appendix (Table IN2).

It is perhaps not surprising to see that the rule of law is dwarfed by alcohol-related social norms. Indeed, the alcohol-facilitated *guanxi* network inherited from the command economy in China often includes not only business partners (e.g., suppliers, auditors, and banks) but also judges and regulators as protectors. This heritage has profound implications in influencing cooperation in China: by both facilitating manipulation-related private benefits and reducing its associated litigation risk, alcohol-related social norms essentially posit a negative externality. Firms pervasively adopt manipulation under this externality as a way of cooperating.

In addition to formal institution, previous studies often find that informal social culture, particularly social trust, can also help promote market cooperation (e.g., Guiso, Sapienza, and Zingales 2004, 2008, 2015, 2016). To see whether culture in China may play a particular role in constraining the social norm externality, we finally examine the interaction between alcohol and social trust as measured by the World Values Survey and report the results in Models (7)–(9). Interestingly, social trust mitigates the influence of social norms for non-SOE firms but not for SOEs. The influence is, however, small in magnitude: a one-standard deviation increase in trust can mitigate the influence of alcohol by 4.5% only (i.e., $\sigma_{trust} \times \gamma/\beta_1 = 4.5\%$ in Model 7). In unreported tests, we also replace *trust* with other social value variables, such as *Religion* and *Individualism*, and fail to find a significant impact. In this regard, social values cannot effectively constrain the influence of social forms.

Jointly, our results demonstrate that alcohol-related social norms are powerful in affecting the way in which firms cooperate vis-à-vis a list of top-down institutions. On the one hand, alcohol-related social norms give rise to a negative externality in cooperation (H2), inducing the large-scale manipulation observed in practice. On the other hand, such an anti-market influence can be attenuated only by the government campaign (H3b)—a more command economy device—but not the more market-oriented legal institutions and social values (i.e., rejecting H3a). These observations underscore the lack of a

proper social foundation—and therefore, the importance of building one—for China's economy and long-term development.

C. Implications of the Negative Externality on the Propagation of Social Norms

One general implication of social norm-induced negative externality is that the norm should be adopted and promoted by a large group of people. We next explored whether this assumption is true for Alcohol in China. Building on studies highlighting the critical role of the leaders of society in shaping the evolution of culture (e.g., Acemoglu and Jackson 2015) and the literature documenting that culture has a persistent impact on individuals even when they emigrate to different countries (Guiso, Sapienza, and Zingales 2006; Fisman and Miguel 2007; DeBacker et al. 2015; and Liu 2016), we investigate whether corporate leaders—i.e., CEOs—could carry their alcohol-related cultural imprints and implement related social norms in their firms.

Of course, alcohol-related social norms may also affect the mental and physical health of exposed persons, allowing "drunk" CEOs to be more distracted from firm operations and therefore disclose less accurate information. As discussed in H4, two interconnected propagation effects related to CEO's cultural imprints can help differentiate the healthy channel from the impact of the negative externality.

Since genetic imprints and childhood experiences crucially affect a person's attitudes toward Alcohol (WHO 2004), birth region is particularly important to alcohol-related cultural imprints. Hence, we hand-collect information related to the CEO's birth region and define a CEO's alcohol imprint, labeled *Alcohol_CEO*, as the long-term average of alcohol consumption (calculated from our whole sample period) in his or her birth region. We then link manipulation to *Alcohol_CEO* in various specifications and report the results in Table 7. Model (1) includes region fixed effects for firm locations to control for regional characteristics that could affect manipulations for all firms located in the same region. We also control for industry fixed effects and cluster the errors at the province and year levels to control for within-cluster dependence not captured by the fixed effects. Model (2) further controls for firm fixed effects, absorbing industry and region fixed effects, and clusters the errors at the firm level. In both cases, we find that manipulation and *Alcohol_CEO* are positively related, suggesting that two firms located in the same region can exhibit different levels of manipulations when their CEOs come from regions with different alcohol-related social norms.

Next, we zoom in on subperiods and subsamples of the above test to gain more insights. First, since the appointment of a new CEO can help to identify policy changes reflecting the incoming CEO's cultural traits (e.g., Liu 2016), in Model (3), we refine the test to the subsample of years around CEO turnover (i.e., from two years before to two years after the appointment of a new CEO). We find that

new CEOs indeed manage to imprint their social norms and subsume those of the old CEOs. Second, since men drink more alcohol than women (e.g., WHO 2014), the gender influence of corporate leaders (e.g., Huang and Kisgen 2013) could play a particularly important role in propagating the influence of alcohol. We split *Alcohol_CEO* into two subsamples of male and female CEOs (denoted as *Alcohol_CEO_M* and *Alcohol_CEO_F*, respectively) and examine their impacts in Model (4). We see that the propagation of alcohol is concentrated on male CEOs.

Finally, since both the local social norms of firms and the imprinted traits of CEOs can affect cooperation, we design tests to differentiate their economic roles. The literature documents that the local culture can act as a selection mechanism to attract or select CEOs who share a similar culture (Schneider 1987; Liu 2016). Hence, we examine the likelihood for more alcohol-exposed firms to attract more alcohol-imprinted CEOs in the following logistic specification:

$$High\_Alcohol\_CEO_{i,p,t} = \Lambda(\alpha + \beta \times High\_Alcohol\_Firm_{i,p,t-1} + C \times M_{i,p,t-1}) + \epsilon_{i,p,t}, \quad (6)$$

where $\Lambda(.)$ represents the logistic function, and $High\_Alcohol\_CEO_{i,p,t}$ is a dummy variable that takes a value of 1 if a CEO who comes from a home region with above-median alcohol use (among all CEOs in year t) joins firm i in region p and 0 otherwise, and $High\_Alcohol\_Firm_{i,p,t-1}$ is a dummy variable that takes the value of 1 if the firm's local alcohol culture is greater than the median and 0 otherwise.

The results for the full sample analysis are reported in Model (5). In Model (6), we further refine the tests to be around CEO turnover. In both cases, more alcohol-imprinted CEOs are positively matched with more alcohol-exposed firms, consistent with the selection mechanism of local alcohol-related social norms. Additional analyses (Table IN3 in the Online Appendix) further show that, after being matched to a firm, CEOs actively influence manipulation based on their alcohol imprints.

These results support hypothesis H4 by sketching different economic roles played by CEOs and firms in propagating the influence of alcohol-facilitated cooperation norm. They confirm that social norm-induced externality, instead of alcohol-induced personal traits (e.g., drunkness), is the economic channel to induce large-scale manipulation.

We can also use the above tests to understand the potential roles played by other corporate leaders sitting on the board (excluding CEOs). Since the board plays an important role in recruiting CEOs, we conjecture that the board can influence manipulation via the selection mechanism.[28] Hence, we

[28] Empirically, we do not find that board members directly influence manipulation like CEOs do. In particular, when we include the alcohol imprint of the board in Models (1) or (2), the CEO effect remains, whereas the board influence is insignificant.

construct a variable, $High\_Alcohol\_Board$, which takes the value of 1 if the average alcohol exposure of a firm's board members is greater than the median and 0 otherwise. When we interact this variable with $High\_Alcohol\_Firm$ in Models (7) and (8), we find that having a more alcohol-imprinted board can enhance the selection mechanism. Therefore, the board can help to transmit alcohol-related social norms *indirectly*.

Collectively, our findings in this section suggest that the negative externality of alcohol-facilitated cooperation is widely practiced and propagated by different groups of corporate leaders. Since corporate leaders are more visible and can exert more influence in shaping the evolution of social norms (Acemoglu and Jackson 2015), they also pose a severe challenge in China to the potential establishment of a beneficial social foundation in support of a market economy.

VI. Robustness Checks and Related Social Norms

Finally, we provide robustness checks based on alternative proxies of manipulation incentives and alcohol-related social norms, and we explore the impact of other forms of social norms. We discuss our main findings in this section and refer to the Online Appendix for more details.

We start by constructing alternative measures to capture alcohol-induced manipulation incentives. In particular, we include two alternative proxies for information manipulation that are immune to the particular features of China's disclosure rules. The first is earnings restatements, in which firms admit their wrong reporting of previous financial information. This measure reveals the realized violation of well-defined disclosure rules (i.e., Srinivasan 2005). Second, we consider the practice of target beating, in which managers distort information to avoid reporting small losses relative to their heuristic targets (e.g., the market expectation). These measures are also uncontaminated by particular disclosure rules because the latter should already be incorporated into the heuristic target.

Panel A of Table IN4 in the Online Appendix replaces *manipulation* with these alternative measures. Across all of these different specifications, we see that the relationship between *alcohol* and manipulation remains significantly positive. For instance, a one-standard-deviation increase in *alcohol* is associated with an approximately 18% standard deviation increase in target beating and a 14.2% increase in earnings restatements. These results suggest a highly robust relationship between alcohol-related social norms and firm manipulation behavior.

We next scrutinize the measure of alcohol-related social norms. We supplement our demand-side proxies using two alternative measures. The first captures the impact of culture from the supply side by counting the number of famous brands of distilled liquor near the locations of firms (*#Famous Brands*).

The second highlights alcohol-related social costs: we manage to collect information about alcohol intoxication events reported by hospitals and construct a variable, *Intoxication,* as the ratio of the number of intoxications among the adult population. We find that being closer to a supply of luxury alcohol brands is generally associated with more manipulation incentives, as is a greater intensity of alcohol intoxication in a given region. Therefore, our main conclusion is robust to the way in which we measure alcohol-related social norms.

We finally examine several related social norms that, together with alcohol, comprise the so-called sin culture: sex, smoking, and gaming. We hand-collect data to measure the intensity of these variables, the process of which is detailed in the Online Appendix, and then we revisit Eq. (1) by replacing *Alcohol* with the list of alternative social norms. We find that none of those three culture proxies exhibit a significant influence, suggesting that alcohol plays a unique and leading role in spurring cooperation conventions in China.

Conclusion

In this paper, we propose a novel perspective that the inertia of social norms can be used to assess the social foundations of manipulation in a country. When we apply this insight to China, we find that China's leading social norms induce firms to manipulate information, giving rise to alcohol-induced manipulation. To examine whether such an influence implies causality, we exploit a unique set of scandals in China in which liquor products were detected to be toxic, punctuating local alcohol-related social norms. Both difference-in-differences and instrumental variable tests support a causal interpretation.

We further demonstrate that alcohol gives rise to a negative externality that contradicts market-based cooperation. Moreover, its influence can be attenuated only by the command-economy device of government campaigns, as opposed to more market-oriented institutions (such as the rule of law and social trust). The impact of alcohol-facilitated cooperation is evident by corporate leaders' propagation of the practice.

Our results suggest a potential social root of manipulation and hint at the importance, if not urgency, of building a proper social foundation for China's long-term development. Although the conclusions and implications are China-specific, the underlying social norm perspective is general and can be applied to understand the social foundations of other transition economies. Our study, therefore, calls for more attention to and research on the potential impact of secular elements of culture and their implied cooperation norms regarding economic development.

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Appendix A: Variable Definitions

Key Variables	Definition	Source
	Main Dependent and Independent Variables	
Alcohol Consumption (Alcohol)	The per capita annual average alcohol consumption of the urban residents of a province divided by their per capita annual income, multiplied by 100.	National Bureau of Statistics and Provincial Statistical Yearbooks
Manipulation	Dechow and Dichev's (2002) residual discretionary accruals	CSMAR
Firm Entertain Cost	The total cost of entertainment and travel, divided by revenue	Annual Report
Political Propaganda	The intensity of promoting CCP political propaganda (detailed in Online Appendix B)	Annual Report
	Instrumental Variables	
Proximity-to-scandal (Geographic distance-based)	We first measure the ranks (in deciles) of the geographic distance between the location of public firms and that of the top-scandal liquor producer. *Proximity-to-scandal* is then defined as these decile-ranks scaled by 10.	General Administration of Food and Drugs and ARCGIS
Latitude	Latitude of the geographic center of a province	CSMAR and ARCGIS
Ab_Snow	The fraction of areas suffering from *abnormal* snowstorms and other natural disasters related to low temperatures, wind, and hail, where *abnormal* means the concurrent-year value minus its average value in the whole sample period	China Civil Affairs' Statistical Yearbooks
Ab_Temperature	*Abnormal* annual temperature in a province, calculated as the average temperature in a year minus its average value in the whole sample period	China Statistical Yearbooks
	Variables Related to Wealth Transfer and Price Risk	
Related-party Transaction	The net value of related party transaction, as the income minus the cost of related party transactions	CSMAR
Other Receivables	The ending balance of other receivables divided by the average of the total assets at the beginning end of the period	CSMAR
Small_Local_Auditor	A dummy variable equals 1 if a firm's auditor is not a top-10 auditor based on assets audited in the region of the firm, and 0 otherwise.	Institute of certified public accountants
Neg_Skew	The negative skewness of firm-specific weekly returns over the fiscal-year period, calculated as: $Ncskew_{i,t}=-[n(n-1)^{\frac{3}{2}}\sum W_{i,t}^{3}]/[(n-1)(n-2)(\sum W_{i,t}^{2})^{3/2}]$.	CSMAR
Synch	Stock return synchronicity, defined as log (R^2 / (1-R^2)). where R2 is estimated from the weekly return, $R_{i,t} = \alpha + \beta_1 R_{m,t} + \beta_2 R_{m,t-1} + \varepsilon_{i,t}$.	CSMAR
	Variables for Top-Down Institutions and Social Values	
Post_Meeting	Anticorruption regulation, which equals 1 if the sample period is after the eight-point regulation adopted in December 2012, and 0 otherwise	The Website of Commission for Discipline Inspection of CPC
Property Rights	Property rights protection, measured by the degree of protection of the legitimate rights and interests of producers as reported in Fan, Wang, and Zhu (2011) and Wang, Fan, and Yu (2016).	National Economic Research Institute Index of Marketization of China's Provinces Report
Trust	The proportion of people in a region who believe "Most people can be trusted"	World Values Survey (2001)
	Control Variables	
Size	Firm size.	CSMAR
LEV	Financial leverage.	CSMAR
ROA	Return on assets.	CSMAR
Cret_Volatility	Stock return volatility.	CSMAR
Totinsholdper	Institutional ownership.	WIND
Analyst	Natural logarithm of the number of analysts following the firm.	CSMAR
BM	Book-to-market ratio.	CSMAR
RET	Annual stock return.	CSMAR
Turnover	Turnover ratio.	CSMAR
Dual	Dual role for the board chair.	CSMAR
Indir	Ratio of independent directors.	CSMAR
SOE	State-owned enterprises.	CSMAR
Age_Ceo	The age of the CEO.	CSMAR
Salary_Ceo	The natural logarithm of the annual salary of the CEO.	CSMAR
Top1	Shares held by the largest shareholder.	CSMAR
Gdp_Percapita	GDP divided by the total population.	China Statistical Yearbooks
Gdp_Growth	Growth rate of GDP.	China Statistical Yearbooks
Pop_Growth	Growth rate of the population.	China Statistical Yearbooks
Consume_Percapita	Natural logarithm of resident consumption per capita.	China Statistical Yearbooks

Table 1: Summary statistics

This table presents the summary statistics and the distribution of the main variables in the sample period from 2002 to 2017. All variables are defined in the Appendix.

Variable	Mean	STD	10%	25%	Median	75%	90%
Alcohol	0.754	0.196	0.546	0.607	0.740	0.853	1.013
Manipulation	0.078	0.050	0.026	0.041	0.065	0.099	0.151
Firm Entertain Cost	0.636	0.901	0.083	0.180	0.373	0.728	1.361
Political propaganda	0.027	0.041	0.000	0.000	0.010	0.040	0.080
SOE	0.580	0.494	0.000	0.000	1.000	1.000	1.000
Gdp_Percapita	4.558	2.615	1.261	2.453	4.049	6.558	8.478
Other Receivables (OR)	0.028	0.047	0.002	0.005	0.012	0.030	0.069
Related-party Transaction	0.027	0.292	-0.243	-0.071	0.006	0.124	0.321
Property Rights	5.489	1.874	3.170	4.120	5.370	6.780	8.090
Trust	0.532	0.116	0.360	0.480	0.540	0.560	0.720
Post_Meeting	0.358	0.480	0.000	0.000	0.000	1.000	1.000
Latitude	32.642	6.259	22.849	29.268	31.318	38.929	40.003

Table 2: The effect of alcohol-related social norms on manipulation

This table presents the results of the following multivariate panel specification, with industry and year fixed effects (IY) controlled for and standard errors clustered at the province and year level:

$$Manipulation_{i,p,t} = \alpha + \beta \times Alcohol_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Manipulation_{i,p,t}$ refers to our main proxy of information manipulation for firm i located in province p in year t. $Alcohol_{p,t-1}$ refers to the lagged alcohol consumption of the region. $M_{i,p,t-1}$ stacks a list of lagged control variables, including the logarithm of firm size (*Size*), financial leverage (*LEV*), return on assets (*ROA*), stock return volatility (*Cret_Volatility*), institutional ownership (*Totinsholdper*), the logarithm of the number of analysts following the firm (*Analyst*), book-to-market ratio (*BM*), annual stock return (*RET*), turnover ratio (*Turnover*), dual role for the board chair (*Dual*), an indicator for state-owned enterprises (*SOE*), CEO age (*Age_Ceo*), CEO salary (*Salary_Ceo*), shares of the largest shareholder (*Top1*), GDP per capita (*GDP_Percapita*), GDP growth (*GDP_Growth*), population growth (*Pop_Growth*), and the logarithm of residential consumption per capita (*Consume_Percapita*). Models (1) and (2) present the baseline regressions. Models (3)–(5) apply alternative empirical specifications to the regression. In particular, Model (3) adopts a Fama-MacBeth specification. Model (4) adopts a cross-sectional regression that examines the relationship between the average value of *Manipulation* for a firm over the entire testing period and the average alcohol consumption of the region (all control variables are averaged over the testing period as well). Model (5) links $Accrual_{i,p,t}$ to the residual value of alcohol consumption, in which we net out the potential influence of regional characteristics on alcohol. More specifically, we first regress alcohol consumption on regional characteristics (i.e., GDP per capita, GDP growth, population growth, and consumption per capita) in the cross-section, and we obtain residuals from the regression to measure the remaining level of alcohol consumption (*Alcohol_Residual*). We then link $Accrual_{i,p,t}$ to $Alcohol\_Residual_{p,t-1}$. Model (6) links $Accrual_{i,p,t}$ to the political propaganda of CCP ideologies in the annual reports of firms (*Political Propaganda*, detailed in Online Appendix B). Appendix A provides the definitions for all variables. Obs denotes the number of firm-year observations, Adj. R2 is the adjusted R^2. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

Dep. Var=*Manipulation*	Baseline Regressions		Alternative Specifications			*Political propaganda*
			Fama-Macbeth	Cross-Sectional	Residual	
	(1)	(2)	(3)	(4)	(5)	(6)
Alcohol $_{t-1}$	0.024***	0.021***	0.017***	0.019**		0.007***
	(5.61)	(4.83)	(3.85)	(2.18)		(3.30)
Alcohol_Residual $_{t-1}$					0.015***	
					(4.62)	
Size $_{t-1}$	-0.006***	-0.007***	-0.008***	0.003	-0.007***	0.000
	(-7.29)	(-7.85)	(-4.19)	(1.04)	(-8.39)	(0.23)
LEV $_{t-1}$	0.054***	0.054***	0.060***	0.019	0.054***	0.002
	(14.7)	(15.0)	(13.0)	(1.47)	(15.7)	(0.88)
Cret_Volatility $_{t-1}$	0.146***	0.144***	0.146***	0.514***	0.136***	-0.013*
	(11.6)	(11.6)	(9.39)	(6.68)	(11.0)	(-1.89)
Totinsholdper $_{t-1}$	-0.002	-0.002	-0.003	0.001	0.001	-0.002
	(-0.72)	(-0.62)	(-1.52)	(0.17)	(0.31)	(-0.91)
Analyst $_{t-1}$	-0.003***	-0.003***	-0.003***	-0.004	-0.002***	-0.000
	(-4.31)	(-4.25)	(-3.86)	(-1.63)	(-3.82)	(-0.77)
BM $_{t-1}$	-0.004***	-0.004***	-0.008***	-0.008***	-0.004***	-0.000
	(-5.14)	(-5.01)	(-4.03)	(-2.64)	(-5.06)	(-1.00)
RET $_{t-1}$	-0.002**	-0.002*	-0.003	-0.002	-0.003**	0.001*
	(-2.03)	(-1.89)	(-0.67)	(-0.19)	(-2.52)	(1.90)
Turnover $_{t-1}$	-0.067***	-0.066***	-0.066***	-0.326***	-0.067***	0.031***
	(-3.78)	(-3.77)	(-2.99)	(-5.79)	(-4.05)	(3.22)
ROA $_{t-1}$	0.030***	0.031***	0.028	-0.123***	0.026**	0.025***
	(2.76)	(2.81)	(1.64)	(-3.00)	(2.52)	(4.78)
Dual $_{t-1}$	0.002*	0.002*	0.001	0.002	0.002	-0.001
	(1.85)	(1.80)	(1.18)	(0.54)	(1.34)	(-1.53)
Indir $_{t-1}$	0.016*	0.016*	0.019***	-0.003	0.015*	0.008
	(1.92)	(1.92)	(3.14)	(-0.13)	(1.90)	(1.35)
SOE $_{t-1}$	-0.011***	-0.011***	-0.011***	-0.019***	-0.011***	0.003***
	(-9.14)	(-9.28)	(-19.1)	(-6.83)	(-9.76)	(4.20)
Age_Ceo $_{t-1}$	-0.000***	-0.000***	-0.000***	-0.000	-0.000***	-0.000
	(-6.54)	(-6.62)	(-5.51)	(-0.83)	(-6.66)	(-0.29)
Salary_Ceo $_{t-1}$	-0.001***	-0.001***	-0.001***	-0.000*	-0.001***	0.000***
	(-7.33)	(-7.25)	(-6.38)	(-1.70)	(-7.19)	(2.64)
Top1 $_{t-1}$	0.000***	0.000***	0.000***	0.000***	0.000***	-0.000
	(6.45)	(6.17)	(4.95)	(2.85)	(6.10)	(-0.34)
Gdp_Percapita $_{t-1}$		0.003***	0.002***	0.005**	0.003***	0.002***
		(4.38)	(3.87)	(2.46)	(6.59)	(5.60)
Gdp_Growth $_{t-1}$		0.020	0.027	-0.018	0.026*	-0.005
		(1.31)	(1.20)	(-0.21)	(1.72)	(-0.41)
Pop_Growth $_{t-1}$		0.080**	0.359***	0.245	0.081***	-0.025*
		(2.12)	(3.45)	(1.05)	(2.61)	(-1.95)
Consume_Percapita $_{t-1}$		-0.017***	-0.017***	-0.035***	-0.023***	-0.011***
		(-3.57)	(-6.62)	(-3.64)	(-6.27)	(-4.46)
Constant	0.394***	0.544***	0.571***	1.279***	0.643***	0.009
	(8.99)	(8.86)	(10.4)	(7.85)	(11.6)	(0.27)
Cluster	Prov, Year	Prov, Year	None	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	I	IY	IY
Obs	18469	18469	18469	1911	18469	15904
Adj. R2	0.12	0.12	0.17	0.24	0.12	0.08

Table 3: Difference-in-differences analysis: The 2012 plasticizer scandal

This table presents the results for the difference-in-differences (DID) analysis of the 2012 plasticizer scandal. We first sort firms into three terciles based on their geographic proximity to the location of the scandal. We then employ a propensity score matching algorithm (PSM) to identify matches between "treated" (nearby) firms in the top tercile and control (far away) firms in the bottom tercile, based on either firm characteristics before the scandal or firm characteristics plus regional alcohol consumption. Panel A conducts the following DiD test and its parallel trend analysis:

$$Manipulation_{i,p,t} = \beta_0 + \beta_1 \times Treat_{i,p} \times After_{i,p,t} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Manipulation_{i,p,t}$ refers to our main proxy of information manipulation for firm i located in province p in year t, $Treat_{i,p}$ is a dummy variable that takes the value of one (zero) when a firm is in the treated (control) group, and $After_{i,p,t}$ refers to a dummy variable that takes the value of one for years after the scandal (including the scandal year) and zero for years before the scandal. $M_{i,p,t-1}$ stacks a list of lagged control variables as before. We further control for firm and year fixed effects and cluster the errors at the province and year level. To save space, we do not tabulate the coefficients for control variables (the Online Appendix provides the full specification). In Panel B, we replace the dependent variable in A2 (*Manipulation*) with political propaganda (*Political Propaganda*), alcohol consumption (*Alcohol*) and firm expenditures on entertainment cost (*Firm Entertain Cost*). The sample for Panels A and B covers the period from 2009 to 2015, i.e., a three-year window around the 2012 alcohol scandal event. In Panel C, we expand the DiD test to include the top three scandals of each year. The sample covers scandals that occurred during 2005-2014, which allows a three-year window around each scandal in our sample period (2002-2017). Accordingly, a firm's *Proximity-to-scandal* is measured based on the average geographic distance to all of the top three scandals. In addition, we also conduct placebo tests by replacing alcohol scandals with political scandals, including the top 3 political scandals in each year and the 2012 Bo-scandal in 2012. The Appendix provides detailed definitions for all variables. Obs denotes the number of firm-year observations, Adj. R2 is the adjusted R^2. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively.

Panel A: Earnings manipulation around the 2012 alcohol plasticizer scandal in diff-in-diff tests

Dep Var = *Manipulation*	A1. PSM by firm characteristics (Treat = Proximity to alcohol scandal)		A2. PSM by firm characteristics and alcohol (Treat = Proximity to alcohol scandal)	
	(1)	(2)	(3)	(4)
Treat×After $^{1\ to\ 3}$	-0.010***		-0.009***	
	(-2.87)		(-2.79)	
Treat×Before $^{-1}$		0.004		0.003
		(1.05)		(0.89)
Treat×Current		-0.001		-0.001
		(-0.30)		(-0.18)
Treat×After ^{1}		-0.005**		-0.005*
		(-1.98)		(-1.89)
Treat×After $^{2\ to\ 3}$		-0.014***		-0.013***
		(-2.63)		(-3.11)
Control Variables	Yes	Yes	Yes	Yes
(Firm, CEO, Region)				
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Obs	2991	2991	2559	2559
Adj. R2	0.0930	0.0974	0.0421	0.0502

Panel B: The puctuation ofpropagation and alcohol consupmtions by the 2012 alcohol scandal (PSM by firm characteristics and alcohol)

Dep Var =	*Political Propaganda*	*Alcohol Consumption*	*Firm Entertain Cost*
	(5)	(6)	(7)
Treat×After $^{1\ to\ 3}$	-0.004*	-0.048***	-0.022**
	(-1.85)	(-4.68)	(-2.17)
Control Variables	Yes	Yes	Yes
(Firm, CEO, Region)			
Cluster	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Firm, Year	Prov, Year	Firm, Year
Obs	2223	2913	1998
Adj. R2	0.1345	0.0468	0.0586

Panel C: The impact of all-year top 3 alcohol scandals and political scandals (top 3 and the 2012 Bo scandal)

Dep Var = *Manipulation*	Top 3 alcohol scandals	Top 3 political scandals	2012 Bo-scandals
	(8)	(9)	(10)
Treat×After $^{1\ to\ 3}$	-0.005***	0.001	0.003
	(-4.18)	(0.79)	(0.64)
Control Variables	Yes	Yes	Yes
(Firm, CEO, Region)			
Cluster	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Firm, Year	Firm, Year	Firm, Year
Obs	9353	10356	2,018
Adj. R2	0.0486	0.0829	0.1081

Table 4: Alcohol consumption and manipulation: An instrumental variable approach

This table presents the results of the following two-stage IV specification:

First stage: $Alcohol_{p,t-1} = a + b \times IV_{i\in p,t-1} + c \times M_{i,p,t-1} + \delta_{p,t-1}$,

Second stage: $Manipulation_{i,p,t} = \alpha + \beta \times \widehat{Alcohol}_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t}$

where $IV_{i\in p,t-1}$ denotes the instrument variables in the first stage for firm i located in province p, which we calculate as the average *Proximity-to-scandal* of the firm with respect to the top national scandals occurring from year $t-3$ to $t-1$, and $\widehat{Alcohol}_{p,t-1}$ refers to the projected value of lagged alcohol consumption obtained from the first-stage regression. $M_{i,p,t-1}$ stacks a list of lagged control variables, as before. *Proximity-to-scandal* is the geographic proximity between the location of the firm and the location of liquor producers experiencing scandals. Higher proximity means a shorter distance. These instruments are further augmented by the latitude of regions (*Latitude*), abnormal snow conditions (*Ab_Snow*), and abnormal temperature in a region in a year (*Ab_Temperature*). We further control for industry and year fixed effects and cluster the errors at the province and year level in all regressions. Obs denotes the number of firm-year observations, and centered R2 is the adjusted R^2 in IV regression. The last three lines report the *F*-statistics for the weak instrument test, as well as Hansen's *J* statistics and their corresponding p-values. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2015.

Dep. Var=	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2
	Alcohol $_{t-1}$	*Manipulation* $_{t}$	*Alcohol* $_{t-1}$	*Manipulation* $_{t}$	*Alcohol* $_{t-1}$	*Manipulation* $_{t}$	*Alcohol* $_{t-1}$	*Manipulation* $_{t}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Alcohol_hat $_{t-1}$		0.055***		0.066***		0.060***		0.051***
		(6.10)		(7.39)		(6.87)		(5.83)
Proximity-to-scandal (t-3 to t-1)	-0.241***		-0.212***		-0.238***		-0.244***	
(Geographical distance-based deciles)	(-7.16)		(-6.00)		(-7.17)		(-7.37)	
Latitude			0.003**					
			(2.51)					
Ab_Snow					0.095*			
					(1.86)			
Ab_Temperature							-0.030**	
							(-2.22)	
Control Variables (Firm, CEO, Region)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	IY	IY	IY	IY	IY
Obs	15077	15077	15077	15077	15077	15077	15077	15077
Centered R2	0.299	0.172	0.304	0.167	0.305	0.169	0.305	0.173
Weak IV *F* Statistics	2036.620		1088.51		1090.246		1090.857	
Hansen's *J* Statistics			1.562		1.872		2.256	
Hansen's *P Value*			0.591		0.6829		0.1085	

Table 5: Social norms vs. private benefits and local collusion

Panel A of this table presents the results of the following multivariate regression:

$$Private\_Benefit_{i,p,t} = \alpha + \beta \times Alcohol_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Private\_Benefit_{i,p,t}$ refers to the private benefit of firm i located in province p in year t, $Alcohol_{p,t-1}$ refers to the lagged alcohol consumption of the region, and $M_{i,p,t-1}$ stacks a list of lagged control variables as before. In Panel A, we use asset tunneling to proxy for private benefits. *Related-party Transaction* refers to the total net value of a firm's transactions with its related parties scaled by the total net asset of the firm; *Other Receivables* refers to the total value of this particular accounting item scaled by firm assets. We provide more detailed variable definitions in Appendix A. In Panels B and C, we link *Alcohol* to two proxies of stock market risk due to the lack of information, including negative skewness (*Neg_Skew*) and price synchronicity (*Synch*), and a dummy variable indicating the hiring of small local auditors to audit its annual reports (*Small_local_Auditor*). We further control for industry and year fixed effects and cluster the errors at the province and year level in all regressions. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

A. Private benefits related to asset tunneling		
Dep. Var=	*Related-party Transaction*	*Other Receivables*
	(1)	(2)
Alcohol $_{t-1}$	0.090***	0.001**
	(4.96)	(2.33)
Control Variables (Firm, CEO, Region)	Yes	Yes
Cluster	Prov, Year	Prov, Year
Fixed Effects	IY	IY
Obs	9873	17353
Adj. R2/ Pseudo R2	0.04	0.22
B. Additional risk in the stock market		
Dep. Var=	*Neg_Skew*	*Synch*
	(3)	(4)
Alcohol $_{t-1}$	0.023**	0.095**
	(2.31)	(2.45)
Control Variables (Firm, CEO, Region)	Yes	Yes
Cluster	Prov, Year	Prov, Year
Fixed Effects	IY	IY
Obs	16049	16298
Adj. R2/ Pseudo R2	0.08	0.32
C. The potential formation of local collusion		
Dep. Var=		*Small_Local_Auditor*
		(5)
Alcohol $_{t-1}$		0.021**
		(2.42)
Control Variables (Firm, CEO, Region)		Yes
Cluster		Prov, Year
Fixed Effects		IY
Obs		15570
Adj. R2/ Pseudo R2		0.17

Table 6: Effectiveness of alcohol vs. top-down institutions

Panel A of this table augments the baseline regression with the following specification:

$$Manipulation_{i,p,t} = \beta \times Alcohol_{p,t-1} + \gamma \times Alcohol_{p,t-1} \times Institutions_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Institutions_{p,t-1}$ refers to measures of formal institutions, including $Post\_Meeting_t$, a dummy variable that takes the value of one for periods after the recent anticorruption regulations (the eight-point regulations, which were adopted in December 2012) and zero otherwise, $Property\ Rights_{p,t-1}$, the regional index of property rights, and $Trust_{p,t-1}$, the regional level of social trust. We further control for industry and year fixed effects (IY) and cluster the errors at the province and year level in all regressions. Obs denotes the number of firm-year observations, Adj. R2 is the adjusted R^2. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

	A. Influences of central gov.			**B. Influences of law**			**C. Influences of social trust**		
Dep. Var=*Manipulation*	Full sample	SOEs	Non-SOEs	Full sample	SOEs	Non-SOEs	Full sample	SOEs	Non-SOEs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Alcohol $_{t-1}$	0.020***	0.025***	0.014**	0.020**	0.016*	0.035**	0.100***	0.053**	0.165***
	(5.19)	(5.65)	(2.34)	(2.36)	(1.72)	(2.43)	(4.00)	(2.16)	(3.24)
Alcohol $_{t-1}$ ×*Post_Meeting*	-0.013**	-0.036***	0.012						
	(-2.07)	(-6.13)	(1.24)						
Alcohol $_{t-1}$ × *Property Rights* $_{t-1}$				0.000	0.001	-0.004			
				(0.035)	(0.71)	(-1.23)			
Property Rights $_{t-1}$				-0.002	-0.002	-0.001			
				(-1.59)	(-1.60)	(-0.41)			
Alcohol $_{t-1}$ × *Trust* $_{t-1}$							-0.039***	-0.015	-0.071**
							(-2.78)	(-1.05)	(-2.56)
Trust $_{t-1}$							-0.054***	-0.021	-0.094***
							(-3.28)	(-1.34)	(-2.73)
Control Variables (Firm, CEO, Region)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	IY	IY	IY	IY	IY	IY
Obs	18469	10716	7753	17272	10058	7214	17651	10236	7415
Adj. R2	0.13	0.12	0.15	0.18	0.14	0.24	0.13	0.11	0.15

Table 7: The role of corporate leaders in propagating alcohol

Panel A presents the results of the following regression:

$$Manipulation_{i,p,t} = \alpha + \beta \times Alcohol\_CEO_{i,p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Alcohol\_CEO_{i,p,t-1}$ refers to the alcohol-imprint of the CEO for firm i located in province p in year t, which is measured as the level of alcohol consumption of the CEO's home (i.e., birth) region, and $M_{i,p,t-1}$ stacks a list of control variables. In Models (1)-(2), the home region refers to the region of birth. We control for industry, year, and region fixed effects for firm locations (IYR) and cluster the errors at the province and year level in Model (1) and further use firm and year fixed effects (Y, Firm) and cluster the errors at the firm level in Model (2). Model (3) applies the test to two years around CEO turnovers (from -2 years to +2 years) with firm fixed effects and clusters the errors at the firm level. Model (4) splits $Alcohol\_CEO_{p,t-1}$ into $Alcohol\_CEO\_M_{p,t-1}$ and $Alcohol\_CEO\_F_{p,t-1}$ based on the gender of the CEOs (M for males and F for females). Panel B presents the results of the logistic specification:

$$High\_Alcohol\_CEO_{i,p,t} = \alpha + \beta \times High\_Alcohol\_Firm_{i,p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $High\_Alcohol\_CEO_{i,p,t}$ is a dummy variable that takes a value of one if a CEO comes from a home region with above-median alcohol (in the cross-section of all CEOs in that year), zero otherwise, and $High_Alcohol_Firm_{i,p,t-1}$is a dummy variable that takes a value of one if its alcohol is above-median, and zero otherwise. In Models (5) and (6), we apply the test to the entire sample and to two years around CEO turnovers, respectively, and control for firm and year fixed effects (Y, Firm) and cluster the errors at the firm level. Models (7) and (8) further interact $High\_Alcohol\_Firm_{i,p,t-1}$ with $High\_Alcohol\_Board_{i,p,t-1}$, which is computed as the average alcohol-imprint of all board members of the firm (excluding CEOs, if applicable). The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

Panel A: The role of CEOs in transmitting home-region culture

Dep. Var = *Manipulation*	CEO Home Province		Around CEO turnover (-2 to 2)	Male vs. female CEOs
	(1)	(2)	(3)	(4)
Alcohol_CEO	0.023**	0.035**	0.021*	
	(2.48)	(2.15)	(1.74)	
Alcohol_CEO_M				0.034**
				(2.15)
Alcohol_CEO_F				0.045
				(1.24)
Cluster	Prov, Year	Firm	Firm	Firm
Fixed Effects	IYR	Y, Firm	Y, Firm	Y, Firm
Obs	2669	2669	1345	2669
Adj. R2	0.25	0.09	0.31	0.09

Panel B: The likelihood of getting a more alcohol-exposed CEO (The selection mechanism)

	With firm-fixed effects		The role of board	
Dep. Var = *High_Alcohol_CEO*	Full sample	Around CEO turnover (-2 to +2)	Full sample	Around CEO turnover (-2 to +2)
	(5)	(6)	(7)	(8)
High_Alcohol_Firm	0.693***	0.669***	0.600***	0.573***
	(11.9)	(11.1)	(7.17)	(6.25)
High_Alcohol_Board			0.016	0.051
			(0.40)	(0.96)
*High_Alcohol_Firm*High_Alcohol_Board*			0.275***	0.248***
			(3.82)	(3.10)
Cluster	Firm	Firm	Firm	Firm
Fixed Effects	Y, Firm	Y, Firm	Y, Firm	Y, Firm
Obs	2669	1345	1607	845
Adj. R2	0.51	0.51	0.58	0.57

Figure 1. Map of Residents' Alcohol Consumption

This figure plots the average value of alcohol consumption (in the percentage of household income) during the sample period from 2002 to 2017 in China's 31 regions.

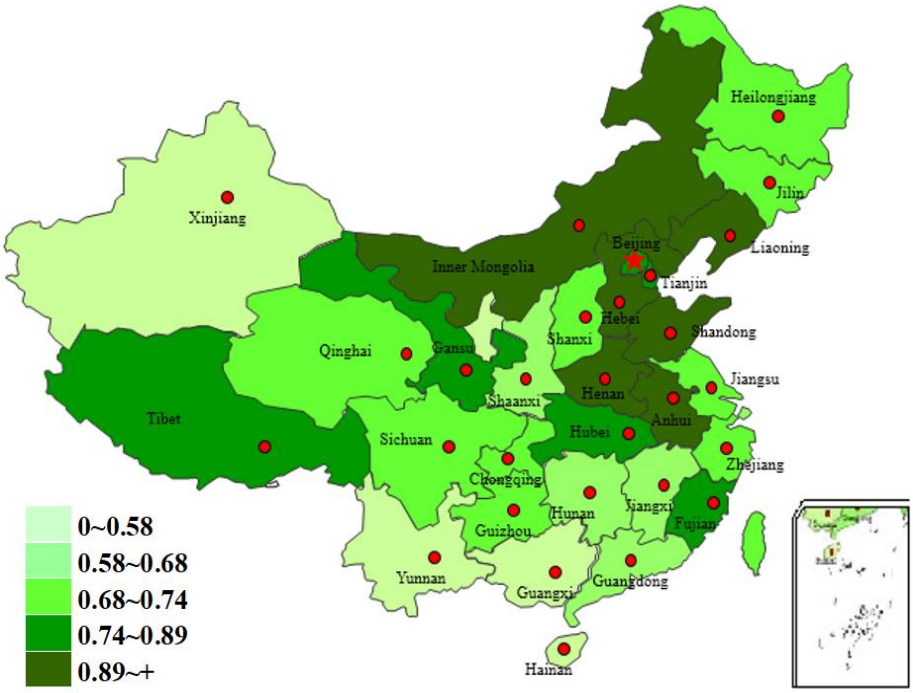
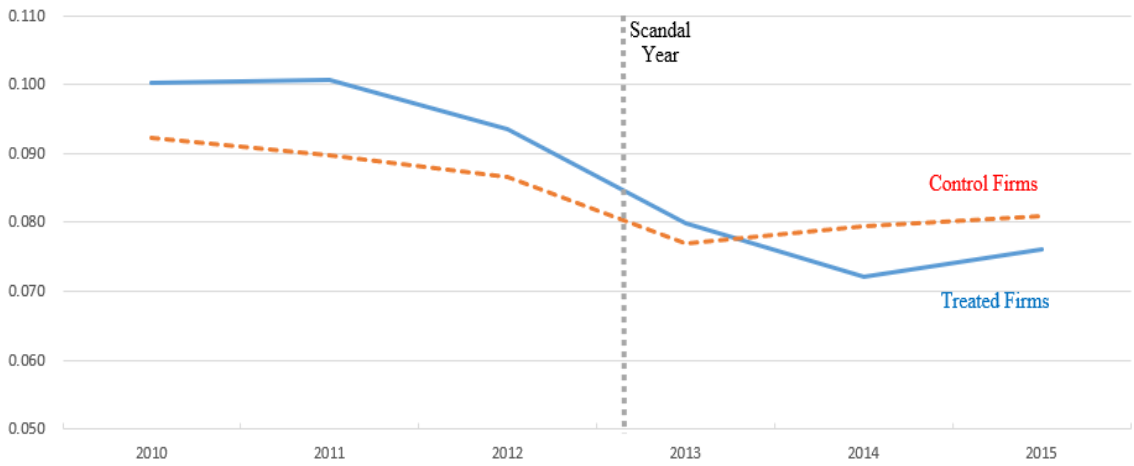


Figure 2. Difference-in-Differences Plot Based on the PSM Sample

This figure plots the distribution of manipulation around the year of the 2012 plasticizer scandal by using a propensity score matching sample based on firm characteristics and regional alcohol consumption before the scandal year.



For Online Publication

Online Appendix

In Part 1 of this Online Appendix, we provide detailed information on the list of alcohol scandals and tabulate the test concerning law enforcement and CEOs. In Part II, we tabulate the full specifications for Tables 1-7 of the main text.

Part 1: Additional Analysis and Tables

In this section, we first provide detailed information on the list of alcohol scandals used in the main tests. We then tabulate our analysis of the relationship between alcohol and law enforcement. Finally, we examine whether a CEO's alcohol traits have an active role in influencing manipulation above and beyond the influence of the firm's local social norms.

A. Construction of the Database of Alcohol Scandals in China

To construct the database on liquor scandals, we first identified all reports issued by the China Food and Drug Administration, the national quality supervisor of China, on quality problems in alcohol products: in other words, scandals. Next, we identify for each year, if applicable, the most influential or the top three most influential alcohol scandals (later on, *top 1* scandal and *top 3* scandals, respectively) as follows. Since listed alcohol producers are much more influential in China than private producers—leading liquor products, such as Moutai, are mostly produced by listed firms—we rank scandals of publicly listed liquor producers as more important than those of private producers. Among the scandals of listed liquor producers, when applicable, we use their sales to rank their importance and the influence of their scandals: as the sales volume increases, the influence of the liquor producer and its scandal increase. Among the scandals of private liquor producers, we use two criteria to rank their influence in the following sequence: 1) the seriousness of the quality problem and 2) how much public attention the problematic producer has attracted. We rank the detection of excessive levels of toxic chemicals as more important than other quality issues, and we rank public attention by the search volume on Baidu.com, the leading search engine in China, in the year of the scandal.

Table IN1 tabulates the list of alcohol scandals identified in our sample period. Panel A reports the locations of alcohol producers of the *top-one* and *top-three* scandals in any particular year. The alcohol producer with the top scandal in 2012 (the plasticizer scandal) is located in Hunan Province. Although this scandal was the most eye-catching event of the year, two other scandals were also uncovered by government quality supervisors. These two events occurred in Shanxi and Heilongjiang, which are quite far from Hunan. Using the geographic locations of the *top three* scandals, therefore, provides a powerful robustness check for tests based on the plasticizer scandal. Note that all results are robust for the use of the *top-one* scandal of each year—interested readers can obtain the results from us.

In Panel B, we further report detailed information on each year's top scandal, including the name of the alcohol producers, their address, the unqualified items (i.e., scandal items) uncovered by the government quality supervisor, how serious the quality problem was (i.e., whether they involved excessive use of toxic chemicals), and whether the alcohol producer is a public firm. We observe that listed alcohol producers dominate more recent scandals, whereas private alcohol producers dominated earlier scandals. In addition, most top scandals involved toxic chemicals, which explains why the uncovering of such scandals typically leads to significant reductions in alcohol consumption.

To visualize the locations of alcohol scandals, Figure IN2 plots the map of regions where alcohol producers of the *top-one* scandals are located. We can immediately see from the map that the locations of these problematic alcohol producers are widely scattered throughout China, ranging from the most northern province in China to mid-east China and to southwestern China. Moreover, if we examine the locations of the top scandals, we find that both Liaoning (for the topmost 2011 scandal) and Heilongjiang (for 2013) are located in the northern part of China, whereas Henan (for 2012) is located in the mid-south, a completely different part of the country. The sequential occurrence of such scandals is therefore likely to introduce staggered shocks into regional alcohol consumption and alcohol-related social norms.

B. The Relationship between Alcohol and Law Enforcement

Next, we examined the relationship between alcohol and law enforcement. Ideally, manipulation incentives and related firm misbehavior should be discouraged by regulators who aim to develop China into a market-based economy, especially when firms resort to manipulated information to escape the scrutiny of the market and market-based investors. However, if the same set of social norms can negatively affect the incentives of regulators, a negative externality may emerge in which the social norms exert a pervasive influence on firms.

To explore this possibility, we begin with the notion that fraud detection should increase with more earnings manipulation because firms that heavily distort information are also more likely to pursue private benefits and engage in corporate fraud, to which regulators pay attention. However, previous research also shows that Chinese firms bribe government officials (e.g., Cai, Fang, and Xu 2011). Adding to the observation that bribes are notoriously facilitated by alcohol-related social norms and activities, we hypothesize that alcohol will allow firms to better connect with regulators and therefore reduce the

effectiveness of fraud detection. This intuition can be tested by the logistic specification on the probability of fraud detection:

(A1) $$FraudDetection_{i,p,t} = \Lambda(\beta_1 \times Manipulation_{i,p,t-1} + \beta_2 \times Alcohol_{p,t-1} + \gamma \times Manipulation_{i,p,t-1} \times Alcohol_{p,t-1} + C \times M_{i,p,t-1}) + \epsilon_{i,p,t},$$

where $\Lambda(.)$ represents the logistic function and $FraudDetection_{i,p,t}$ is a dummy variable that takes the value of 1 when corporate fraud is detected by the government for firm i located in province p in year t. We examine two major types of government-led fraud detection. The first is tax-related corporate fraud detected by the State Taxation Administration of China and its local branches. This detection is important because information manipulation can directly help firms hide taxable income. The second is corporate fraud detected by China's Securities Regulatory Commission (CSRC) and stock exchanges regarding a list of disclosure-related items, including fictitious profits, fictitious assets, false records, misleading statements, delayed disclosure, major omissions, false disclosures, and improper general accounting treatment. The coefficient of interest is γ: if alcohol-related social norms reduce the detection rate, the coefficient should be negative.

Table IN2 tabulates the results. We first observe from Models (1) and (2) that the likelihood of tax fraud detection increases with manipulation and decreases with *Alcohol*. More importantly, in Model (3), the coefficient γ is significantly negative, confirming that a more intensive drinking culture reduces the effectiveness of fraud detection. For the economic impact of this effect, a one-standard-deviation increase in both variables increases the probability of detection by approximately 10.80% (scaled by the fitted probability of the logistic function when all independent variables take the value of their sample mean).[1] Models (4)–(6) show similar patterns, which demonstrate a significant influence of alcohol on the effectiveness of corporate fraud detection (the magnitude of its influence is 10.20%).

To complement government-detected corporate fraud, we also use lawsuits filed by other companies and individuals as a proxy for private enforcement. Models (7)–(9) report the results showing that alcohol influences the risk of being sued by other companies and individuals by approximately 10.20%. The joint effect of government and private enforcement shows the litigation risk faced by manipulating firms.

[1] The economic magnitude for the interaction term is estimated as $mfx \times [(\bar{x}_1 + \Delta x_1)(\bar{x}_2 + \Delta x_2) - \bar{x}_1\bar{x}_2]/\overline{\Lambda}$, where mfx is the marginal effect of the interaction term (0.086), $\bar{x}_1$ and $\bar{x}_2$ (Δx_1 and Δx_2) refer to the mean value (standard deviation) of the two independent variables, *Accrual* and *Alcohol*, and $\overline{\Lambda} = \Lambda(\beta_1\bar{x}_1 + \beta_2\bar{x}_2 + \gamma\bar{x}_1\bar{x}_2 + C\bar{M})$ is the fitted probability of the logistic function using estimated coefficients and the mean value of all independent variables.

Across all these models, we see two important results. First, information manipulation is indeed associated with high litigation risk in terms of a higher likelihood of government-led fraud detection and private enforcement. Second, *Alcohol* can reduce such litigation risk. It is especially striking to see that *Alcohol* can mitigate public enforcement, suggesting that alcohol facilitates the potential collusion between firms and regulators. In other words, alcohol-facilitated *guanxi* is likely to include regulators as well, which reduces the efficiency of fraud detection. Importantly, we see that litigation risk—or the cost of manipulation from the perspective of firms—is reduced by the same social norm that motivates misbehavior. In this case, a negative externality can arise in which the social norm induces firms to misbehave.

C. Alcohol-Imprinted CEO vs. the Local Social Norm of Firms

In the main test, we demonstrate that the local alcohol-related social norm of firms provides a selection mechanism to attract more alcohol-imprinted CEOs. One interesting follow-up question is, after being matched to a firm, how do CEOs' social norm imprints influence manipulations?

To understand this question, we examine two reciprocal mechanisms. First, we ask whether alcohol-imprinted CEOs can magnify the impact of local alcohol-related social norms. Second, we examine whether a CEO may appear to be more aggressive in manipulating information (with respect to his peers who originate from a similar cultural background) when his firm is located in a region with the more prominent local culture of alcohol. The first issue concerns the potential active role played by CEOs in propagating alcohol, whereas the second asks the extent to which CEOs are influenced by the local social norm to design firm policies.

We first examine the issue that a firm may exhibit more aggressive manipulation (with respect to its peers within the same local culture) when the firm's CEO comes from a home region with more prominent alcohol-related social norms. To explore this possibility, we expand Eq. (1) into the following specification:

(A2) $$Manipulation_{i,p,t} = \alpha + \beta_1 \times Alcohol\_Firm_{p,t-1} + \beta_2 \times More\_Alcohol\_CEO_{i,t-1} + \gamma \times Alcohol\_Firm_{p,t-1} \times More\_Alcohol\_CEO_{i,t-1} + C \times M_{i,p,t-1},$$

where $Alcohol\_Firm_{p,t-1}$ is the same as *Alcohol* in Eq. (1) except that we relabel it to emphasize that it refers to the local culture of firms, and $More\_Alcohol\_CEO_{i,t-1}$ takes the value of 1 when the CEO of a firm comes from a home region that values alcohol higher than the firm's region, and 0 otherwise. If a more alcohol-exposed CEO helps magnify the influence of local culture on manipulation, we should see a significant coefficient for the interaction term.

Table IN3 reports the results. Model (1) controls for industry and year fixed effects (IY) and clusters the errors at the province and year level. Model (2) further controls for the firm and CEO fixed effects to highlight the influence of the interaction term. In both cases, more alcohol-imprinted CEOs magnify the influence of the local culture on manipulation.

Next, we explore the reciprocal mechanism by which a CEO joining a more alcohol-exposed firm may be influenced by the local culture of the firm. That is, the CEO may appear to be more aggressive in manipulating information (with respect to his peers who originate from a similar cultural background) when his firm is immersed in a more prominent local culture of alcohol. To explore this mechanism, we tested the following:

(A3) $$Manipulation_{i,p,t} = \alpha + \beta_1 \times Alcohol\_CEO_{p,t-1} + \beta_2 \times More\_Alcohol\_Firm_{i,t-1} + \gamma \times Alcohol\_CEO_{p,t-1} \times More\_Alcohol\_Firm_{i,t-1} + C \times M_{i,p,t-1},$$

where $Alcohol\_CEO_{p,t-1}$ refers to the alcohol culture carried by CEOs, and $More\_Alcohol\_Firm_{i,t-1}$ takes the value of 1 when the firm culture has a higher value than the CEO's culture. We report the results in Models (3) and (4). Model (3) controls for industry and year fixed effects (IY), and the errors are clustered at the province and year level. Model (4) further controls for the firm and CEO fixed effects to highlight the influence of the interaction term. Interestingly, we see that a more intense local culture does not magnify the influence of CEOs' home-region culture on manipulation.

Overall, the difference between the two mechanisms implies that select CEOs play a more prominent role than local social norms in propagating the manipulation influence of alcohol.

D. Robustness Checks and Related Social Norms

Finally, we provide detailed variable constructions and empirical analysis for the robustness checks as summarized in the last session of the main text. The definitions of all additional variables used in this session are provided in the Online Appendix A.

We start by constructing alternative measures of manipulation incentives. In addition to Dechow and Dichev (2002), we also use two additional measures of abnormal discretionary accruals, including Dechow, Sloan, and Sweeney's (1995), modification of Jones (1991) and Kothari, Leone, and Wasley (2005) as a robustness check (denoted as *Manipulation_Jones* and *Manipulation_KLW*). The modified Jones measure denotes the residuals obtained by regressing total accruals on fixed assets and revenue growth, excluding growth in credit sales. Kothari, Leone, and Wasley (2005) controls for firm fundamentals by matching a firm with another firm from the same country, industry, and year with the closest ROA. Dechow and Dichev (2002) further controls for operating performance by regressing results on past, current, and future cash flows. Since Dechow and Dichev (2002) employs the most complete firm controls among the three measures, we use it as our main proxy.

In addition to discretionary accrues, we also construct two types of measures that are immune to any particular feature of China's disclosure rules. The first is an indicator of the occurrence of earnings restatements (*Restatement*), which can measure the realized violation of well-defined disclosure rules (e.g., Srinivasan 2005).

Second, we consider the practices of target beating, in which managers distort information to avoid reporting small losses relative to their heuristic target (e.g., the market expectation). We use both *target beating on small positive forecasting profits* (*SPAF*) based on Degeorge, Patel, and Zeckhauser (1999), which is a dummy that equals 1 if the difference between the reported earnings per share and the analyst-forecasted earnings per share scaled by stock price is between 0% and 1%, and *target beating on small positive profits* (*SPE*) based on Burgstahler and Dichev (1997), which is a dummy that equals 1 if net income scaled by lagged total assets is between 0% and 1%. These measures are uncontaminated by particular disclosure rules because the latter should already be incorporated into the heuristic target.

Panel A of Table IN4 replaces the dependent variable *Manipulation* with these alternative measures. When the target-beating and restatement measures are used, we use logistic regression specifications because these measures are dummy variables. Across all these different specifications, we see that the relationship between *Alcohol* and manipulation remains significantly positive. For instance, a one-standard-

deviation increase in *Alcohol* is associated with an 18.3% standard deviation increase in the target-beating (Models 4) and a 14.2% increase in earnings restatements (Model 5). These results suggest a highly robust relationship between alcohol-related social norms and firm manipulation behavior.

We next scrutinize the measure of alcohol-related social norms. We supplement our demand-side proxies using two alternative measures. The first captures the impact of culture from the supply side by counting the number of famous brands of distilled liquor near the location of firms (*#Famous Brands*).[2] The second highlights alcohol-related social cost: we manage to collect information on alcohol intoxication events reported by hospitals and construct a variable *Intoxication* as the ratio of the number of intoxications to the adult population.[3] The results for these two alternative proxies are tabulated in Models (6) and (7) of Panel B. Clearly, being closer to a supply of luxury alcohol brands is generally associated with more manipulation incentives, as is a higher intensity of alcohol intoxication in a given region. Therefore, our main conclusion is robust in the way we measure alcohol-related social norms.

We finally examine several related social norms that, together with alcohol, comprise the so-called sin culture: sex, smoking, and gaming. We first hand-collect from the China Yearbook of Eliminating Pornography and Illegal Publications[4] cases of illegal pornographic publications (books, periodicals, and videos) and define (illegal) sex-related social norms (*Sex*) as the number of detected cases divided by the population aged 15 years or older in a province. We use provincial tobacco consumption (obtained from the NBS and PSYs) divided by urban employees' per capita GDP to measure the smoking-related social norm (*Smoking*). Finally, since mahjong is one of the most popular four-player games in China, we measure the gaming element of social norms (*Gaming*) as the number of mahjong rooms—manually collected from the search engine of Baidu Map (http://map.baidu.com/) across 31 provinces—divided by the population aged 15 years or older in a province. We then revisit Eq. (1) by replacing *Alcohol* with the list of alternative social norms. The results are tabulated in Models (8)–(10). We find that none of those three culture proxies

[2] We identify the list of the top 200 brands of distilled liquor and the geographic location of their headquarters from the China National Association for Liquor and Spirits Circulation. For each firm in our sample, we then count the number of famous liquor brands among the top 200 that are within a 200-kilometer radius of the firm's headquarters. The list is available from 2009 to 2017. Since the list of famous liquor producers varies little over time, we extrapolate the 2009 list to earlier years.

[3] The National Ministry of Public Health conducted surveys on alcohol intoxication in six provinces in three different years (2005, 2011, and 2014). We extrapolate the 2005, 2011, and 2014 variables to nearby years. The test is based on six regions.

[4] The yearbook provides detailed information about the provincial cases of pornographic publications (books, periodicals, and videos) for the period from 2006 to 2013. For the missing values before 2006 and after 2013, we use the value in the nearest year (2006 and 2013, respectively) to measure those missing values.

exhibit a significant influence, suggesting that alcohol plays a unique and leading role in spurring cooperation conventions in China.

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Online Appendix A (Full specification): Variable Definitions

Variable	Definition	Source
	Main Dependent and Independent Variables: Proxies for Alcohol-Related Social Norms	
Alcohol	Alcohol consumption, defined as the per capita annual average alcohol consumption of the urban residents of a province divided by the per capita annual income of the same population, multiplied by 100.	National Bureau of Statistics (NBS) and Provincial Statistical Yearbooks
Firm Entertain Cost	The total cost of travel and entertainment, divided by revenue	Annual Report
Famous Brands	Number of Top 200 famous brands of distilled liquor factories near the firm's location (within a 200-kilometer radius).	China National Association for Liquor and Spirits Circulation
Intoxication	Intoxication, measured as the cases of alcohol intoxication scaled by the adult population.	Survey of residents regarding alcohol intoxication in six provinces
	Main Dependent and Independent Variables: Proxies for Firm Manipulations	
Manipulation	Dechow and Dichev's (2002) residual discretionary accruals	CSMAR
Manipulation_Jones	Dechow, Sloan, and Sweeney's (1995) modification of Jones's (1991) residual accruals, obtained by regressing total accruals on fixed assets and revenue growth, with growth in credit sales excluded	CSMAR
Manipulation_KLW	Kothari, Leone, and Wasley's (2005) residual accruals. Based on *Manipulation_Jones*, KLW's model further controls for firm ROA	CSMAR
SPAF	Target beating on small positive forecasting profits, a dummy variable that equals 1 if the difference between reported earnings per share and forecasted earnings per share scaled by stock price is between 0% and 1%, based on Degeorge, Patel, and Zeckhauser (1999)	CSMAR
SPE	Target beating on small positive profits, a dummy variable that equals 1 if the net income scaled by lagged total assets is between 0% and 1%, based on Burgstahler and Dichev (1997)	CSMAR
Restatement	Earnings restatements, a dummy variable that equals 1 if a firm restates its earnings in a given year	WIND
	Instrumental Variables	
Proximity-to-scandal (Geographic distance-based)	We measure the geographic distance between the location of public firms and that of the top-scandal liquor producer in each year. These distance measures are then ranked in deciles, whereby deciles 1 and 10 consist of firms with the lowest and highest geographic proximity to the top-scandal liquor producer of the year, respectively. *Proximity-to-scandal* is defined as these decile-ranks scaled by 10	General Administration of Food and Drugs and ARCGIS
Latitude	Latitude of the geographic center of a province	CSMAR and ARCGIS
Ab_Snow	The fraction of areas suffering from *abnormal* snowstorms and other natural disasters related to low temperatures, wind, and hail, calculated as the difference between the fraction of areas of the concurrent year minus its average value in the whole sample period	China Civil Affairs' Statistical Yearbooks
Ab_Temperature	*Abnormal* annual temperature in a province, calculated as the average temperature in a year minus its average value in the whole sample period	China Statistical Yearbooks
	Variables Related to Wealth Transfer and Price Risk	
Related-party Transaction	Net related transactions/average of total assets at the beginning and end of the period. The net value of the connected transaction is the income of connected transaction business minus the cost of connected transaction business	CSMAR
Other Receivables	The ending balance of other receivables divided by the average of the total assets at the beginning end of the period	CSMAR
Small _Local_Auditor	Small local auditors, a dummy variable, which equals 1 if a client's registry province or provincial-level region is the same as that of its auditor who is not a top-10 auditor based on assets audited, and 0 otherwise.	Institute of certified public accountants
Neg_Skew	The negative skewness of firm-specific weekly returns over the fiscal-year period, calculated as: $Ncskew_{i,t}=-[n(n-1)^{\frac{3}{2}}\sum W_{i,t}^{3}]/[(n-1)(n-2)(\sum W_{i,t}^{2})^{3/2}]$.	CSMAR
Synch	Stock return synchronicity, defined as log $(R^2 / (1-R^2))$. where R2 is the coefficient of determination from the estimation of weekly return, $R_{i,t} = \alpha + \beta_1 R_{m,t} + \beta_2 R_{m,t-1} + \varepsilon_{i,t}$.	CSMAR
	Variables for Top-Down Institutions and Social Values	
Post_Meeting	Anticorruption regulation, which equals 1 if the sample period is after the eight-point regulation adopted in December 2012, and 0 otherwise	The Website of Commission for Discipline Inspection of CPC
Property Rights	Property rights protection, measured by the degree of protection of the legitimate rights and interests of producers as reported in Fan, Wang, and Zhu (2011) and Wang, Fan, and Yu (2016).	National Economic Research Institute Index of Marketization of China's Provinces Report
Trust	The proportion of people in a region who believe "Most people can be trusted"	World Values Survey (2001)
Tax Fraud Detection	Likelihood of tax fraud detection by the national tax administration	State Administration of Taxation (http://hd.chinatax.gov.cn/xxk/)
Corporate Fraud Detection	Likelihood of corporate accounting fraud detection by CSRC or exchanges. The accounting fraud is closely related to earnings manipulation, including fictitious profits, fictitious assets, false records, misleading statements, delayed disclosure, major omissions, false disclosures, and improper general accounting treatment	CSMAR
Lawsuits	Likelihood of being sued	CSMAR

Control Variables		
Size	Firm size.	CSMAR
LEV	Financial leverage.	CSMAR
ROA	Return on assets.	CSMAR
Cret_Volatility	Stock return volatility.	CSMAR
Totinsholdper	Institutional ownership.	WIND
Analyst	Natural logarithm of the number of analysts following the firm.	CSMAR
BM	Book-to-market ratio.	CSMAR
RET	Annual stock return.	CSMAR
Turnover	Turnover ratio.	CSMAR
Dual	Dual role for the board chair.	CSMAR
Indir	Ratio of independent directors.	CSMAR
SOE	State-owned enterprises.	CSMAR
Age_Ceo	The age of the CEO.	CSMAR
Salary_Ceo	The natural logarithm of the annual salary of the CEO.	CSMAR
Top1	Shares held by the largest shareholder.	CSMAR
Gdp_Percapita	GDP divided by the total population.	China Statistical Yearbooks
Gdp_Growth	Growth rate of GDP.	China Statistical Yearbooks
Pop_Growth	Growth rate of the population.	China Statistical Yearbooks
Consume_Percapita	Natural logarithm of resident consumption per capita.	China Statistical Yearbooks

Online Appendix B (The specific definition): Definitions of political propagandas

In this table, we describe the keywords we use to measure the intensity of political propagandas that appeared in the annual reports of firms (the MD&A, or Management discussion and analysis section). More explicitly, the intensity is measured as the fraction of sentences containing the slogans of the Chinese Communist Party (CCP), as summarized by the *Dictionary of Scientific Development* published by the President of CCP in 2008. This dictionary was created to celebrate China's 30-year reform and consisted of a comprehensive list of political slogans used in official CCP documents between 1978 and 2008. We select political slogans related to the leadership of CCP, its socialism ideology, and party-building, and drop keywords that could be related to microeconomic conditions and firm fundamentals. Below we present the list of political propagandas used in this paper.

中国特色社会主义 (Chinese Socialism)					
全面建设小康社会	四项基本原则	科学发展社会和谐	中国共产党在社会主义初级阶段的基本路线	中国特色社会主义	社会主义本质
社会主义建设规律	以经济建设为中心	党的思想路线	建设中国特色社会主义的基本经验	社会主义法治国家	一国两制
社会主义民主政治	社会主义市场经济	和谐发展	马克思主义中国化		
加强党的执政能力和先进性建设 (CCP Leadership and Party-building)					
保持共产党员先进性教育活动的鲜明特点	三种意识	执政地位	保持共产党员先进性教育活动的指导原则	保持共产党员先进性教育活动	两个务必
共产党员保持先进性的基本要求	学习型政党	干群关系	尊重人、理解人、关心人	求真务实	领导干部选拔制度
全面推进党的建设	舆论导向	三大作风	民主选举、民主决策、民主管理、民主监督		党的纪律检查体制
群众监督	党的基层组织	尊重和保障人权	领导干部述职述廉制度	党风廉政建设责任制	党内监督
巡视制度	为民、务实、清廉	差额推荐和差额选举	完善党领导经济工作的体制机制和方式	优化领导班子素质结构	党内民主
党的领导方式	民主形式	执政体制	执政方略	发展社会主义民主政治的能力	执政理念
构建社会主义和谐社会的能力	五种能力	执政方式	建设社会主义先进文化的能力		党的执政能力
驾驭社会主义市场经济的能力	执政基础	两大历史性转变	加强党的执政能力建设的主要任务	党的执政能力建设的重点	
科学发展观基本内涵 (Socialism Ideology on Social Development)					
经济结构战略调整	“三高一低”企业	中部崛起	社会主义民主	生态平衡	生态系统
文化事业	社会诚信	“两新组织”	政府职能	社会舆论	舆论监督
社会主义法制	四个深刻变化	公民义务	公民权利	权利观	五个统筹
爱国主义	“四位一体”	经济增长方式	小康社会	可持续发展	以人为本
又好又快发展					
构建社会主义和谐社会 (Socialism Ideology on Harmonic Society)					
马克思主义理论研究和建设工程	群体性事件	民生	《公民道德建设实施纲要》	公民知情权	信访制度
村务公开	政务公开	生存权	《中华人民共和国反分裂国家法》	社会主义核心价值体系	服务型政府
社会主义思想道德体系	社会主义荣辱观	人文关怀	道德风尚	宗教信仰自由政策	社会风气
和谐理念	社会和谐法治基础	民主权利保障制度	和谐文化	权利公平	生态文明
教育公平	教育优先发展	和谐与发展	构建社会主义和谐社会的指导思想	终身教育体系	生态安全
构建社会主义和谐社会的总要求	现代国民教育体系	社会价值导向	构建社会主义和谐社会的原则	构建社会主义和谐社会	生态建设
社会公信力	八荣八耻	思想舆论导向	构建社会主义和谐社会的目标任务	先进文化	和谐精神
法律面前人人平等	社会主义法治理念				
建设社会主义新农村 (Socialism Ideology on Rural Areas)					
农村新型合作医疗制度	村民自治	农村基层民主	中国特色的农业现代化	生态农业	西部行动
农村集体经济	社会主义新农村建设	农民增收机制	希望工程	三峡移民	农村土地所有制
社会主义新农村	退耕还林	三农问题	支农惠农政策	新型农民	
建设创新型国家 (Socialism Ideology on Nation-Building)					
星火计划	跨世纪发展战略	科教兴国战略	科学技术是第一生产力		
走和平发展道路 (CCP's Foreign Policies)					
和谐世界理念	和平共处五项原则	中国和平发展道路	一个中国原则		

Table IN1: Detailed information for top alcohol scandals

This table provides detailed information on top alcohol scandals. Panel A tabulates the occurrence of the top three scandals in any given year. In each column, a region marked with number "1" indicates that it is the location of the alcohol producer involved in the top three scandals in that year. The location of the top scandal in each year is further marked by an additional superscript of *. Panel B further provides detailed information on the top scandal, including the name of the producer and the nature of the scandal (i.e., whether toxic chemical materials are involved).

Panel A: The location of top-one (marked with 1*) and three-three scandals (marked with 1) of each year															
Prov/Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Sum**
Anhui	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Beijing	0	0	0	0	0	0	0	0	1	0	0	1	1*	1*	4
Chongqing	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Fujian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gansu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guangdong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guangxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guizhou	0	0	0	0	1	1*	0	0	0	0	0	0	1	0	3
Hainan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hebei	0	0	0	0	1*	0	0	0	0	1	0	0	0	0	2
Henan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heilongjiang	0	0	1*	0	0	0	1	1*	0	0	1	1*	1	1	7
Hubei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hunan	0	0	0	0	0	0	0	0	0	0	1*	0	0	0	1
Jilin	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Jiangsu	0	0	0	0	0	0	1*	0	0	0	0	0	0	0	1
Jiangxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liaoning	0	1	0	0	0	0	0	0	0	1*	0	0	0	0	2
Neimenggu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ningxia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qinghai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shandong	0	0	0	0	0	0	0	0	1*	0	0	0	0	0	1
Shanxi(Jin)	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
Shanxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shanghai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sichuan	0	0	1	0	0	0	0	0	0	1	0	1	0	0	3
Tianjin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Xinjiang	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Xizang	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yunnan	0	1*	0	0	0	0	0	0	0	0	0	0	0	0	1
Zhejiang	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Panel B: Detailed Information of the top scandal of each year							
Year	**Region (Province)**	**Brand**	**Firm**	**Address**	**Unqualified Items Uncovered by Quality Supervisr**	**Excess Use of Toxic Chemicals (Yes/No)**	**Listed or Not**
2003	Yunnan	Qiyuan	Yunzi liquor Co., Ltd in Yunnan Province	Gasa Road, Gasa town, Xinping County, Yunnan Province	Cyclohexylsulfamate (sodium cyclamate) 0.0028g / kg	Yes	No
2004	Heilongjiang	Zhuangjiahan	Cheng Xu liquor Co., Ltd in Shuangcheng City of Heilongjiang Province	No. 286 East Road, Shuangcheng City, Heilongjiang Province	Saccharin sodium 0.0048g/kg‖/ Cyclohexylsulfamate 0.057g / kg	Yes	No
2006	Hebei	Xingdiwang	Xingdi Wine Co., Ltd in Tangshan City of Heibei Province	Pingnan High - tech Development Zone of Hebei Province	Cyclohexylsulfamate 0.0015g / kg	Yes	No
2007	Guizhou	Miaoxiangqing	Ba winery in Ping dam of Guizhou Province	Pingba County, Guizhou Province	Alcohol 41.8% vol ｜ 25.0% vol-55.0% vol	No	No
2008	Jiangsu	Lanhuaci	Su Guan winery in Yanghe Township of Suqian City of Jiangsu Province	Yangcheng Town Development Zone, Suqian City, Jiangsu Province,	Ethylhexanoate 1.09g / L	Yes	No
2009	Heilongjiang	Kangtouwang	Zhen Xing winery if Heilongjiang Province	Nangang Hongqi Development Zone, Heilongjiang Province	Alcohol 48.9% vol ｜ 53.0 ± 1.0% vol	No	No
2010	Shandong	Kaweisikabona	Candy shop in Zhang Dian District of Zibo City	No.1, North Health Street, Zhangdian District, Zibo City, Shandong Province	Sodium cyclamate 3.51 g / kg ｜ 0.65g / kg; Sodium acetylsulfonylate (Acesulfame) 0.009 g / kg	Yes	No
2011	Liaoning	Fengcheng laojiao	Liaoning Fengcheng Laojiao liquor Co., Ltd	Fengcheng Street, Fengcheng City, Liaoning Province	Hexanoic acid ethyl ester 0.25g / L	Yes	Yes
2012	Hunan	Jiugui	Jiu Gui Liquor Co., Ltd	Cave River Street, Zhenwu camp Village, Jishou City, Hunan Province	Hexyl phthalate (DEHP), Diisobutyl phthalate (DIBP), Dibutyl phthalate (Dibutyl phthalate) (DBP)	Yes	Yes
2013	Heilongjiang	Lao Gu Fang	COFCO Heilongjiang Brewery Co., Ltd	Dongzheng Street, Dongsheng District, Zhaodong City, Heilongjiang Province	Cyclohexylsulfamate 0.0067g / kg	Yes	Yes
2014	Beijing	Niulanshan	Beijing Shun Xin Agricultural Co., Ltd.	Niulanshan Town, Shunyi District, Beijing	Alcohol 42.2% vol ｜ (36.0 ± 1.0)% vol	No	Yes
2015	Beijing	Niulanshan	Beijing Shun Xin Agricultural Co., Ltd.	Niulanshan Town, Shunyi District, Beijing	Alcohol 37.8% vol ｜ (42.0 ± 1.0)% vol	No	Yes

Table IN2: Social norms vs. law enforcement

This table presents the results of the following multivariate regression:

$$FraudDetection_{i,p,t} = \Lambda(\beta_1 \times Manipulation_{i,p,t-1} + \beta_2 \times Alcohol_{p,t-1} + \gamma \times Manipulation_{i,p,t-1} \times Alcohol_{p,t-1} + C \times M_{i,p,t-1}) + \epsilon_{i,p,t},$$

where $\Lambda(.)$ represents the logistic function and $FraudDetection_{i,p,t}$ is a dummy variable that takes the value of one when corporate fraud is detected by the government for firm i located in province p in year t. $Manipulation_{i,p,t-1}$refers to earnings manipulation, $Alcohol_{p,t-1}$ refers to the alcohol consumption of the region, and $M_{i,p,t-1}$ stacks a list of lagged control variables as before. We examine two major types of government-led fraud detection. The first is tax-related corporate fraud detected by the State Taxation Administration of China and its local branches in China. This detection is important because information manipulation can directly help firms hide taxable income. The second is corporate fraud detected by China's Securities Regulatory Commission or stock exchanges on a list of disclosure-related items, including fictitious profits, fictitious assets, false records, misleading statements, delayed disclosure, major omissions, false disclosure, and improper general accounting treatment. The results for these two public enforcements are tabulated in Models (1)–(3) and Models (4)–(6), respectively. In Models (7)–(9), we further supplement public enforcement by a variable of private enforcement, labeled $Lawsuit$, which takes the value of one when the listed firm is sued by another institution or individuals in year t. We further control for industry and year fixed effects and cluster the errors at the province and year levels in all regressions. Obs denotes the number of firm-year observations, and Pseudo R2 reports the goodness of fit for binary models. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

Dep. Var =	*Prob(Tax Fraud Detection)*			*Prob(Corporate Fraud Detection)*			*Prob(Lawsuits)*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Manipulation	2.016***	2.410***	3.602***	0.912**	1.092***	2.406***	2.201***	2.705***	4.545***
	(3.50)	(4.19)	(5.00)	(2.26)	(2.73)	(4.14)	(4.05)	(5.02)	(6.64)
Alcohol		-0.545***	-0.232*		-0.242***	0.031		-0.682***	-0.156
		(-6.90)	(-1.92)		(-4.06)	(0.36)		(-8.52)	(-1.29)
*Manipulation*Alcohol*			-2.928***			-2.759***			-4.784***
			(-2.91)			(-3.72)			(-4.85)
Size	0.282***	0.278***	0.273***	-0.216***	-0.218***	-0.222***	0.102	0.098	0.090
	(4.27)	(4.25)	(4.19)	(-5.40)	(-5.48)	(-5.61)	(1.44)	(1.40)	(1.30)
LEV	1.714***	1.673***	1.667***	0.822***	0.799***	0.797***	2.280***	2.229***	2.224***
	(7.12)	(7.04)	(7.06)	(6.37)	(6.18)	(6.13)	(8.84)	(8.80)	(8.81)
Cret_Volatility	1.415*	1.224	1.267	1.043*	0.969*	1.002*	1.425	1.196	1.247
	(1.65)	(1.44)	(1.49)	(1.82)	(1.69)	(1.74)	(1.57)	(1.34)	(1.39)
Totinsholdper	0.733***	0.730***	0.733***	-0.027	-0.037	-0.039	0.780***	0.781***	0.786***
	(3.68)	(3.73)	(3.75)	(-0.19)	(-0.26)	(-0.28)	(4.03)	(4.11)	(4.13)
Analyst	-0.240***	-0.226***	-0.225***	-0.142***	-0.134***	-0.133***	-0.193***	-0.174***	-0.173***
	(-4.53)	(-4.25)	(-4.27)	(-4.96)	(-4.70)	(-4.64)	(-3.81)	(-3.44)	(-3.46)
BM	0.040	0.054	0.058	0.187***	0.195***	0.199***	0.077	0.093*	0.099*
	(0.72)	(0.96)	(1.05)	(5.17)	(5.42)	(5.55)	(1.35)	(1.66)	(1.79)
RET	-0.094	-0.087	-0.089	-0.093*	-0.088*	-0.090*	-0.112	-0.104	-0.107
	(-1.04)	(-0.97)	(-0.98)	(-1.85)	(-1.76)	(-1.78)	(-1.27)	(-1.18)	(-1.22)
Turnover	2.182*	2.149*	2.232*	2.643***	2.610***	2.662***	2.934**	2.934**	3.064**
	(1.80)	(1.79)	(1.86)	(3.40)	(3.35)	(3.40)	(2.36)	(2.40)	(2.52)
ROA	-2.869***	-2.884***	-2.916***	-1.750***	-1.759***	-1.778***	-2.483***	-2.544***	-2.639***
	(-5.12)	(-5.25)	(-5.36)	(-4.80)	(-4.84)	(-4.90)	(-4.48)	(-4.73)	(-4.98)
Dual	0.156	0.149	0.143	0.198***	0.194***	0.186***	0.175*	0.166*	0.154
	(1.49)	(1.43)	(1.36)	(3.07)	(3.03)	(2.88)	(1.77)	(1.69)	(1.54)
Indir	-0.834	-0.790	-0.753	-1.319***	-1.294***	-1.253***	-0.999	-0.929	-0.880
	(-1.21)	(-1.16)	(-1.10)	(-3.15)	(-3.09)	(-2.99)	(-1.50)	(-1.42)	(-1.34)
SOE	-0.225***	-0.208***	-0.198**	-0.325***	-0.324***	-0.317***	-0.261***	-0.242***	-0.227***
	(-2.84)	(-2.62)	(-2.45)	(-5.79)	(-5.78)	(-5.61)	(-3.37)	(-3.12)	(-2.89)
Age_Ceo	-0.008	-0.009	-0.009	-0.002	-0.002	-0.002	-0.005	-0.006	-0.007
	(-1.31)	(-1.43)	(-1.46)	(-0.43)	(-0.48)	(-0.46)	(-0.88)	(-1.03)	(-1.06)
Salary_Ceo	-0.031***	-0.029**	-0.029**	-0.024***	-0.023***	-0.024***	-0.028**	-0.026**	-0.026**
	(-2.65)	(-2.46)	(-2.47)	(-2.90)	(-2.82)	(-2.86)	(-2.40)	(-2.20)	(-2.23)
Top1	-0.003	-0.004	-0.004	-0.007***	-0.007***	-0.007***	-0.003	-0.003	-0.003
	(-1.16)	(-1.40)	(-1.36)	(-4.73)	(-4.92)	(-4.86)	(-1.00)	(-1.28)	(-1.20)
Gdp_Percapita	-0.033	0.065	0.064	-0.076**	-0.033	-0.032	-0.018	0.102**	0.101**
	(-0.71)	(1.30)	(1.32)	(-2.18)	(-0.94)	(-0.91)	(-0.38)	(1.99)	(2.02)
Gdp_Growth	2.650*	3.209**	3.240**	-0.354	-0.061	-0.013	1.824	2.472*	2.539*
	(1.84)	(2.35)	(2.39)	(-0.34)	(-0.060)	(-0.012)	(1.21)	(1.78)	(1.84)
Pop_Growth	-1.666	-2.388	-2.321	0.119	-0.179	-0.134	-1.257	-2.257	-2.173
	(-0.87)	(-1.32)	(-1.29)	(0.066)	(-0.11)	(-0.085)	(-0.61)	(-1.13)	(-1.09)
Consume_Percapita	-0.171	-0.734***	-0.706**	-0.252	-0.506**	-0.490**	-0.375	-1.054***	-1.004***
	(-0.63)	(-2.63)	(-2.55)	(-1.03)	(-2.08)	(-2.03)	(-1.36)	(-3.76)	(-3.63)
Constant	-15.855***	-10.646**	-11.218***	-4.135	-1.696	-2.090	-12.614***	-6.479	-7.427*
	(-3.84)	(-2.55)	(-2.70)	(-1.30)	(-0.54)	(-0.66)	(-2.93)	(-1.52)	(-1.77)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	IY	IY	IY	IY	IY	IY
Obs	18086	18086	18086	18168	18168	18168	18168	18168	18168
Pseudo R2	0.110	0.117	0.118	0.138	0.140	0.141	0.124	0.135	0.138

Table IN3: The active role of corporate leaders in propagating the negative externality

This table presents the results of the following two specifications:

$$Manipulation_{i,p,t} = \alpha + \beta_1 \times Alcohol\_Firm_{p,t-1} + \beta_2 \times More\_Alcohol\_CEO_{i,t-1} + \gamma \times Alcohol\_Firm_{p,t-1} \times More\_Alcohol\_CEO_{i,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

$$Manipulation_{i,p,t} = \alpha + \beta_1 \times Alcohol\_CEO_{p,t-1} + \beta_2 \times More\_Alcohol\_Firm_{i,t-1} + \gamma \times Alcohol\_CEO_{p,t-1} \times More\_Alcohol\_Firm_{i,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Alcohol\_Firm_{p,t-1}$ and $Alcohol\_CEO_{p,t-1}$ refer to the alcohol culture carried by firms and CEOs, respectively, $More\_Alcohol\_CEO_{i,t-1}$ takes the value of one when the CEO of a firm comes from a home region with a higher value of alcohol than that of the firm's region, and zero otherwise, and $More\_Alcohol\_Firm_{i,t-1}$ takes the value of one when the firm culture has a higher value than the CEO's culture. In Models (1) and (3), we control for industry and year fixed effects (IY) and cluster the errors at the province and year level. In Models (2) and (4), we further control for firm and CEO fixed effects and cluster the errors at the firm level. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

Dep. Var=*Manipulation*	**CEOs magnify local culture's influence**		Dep. Var=*Manipulation*	**Local culture affects CEOs influence**	
	(1)	(2)		(3)	(4)
Alcohol_Firm	0.005	-0.010	*Alcohol_CEO*	0.022***	0.046*
	(0.65)	(-0.37)		(2.60)	(1.65)
More_Alcohol_Ceo	0.025*	0.062**	*More_Alcohol_Firm*	0.011	-0.036
	(1.69)	(2.03)		(0.56)	(-1.36)
*Alcohol_Firm**	0.043**	0.086*	*Alcohol_CEO**	-0.006	0.043
More_Alcohol_Ceo	(2.10)	(1.72)	*More_Alcohol_Firm*	(-0.19)	(0.97)
Size	-0.005**	-0.002	*Size*	-0.006***	-0.004
	(-2.58)	(-0.33)		(-2.68)	(-0.55)
LEV	0.051***	0.011	*LEV*	0.053***	0.014
	(6.02)	(0.63)		(6.27)	(0.75)
Cret_Volatility	0.118***	0.064**	*Cret_Volatility*	0.120***	0.066**
	(4.03)	(2.18)		(4.10)	(2.25)
Totinsholdper	-0.004	-0.004	*Totinsholdper*	-0.004	-0.003
	(-0.66)	(-0.31)		(-0.65)	(-0.20)
Analyst	-0.004**	0.001	*Analyst*	-0.003**	0.001
	(-2.43)	(0.42)		(-2.34)	(0.25)
BM	-0.007***	-0.004*	*BM*	-0.007***	-0.004*
	(-4.82)	(-1.79)		(-4.74)	(-1.71)
RET	0.000	0.000	*RET*	-0.000	-0.000
	(0.038)	(0.047)		(-0.066)	(-0.055)
Turnover	-0.079*	-0.071	*Turnover*	-0.081*	-0.071
	(-1.88)	(-1.21)		(-1.94)	(-1.23)
ROA	0.026	0.017	*ROA*	0.027	0.018
	(1.00)	(0.67)		(1.05)	(0.68)
Dual	-0.008***	-0.005	*Dual*	-0.008***	-0.006
	(-2.75)	(-0.62)		(-2.74)	(-0.75)
Indir	0.028	-0.001	*Indir*	0.029*	0.000
	(1.64)	(-0.017)		(1.76)	(0.013)
SOE	-0.014***	-0.001	*SOE*	-0.014***	-0.002
	(-4.65)	(-0.17)		(-4.80)	(-0.33)
Age_Ceo	-0.001***	-0.001	*Age_Ceo*	-0.001***	-0.001
	(-4.92)	(-1.35)		(-5.02)	(-1.40)
Salary_Ceo	-0.002***	-0.001*	*Salary_Ceo*	-0.002***	-0.001*
	(-5.39)	(-1.85)		(-5.51)	(-1.75)
Top1	0.000***	0.000	*Top1*	0.000***	0.000
	(3.31)	(0.83)		(3.35)	(0.78)
Gdp_Percapita	0.001	-0.003	*Gdp_Percapita*	0.001	-0.003
	(1.05)	(-0.40)		(0.98)	(-0.38)
Gdp_Growth	-0.004	0.070	*Gdp_Growth*	-0.010	0.063
	(-0.067)	(1.15)		(-0.18)	(1.06)
Pop_Growth	0.075	-0.031	*Pop_Growth*	0.065	-0.032
	(1.31)	(-0.45)		(1.12)	(-0.46)
Consume_Percapita	-0.010	0.037	*Consume_Percapita*	-0.009	0.047
	(-1.13)	(1.36)		(-1.08)	(1.41)
Gdp_Percapita_Home	-0.002***	0.003	*Gdp_Percapita_Home*	-0.002**	0.003
	(-2.87)	(0.56)		(-2.10)	(0.72)
Gdp_Growth_Home	0.050	-0.030	*Gdp_Growth_Home*	0.055	-0.031
	(0.86)	(-0.49)		(0.93)	(-0.51)
Pop_Growth_Home	0.029	0.038	*Pop_Growth_Home*	0.044	0.045
	(0.41)	(0.55)		(0.59)	(0.66)
Consume_Percapita_Home	0.005	0.032*	*Consume_Percapita_Home*	-0.002	0.032*
	(0.52)	(1.92)		(-0.18)	(1.85)
Constant	0.498***		*Constant*	0.514***	
	(3.52)			(3.86)	
Cluster	Prov, Year	Firm	Cluster	Prov, Year	Firm
Fixed Effects	IY	Y, Firm, CEO	Fixed Effects	IY	Y, Firm, CEO
Obs	2669	2495	Obs	2669	2495
Adj. R2	0.20	0.72	Adj. R2	0.20	0.72

Table IN4: Robustness checks using alternative measures

This table presents the results of the robustness checks on alternative measures. Panel A links alcohol to alternative proxies for earnings manipulation, including Dechow, Sloan, and Sweeney's (1995) modification of Jones' (1991) residual accruals (*Manipulation_Jones*), Kothari, Leone, and Wasley's (2005) residual accruals (*Manipulation_KLW*), and target beating on "small positive forecasting profits" (*SPAF*) and "small positive profits" (*SPE*) based on Burgstahler and Dichev (1997), and earnings restatements (*Restatement*). Panel B presents the results of the following multivariate regression:

$$Manipulation_{i,p,t} = \alpha + \beta \times Alt\_SocialNorm_{p,t-1} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Manipulation_{i,p,t}$ refers to discretionary accruals following Dechow and Dichev's (2002) model for firm i located in province p in year t. In Models (6) and (7), $Alt\_SocialNorm_{p,t-1}$ refers to alternative proxies of alcohol-related social norms, including the number of nearby famous distilled liquor brands (*#Famous Brands*) and the intensity of alcohol intoxication (*Intoxication*). In Models (8) to (10), $Alt\_SocialNorm_{p,t-1}$ refers to a list of related social norms on illegal sex (*Sex*), smoking (*Smoking*), and gaming (*Gaming*). These variables are defined in Appendix A. We further control for industry and year fixed effects (IY) and cluster the errors at the province and year level in all regressions. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively. The sample covers the period from 2002 to 2017.

Panel A: The effect of alcohol on alternative proxies of earnings management

Dep. Var=	Alternative Earnings Accruals		Target Beating Measures		Earnings
	Manipulation_Jones	*Manipulation_KLW*	*SPDE*	*SPE*	*Restatement*
	(1)	(2)	(3)	(4)	(5)
Alcohol	0.009***	0.008***	0.325***	0.461***	0.285***
	(3.74)	(4.24)	(3.01)	(3.87)	(7.95)
Size	-0.006***	-0.005***	0.028	-0.016	0.055
	(-7.50)	(-8.08)	(0.84)	(-0.38)	(0.44)
LEV	0.031***	0.030***	-0.459***	0.910***	0.149
	(10.2)	(11.8)	(-3.05)	(5.57)	(0.43)
Cret_Volatility	0.029**	0.011	-0.403	1.455***	4.510***
	(2.30)	(1.14)	(-0.81)	(2.69)	(3.13)
Totinsholdper	0.002	0.001	0.082	-0.434***	0.459
	(1.17)	(0.48)	(0.79)	(-3.27)	(1.07)
Analyst	-0.002***	-0.001	-0.140***	-0.371***	-0.232***
	(-3.07)	(-1.63)	(-5.61)	(-13.3)	(-2.93)
BM	-0.001	-0.001	0.041	0.226***	0.178
	(-1.43)	(-1.03)	(1.36)	(6.48)	(1.56)
RET	0.004***	0.004***	-0.233***	-0.344***	0.046
	(4.16)	(4.54)	(-4.32)	(-6.06)	(0.24)
Turnover	0.052***	0.018	-0.195	-0.352	-1.776
	(3.12)	(1.32)	(-0.28)	(-0.44)	(-0.97)
ROA	-0.020*	0.040***	-0.665*	-6.611***	-3.267***
	(-1.94)	(4.43)	(-1.89)	(-14.1)	(-3.49)
Dual	0.001	0.001	0.097*	0.115*	-0.197
	(0.84)	(0.58)	(1.74)	(1.83)	(-1.12)
Indir	0.008	0.014**	-0.097	0.200	-0.594
	(1.07)	(2.04)	(-0.28)	(0.49)	(-0.57)
SOE	-0.005***	-0.004***	0.075*	0.148***	0.129
	(-4.85)	(-4.61)	(1.67)	(2.71)	(1.16)
Age_Ceo	-0.000**	-0.000*	0.002	-0.001	0.010
	(-2.09)	(-1.82)	(0.72)	(-0.40)	(1.06)
Salary_Ceo	-0.001***	-0.000**	0.004	-0.021***	0.017
	(-3.23)	(-2.01)	(0.57)	(-2.84)	(0.76)
Top1	0.000***	0.000***	-0.003**	-0.005***	-0.010**
	(3.22)	(5.75)	(-2.42)	(-2.81)	(-2.34)
Gdp_Percapita	0.001	0.001**	0.061***	0.047**	-0.030
	(1.61)	(2.10)	(3.22)	(2.41)	(-0.19)
Gdp_Growth	0.015	0.008	0.137	-0.002	1.926
	(0.92)	(0.78)	(0.23)	(-0.0039)	(0.56)
Pop_Growth	0.032	0.035**	0.655	1.360	2.606
	(1.46)	(2.10)	(0.64)	(1.27)	(0.43)
Consume_Percapita	0.004	0.002	-0.566***	-0.865***	0.263
	(1.27)	(0.84)	(-3.97)	(-6.01)	(0.32)
Constant	-0.035	0.059	4.304*	7.664***	-7.839
	(-0.77)	(1.58)	(1.79)	(3.02)	(-0.86)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	IY	IY
Obs	18469	18469	18469	18469	13220
Adj R2 / Pseudo R2	0.07	0.06	0.04	0.11	0.21

Panel B: Robustness checks on alternative alcohol measures and other sins

Dep. Var=	Alternative Alcohol Measures		Related Social Norms		
	#Famous Brands	*Intoxication*	*Sex*	*Smoking*	*Gaming*
	(6)	(7)	(8)	(9)	(10)
Sins Culture	0.001***	3.457***	0.028	-0.001	-0.273
	(5.04)	(6.34)	(1.52)	(-1.34)	(-0.83)
Size	-0.007***	-0.008***	-0.007***	-0.007***	-0.007***
	(-8.33)	(-4.51)	(-8.34)	(-8.41)	(-8.44)
LEV	0.054***	0.062***	0.054***	0.054***	0.054***
	(15.5)	(10.9)	(15.5)	(15.6)	(15.6)
Cret_Volatility	0.139***	0.124***	0.139***	0.139***	0.140***
	(11.4)	(5.52)	(11.4)	(11.4)	(11.4)
Totinsholdper	-0.002	0.007	-0.002	-0.002	-0.002
	(-0.79)	(1.24)	(-0.65)	(-0.64)	(-0.74)
Analyst	-0.002***	-0.001	-0.002***	-0.002***	-0.002***
	(-3.55)	(-1.64)	(-3.42)	(-3.47)	(-3.55)
BM	-0.004***	-0.003	-0.004***	-0.004***	-0.004***
	(-4.95)	(-1.40)	(-4.90)	(-4.86)	(-4.83)
RET	-0.002*	-0.003	-0.002*	-0.002*	-0.002*
	(-1.81)	(-1.42)	(-1.83)	(-1.85)	(-1.85)
Turnover	-0.064***	0.014	-0.065***	-0.065***	-0.069***
	(-3.74)	(0.46)	(-3.82)	(-3.82)	(-4.02)
ROA	0.025**	0.010	0.026**	0.026**	0.028***
	(2.38)	(0.57)	(2.51)	(2.49)	(2.67)
Dual	0.001	0.003	0.002	0.002	0.002
	(1.15)	(1.51)	(1.28)	(1.22)	(1.52)
Indir	0.014*	0.018	0.015*	0.015*	0.015*
	(1.74)	(1.30)	(1.89)	(1.85)	(1.85)
SOE	-0.011***	-0.008***	-0.011***	-0.011***	-0.011***
	(-9.71)	(-4.09)	(-9.64)	(-9.47)	(-10.1)
Age_Ceo	-0.000***	-0.000	-0.000***	-0.000***	-0.000***
	(-6.57)	(-1.51)	(-6.57)	(-6.62)	(-6.34)
Salary_Ceo	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(-7.16)	(-4.83)	(-7.10)	(-7.11)	(-7.09)
Top1	0.000***	0.000***	0.000***	0.000***	0.000***
	(6.13)	(3.49)	(6.15)	(6.18)	(6.16)
Gdp_Percapita	0.004***	0.001	0.003***	0.003***	0.002***
	(7.01)	(0.98)	(6.66)	(6.21)	(4.43)
Gdp_Growth	0.022	0.001	0.022	0.024	0.035**
	(1.42)	(0.033)	(1.39)	(1.55)	(2.27)
Pop_Growth	0.083**	-0.120	0.067*	0.075**	0.061**
	(2.36)	(-1.51)	(1.66)	(2.12)	(2.37)
Consume_Percapita	-0.023***	-0.023*	-0.024***	-0.024***	-0.016***
	(-5.85)	(-1.70)	(-6.26)	(-6.08)	(-3.82)
Constant	0.613***	0.402***	0.622***	0.631***	0.575***
	(11.4)	(2.76)	(11.7)	(11.6)	(10.7)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	IY	IY	IY	IY	IY
Obs	18469	5590	18469	18469	18469
Adj R2	0.12	0.11	0.12	0.12	0.13

Figure IN1: Average regional alcohol consumption vs. average manipulation in China

This figure plots the relationship between the average value of earnings manipulation (y-axis), which is proxied by Dechow and Dichev's (2002) measure of discretionary accruals averaged for all firms in a region (province) in the testing period from 2002 to 2017, and the average value of alcohol consumption across China's 31 regions (x-axis). The dashed lines represent the fitted linear relationship between the two variables.

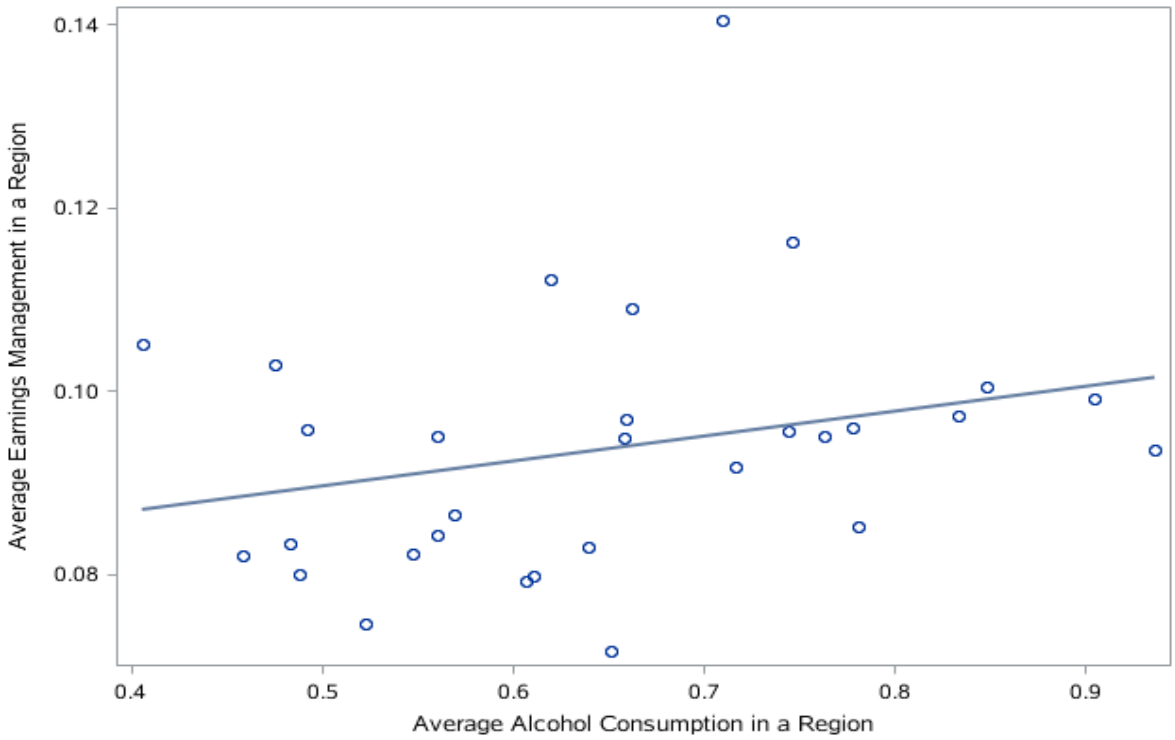

Figure IN2: Geographic locations of top scandals

This figure plots the locations (regions) of the top alcohol scandals uncovered by the government quality supervisor in our sample period.

Part 2: Full Specification of Tables

This part provides the full specification of Tables 1 and 3 to supplement the discussions in our main text. The full specifications of all other tables are also available upon request.

Table 1 (Full Specification): Summary statistics

This table presents the distribution of the all variables in the sample period from 2002 to 2017. All variables are defined in the Appendix of the manuscript. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Panel A: Variable Distributions

Variable	Mean	STD	10%	25%	Median	75%	90%
Alcohol	0.754	0.196	0.546	0.607	0.740	0.853	1.013
Intoxication	0.001	0.001	0.000	0.000	0.001	0.002	0.003
#Famous Brand	1.178	2.065	0.000	0.000	0.000	2.000	3.000
Sex	2.355	3.503	0.066	0.350	0.979	2.597	4.559
Smoking	0.747	0.594	0.301	0.349	0.566	0.913	1.519
Gaming	0.021	0.008	0.013	0.015	0.021	0.028	0.029
Manipulation	0.078	0.050	0.026	0.041	0.065	0.099	0.151
Manipulation_Jones	0.052	0.046	0.006	0.017	0.038	0.073	0.121
Manipulation_KLW	0.047	0.039	0.006	0.016	0.036	0.066	0.108
SPDE	0.205	0.404	0.000	0.000	0.000	0.000	1.000
SPE	0.146	0.353	0.000	0.000	0.000	0.000	1.000
Restate	0.022	0.148	0.000	0.000	0.000	0.000	0.000
Firm Entertain Cost	0.636	0.901	0.083	0.180	0.373	0.728	1.361
Political propaganda	0.027	0.041	0.000	0.000	0.010	0.040	0.080
Size	21.885	1.263	20.512	20.996	21.696	22.538	23.537
LEV	0.477	0.193	0.204	0.339	0.489	0.624	0.722
Cret_Volatility	0.126	0.055	0.072	0.089	0.113	0.150	0.195
Totinsholdper	0.166	0.180	0.005	0.026	0.099	0.253	0.427
Analyst	1.285	1.167	0.000	0.000	1.099	2.303	2.996
BM	1.087	0.969	0.289	0.471	0.789	1.360	2.208
RET	0.266	0.774	-0.425	-0.245	0.032	0.530	1.322
ROA	0.041	0.054	0.002	0.013	0.035	0.064	0.104
Turnover	3.017	0.063	2.922	2.979	3.026	3.061	3.091
Dual	0.161	0.367	0.000	0.000	0.000	0.000	1.000
Indir	0.354	0.063	0.333	0.333	0.333	0.375	0.429
SOE	0.580	0.494	0.000	0.000	1.000	1.000	1.000
Age_Ceo	47.989	6.429	40.000	44.000	48.000	52.000	56.000
Salary_Ceo	11.157	4.539	0.000	11.983	12.846	13.412	13.879
Top1	37.080	16.042	17.730	24.170	34.980	49.130	59.720
Gdp_Percapita	4.558	2.615	1.261	2.453	4.049	6.558	8.478
Gdp_Growth	0.140	0.053	0.077	0.095	0.133	0.179	0.213
Pop_Growth	0.013	0.023	0.002	0.004	0.007	0.018	0.030
Consume_Percapita	9.640	0.461	8.945	9.351	9.666	10.052	10.176
Snow	0.113	0.197	0.000	0.018	0.053	0.159	0.369
Temperature	16.180	4.177	9.727	14.000	16.870	18.220	21.540
Tax Fraud Detection	0.050	0.218	0.000	0.000	0.000	0.000	0.000
Corporate Fraud Detection	0.178	0.383	0.000	0.000	0.000	0.000	1.000
Lawsuits	0.053	0.225	0.000	0.000	0.000	0.000	0.000

Other Receivables (OR)	0.028	0.047	0.002	0.005	0.012	0.030	0.069
Related-party Transaction	0.027	0.292	-0.243	-0.071	0.006	0.124	0.321
Neg_Skew	-0.233	0.984	-1.403	-0.833	-0.224	0.371	0.955
Synch	-0.170	0.847	-1.217	-0.634	-0.095	0.397	0.804
Small _Local_Auditor	0.030	0.170	0.000	0.000	0.000	0.000	0.000
Property Rights	10.498	5.548	4.500	5.880	8.180	16.270	19.850
Trust	0.532	0.116	0.360	0.480	0.540	0.560	0.720
Post_Meeting	0.358	0.480	0.000	0.000	0.000	1.000	1.000
Latitude	32.642	6.259	22.849	29.268	31.318	38.929	40.003

Table 1 Continued: Correlation Matrix

Panel B: Correlation coefficients of main variables (Spearman for the upper-right side, and Pearson for the bottom-left side)

	Alcohol	*Manipulation*	*Manipulation_Jones*	*Manipulation_KLW*	*Firm Entertain Cost*	*Political Propaganda*	*SOE*	*Trust*	*Related-party Transaction*	*Other Receivables (OR)*	*Property Rights*
Alcohol	1	0.090***	0.041***	0.027***	-0.040***	0.070***	0.086***	0.226***	0.146***	0.093***	-0.135***
Manipulation	0.070***	1	0.161***	0.138***	0.162***	0.069***	-0.079***	0.051***	0.124***	0.052***	-0.069***
Manipulation_Jones	0.025***	0.226***	1	0.716***	0.069***	0.171***	-0.036***	0.00900	0.112***	0.026***	0.00700
Manipulation_KLW	0.015**	0.181***	0.797***	1	0.033***	0.122***	-0.045***	0.00300	0.063***	0.028***	0.024***
Firm Entertain Cost	0.0120	0.325***	0.145***	0.107***	1	0.092***	-0.077***	0.048***	0.152***	-0.0120	-0.044***
Political Propaganda	0.049***	0.034***	0.073***	0.060***	0.052***	1	0.104***	0.00900	0.041***	0.039***	0.040***
SOE	0.103***	-0.099***	-0.048***	-0.052***	-0.162***	0.089***	1	-0.021***	-0.022***	0.101***	-0.073***
Trust	0.175***	0.040***	0	-0.00400	0.042***	0.0130	-0.081***	1	-0.00300	0.0130	-0.281***
Related-party Transaction	0.122***	0.211***	0.164***	0.084***	0.196***	0.025***	-0.022***	-0.00400	1	-0.041***	-0.037***
Other Receivables (OR)	0.078***	0.025***	0.032***	0.038***	0.0180	-0.020**	0.089***	-0.00100	-0.018**	1	-0.078***
Property Rights	-0.154***	-0.054***	0.00900	0.028***	-0.070***	0.033***	-0.060***	-0.294***	-0.052***	-0.059***	1

Table 3 (Full Specification and Additional Diagnostic Statistics): Difference-in-differences analysis: The 2012 plasticizer scandal and more

This table presents the results for the difference-in-differences (DID) analysis of the 2012 plasticizer scandal. We first sort firms into three terciles based on their geographic proximity to the location of the scandal. We then employ a propensity score matching algorithm (PSM) to identify matches between "treated" (nearby) firms in the top tercile and control (far away) firms in the bottom tercile, based on either firm characteristics before the scandal or firm characteristics plus regional alcohol consumption. Panel A conducts the following DiD test and its parallel trend analysis:

$$Manipulation_{i,p,t} = \beta_0 + \beta_1 \times Treat_{i,p} \times After_{i,p,t} + C \times M_{i,p,t-1} + \epsilon_{i,p,t},$$

where $Manipulation_{i,p,t}$ refers to our main proxy of information manipulation for firm i located in province p in year t, $Treat_{i,p}$ is a dummy variable that takes the value of one (zero) when a firm is in the treated (control) group, and $After_{i,p,t}$ refers to a dummy variable that takes the value of one for years after the scandal (including the scandal year) and zero for years before the scandal. $M_{i,p,t-1}$ stacks a list of lagged control variables as before. We further control for firm and year fixed effects and cluster the errors at the province and year level. To save space, we do not tabulate the coefficients for control variables (the Online Appendix provides the full specification). In Panel B, we replace the dependent variable in A2 (*Manipulation*) with political propaganda (*Political Propaganda*), alcohol consumption (*Alcohol*) and firm expenditures on entertainment cost (*Firm Entertain Cost*). The sample for Panels A and B covers the period from 2009 to 2015, i.e., a three-year window around the 2012 alcohol scandal event. In Panel C, we expand the DiD test to include the top three scandals of each year. The sample covers scandals that occurred during 2005-2014, which allows a three-year window around each scandal in our sample period (2002-2017). Accordingly, a firm's *Proximity-to-scandal* is measured based on the average geographic distance to all of the top three scandals. In addition, we also conduct placebo tests by replacing alcohol scandals with political scandals, including the top 3 political scandals in each year and the 2012 Bo-scandal in 2012. Panel D shows the diagnostic statistics on PSM matching. Accordingly, a firm's *Proximity-to-scandal* is measured based on the average geographic distance to all of the top three scandals. The Appendix provides detailed definitions for all variables. Obs denotes the number of firm-year observations, Adj. R2 is the adjusted R^2. The superscripts ***, **, and * refer to the 1%, 5%, and 10% levels of statistical significance, respectively.

1. Full Specifications of Models 1-5 and the Parallel Trend Test of Political Propaganda (Model 5b)

	PSM by firm characteristics		PSM by firm characteristics and alcohol			
	Dep Var = *Manipulation*		Dep Var = *Manipulation*		Dep Var = *Political Propaganda*	
	(1)	(2)	(3)	(4)	(5a)	(5b)
Treat×After $^{1\ to\ 3}$	-0.010***		-0.009***		-0.004*	
	(-2.87)		(-2.79)		(-1.85)	
Treat×Before $^{-1}$		0.004		0.003		-0.000
		(1.05)		(0.89)		(-0.0042)
Treat×Current		-0.001		-0.001		-0.007
		(-0.30)		(-0.18)		(-1.33)
Treat×After ^{1}		-0.005**		-0.005*		0.000
		(-1.98)		(-1.89)		(0.12)
Treat×After $^{2\ to\ 3}$		-0.014***		-0.013***		-0.005**
		(-2.63)		(-3.11)		(-2.26)
Size	0.001	0.001	0.003	0.003	0.002*	0.002*
	(0.45)	(0.49)	(1.10)	(1.13)	(1.78)	(1.77)
LEV	-0.000	-0.000	-0.005	-0.005	0.001	0.001
	(-0.022)	(-0.0087)	(-0.56)	(-0.55)	(0.13)	(0.12)
Cret_Volatility	0.099***	0.099***	0.084***	0.083***	-0.004	-0.004
	(4.44)	(4.48)	(4.21)	(4.14)	(-0.32)	(-0.29)
Totinsholdper	-0.013	-0.013	-0.011	-0.012	0.003	0.003
	(-1.63)	(-1.62)	(-1.24)	(-1.33)	(0.57)	(0.61)
Analyst	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.52)	(-0.61)	(-0.92)	(-0.96)	(-0.59)	(-0.60)
BM	-0.000	-0.000	-0.001	-0.002	-0.002	-0.002
	(-0.23)	(-0.22)	(-1.06)	(-1.13)	(-1.61)	(-1.62)
RET	0.000	0.000	0.001	0.001	0.001	0.001
	(0.16)	(0.15)	(0.37)	(0.37)	(0.35)	(0.37)
Turnover	-0.072*	-0.070*	-0.133***	-0.130***	0.034	0.035
	(-1.89)	(-1.84)	(-3.01)	(-2.95)	(1.26)	(1.27)
ROA	0.054***	0.054***	0.075***	0.074***	0.016	0.016
	(2.91)	(2.91)	(3.40)	(3.35)	(1.14)	(1.15)
Dual	0.009***	0.009***	0.002	0.002	-0.003	-0.003
	(2.96)	(2.93)	(0.47)	(0.48)	(-1.39)	(-1.39)
Indir	-0.018	-0.019	0.018	0.018	0.020	0.019
	(-0.91)	(-0.98)	(0.71)	(0.72)	(1.51)	(1.45)
SOE	-0.008**	-0.008**	-0.009***	-0.009***	0.005***	0.005***
	(-2.54)	(-2.51)	(-2.94)	(-2.81)	(2.68)	(2.62)
Age_Ceo	-0.000**	-0.000**	-0.001***	-0.001***	-0.000	0.000
	(-2.34)	(-2.37)	(-3.58)	(-3.55)	(-0.0093)	(0.036)
Salary_Ceo	-0.000	-0.000	0.000	0.000	-0.000	-0.000
	(-0.80)	(-0.97)	(0.11)	(0.12)	(-1.32)	(-1.31)
Top1	0.000	0.000	0.000	0.000	-0.000	-0.000
	(0.69)	(0.67)	(0.67)	(0.68)	(-0.46)	(-0.44)
Gdp_Percapita	0.003*	0.002	0.003*	0.002	0.001	0.001
	(1.93)	(1.43)	(1.84)	(1.12)	(0.66)	(0.75)
Gdp_Growth	-0.012	-0.017	0.028	0.020	0.040	0.042
	(-0.33)	(-0.53)	(0.89)	(0.68)	(1.12)	(1.12)
Pop_Growth	-0.003	-0.007	-0.058	-0.062	-0.035	-0.034
	(-0.092)	(-0.22)	(-1.19)	(-1.34)	(-1.06)	(-1.00)
Consume_Percapita	-0.008	0.002	-0.013	-0.004	0.002	0.001
	(-0.85)	(0.22)	(-1.46)	(-0.46)	(0.25)	(0.092)
Constant	0.356***	0.266**	0.565***	0.473***	-0.161*	-0.152
	(2.79)	(2.14)	(4.09)	(3.31)	(-1.66)	(-1.53)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Firm, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Obs	2991	2991	2559	2559	2223	2223
Adj. R2	0.0930	0.0974	0.0421	0.0502	0.1345	0.1354

2. Full Specification of Model 6-10 (PSM by firm characteristics and alcohol)

Dep Var =	The impact of 2012 alcohol scandal on		The impact of all-year top 3 alcohol scandals and political scandals (top 3 and the 2012 Bo scandal)		
	Alcohol Consumption	*Firm Entertain Cost*	All-Year Top-3 Alcohol Scandals	All-Year Top-3 Political Scandals	2012 Bo-scandals
	(6)	(7)	(8)	(9)	(10)
Treat×After $^{1\ to\ 3}$	-0.048***	-0.022**	-0.005***	0.001	0.003
	(-4.68)	(-2.17)	(-4.18)	(0.79)	(0.64)
Size		-0.030***	0.001	0.002	0.001
		(-3.29)	(0.69)	(0.86)	(0.21)
LEV		0.029	0.027***	0.024***	0.028**
		(0.83)	(4.11)	(3.91)	(2.46)
Cret_Volatility		-0.057	0.066***	0.072***	0.067**
		(-0.65)	(4.18)	(4.29)	(2.55)
Totinsholdper		0.048**	-0.007	-0.006	-0.017*
		(1.98)	(-1.40)	(-1.41)	(-1.92)
Analyst		0.005	-0.001	-0.001	-0.001
		(1.08)	(-1.42)	(-0.68)	(-0.65)
BM		-0.005	-0.004***	-0.004***	-0.001
		(-1.05)	(-3.73)	(-3.77)	(-0.52)
RET		0.009	-0.003**	-0.003***	0.001
		(0.98)	(-2.12)	(-2.82)	(0.55)
Turnover		-0.252	-0.061**	-0.083***	-0.073
		(-1.51)	(-2.35)	(-3.00)	(-1.47)
ROA		0.122	0.042***	0.031**	0.132***
		(1.56)	(3.20)	(2.51)	(3.93)
Dual		-0.005	0.001	0.003	0.003
		(-0.35)	(0.34)	(1.28)	(0.72)
Indir		0.013	0.001	0.011	-0.048**
		(0.14)	(0.069)	(0.74)	(-2.08)
SOE		-0.001	-0.007**	-0.004	-0.010**
		(-0.14)	(-2.48)	(-1.56)	(-2.35)
Age_Ceo		-0.001*	-0.000	-0.000**	-0.000*
		(-1.88)	(-1.54)	(-2.45)	(-1.75)
Salary_Ceo		-0.001	-0.000*	-0.000	-0.001**
		(-0.93)	(-1.77)	(-1.43)	(-2.15)
Top1		-0.000	0.000***	0.000***	0.000*
		(-0.33)	(2.73)	(2.96)	(1.85)
Gdp_Percapita	0.000	-0.004	0.001	0.001	0.000
	(0.037)	(-0.85)	(1.12)	(0.59)	(0.14)
Gdp_Growth	-0.006	-0.145	0.040	0.021	0.091**
	(-0.050)	(-1.11)	(1.49)	(1.16)	(2.27)
Pop_Growth	-0.144	-0.226	-0.022	-0.033	-0.078**
	(-0.71)	(-1.01)	(-0.88)	(-0.88)	(-2.44)
Consume_Percapita	-0.000	0.025	-0.009	-0.002	0.004
	(-0.00053)	(0.97)	(-1.26)	(-0.27)	(0.50)
Constant	0.730**	1.275**	0.330***	0.312***	0.271
	(2.41)	(2.55)	(3.39)	(3.66)	(1.60)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Prov, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Obs	2913	1998	9353	10356	2,018
Adj. R2	0.0468	0.0586	0.0435	0.0810	0.1081

3. Robustness Checks of Model 6-10 (PSM by firm characteristics)

Dep Var =	The impact of 2012 alcohol scandal on		The impact of all-year top 3 alcohol scandals and political scandals (top 3 and the 2012 Bo scandal)		
	Alcohol Consumption	*Firm Entertain Cost*	All-Year Top-3 Alcohol Scandals	All-Year Top-3 Political Scandals	2012 Bo-scandals
	(6)	(7)	(8)	(9)	(10)
Treat×After [1 to 3]	-0.052***	-0.027**	-0.003***	-0.000	-0.003
	(-4.91)	(-2.28)	(-2.90)	(-0.14)	(-0.84)
Size		-0.014	0.001	-0.002	0.001
		(-1.58)	(0.96)	(-1.16)	(0.45)
LEV		0.034	0.017***	0.028***	0.017*
		(1.02)	(3.06)	(5.04)	(1.76)
Cret_Volatility		0.024	0.072***	0.053***	0.081***
		(0.35)	(5.13)	(4.06)	(3.18)
Totinsholdper		-0.015	-0.013***	-0.010**	-0.019**
		(-0.48)	(-3.17)	(-2.26)	(-2.09)
Analyst		0.006	-0.001	0.000	0.000
		(0.98)	(-0.99)	(0.52)	(0.29)
BM		-0.002	-0.005***	-0.003**	-0.003
		(-0.31)	(-5.00)	(-2.34)	(-1.21)
RET		0.008	-0.002*	-0.003**	0.000
		0.008	(-1.86)	(-2.55)	(0.13)
Turnover		-0.207	-0.099***	-0.046*	-0.166***
		(-1.30)	(-4.33)	(-1.76)	(-3.05)
ROA		0.122*	0.037***	0.027**	0.129***
		(1.66)	(3.12)	(2.21)	(4.35)
Dual		-0.003	-0.001	0.003	-0.005
		(-0.27)	(-0.57)	(1.34)	(-1.08)
Indir		0.000	0.003	0.020*	-0.035
		(0.0017)	(0.24)	(1.70)	(-1.32)
SOE		-0.013	-0.004	-0.001	-0.004
		(-1.28)	(-1.37)	(-0.62)	(-1.05)
Age_Ceo		-0.001	-0.000*	-0.000**	-0.000
		(-1.27)	(-1.76)	(-2.49)	(-1.11)
Salary_Ceo		-0.003**	-0.000	-0.000	-0.001*
		(-2.48)	(-1.47)	s	(-1.82)
Top1		-0.001	0.000***	0.000***	0.000
		(-1.31)	(4.18)	(4.69)	(0.84)
Gdp_Percapita	-0.002	0.000	0.001	0.002*	-0.001
	(-0.20)	(0.023)	(1.53)	(1.71)	(-0.36)
Gdp_Growth	0.027	-0.295**	0.015	0.019	-0.036
	(0.25)	(-2.10)	(0.72)	(1.19)	(-0.93)
Pop_Growth	-0.178	-0.332*	0.001	-0.012	0.017
	(-0.85)	(-1.71)	(0.019)	(-0.40)	(0.44)
Consume_Percapita	-0.003	-0.027	-0.009	-0.015**	0.005
	(-0.078)	(-0.71)	(-1.13)	(-2.36)	(0.42)
Constant	0.752**	1.292**	0.431***	0.394***	0.546***
	(2.38)	(2.38)	(4.71)	(4.75)	(3.13)
Cluster	Prov, Year	Prov, Year	Prov, Year	Prov, Year	Prov, Year
Fixed Effects	Prov, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Obs	3437	2427	15418	14150	1,949
Adj. R2	0.0456	0.0563	0.0463	0.0829	301

4A. Diagnostic on PSM matching (PSM by Firm Characteristics)

Variable	Mean			t-test	
	Treated	Control	%bias	t	p>|t|
Size	22.098	22.086	0.9	0.09	0.928
LEV	0.532	0.518	7.1	0.68	0.496
Cret_Volatility	0.109	0.106	4.8	0.57	0.566
Totinsholdper	0.166	0.181	-8.3	-0.82	0.414
Analyst	1.561	1.576	-1.3	-0.13	0.900
BM	1.340	1.279	5.4	0.57	0.568
RET	-0.307	-0.303	-1.6	-0.19	0.853
Turnover	3.043	3.040	7.8	0.79	0.432
ROA	0.041	0.040	2.7	0.27	0.787
Dual	0.131	0.141	-3.1	-0.30	0.766
Indir	0.370	0.369	2.6	0.25	0.803
SOE	0.597	0.681	-18	-1.71	0.089
Aae Ceo	48.131	47.927	3.3	0.33	0.745
Salary_Ceo	12.805	12.743	2.6	0.29	0.771
Top1	34.266	36.595	-14.4	-1.45	0.147
Avg_Manipulation_Change	0.081	0.080	2.3	0.28	0.837

4B: Diagnostic on PSM matching (PSM by Characteristics and Alcohol)

Variable	Mean			t-test	
	Treated	Control	%bias	t	p>|t|
Size	22.100	22.179	-5.9	-0.55	0.580
LEV	0.536	0.544	-4.3	-0.40	0.688
Cret_Volatility	0.109	0.105	9.7	1.15	0.250
Totinsholdper	0.177	0.188	-5.8	-0.54	0.590
Analyst	1.526	1.593	-5.8	-0.55	0.583
BM	1.269	1.281	-1.1	-0.11	0.911
RET	-0.297	-0.296	-0.3	-0.03	0.974
Turnover	3.044	3.044	1.5	0.14	0.889
ROA	0.038	0.041	-3.6	-0.33	0.745
Dual	0.184	0.134	14.8	1.30	0.195
Indir	0.368	0.367	1.4	0.13	0.895
SOE	0.665	0.687	-4.8	-0.45	0.653
Age_Ceo	48.503	48.201	4.9	0.48	0.631
Salary_Ceo	12.428	12.725	-12.7	-1.08	0.282
Top1	34.954	35.462	-3.1	-0.30	0.764
Alcohol	0.589	0.588	0.8	0.08	0.938
Avg_Manipulation_Change	0.072	0.073	-1.2	-0.09	-0.916