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No Taxation with Information on Representation:

A Survey Experiment on Tax Morale in China

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Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Arts

The University of Texas at Austin

December, 2016

Abstract

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Extant studies on tax morale emphasize the influence of reciprocal motivations on tax compliance behavior. This strand of literature views tax payments as a tax contract between governments and citizens, arguing that individuals' willingness to pay taxes depends on their perceptions of government's representation. This paper examines whether a reciprocal information can affect individuals' tax morale in an authoritarian regime featured by low-information environments with an original survey experiment of 119 respondents in China. I primed a subgroup of respondents with information about congressional representation unfolding at local levels, and compared their tax morale to the untreated group. The results show that this information affects people's willingness to pay taxes in an unexpected direction. I find evidence that those who received the representation information tended to have lower tax morale than those who did not receive the information. This is because this information undermined congress delegates' representation perceived by the treated units, which in turn diminished their willingness to pay taxes. Following the baseline result, three heterogeneous effects were tested. I find that the negative effect of information on tax morale is larger among MBA group. I also find some evidence that the treatment effect is stronger among low self-monitors, who incline to express their real attitudes toward sensitive questions such as tax compliance. Yet, I do not find evidence that political

knowledge plays a role in the heterogeneous effect. Last, I offer some suggestive evidence, both quantitative and qualitative, of why the reciprocal information lowered, not enhanced, people's perceptions of local congress delegates' representation.

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CHAPTER 1: INTRODUCTION

Existing literature on tax compliance has identified that compliance behavior is not only a function of tax rates, penalty, and probability of detection, but also a function of individuals' willingness to pay taxes. Scholars have proposed the term Tax morale in reference to this willingness. However, even if survey-based and experimental research have offered some evidence that favorable tax morale encourages people's compliance behavior, we still know little about the factors that foster tax morale itself. This paper contributes to tax morale literature by examining whether or not Chinese citizens are more willing to pay taxes, measured by attitudes toward tax compliance, if they are informed that local congress delegates have become more representative than before. This tax morale channel is known as reciprocal motivation, meaning that citizens tend to be more willing to pay taxes if they feel that their interests are represented or responded by the government.

To examine reciprocal motivation, this paper introduces an original survey experiment in China. I randomly primed a subgroup of respondents with the information on congressional representation recently unfolding in China's local congresses and asked a battery of questions regarding one's tax morale. Since randomization ensures that there would be no systematic differences in the pretreatment covariates (both observable and unobservable) held by subjects across groups at the outset of the survey, the treatment effect can be identified by a simple difference-in-means test between the treatment and control group concerning their tax morale.

Tax compliance is a vital issue in both academic and policy arenas. On the one hand, taxpayer behavior is one of the classical topics in the research of development economics. On the other hand, particularly in developing countries, taxation matters a lot as to state-building and economic development. But, "almost by definition, developing country governments do not have enough money" (Morrison, 2015: 1) since they often lack sufficient capacities to enforce tax

extraction. Thus, from a policy perspective, it is important to understand what factors could affect citizens' willingness to comply with the tax law.

Previous works have attributed compliance behavior to two broad factors: deterrence and tax morale. The former was built on the Allingham and Sandmo (1972) model, in which taxpayers choose how many incomes would be reported to tax authorities by trading-off the benefits (lower payments) and costs (the risk of being detected) of evasion. In other words, compliance decisions are entirely determined by economic factors. Experimental evidence, however, indicated that this model does not capture the whole story, as people's actual compliance is often higher than the expected utility model would predict, even under weak enforcement conditions (Alm et al., 1992; Slemrod et al., 2001). This inconsistency suggests that deterrence is not the only factor that affects compliance (Elffers, 1991; Graetz and Wilde, 1985).

Tax morale is used in reference to these non-deterrence factors, emphasizing that people's intrinsic motivations to pay taxes also affect compliance behavior. As discussed in the following section, scholars have proposed several tax morale mechanisms through which tax compliance may be increased, such as fulfillment of civic duties (Dwenger et al. 2016), perceptions of state's legitimacy (Levi, 1989), attitudes toward the fairness of tax systems (Feld and Frey, 2007), peer effects (Hallsworth et al. 2014), and so forth. In actuality, deterrence and tax morale are by no means mutually exclusive but may interact with each other, neither do tax morale mechanisms.

There are at least two problems in the previous studies, however. First, as Luttmer and Singhal (2014: 166) have noted, most field studies of tax morale to date have been "one-shot" in nature. Specifically, to examine the relationship between tax morale and compliance behavior, these studies often began with a random assignment of interventions that aimed at priming treated participants' motivations to pay taxes to the treated subjects, then comparing their compliance

behaviors to the untreated subjects. However, the casual chain from tax morale to compliance is not identified, as this kind of study failed to see the impact of the interventions on tax morale in the first place. Besides, even if survey-based studies have examined the determinants of tax morale (OECD, 2013), the relationships they found may not be causation but merely correlation. Moreover, numerous studies on tax compliance focused on European, Latin American, and African countries but little on the East Asian contexts. Hence, our understanding on individuals' tax morale is still limited.

This paper aims to address these issues and contributes to this body of literature on tax morale by focusing on the reciprocal mechanism. The theoretical foundation of reciprocity lies in tax contract theory in which paying taxes is viewed as a bargaining with governments by taxpayers. Taxpayers' compliance with the tax law depends on their relationship with the government, and if they feel that government to some extents represent and respond to their interests, they will be more willing to pay taxes. Ostensibly, reciprocity seems not to operate in autocracies, as we conventionally only correlate representation to democracy. Nevertheless, scholars have recently found an increased congressional representation at the local level in China, showing that local congress delegates have attempted to respond to personal contacts and advocated the local government for local public services (Manion, 2014; 2016). This political change renders this paper an opportunity to prime Chinese citizens' reciprocal motivations with information about congressional representation and to see whether or not people' tax morale will be affected by it.

The experimental results show that the representation information affected people's tax morale in an unexpected way: The informed respondents tended to have lower tax morale relative to the uninformed respondents. Put differently, the information executed a negative effect on tax morale. The results show that, instead of increasing informed respondent' perceived representation

of local congress delegates, the information diminished it, thus leading informed respondents to have lower tax morale. Next, I test three heterogeneous effects, finding some evidence that the treatment effect is larger among MBA respondents and low self-monitors, who incline to reveal their actual attitudes toward tax compliance. By contrast, no evidence suggested that one's political knowledge plays a role in the test of heterogeneous effect. Last, I provide some tentative answers to why the intervention reduced people's perceptions of congress delegates' representation. I argue that the surveyed respondents on average considered the information is from the government and/or did not trust the information. In the meantime, the information has already primed their ideal of reciprocity, thus lowering their perceptions of local congress delegates' representation. I offere some qualitative and quantitative evidence to support this argument.

It also merits noting that the outcome variable in this paper is not behaviors but reported attitudes toward compliance. Of course, the attitudes that respondents revealed in a survey may not accurately reflect their actual behavior when faced with the real consequence of tax evasion (Ajzen and Fishbein, 1977), and this drawback could explain why scholars begin conducting large-scale field experiments to look at real taxpayer behavior (Mascagni, 2016). However, to establish the causal mechanism behind the effect of tax morale on compliance decisions, we must understand what factors foster people's tax morale in the first place. While most tax experiments failed to examine this question, this paper aims to fill in this gap.

This paper is organized as follows: Chapter 2 reviews extant studies on tax compliance. Chapter 3 discusses the tax contract theory, institutional environment in China, and tested hypotheses. Chapter 4 introduces the research design, including experimental intervention, pretest results, experimental setup, and outcome variables. Empirical results were reported in Chapter 5. This paper then provides some quantitative and qualitative evidence to interpret the experimental

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findings in Chapter 6. Chapter 7 concludes the paper by summarizing the finding and proposing

the potential follow-up experiments.

CHAPTER 2: WHY COMPLY?

2.1 Deterrence

Existing literature on tax compliance has ascribed compliance decisions to deterrence (economic factors) and tax morale (noneconomic factors). This section reviews the two broad categories of factors. Deterrence is the first well-recognized determinant of tax compliance. Allingham and Sandmo (1972) applied the Becker (1968) model of economic crime to the tax compliance context. The underlying logic of this model is that individuals' compliance decisions are determined by the expected utility to tax evasion, which is decided by tax rates, the probability of being detected, and the amount of penalty to be paid if found guilty. The first generation of tax experiments was concerned with testing this expected utility model. Friedland et al. (1978) utilized a lab experiment of 15 Israeli psychology students, finding that if tax rates rose above a certain threshold (in their findings, from 25% to 50%), a striking increase in the probability of underreporting income, as well as the degree of underreporting, could be observed. Besides, for deterring evasion, large fines were found to be more effective than frequent audits. Later, Spicer and Thomas (1982) further advanced the deterrence theory by launching a lab experiment of 54 students, finding that the relation between deterrence and compliance is empirically valid when people have full information about that the probability of detection. In Beck, Davis, and Jung (1991)'s lab experiment of 112 students, they also found supporting evidence that, on the one hand, evasion is lower when the audit probability is higher, and that, on the other hand, the lack of information weakens this opposite effect.

At the same time, there is ample experimental evidence against the expected utility model. Scholars have claimed that the model puts too much weight on economic factors, thus failing to explain the actual level of compliance observed in real-world conditions, which is often higher

than predicted by the model. Graetz and Wilde (1985) first challenged the idea that evasion would have disappeared had tax rates been lower. Alm, et al. (1992) then in the lab found that people pay taxes because they value public provisions and tend to exhibit much diversity in their tax behaviors. Alm et al. (1999) then showed that voting on different aspects of a fiscal system change individuals' social norms, which seem to have predictable effects on compliance decisions. Slemrod et al. (2001) also noted that the impact of deterrence is not universal but conditional on taxpayers' income levels.

The early tax experiments have prompted scholars to search for non-deterrence factors that fall outsides the expected utility model but may affect compliance. In fact, Allingham and Sandmo also acknowledged that their compliance model could be criticized for giving too little attention to non-deterrence factors. More important, the early compliance experiments, whether siding with the expected utility model or not, own a common weakness: they often used students as the subject pool, which may be inappropriate. Even if students will respond to the incentives set out in the lab, they have no actual experience in paying taxes. My experiment avoids this pitfall by recruiting respondents who have had full-time working experiences and thus can be considered real taxpayers.

2.2 Tax Morale

Given that tax compliance scholars have recognized that expected utility of tax evasion is not the only cause of compliance behavior, they have attempted to understand why people have intrinsic motivations to comply with the tax law. Under this circumstance, tax morale has received lots of attention. Tax morale is defined as individuals' own willingness to pay their tax payments (Torgler, 2007). Scholars have offered evidence, albeit mixed, that individuals' attitudes toward tax compliance affect their compliance decisions. Here, the key question is what affects

compliance attitudes. Scholars have proposed several mechanisms through which tax morale operates (Luttmer and Singhal, 2014). Below, this paper reviewes these mechanisms.

First, individuals' social norms, such as the feeling of pride and honesty, sense of civic duties, altruism toward others, and the inclination to avoid feeling guilty and/or shame, may affect their compliance behavior. Many Scholars have examined the influence of social norms by randomly sending letters/emails with moral suasion messages to taxpayers. The social norm effects were then estimated by comparing compliance behaviors between treated and untreated participants. To date, most experimental studies attempting to prime people's social norms tended to find null effects. Blumenthal et al. (2001), for example, found little evidence that letters encouraging voluntary compliance can affect taxpayer behaviors in Minnesota. Torgler (2004) also found a weak and statistically insignificant effect of normative appeal messages on compliance behaviors in Switzerland. However, null effects do not necessarily mean social norms do not exert effects on compliance; instead, it may exist but is not elastic to a particular intervention/message.

Second, tax compliance could also be affected by how others pay taxes, as people may want to conform to others' behavior. Previous works on this peer effect have provided mixed evidence. For example, Fellner et al. (2013) randomly provided potential Australian evaders of TV license fees with information on others' paying behavior but did not find a consistent and positive effect. The information, nevertheless, had a weak positive effect in municipalities where evasion is seen as widespread. In Peru, Del Carpio (2014) showed that messages combining information on peer compliance and payment reminder only led to a small but insignificant increase in compliance. However, a study in the United Kingdom offered a different picture. Hallsworth et al. (2014) randomly gave a subgroup of participants one of three messages about peer compliance: 1) 9 out of 10 people pay their tax on time; 2) 9 out of 10 people in the U.K. pay their tax on time;

and, 3) 9 out of 10 people in the U.K. pay their tax on time and you are currently in the very small minority of people who have not paid us yet. The authors found that all three messages had significant effects on compliance, though the strongest one is the last message.

A small group of scholars has also identified long-term cultural effects on compliance behaviors. Cummings et al. (2009) examined compliance behavior of individuals from different cultural backgrounds when placed them in a similar environment. They utilized both survey and experimental data to buttress their contention that cross-cultural differences explained the observed compliance behavior. Halla (2012) provided an alternative strategy to investigate cultural effects. He exploited variations arising from individuals who resided in the same country but had varying countries of origin, finding that American-born individuals in the United States have higher tax morale when the country of their ancestry has higher average tax morale. Besides, he also concluded that tax morale seems to have a causal effect on the size of shadow economy.

Last but not least, people's willingness to pay taxes also depends on their relationship with governments. This paper uses the term reciprocity about this broad situation. When it comes to paying taxes, citizens consider tax payments as signing a contract between governments and themselves in exchange for public services. Citizens' compliance behaviors then are motivated by this reciprocal relationship with governments. Scholars have proposed several manners relating to this reciprocal motivation. For instance, citizens may be more compliant with the tax law if they feel active in the decision-making process (Feld and Tyran, 2002; Lü and Tsai, 2016), when they perceive the state as legitimate (Levi, 1989), when they have positive attitudes toward government institutions (Torgler, 2005), or when they feel the tax authorities fairly treat them (Feld and Frey, 2007). To sum up, all of these factors have indicated that compliance behavior embodies the psychological tax contract between governments and citizens.

To date, experimental evidence regarding reciprocal motivations has found mixed results. Scholars have attempted to prime individuals' reciprocal motivations with information on the uses of tax revenues. For example, Blumenthal et al. (2001) described the types of social programs on which tax revenues are spent in letters randomly given to taxpayers in Minnesota. Castro and Scartascini (2013) randomly gave taxpayers in Argentina the information about specific public goods in their community. Dwenger et al. (2016) included messages, in which local German church tax revenues fund work in the parish, in a letter randomly assigned to citizens. None of them found any significant effect of this type of information on compliance behavior. By contrast, Bott et al. (2014) and Hallsworth et al. (2014) found some evidence that the informed taxpayers seem more compliant with the tax law if the received information highlighted the breakdown of the public expenditures. From a different angle, Lü and Tsai (2016) found that Chinese people tend to comply with property taxes if they have a chance to participate in the design of a new tax law.[1]

Even though this paper also focuses on reciprocity, it differs from the previous works in three fundamental ways. First, most reciprocity studies adopted one-shot interventions to examine whether reciprocity could encourage people's compliance behavior. However, the casual process from compliance attitudes to compliance practices may not be identified if we do not see whether the interventions relating to reciprocity indeed improve people's tax morale in the first place. This paper intends to examine this dynamic process by investigating whether a reciprocal information affects tax morale. Second, existing studies on reciprocity often focused on democratic regimes

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[1] Although Lü and Tsai (2016) also examines the effect of reciprocal motivations on tax morale, this paper is different from them in two fundamental ways. First, their conjoint analysis focuses on citizens' participation, not government institutions' representation and officials' responsiveness. Second, when mentioning tax morale, they focus on people's attitudes toward property tax compliance. By contrast, this paper does not target any specific type of taxes but intends to provide a more general picture. Related, Lü, Queralt, and Kao (2016) conducted two survey experiments in China and Taiwan focusing on the effect of information about tax burden on the demand for government accountability. Even if that project also examines the relation between taxation and representation, the outcome variable of interest is not tax morale, which is the focus of this paper.

but little on authoritarian regimes (exceptions are de la Cuesta, 2015; Lü and Tsai, 2016; Lü, Queralt, and Kao, 2016). Likewise, most studies looked at European, Latin American, and African contexts but little at the East Asian context. This paper contributes to this literature by focusing on an authoritarian regime in East Asia. Third, this paper primes taxpayers' reciprocal motivations with information about government representation, not about the use of tax revenues.

CHAPTER 3: THEORY

3.1 Tax Contract Between Governments and Taxpayers

The theoretical framework of reciprocity lies in the tax contract theory in which citizens consider paying taxes as an establishment of contractual relationships between governments and themselves. In line with this reasoning, taxpayers who feel that governments represent their interests are expected more willing to pay taxes. This theory has deep roots in early modern Europe where monarchs were compelled to relinquish some of their power to legislative institutions in exchange for the ability to raise new taxes (Moore, 2004). As Tilly (1990: 64) noted, representative institutions in the case of England were the outcome of bargaining with the subject population for the wherewithal of state activity, especially the means of war. Initially, Kings of England did not want a representative institution to form; however, to raise more tax revenues for warfare, they conceded to barons, then to clergy, gentry, and the bourgeoisie. This is where the notion no-taxation-without-representation comes from. In addition, the relationship between taxation and representation is confirmed by the resource curse literature, in that autocrats could avoid pressures to implement representative institutions if they can finance themselves with non-tax revenues from natural resources, such as petroleum (Ross, 2001).

In the meantime, the contractual relationships between governments and citizens also involve public provisions. In Levi (1989)'s seminal work, she argued that citizens pay taxes in part because they perceive the government will deliver public services in return. From the perspective of governments, to make the link between tax payments and public provisions clearer, they have the incentive to establish legislative institutions for lowering compliance cost. Timmons (2005) lends statistical evidence to support this idea, showing that countries with higher proportion of

revenues from personal income and corporate taxes have better property protection rights while countries relying more on regressive taxes have higher social spending.

In sum, according to tax contract theory, reciprocity has two interrelated components: To encourage individuals' willingness to pay taxes before the due date, on the one hand, it is important to make taxpayers feel that the government put efforts into representing citizen interests. On the other hand, taxpayers need to perceive that government officials play a role in delivering public services deemed critical to citizens. Clearly, this theory is psychological in nature.

3.2 Representation in China?

Conventional wisdom holds democracy to be a necessary condition for meaningful representation and thus, "it will be difficult to think of a psychological tax contract in autocratic regimes" (Feld and Frey, 2007:107). In contemporary authoritarian countries, even if the existence of legislative institutions has become more common than before, and many of them are more than window dressing (Gandhi, 2008; Gandhi and Lust-Okar, 2009), scholars rarely contended that these legislatures perform representation. The scenario seems worse in the Chinese case: congress delegates have long been disparaged as "rubber stamps" and only shake hands ceremoniously, clap hands at speeches by government leaders, and raise hands to ratify executive decisions in the plenary session every March.

However, things have changed recently. Scholars have started to argue that China's congresses are undergoing a substantial change regarding delegates' representation. For example, based on observational data, Truex (2016) found that provincial congress delegates have become more willing to address issues deemed most serious by the constituents they claim to represent. For nonpolitical issues, provincial congress delegates have proposed policies that greatly reflect the constituent interests, and sometimes, these proposals embody public provisions. Why the

Chinese Communist Party (CCP) attempted to increase congressional representation? Truex (ibid.: 5) argued that the autocrat in China has the incentive to stay in power and thus must placate citizens by providing a minimal standard of welfare; but at the same time, the CCP has limited information about citizen interests. To better understand people's preferences, the party therefore intentionally increased congressional representation.

Perhaps more relevant to this paper, Melanie Manion (2016) also found local congresses have gradually become more representative (municipal, county, and township level) after the CCP passed a new election law in the late 1990s that legalized direct elections of local congresses. Since current local congress delegates are nominated and elected by citizens, they have the incentive to be representatives. By a large number of interviews and a 5000 local congress delegates survey, Manion pointed out that the delegates frequently used such terms as voting districts, constituency, and constituent interests. Moreover, most of them viewed themselves as representatives and thus, should side with their geographic constituents. More important, it has become more common than before to see that delegates take an initiative to advocate the local government for public services, such as road building, irrigation system, environmental protection, and social order maintenance.

This paper exploits the increased congressional representation to examine the relationship between reciprocity and tax morale. Since I cannot manipulate congresses' level of representation, the survey experiment intends to prime people's reciprocal motivations with information about congressional representation unfolding in local congresses. I argue that this particular information treatment is suitable to the Chinese case based on two reasons. First, even though congresses have become more representative and responsive than before (relatively), most people may not possess this political information or are unaware of this change. As mentioned, both the National and Local People's Congress were often described as a "rubber stamp" by critics since the 1950's, as the

CCP is so dominant in the political system that it made this governing institution powerless. Hence, most citizens may not have intimate knowledge of the inner workings of the congressional system, let alone delegates' representative actions. As Shi and Kong (2006) have noted, ordinary people's lack of interest may stem from the relatively closed nature of the political system and the lack of meaningful electoral accountability. Meanwhile, people often treat politics as a distant entity and may not have the incentive to understand it. In short, this paper argues that people's knowledge of congressional representation is inhibited by China's inherent low-information environment. Thus, using information to prime individuals' reciprocal motivations seems an ideal approach, especially in countries with a low information environment.

On the other hand, the reasons the information to be used is about representation in local congresses, rather than national or provincial congresses are two-fold: First, local congress delegates are expected to perform greater representation than the national counterparts because only the former need to be nominated and elected to be delegates. Second, citizens arguably much easier perceive local congresses' representation, as they are geographically closer to them than delegates from national and/or provincial congresses. In sum, by using local congress delegates as the subject in the vignette, it may offer a relatively strong treatment as to priming participants' reciprocity in the survey experiment.

3.3 Hypothesis

This paper exploits taxpayers' deficient information about congressional representation in China, testing whether people's attitudes toward tax compliance (i.e. their tax morale) will change after receiving the representation information. The baseline hypothesis to be tested is about reciprocal motivation. According to tax contract theory, individuals are more willing to honestly report their incomes to the tax authority and pay taxes before the due date if they feel government

institutions to some extents represent and respond to citizen interests and deliver public services deemed as important by ordinary citizens. If this psychological tax contract theory is correct, the observable implication is that:

- **H1:** Individuals who were informed that local congress delegates have become more representative and responsive than before and have advocated local governments for public services should have higher tax morale than those who were uninformed.

The causal parameter to be estimated is representation information, and the coefficient sign is expected to be positive. However, it also merits noting that this hypothesis implicitly assumes that the informed respondents trust the authenticity of the received message. By contrast, if people do not believe or trust the message, the intervention may fail to render or, even worse, damage their reciprocal motivations. I elaborate this contention in the discussion section.

In addition to this baseline hypothesis, this paper also tests two heterogeneous effects. First, as mentioned, scholars have established that many citizens in developing and authoritarian regimes rarely possess a modicum of information about government institutions and policies. However, it is inaccurate to say people's political savvy is fixed in a given country; instead, some people may have better political knowledge than others because they are more well-educated and are more interested in politics. In view of this difference, this paper hypothesizes that the effect size of representation information is conditional on one's political knowledge. If one is more aware of politics, she may have noticed the increased congressional representation and thus, the information may only bring a weak priming impact, and vice versa. The second hypothesis is thus:

- **H2:** the effect of the representation information on tax morale should be larger among the respondents whose political knowledge is low, relative to the respondents with high political knowledge.

The casual parameter to be estimated is an interaction variable that interacts the treatment with a binary variable of low political knowledge. I will explain how to measure and generate this variable in the following section. The expected sign of the coefficient is positive, meaning that the treatment effect is stronger for the respondents with low political knowledge.

The other heterogeneous effect to be tested is about the self-monitoring scale (SM). It is based on the assumption that individuals differ in the degree to which they actively monitor and regulate their interpersonal behavior in response to social context (Gangestad and Snyder, 2000). Thus, high self-monitors are more likely than low self-monitors to accurately perceive and response to social cues by tailoring their attitudes and behavior to fit prevailing social expectations. That said, high self-monitors are less likely than low self-monitors to reveal their actual attitudes toward questions containing socially desirable answers. Since this experiment asked people's compliance attitudes, the questions may be sensitive to people because socially desirable answers are present. Given that the variations in compliance attitudes should be larger for low self-monitors than for high self-monitors, the last tested hypothesis is thus:

- **H3:** the effect of representation information on tax morale should be larger among the low self-monitors, relative to the effect among the high self-monitors.

This heterogeneous effect could be tested by including an interaction variable interacting the treatment variable with the low-SM variable into the regression model, and the expected sign of coefficient should be positive, meaning that the positive treatment effect of representation information on tax morale is larger among the low self-monitors.

CHAPTER 4: RESEARCH DESIGN

Survey-based studies have shown that tax morale is positively correlated to people's support for democracy, trust in government, and satisfaction with public services (OECD, 2013). Indeed, using data from the sixth-wave of World Value Survey, I find that people's confidences in governments are positively correlated to their willingness to pay taxes (See Figure 1). However, this positive correlation may be spurious due to the endogeneity problem in observational data.

To identify the *causation*, this paper introduces an original survey experiment of 119 Chinese respondents. Randomized intervention averts selection bias (subjects are not self-selected into the intervention), balancing out the potential difference in pretreatment covariates across groups. Thus, when the stable unit treatment value assumption (SUTVA) is met,[2] the average difference in outcome variables across groups could be attributed to the intervention. In this section, I discuss the information treatment, experimental setup, outcome measures, and other relevant variables necessary for testing heterogeneous effects.

4.1 Treatment: information about representation in local congresses

The treatment to be used for priming individuals' reciprocal motivations is a text-based vignette in which information about congressional representation was provided. In this vignette, it contains two critical messages relating to the tax contract theory. First, the vignette informs the respondents that local congress delegates have become willing to respond to constituent interests and have played a greater role in delivering public services than before. Second, it also explains congress delegates' incentives to represent citizen. In sum, the vignette aims to inform the treated

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[2] A good discussion on the violation of SUTVA in the context of field experiment can be found in Gerber and Green (2012: 39-44). Morgan and Winship (2014: 48-52) provided a more general discussion about causal identification.

subjects of what local congress delegates are doing and why they are doing so. The message in the texted-based vignette is as follows:

> *People's Congresses are a fundamental government institution in China. Each year, local congress delegates meet at least once to discuss public policies. **We want to let you know that**, according to a recent survey of 5000 local delegates, local congress delegates become more willing to respond people's interests in their locality. Besides, they also take an initiative to advocate local governments for offering public services deemed as important by local people, such as road, irrigation system, and social order. This is different than before in that congress delegates seldom delivered public services previously. But, now, since township and county congress delegates are nominated and elected in direct elections, they need to respond people to gain personal reputation. Yangzhou Municipal and Taizhou Wenling congresses are concrete examples.*

In this experiment, the treated subjects received a complete vignette as shown above, while the untreated subjects received the first two sentences of the vignette (*People's Congresses are a fundamental government institution in China. Each year, local congress delegates meet at least once to discuss public policies*). In other words, holding the first two sentences constant, the only difference between the treated and untreated subjects is whether they will read the information about congressional representation (beginning with the sentence in bold font). As Gaines et al. (2007) have noted, many survey experiments do not include a control group in their research designs, and this paper recognizes this pitfall by including a baseline group.

4.2 Pretest: the formulation of the texted-based vignette

In formulating the text-based vignette and increase its internal validity, this paper has conducted a pretest before the core experiment. To begin, I had an informal online discussion about congressional representation with four graduate students and one Professor from the Central Europe University Business School in late September this year. This informal discussion facilitated the formulation of four different text-based vignettes (role perception, perceived responsibility, delegate activism, and elections incentive). Appendix A provides the wording for each vignette.

Next, on November 3, I launched an online pretest of 45 undergraduate students from the Shanghai University of Finance and Economics. The respondents were told that they had to read four different text-based vignettes relating to local congress delegates in China, without informing them of the purpose of the pretest. After reading each vignette, they were asked what information a given vignette attempted to convey. The results show that (not reported) all four vignettes were quite successful in conveying the idea that local congress delegates have become willing to represent citizen interests. It also merits noting that I randomized the order in presenting the four vignettes to respondents to avoid order effects.

Next, I asked respondents to rank the four vignettes based on how successful they think a given vignette conveys the information about congressional representation. As shown in Appendix B, these respondents on average viewed "delegate activism" as the most successful vignette for conveying the idea of representation. I then conducted a series of t-tests to examine if "delegate activism's" mean is statistically different from others. Results show that (not reported) this is true by one-tailed t-test at the .05 significance level, even if the sample size is rather small (n=45). Meanwhile, if we conducted two-tailed t-test with the same significance level, "delegate activism's" mean is still different from both "role perception's" and "self-reported responsibility's" mean. Yet it becomes statistically indistinguishable from "election incentive's" mean. This may suggest that the "election incentive" vignette is also crucial in embodying people's idea of representation.

Finally, the pretest proposed open-ended questions to respondents before they left the survey (whether or not these messages made them feel that local congress delegates have become more willing to represent citizen interest; whether or not the messages reflect what is going on in China; what their general feedback is). These open-ended questions offered valuable information

for me to interpret the experimental findings. I will elaborate on this in the discussion section. In sum, this pretest helped me formulate the wording of the information in the text-based vignette and provided some qualitative information about how Chinese people perceived the representation information. Both of which benefited the research design and interpretation of experimental findings.

4.3 Experimental Setup

The experimental observations consist of 119 Chinese citizens who have had full-time working experience and thus can be treated as real taxpayers. I first built an online survey by Qualtrics and started to recruit respondents on November 12. The first group of respondents is from a Master of Business Administration (MBA) class at the Shanghai University of Finance and Economics. 36 respondents from the class completed the survey on November 12. The second group of respondents is from another MBA class at the Central European University Business School. 28 respondents from the class completed the survey on November 14. In total, MBA-type respondents constitute 64 respondents. Meanwhile, I was concerned with the small sample, thus starting to find more respondents on November 15. Since I did not have more MBA classes to use for this survey experiment, I decided to recruit non-MBA respondents. In doing so, my Chinese research partner and I sent the survey link to two WeChat Group Chats, whose members are university alumni. All respondents in the Group Chat voluntarily joined the survey, though we also incentivized them with a feature of WeChat Group Chat called "Grab the Red Package". From November 15 to 17, 55 non-MBA respondents completed the survey. In total, this experiment consists of 119 recorded respondents.

I employed block random assignment to enhance the precision of estimation, as the respondents in a given block are expected to have similar potential outcomes (Gerber and Green,

2014). In practice, as noted, I divided respondents into three groups and then adopted a complete random assignment in each block. The survey questionnaire can be found in Appendix C. As shown, all respondents first answered some demographic questions (gender, age, and occupation). Next, the treated subjects received the representation information while the untreated subjects did not, and both type of subjects then answered a manipulation check question. This question was used for checking whether the informed respondents were primed by the idea of representation (*Do you think to what extent local congress delegates are willing to respond to ordinary people's interests?*). Later, a battery of question about tax morale, political knowledge and the SM scale were followed. Finally, respondents answered another set of demographic questions (party affiliation, monthly income, and residence location) before they left the survey.

Relative to most tax experiments that used undergraduate and graduate students as the subject pool, respondents in this experiment are more suitable subjects to study tax-related issues. As for the MBA respondents, the admitted students must have full-time work experience for two years or longer. Using the MBA students from the Central Europe University Business School as an example, the majority has four- to five-years working experience. Provided that MBA students have had full-time working experience, they should have a better sense of paying taxes than normal students could have. As for the non-MBA respondents, the WeChat Group Chats eliminated the possibility of recruiting students into the experiment. According to the age and occupation variable, it is indeed the case. Appendix D provides the descriptive statistics of the demographic variables.

4.4 Tax Morale, Political Knowledge and SM Scale

The outcome variable of interest is individuals' tax morale. This experiment proposes five tax-morale-related items, ACCOUNTABLE, REASONABLE, SERVICE, DISHONEST, and

ACCEPTABLE, to measure people's attitudes toward paying taxes (Appendix C).[3] The first four variables were measured on a seven-point Likert scale while the last one is a binary variable. In deciding the measurement of tax morale, I rely on Internal Revenue Service (IRS), World Value Survey (WVS), and Afrobarometer for the survey items. These items have been widely used in extant studies on tax morale (for example, Ali, et al. 2014; Cumming et al. 2009; Halla, 2012; OECD, 2013). Appendix D reports the descriptive statistics of the five tax morale variables.

To test the heterogeneous effects, I generate two variables that measure one's political knowledge and SM propensity respectively. According to Zaller (1992), the best proxy of one's political knowledge is neither by her education nor by her frequency of media use; instead, it is best measured by simple tests of neutral factual information about both domestic and international issues, as factual information is critical for intellectual engagement in politics. Thus, I propose six questions relating to one's political savvy. Appendix C reports the knowledge questions used in the experiment. To determine whether one has high or low political knowledge, I first create a variable by aggregating all the six variables and then dichotomize it by the mean. Later, the heterogeneous effect can be tested by including an interaction variable that interacts the treatment variable with the binary knowledge variable.

As to the SM scale, this paper adopts Berinsky and Lavine (2007)'s measure to construct one's SM scale. They revised the original items developed by Snyder and Gangstad (1986) with factor analysis and proposed six items to capture one's SM scale. Berinsky and Lavine found that the first four items have the highest factor loadings and account for great variance. As Appendix

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[3] By **ACCOUNTABLE**: Everyone who cheats on their taxes should be held accountable. By **REASONABLE**: People should just have to pay what they feel is a fair amount of taxes to governments. By **SERVICE**: Not honestly paying for the services they receive from government. By **DISHONEST**: Cheating on reporting actual profits to the tax authorities if having a chance. By **ACCEPTABLE**, it is either-or question: either (1) tax fraud is unacceptable under any circumstance. It is a matter of principle and fairness, or (2) fraud and taxes are inseparable, everyone evades taxes to some extent, and this is how the system is sustainable.

C shows, the six survey items are classified into two categories. First, positive-keyed items mean that in the traditional true/false response format of the scale, a response of "true" is indicative of high SM. Second, negative-keyed items mean that a response of "false" indicates high SM. I generate a new variable indicating whether one is high or low self-monitors through aggregating the six items and then dichotomize it by the mean. To test the heterogeneous effect relating to the SM scale, I create an interaction variable interacting the treatment variable with the binary variable. Since I expected the effect of representation information on tax morale is larger among low self-monitors, this binary variable was coded by 1 if a respondent's aggregated SM score is below the mean.

CHAPTER 5: EXPERIMENTAL RESULTS

This paper first checks whether or not the random assignment properly worked as expected by conducting a series of difference-in-means tests. In doing so, bivariate linear regression with robust standard error is employed. The result shows that all the pretreatment covariates are equally distributed across groups at $p \geq .05$. In addition, I conduct the same tests for MBA and non-MBA respondents, respectively, and the results remain intact at $p \geq .10$, which is not surprising given smaller sample. Last, I run three logistic regression models: Model 1 is for MBA respondents, Model 2 is for Non-MBA respondents, and Model 3 is for the pool data (Table 1). As reported, no pretreatment covariate is statistically correlated to the probability of receiving the treatment at $p \geq .10$. Figure 2 visualizes the results.

This paper then checks that the manipulation worked as intended by seeing if ratings of local congress delegates as "willing to respond to ordinary people's interests" were higher in the treatment group relative to the control group. The results are puzzling: Mean ratings *decreased* .21 for the informed respondents relative to ratings for the uninformed respondents ($sig < .05$). In other words, the ratings of local congress delegates' perceived representation are lower in the treatment group than in the control group. The puzzle lies in the fact that the message, from citizens' perspective, is a positive story but has led to many negative reactions. I provide a tentative account of why this occurred, along with some suggestive evidence, in the following section.

Even though results from the manipulation check is not as expected, the treatment effect is consistent with the tax contract theory. Note that tax contract theory suggests that people's tax morale depends on their perceptions of government representation. Since the representation information systematically *damaged* local congress delegates' representation perceived by the informed subjects, we then should expect that the informed respondents have *lower* tax morale

relative to uninformed respondents. I find some evidence to support this hypothesis. As shown in Table 2, other than the DISHONEST variable, the coefficient signs of the intervention are consistently negative. More importantly, I find consistent evidence that the intervention reduces tax morale if ACCOUNTABLE and REASONABLE variables were used as the outcome measure ($sig < .05$).[4] If the ACCEPTABLE variable was adopted as the outcome measure, the intervention almost reaches the significance level of .10 to reject the null hypothesis. In sum, the results lend some support to the tax contract theory. When the information about representation damages local congress delegates' representation perceived by the informed respondents, it then lowered the treated units' tax morale afterward. Figure 3 visualizes the experimental results.

Given this unexpected finding, this paper expects that the negative impact of representation information on tax morale should be more striking in the MBA group. The intuition is that many MBA respondents come from marketing, finance, or management industries and thus may have more chances to know and analyze both domestically and internationally socioeconomic issues. Meanwhile, they may also have more exposure to Western values and information about congress delegates during their working hours. Hence, the informed MBA respondents may be more likely to question the accuracy of the message. As discussed in the following section, many respondents in the pretest considered the message in the vignette as government's propaganda; besides, some of them did not believe that local congress delegates have become more willing to represent and respond to ordinary citizens, as this does not fit their life-experiences. As noted above, if informed respondents do not trust the message, the representation information may prime their reciprocal motivations in an opposite direction-- the information lowers local congress delegates' perceived representation owned by the informed respondents.

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[4] The results are still robust even if a set of pretreatment covariates are included into the model.

I find some evidence to support this argument. I first examined the variable used for manipulation check among MBA respondents by an independent sample T-test with unequal variance, finding that the mean ratings decreased .53 for the informed respondents relative to the ratings for the uninformed respondents ($sig < .05$). Clearly, the negative impact of representation information on perceived representation is larger among MBA respondents. Next, I run a multiple regression that regresses the outcome variables against the treatment and an interaction variable (Treated##MBA=1). As reported in Table 3, the coefficient sign of this interaction variable is negative and statistically significant when three (out of five) tax morale variables were used ($sig < .10$ for DISHONEST; $sig < .05$ for SERVICE; and $sig < .01$ for REASONABLE).

The baseline results show that the informed respondents tended to have *lower* tax morale relative to their uninformed counterparts, as the representation information damaged congress delegates' perceived representation. Here, it may merit giving some space to demonstrate how the statistical findings were changed as the sample size increased. As shown in Figure 4, first of all, most estimation becomes more precise if sample sizes increase from 64 toward 119. Related, if the sample size is 64, I cannot reject the null hypothesis that the representation information has no effect on tax morale. As seen, for the two outcome variables, ACCOUNTABLE AND REASONABLE, the treatment effect could reach statistical significance only if the sample size were increased. In sum, statistical power matters in this survey experiment.

This paper now checks H2 (political knowledge) and H3 (self-monitoring) about the heterogeneous effects. Initially, I expected the intervention would have larger effects on tax morale among the respondents with low political knowledge, as this subgroup of respondents may not notice the increased congressional representation and thus the information may render them greater reciprocal motivations, thereby leading to better tax morale.

However, now that I have found that information leads to lower local congress delegates' perceived representation, I now expect that the negative effect of representation information on tax morale should be larger for respondents with high political knowledge, as they are expected more skeptical about government institutions and more likely to distrust the intervention (I will show why distrusting the message may lead to a negative priming effect in the following section). However, as Table 4 reports, there is no evidence that the effect size of representation information is conditional on one's political knowledge. No matter what outcome variables are used, the coefficient signs are far from consistent. Besides, no estimates reach the conventional significance threshold. The results remain the same even if I look at MBA group only (not reported). In sum, I find no evidence that political knowledge plays a role in the test of heterogeneous effects.

The other heterogeneous effect to be tested is one's self-monitoring propensity. I expect the intervention should exert larger effect among the low self-monitors. Table 5 reports the results, showing that this is the case if I use REASONABLE and ACCETABLE as the outcome measure ($sig < .05$). However, if ACCOUNTABLE, SERVICE, or DISHONEST are used as the outcome measure, the estimates are not statistically different from zero; besides, their coefficient signs are quite mixed. In short, even though I find some evidence that the negative effect of representation information is large for the low self-monitors, the results are mixed and need to be careful when one interprets them.

In sum, this paper lends some evidence to support tax contract theory by showing that individuals' reciprocal motivations affect their tax morale. Specifically, I randomly assigned the representation information to respondents in the experiment. Puzzlingly, I find that the informed respondents tended to have lower mean ratings than uninformed respondents when they were asked their perceptions of congressional representation. In other words, the information undermined, not

enhanced, local congress delegates' perceived representation. Given this fact, I find some evidence that informed respondents tended to have lower tax morale than uninformed respondents. In what follows, this paper provides some suggestive evidence of why a positive message (local congress delegates become more willing to represent citizens) led to so many negative responses.

CHAPTER 6: DISCUSSION

Although this paper has found some evidence that individuals' tax morale is influenced by their perceived representation of local congress delegates, it is still unclear why the intervention aiming at priming people's reciprocal motivation turned out to "spoil" this motivation. I argue that the reason we observed this puzzling result is that respondents in the experiment on average suspected or even did not trust the message, either because they considered the information came from the CCP and was used for propaganda, or because the message in their views did not fit their real-life experiences. In the meantime, their reciprocal ideas have been primed-- i.e. the information may remind the informed respondents how not representative and responsive the current congressional system is. Thus, instead of increasing delegates' perceived representation, the information backfired. This section offers *four* suggestive evidence to support this argument.

The first evidence comes from pretest results. As mentioned, in the pretest I presented some open-ended questions that tried to get some feedback from the respondents about the vignette. Although the subjects in the pretest are different from those in the core experiment, the feedback to some extent may still reflect how Chinese people are percevivng this information in specific and congressional representation in general. As to the feedback from the pretest, I find many respondents negatively considered the received message. Some viewed the message as CCP propaganda intended to convince citizens that the government has become more representative. Others explicitly mentioned that they suspect the authenticity of the messages, noting that the message induces them to believe that local congress delegates have become more representative, which in their views is not true. Still others mentioned that they rarely feel the existence of local congress delegates in their daily life so the message does not fit the reality. Last, many respondents noted that they do not trust the government's propaganda and reports, considering local elections

to be opaque and fake even if the government keeps emphasizing the importance of the elections and the benefits citizens can get from them.

Even if the feedback from the pretest cannot represent the whole population, there are some similarities in the subject pool between the pretest and the core experiment. On the one hand, we can consider most respondents in both pretest and core experiment well-educated respondents who may be more skeptical about and critical to political and socioeconomic issues than less-educated respondents are. Hence, it may be unsurprising to see many pretest respondents bluntly mentioned that they do not trust CCP propaganda and be very skeptical about congressional representation at the local levels. On the other hand, most respondents in both pretest and core experiment come from Shanghai. Given a shared environment, they may perceive local congress delegates in a relatively similar way. In short, the feedback from the pretest offers some suggestive, indirect evidence that many respondents in the core experiment may think the information comes from the CCP and is used for propaganda. Once they find that the messages do not fit reality, the priming effect may backfire; that is, the informed respondents may perceive congressional representation in a more negative manner than the uninformed respondents, who are not primed by the reciprocal message.

The next piece of suggestive evidence is from survey data about people's different levels of trust between central and local governments. Specifically, people's distrust of the information may be explained by the wording in which the intervention refers to local congresses and local governments, not to the NPC and the central government. People's differences in trustworthiness between central and local government was first identified by Li (2004), who found in a survey of four counties from 1999 to 2001 that most Chinese citizens considered the central government as more trustworthy than local governments. Using the 2008 China Survey, a national and

representative dataset, I find an identical result. In the survey, it asked respondents how many confidences in central and local governments, respectively, they have. Table 6 clearly shows that, instead of seeing China as a monolithic country, citizens view the central and local governments separately, as they tend to have higher trust in the central government. Hence, in view of this difference, if the intervention used national, not local, congress delegates as the leading actors, the informed respondents may act differently. Of course, this is an empirical question and cannot be answered in this paper.

The third piece of evidence is drawn from the MBA respondents. As shown, I find some evidence that the adverse effect of representation information on people's tax morale is larger among MBA respondents, as they are expected to be more sensitive to political and socioeconomic issues. To show this might be a valid explanation, I check the working histories of those current MBA students at the Central Europe University Business School. Its website details the breakdown of industry and function of their current students before they were admitted into the program. As reported in Figure 5, a great majority of these students were previously doing finance/accounting, general management, marketing/sales, and consulting, which may bolster their understanding of socioeconomic issues in both China and Western countries. For example, during their working hours, they may have more chances to collect and analyze domestic and international news for proposing better investment projects; they may also have more chances to go abroad for signing business contracts; moreover, they may have more chances to meet with Westerns, particularly because they are in Shanghai. All of these experiences may lead them to become more critical, sensitive, and skeptical about the information on congressional representation. Of course, this evidence is only suggestive; in addition, I did not have individual-level data to show whether respondents' working histories affect their attitudes toward congressional representation.

The last possible explanation is about the saliency of congress elections when this survey experiment was conducted. In September 2016, a total of 454 members of the Liaoning province congress were relieved from their positions following widespread allegations of vote buying and bribery. Earlier this year, the CCP launched an investigation to look into this case, which has led to the ouster of former Liaoning provincial Communist Party head Wang Min from the party itself. This unusual event may negatively affect the informed respondents' perceptions of the representation information, as the message stated that the reason local congress delegates attempt to represent citizen interests is that they need to build personal reputations to be nominated and elected in the next election. While, on average, this statement is not deceptive, the Lianning event may lead people to call it into question.

In sum, this section offers some suggestive evidence of why the intervention lowered local congress delegates' perceived representation. The puzzling findings may be explained by the fact that people did not trust the authenticity of the message while at the same time have been primed the reciprocal idea. Thus, the treated subjects' perceptions of congress delegates' representation tended to be lower relative to their uninformed counterparts. To offer firmer evidence, more works needs to be done, of course. This paper provides some possible extensions of this study in the concluding section.

CHAPTER 7: CONCLUSION

Do individuals' reciprocal motivations affect their willingness to pay taxes? Tax contract theory has argued that individuals' tax morale depends on their perceptions of government representation, holding other things constant. This psychological tax contract thus has contended that people tend to be more willing to comply with the tax law if they feel that government institutions attempt to represent and respond to their interests through public provisions. To examine whether or not this psychological mechanism is also operating in authoritarian regimes, this paper proposes a survey experiment of 119 respondents in China.

I find some evidence that information about the increased congressional representation indeed affected people's attitudes toward tax compliance, a finding that supports the tax contract theory. However, what is not as expected is that the informed respondents tended to have lower, rather than higher, tax morale. I find consistent evidence that this is because the representation information lowered local congress delegates' perceived representation. That is, the informed respondents tend to have lower mean ratings than the uninformed respondents when they were asked to what extent they think local congress delegate are willing to represent ordinary people's interests. In addition to this baseline finding, this paper tests three heterogeneous effects. I find some evidence that the treatment effect is larger among MBA respondents and low self-monitors. Yet, I find no evidence that one's political knowledge play a role in the heterogeneous effect.

Why did the intervention damage people's perceptions of local congress delegates' representation? I argue that this is because the respondents in the survey on average did not trust the received message. I offer some suggestive evidence to support this argument. However, more following-up experiments need to be done. First, to examine whether or not people's trust in the information depends on the source of information, I may randomize the information providers to

see if people's perception of a given information will change. Specifically, holding the information constant, I could randomly attach a name of the provider in the vignette, such as the CCP, an academic institute, or a commercial magazine, and then compare people's perceptions of this particular message across different treatment conditions. Another possible follow-up experiment is to see whether or not an individual's working experience has any conditional effect on tax morale. This may be the easiest issue to solve, as I could propose a new survey item about one's working industry and function in the questionnaire for the next wave of this survey experiment.

The policy implication of this experimental study is that CCP's propaganda may not always bring about what it planned and wanted. Even if the CCP has continued to emphasize how democratic and representative it has become in order to garner more regime supports, compared to the uneducated citizens, the well-educated citizens may not buy the argument.

TABLES AND FIGURES

Table 1: Pretreatment Balance Test

	Dependent Variable: Treated		
Independent Variables	**MBA**	**Non-MBA**	**Pooled**
Female	-0.0183	0.509	0.264
	(0.974)	(0.387)	(0.506)
Age	0.0106	0.0286	0.0212
	(0.897)	(0.569)	(0.581)
CCP Membership	-0.796	0.0662	-0.369
	(0.139)	(0.911)	(0.344)
Income Category	-0.116	-0.204	-0.150
	(0.296)	(0.176)	(0.101)
Political Knowledge	-0.0409	0.128	0.0506
	(0.842)	(0.582)	(0.741)
MBA			0.0527
			(0.897)
Constant	1.021	0.0121	0.286
	(0.713)	(0.994)	(0.818)
Observations	64	55	119

p-values in parentheses
$^{+}p < .10,$ $^{*}p < .05,$ $^{**}p < .01,$ $^{***}p < .001$

Table 2: Baseline Results: The Effect of Representation Information on Tax Morale

	Dependent Variable				
	ACCOUNTABLE	REASONABLE	SERVICE	DISHONEST	ACCEPTABLE
Treated	-0.447**	-0.540*	-0.177	0.0866	-0.0509
	(0.005)	(0.016)	(0.330)	(0.233)	(0.158)
Constant	5.544***	4.702***	5.789***	5.526***	0.632***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	119	119	119	119	119

p-values in parentheses
$^{+}p < .10,$ $^{*}p < .05,$ $^{**}p < .01,$ $^{***}p < .001$

Table 3: Heterogeneous Effect I: MBA Respondents

			Dependent Variable		
	ACCOUNTABLE	**REASONABLE**	**SERVICE**	**DISHONEST**	**ACCEPTABLE**
Treated	-0.483[+]	-0.0569	0.235	0.312	-0.0556
	(0.092)	(0.732)	(0.336)	(0.133)	(0.415)
MBA	0.0481	0.207	0.726[***]	0.507[+]	0.144
	(0.853)	(0.276)	(0.001)	(0.053)	(0.173)
Treated## MBA	0.0632	-0.890[**]	-0.781[*]	-0.432[+]	0.00261
	(0.802)	(0.001)	(0.013)	(0.053)	(0.968)
Constant	5.519[***]	4.593[***]	5.407[***]	5.259[***]	0.556[**]
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Observations	119	119	119	119	119

p-values in parentheses
[+] *p* < .10, [*] *p* < .05, [**] *p* < .01, [***] *p* < .001

Table 4: Heterogeneous Effect II: Political Knowledge

			Dependent Variable		
	ACCOUNTABLE	**REASONABLE**	**SERVICE**	**DISHONEST**	**ACCEPTABLE**
Treated	-0.647[*]	-0.647[+]	0.0588	0.118	-0.118[*]
	(0.035)	(0.070)	(0.881)	(0.540)	(0.016)
High_Know	-0.766[*]	0.0627	0.499	0.357[+]	-0.0384
	(0.030)	(0.849)	(0.243)	(0.085)	(0.543)
Treated## High_Know	0.524	0.229	-0.574	-0.107	0.152
	(0.186)	(0.475)	(0.422)	(0.787)	(0.129)
Constant	5.853[***]	4.676[***]	5.588[***]	5.382[***]	0.647[***]
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	119	119	119	119	119

p-values in parentheses
[+] *p* < .10, [*] *p* < .05, [**] *p* < .01, [***] *p* < .001

Table 5: Heterogeneous Effect III: Self-Monitoring Propensity

	Dependent Variable				
	ACCOUNTABLE	REASONABLE	SERVICE	DISHONEST	ACCEPTABLE
Treated	-0.848[**]	0.274	-0.325	0.323	0.186[+]
	(0.006)	(0.445)	(0.168)	(0.132)	(0.062)
Low_SM	0.0263	0.500	2.10e-17	0.632[*]	0.316[**]
	(0.932)	(0.190)	(1.000)	(0.014)	(0.009)
Treated## Low_SM	0.736[+]	-1.378[**]	0.271	-0.295	-0.364[*]
	(0.056)	(0.003)	(0.185)	(0.216)	(0.040)
Constant	5.526[***]	4.368[***]	5.789[***]	5.105[***]	0.421[***]
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	119	119	119	119	119

p-values in parentheses
[+] $p < .10$, [*] $p < .05$, [**] $p < .01$, [***] $p < .001$

Table 6 Confidence in Governments

|	Mean	Std.	N.
Central Government	8.17	2.19	3763
Local Government (County/City)	6.54	2.65	3702

Note: Data from The 2008 China Survey. 0: least confident, 10: most confident.

Figure 1: Attitudes toward Government and Tax Morale
World Value Survey VI (China)
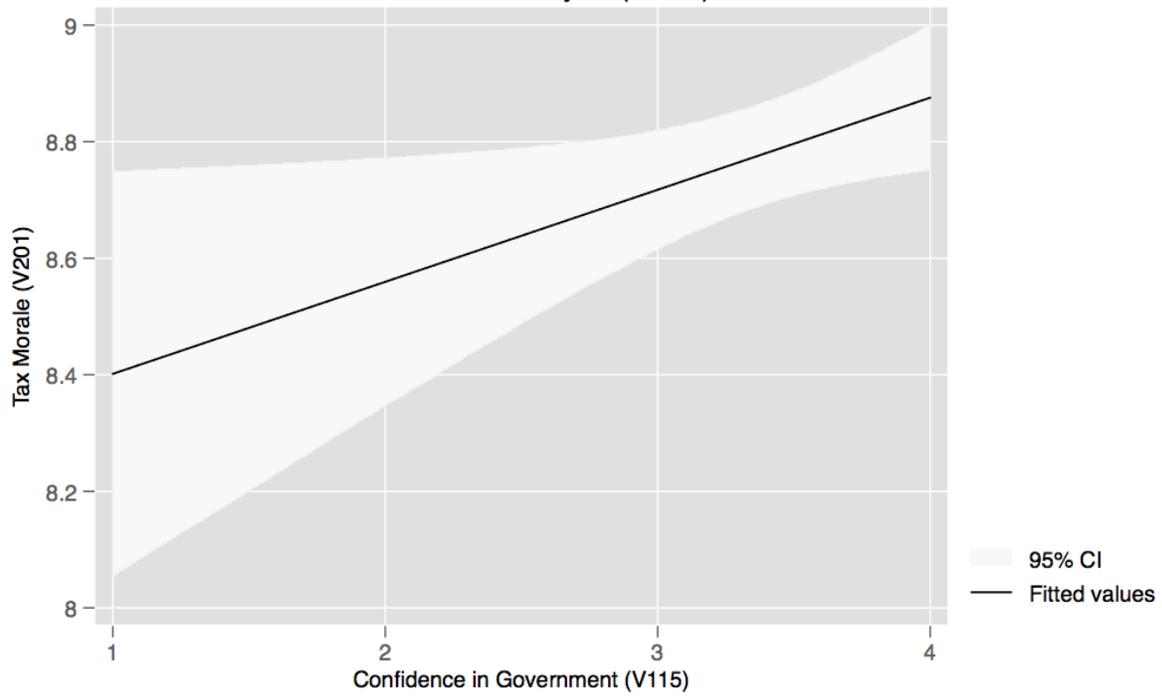
Note: Data from World Value Survey VI. The sample size is 1750 for the Chinese case. The independent variable (x-axis) asked respondents their confidence in the government and the dependent variable (y-axis) asked to what extents they think "cheating on taxes if you have a chance" is justifiable (Likert scale from 1 to 10. 1 means completely unjustifiable and 10 means completely justifiable). I run an OLS model with robust standard error.

Figure2: Balance Test
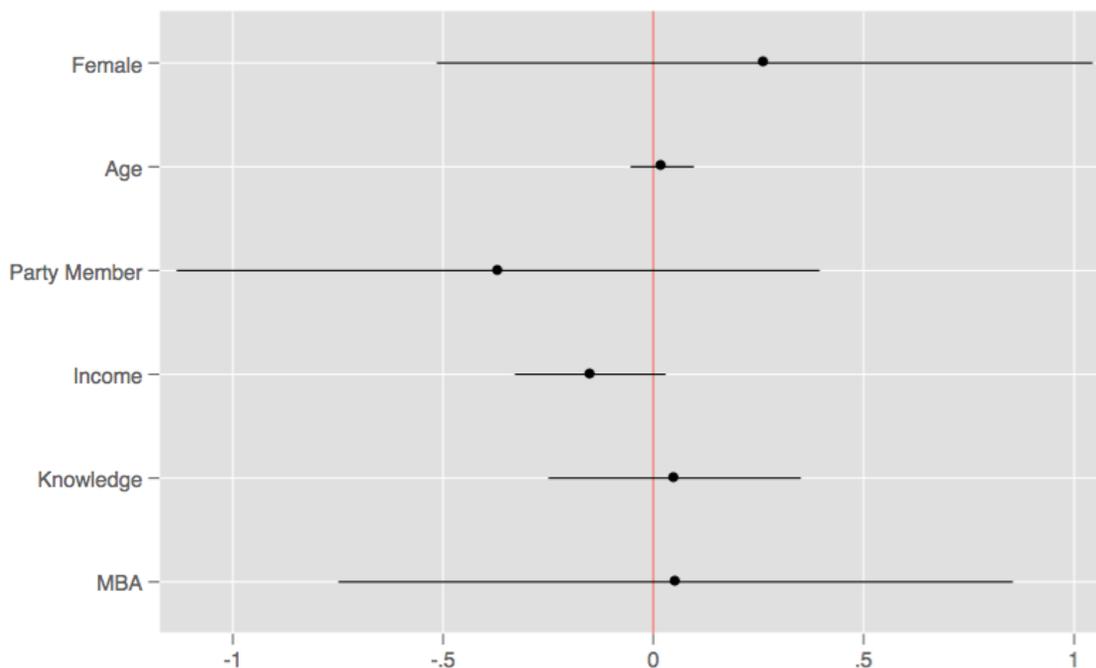
Note: This coefficient plot is for the balance test of pretreatment covariates with the pooled data combining MBA and Non-MBA respondents (N=119). The confidence intervals were estimated by logit regression model with robust standard error at the significance level of .05

Figure 3: The Effect of Information on Tax Morale (Pooled Data)
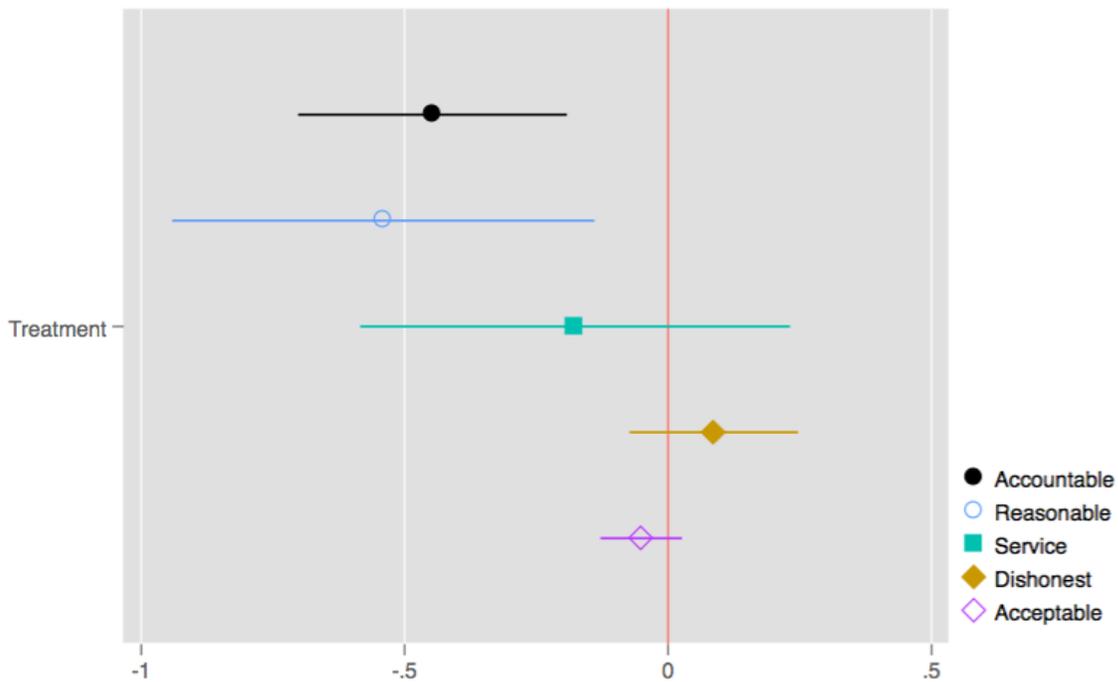
Note: The coefficients are estimated by bivariate regression with robust standard error at .05 significance level.

Figure 4: Change in Sample Size

MBA (N=64)

Pooled (N=119)
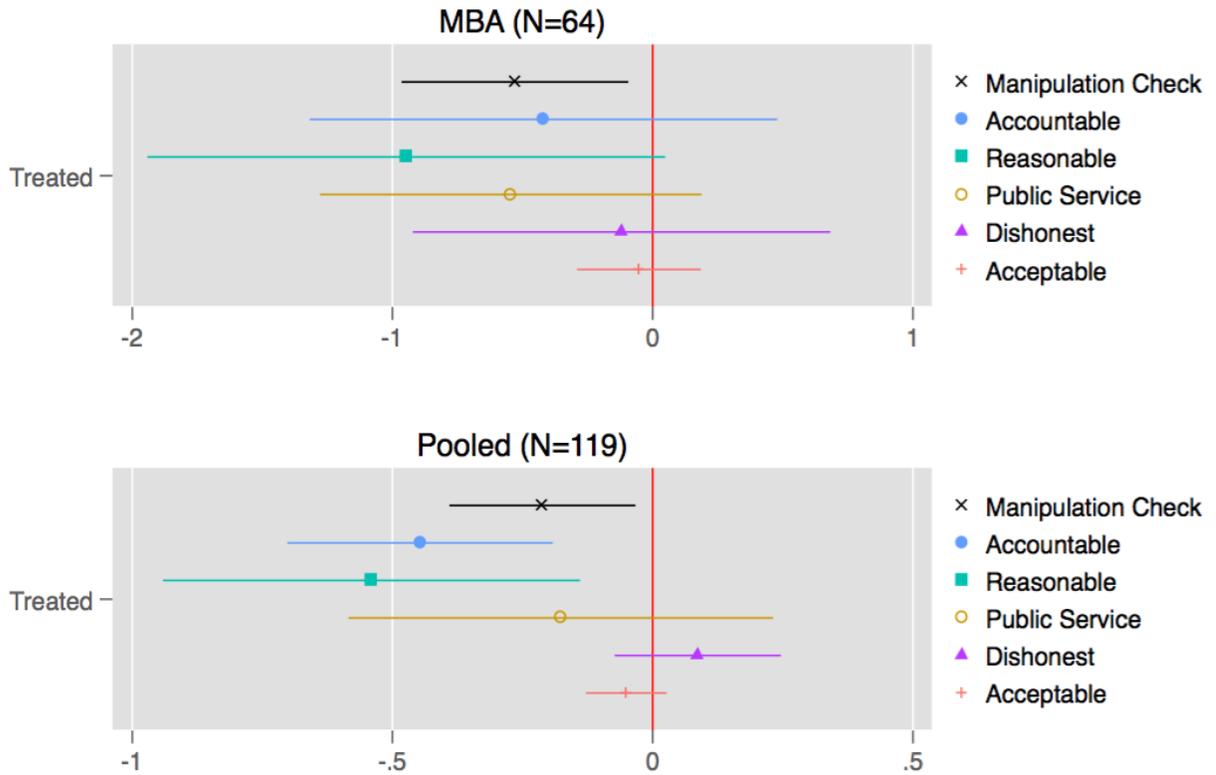
Note: Both coefficient plots used the significance level of .05 to construct to confidence interval. The upper plot included only MBA respondents, my first wave of data collection while the below plot pooled both MBA and non-MBA respondents. As expected, when the sample size increased, the estimation improved its precision. Although the coefficient of DISHONEST changed the direction, the treatment variable is not statistically significant. It also merits noting that the pooled data consist both MBA and non-MBA respondents so, strictly speaking, the increase in sample size may contain heterogeneity.

Figure 5: The Proportion of Industry and Function of the MBA Students from CEBS

Note: Figure 5 is from CEBS MBA program. It details the proportion of industry and function of their current MBA students before they were admitted into the program.

Industry

Industry	Percentage
Financial Services	22.0%
Manufacturing	15.2%
Technology	14.7%
Consulting Services	10.5%
Pharmaceutical/Biotechnology/Healthcare	7.9%
Retail/Trading	5.2%
Consumer Products	5.2%
Petroleum/Energy	4.6%
Media/Entertainment	3.7%
Government/NGOs	3.1%
Logistics	2.1%
Real Estate	1.6%
Others	4.2%

Function

Function	Percentage
Finance/Accounting	23.6%
General Management	19.4%
Marketing/Sales	14.7%
Consulting	12.0%
Operation/Logistics	10.4%
IT/Research & Development	8.4%
Entrepreneur/Owner/Partner	6.3%
Human Resources	3.1%
Others	2.1%

APPENDIX A: VIGNETTES IN THE PRETEST

Message 1: Role Perception
Just for your information, according to several scholarly research, local congress delegates have recently become increasingly responsive to ordinary people's interests in their locality. As shown in a large-scale survey of more than 5000 local congress delegates, when asking these delegates to choose among statements closest to their own view of the relationship between delegates and ordinary people, 60% of them chose "delegates should side with the majority of the ordinary people in the locality because these people best understand their own interests.

This result seems very different than before: Previously, scholars in the 1980s-1990s found that most local congress delegates emphasized that they are party agent, thinking of congress membership as merely an honorary status. Currently, in this survey, only 23% of them chose "delegates should obey the decisions of the Communist party organization" in the survey.

Message 2: Perceived Responsibility
Just for your information, according to several scholarly research, local congress delegates have recently become increasingly responsive to ordinary people's interests in their locality. As shown in a large-scale survey of more than 5000 local congress delegates, when asking these delegates to choose among nine tasks that they treat as their most important responsibility, more than half of them chose "doing practical things and solving concrete problems for the mass public".

This seems very different than before. Previously, delegates' main responsibility was "reporting upward the opinions of people and transmitting downward the official policies". Currently, only 7.4% of these delegates consider this choice as their primary responsibility in the survey.

Message 3: Delegate Activism
Just for your information, according to several scholarly research, local congress delegates have recently become increasingly responsive to ordinary people's interests in their locality. As shown in a large-scale survey of more than 5000 local congress delegates, they show greater extra-legislative, everyday responsiveness in daily life. Currently, they usually respond to people's contacting for practical issues, such as social order problem; they also advocate with local government officials for providing ordinary people in their locality with public services, such as road and irrigation system.

This seems very different than before. Previously, congress delegates often were viewed as entirely irrelevant in public good provisions and had no desire to deliver local public services. Compared to journalists' interviews in the late 1970s and early 1980s that showed delegates had no concept of what they were supposed to be doing, local congress delegates are playing a more active role in public good provisions.

Message 4: Electoral Incentives
Just for your information, according to several scholarly research, local congress delegates have recently become increasingly responsive to ordinary people's interests in their locality. As shown in a large-scale survey of more than 5000 local congress delegates, since township and county congress delegates are nominated and elected in direct elections, scholars found that these congress delegates have a strong desire to build personal reputation by representing ordinary people's interests. Currently, congress delegates fluently speak a language that manifests this desire, such as voting district, constituency, and constituent interests; they also try to advocate with government for delivering public services deemed as most important by ordinary people in their locality.

This seems very different than before. Previously, delegates in township and county congress were not nominated and elected by people; instead, they were selected by the party as an honorary status. In this regard, congress delegates often did not represent people's interests because they did not need to build personal reputation.

APPENDIX B: PRETEST RESULTS

Variable	Obs	Mean	Std. Dev.	Min	Max
Role Perception	45	2.511111	1.057919	1	4
Delegate Activism	45	3.022222	1.196375	1	4
Perceived Responsibility	45	2.288889	1.014043	1	4
Election Incentives	45	2.622222	1.050733	1	4

Note: Data from the pretest. Sample is from 45 undergraduate students from the Shanghai University of Finance and Economics. They were asked to *rank* the four vignettes based on how successful they think a given one in conveying the idea of congressional representation. 1 means the least while 4 means the most.

APPENDIX C: SURVEY QUESTIONNAIRE

Z1. What is your gender?

Z2. What year were you born?

Z3. Before you are in this master program, what was your occupation?

We are interested in your opinion about paying taxes and public services. There is no right or wrong answer. We are simply interested in your opinion. Please read the following message before answering the questions.

[Control Group]
People's Congress is an essential state institution in China. Each year, local congress delegates meet at least once to discuss public policies.

[Treatment Group]
People's Congress is an essential state institution in China. Each year, local congress delegates meet at least once to discuss public policies. **We want to let you know that**, according to a recent survey of 5000 local delegates, local congress delegates become more willing to respond people's interests in their locality. Besides, they also take an initiative to advocate with local governments for offering public services deemed as important by local people, such as road, irrigation system, and social order. This is different than before in that congress delegates seldom delivered public services previously. But, now, since township and county congress delegates are nominated and elected in direct elections, they need to respond people to gain personal reputation. Yangzhou Municipal and Taizhou Wenling congresses are concrete examples.

A0. In general, do you think to what extent local congress delegates are willing to respond ordinary people's interests [Manipulation check]?

I'm going to ask you some questions. For your answer, 1 means you completely disagree with the statement; 7 means you completely agree with the statement of the right. If your views fall somewhat in between, you can choose any number in between [Tax Morale].

A1. Everyone who cheats on their taxes should be held accountable [ACCOUNTABLE].

A2. People should just have to pay what they feel is a fair amount of taxes to governments [REASONABLE].

A3. Governments should take public opinion into account while making fiscal-policy decisions, even if this may spend more time.

A4. Once paying taxes, people have the right to discuss how governments spend their revenues.

I am now going to ask you about two different actions that *some* other people take. For each of the following, please tell me to what extent you think the action is justifiable.

A5. Not honestly paying for the services they receive from government [SERVICE]

A6. Cheating on reporting actual profits to the tax authorities if having a chance [DISHONEST]

A7. Let's talk about tax fraud. We would like to know which of these expressions you agree with the most [ACCEPTABLE]:
[1] Tax fraud is unacceptable under any circumstance. It is a matter of principle and fairness.
[2] Fraud and taxes are inseparable, everyone evades taxes to some extent, and this is how the system is sustainable.

Now I am going to ask you some short questions such as you might see on mass media. Some questions may be more difficult than others. If you don't know the answer it's not a problem. Just select "don't know" and move to the next question [Political Knowledge].

B1. Who is NOT the current members of the Politburo Standing Committee?

B2. Do you happen to know, other than CCP, how many political parties are there in China?

B3. Do you happen to know when the central government implemented tax-sharing reform?

B4. Where is the headquarter of the Shanghai Cooperation Organization?

B5. Who is the current chairman of the standing committee of the National People's Congress?

B6. Who is the current Prime Minister of the United Kingdom?

Next, I am going to read you a series of statements. Please tell me how well they each apply to you. For each statement, tell me if you strongly agree with it, somewhat agree with it, somewhat disagree with it or strongly disagree with it [SM scale].

D1. I put on a show to impress or entertain others (positive-keyed)
D2. I would probably make a good actor (positive-keyed)
D3. In a group of people, I am rarely the center of attention (negative-keyed)
D4. At a party, I let others keep the jokes and stories going (negative-keyed)
D5. I can make speeches on the spot, even on topics about which I have almost no information (positive-keyed)
D6. I find it hard to imitate the behavior of other people (negative-keyed)

E1. What is your party affiliation?

E2. Are you married?

E3. What is your monthly income category?

E4. What is your current city of residence?

[Full version of English and Chinese questionnaire is upon request]

APPENDIX D: DESCRIPTIVE STATISTICS OF THE KEY VARIABLES

Variable	Obs.	Mean	Std. Dev.	Min	Max
Female	119	.512605	.5019546	0	1
Age	119	29.38655	4.841749	22	51
CCP	119	.3865546	.4890191	0	1
Income Category	119	6.352941	2.275843	1	10
Manipulation	119	3.117647	.8454912	1	5
Accountable	119	5.310924	1.759949	1	7
Reasonable	119	4.420168	2.027338	1	7
Public Service	119	5.697479	1.559849	1	7
Dishonest	119	5.571429	1.576154	1	7
Acceptable	119	.605042	.4909087	0	1
Political Knowledge	119	2.268908	1.406387	0	6
Self-Monitoring	119	14.0084	1.997862	9	19

Note: Data from the core experiment. Replication data are upon request.

REFERENCES

Ajzen, Icek, and Martin Fishbein. "Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research." *Psychological Bulletin* 84, no. 5 (1977): 888–918.

Allingham, Maurice, and Agnar Sandmo. "Income Tax Evasion: A Theoretical Analysis." *Journal of Public Economics*, no. 3–4: 323–38.

Alm, James, Gary H. McClelland, and William D. Schulze. "Changing the Social Norm of Tax Compliance by Voting." *Kyklos* 52, no. 2 (May 1, 1999): 141–71.

———. "Why Do People Pay Taxes?" *Journal of Public Economics* 48, no. 1 (June 1, 1992): 21–38.

Beck, Paul J., Jon S. Davis, and Woon-Oh Jung. "Experimental Evidence on Taxpayer Reporting under Uncertainty." *The Accounting Review* 66, no. 3 (1991): 535–58.

Becker, Gary S. "Crime and Punishment: An Economic Approach." *Journal of Political Economy* 76, no. 2 (March 1, 1968): 169–217.

Berinsky, Adam, and Howard Lavine. "Self-Monitoring and Political Attitudes." *Working Paper*, 2007. http://www.electionstudies.org/onlinecommons/2006Pilot/berinsky_hlavine.pdf.

Blumenthal, Marsha, Charles W. Christian, and Joel Slemrod. "Do Normative Appeals Affect Tax Compliance? Evidence from a Controlled Experiment in Minnesota." *National Tax Journal* 54, no. n. 1 (2001): 125–38.

Castro, Lucio, and Carlos Scartascini. "Tax Compliance and Enforcement in the Pampas Evidence from a Field Experiment." *Journal of Economic Behavior & Organization* 116 (August 2015): 65–82.

Cummings, Ronald G., Jorge Martinez-Vazquez, Michael McKee, and Benno Torgler. "Tax Morale Affects Tax Compliance: Evidence from Surveys and an Artefactual Field Experiment." *Journal of Economic Behavior & Organization*, Field Experiments in Economics, 70, no. 3 (June 2009): 447–57.

Del Carpio, Lucia. "Are the Neighbors Cheating? Evidence from a Social Norm Experiment on Property Taxes in Peru." *Working Paper*, 2013. https://irs.princeton.edu/sites/irs/files/event/uploads/DelCarpioOct2013.pdf.

Dwenger, Nadja, Henrik Kleven, Imran Rasul, and Johannes Rincke. "Extrinsic and Intrinsic Motivations for Tax Compliance: Evidence from a Field Experiment in Germany." *American Economic Journal: Economic Policy* 8, no. 3 (August 2016): 203–32.

Elffers, H. *Income Tax Evasion : Theory and Measurement*. Burger en belastingen. Deventer : Kluwer, 1991.

Feld, Lars P., and Bruno S. Frey. "Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation." *Law & Policy* 29, no. 1 (January 1, 2007): 102–20.

Feld, Lars P., and Jean-Robert Tyran. "Tax Evasion and Voting: An Experimental Analysis." *Kyklos* 55, no. 2 (May 1, 2002): 197–221.

Fellner, Gerlinde, Rupert Sausgruber, and Christian Traxler. "Testing Enforcement Strategies in the Field: Threat, Moral Appeal and Social Information." *Journal of the European Economic Association* 11, no. 3 (June 1, 2013): 634–60.

Friedland, Nehemiah, Shlomo Maital, and Aryeh Rutenberg. "A Simulation Study of Income Tax Evasion." *Journal of Public Economics* 10, no. 1 (August 1, 1978): 107–16.

Gandhi, Jennifer. *Political Institutions under Dictatorship by Jennifer Gandhi*. Cambridge University Press, 1789.

Gandhi, Jennifer, and Ellen Lust-Okar. "Elections Under Authoritarianism." *Annual Review of Political Science* 12, no. 1 (2009): 403–22.

Gangestad, S. W., and M. Snyder. "Self-Monitoring: Appraisal and Reappraisal." *Psychological Bulletin* 126, no. 4 (July 2000): 530–55.

Gerber, Alan S., and Donald P. Green. *Field Experiments: Design, Analysis, and Interpretation*. New York: W. W. Norton & Company, 2012.

Graetz, Michael J., and Louis L. Wilde. "The Economics of Tax Compliance: Fact and Fantasy." *National Tax Journal* 38, no. 3 (1985): 355–63.

Halla, Martin. "Tax Morale and Compliance Behavior: First Evidence on a Causal Link." *The B.E. Journal of Economic Analysis & Policy* 12, no. 1 (January 18, 2012).

Hallsworth, Michael, John List, Robert Metcalfe, and Ivo Vlaev. "The Behavioralist As Tax Collector: Using Natural Field Experiments to Enhance Tax Compliance." NBER Working Paper. National Bureau of Economic Research, Inc, March 2014. http://econpapers.repec.org/paper/nbrnberwo/20007.htm.

Levi, Margaret. *Of Rule and Revenue*. Berkeley: University of California Press, 1989.

Li, Lianjiang. "Political Trust in Rural China." *Modern China* 30, no. 2 (2004): 228–58.

Lü, Xiabo and Lily Tsai. "When Do Citizens Want Representation in Exchange for Taxation? An

Experimental Study of Property Right in China" *Working Paper*, 2016.

Lü, Xiaobo, Didac Queralt, and Jay C. Kao. "A Tale of Two Regimes? Taxation and Accountability in China and Taiwan." *Working Paper*, 2016.

Luttmer, Erzo F. P., and Monica Singhal. "Tax Morale." *Journal of Economic Perspectives* 28, no. 4 (November 2014): 149–68.

Manion, Melanie. "Authoritarian Parochialism: Local Congressional Representation in China*." *The China Quarterly* 218 (June 2014): 311–38.

———. *Information for Autocrats: Representation in Chinese Local Congresses*. Cambridge, United Kingdom: Cambridge University Press, 2016.

Mascagni, Giulia. "From the Lab to the Field: A Review of Tax Experiments." *Working Paper*, 2016.

Moore, Mick. "Revenues, State Formation, and the Quality of Governance in Developing Countries." *International Political Science Review* 25, no. 3 (July 1, 2004): 297–319.

Morgan, Stephen L., and Christopher Winship. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. 2-edition. New York, NY: Cambridge University Press, 2014.

Morrison, Kevin M. *Nontaxation and Representation: The Fiscal Foundations of Political Stability*. New York, NY: Cambridge University Press, 2014.

OECD. "Tax and Development: What Drives Tax Morale?" *Working Paper*, 2013.

Ross, Michael L. "Does Oil Hinder Democracy?" *World Politics* 53, no. 3 (April 2001): 325–61.

Slemrod, Joel, Marsha Blumenthal, and Charles Christian. "Taxpayer Response to an Increased Probability of Audit: Evidence from a Controlled Experiment in Minnesota." *Journal of Public Economics* 79, no. 3 (March 2001): 455–83.

Snyder, Mark, and Steve Gangestad. "On the Nature of Self-Monitoring: Matters of Assessment, Matters of Validity." *Journal of Personality and Social Psychology* 51, no. 1 (1986): 125–39.

Spicer, Michael W., and J. Everett Thomas. "Audit Probabilities and the Tax Evasion Decision: An Experimental Approach." *Journal of Economic Psychology* 2, no. 3 (1982): 241–45.

Tilly, Charles. *Coercion, Capital and European States, A.D. 990 - 1992*. Revised edition. Cambridge, MA: Wiley-Blackwell, 1992.

Timmons, Jeffrey F. "The Fiscal Contract: States, Taxes, and Public Services." *World Politics* 57, no. 4 (2005): 530–67.

Torgler, Benno. "Moral Suasion: An Alternative Tax Policy Strategy? Evidence from a Controlled Field Experiment in Switzerland." *Economics of Governance* 5, no. 3 (November 1, 2004): 235–53.

———. *Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis*. Cheltenham, UK ; Northampton, MA: Edward Elgar Pub, 2007.

———. "Tax Morale and Direct Democracy." *European Journal of Political Economy* 21, no. 2 (June 2005): 525–31.

Truex, Rory. *Making Autocracy Work: Representation and Responsiveness in Modern China*. New York: Cambridge University Press, 2016.

Zaller, John R. *The Nature and Origins of Mass Opinion*. 1st edition. Cambridge England ; New York, NY, USA: Cambridge University Press, 1992.