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When Do Chinese Subnational Governments Make Law?

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Abstract

How often does law get made in China, and what kinds of law? We construct a dataset on subnational lawmaking to address these questions. The dataset builds on a basic insight: Chinese politicians choose among three types of instruments to implement policy—statutes, regulations, and informal policy directives (IPDs). IPDs are easier to promulgate than statutes and regulations, and the fact that they lack the force of law rarely impedes enforcement. Why then do politicians make law at all?

Several findings shed light on this puzzle. First, the choice between formal lawmaking and IPDs depends on the policy subject. Second, provinces and cities have distinct policy specializations. Specialization may lead one level of government to invest in lawmaking in the subject, or lead the other level of government to refrain from doing so. Third, politician tenure has little impact on lawmaking. Fourth, while population is a relevant predictor of lawmaking, other factors that might seem to represent the "demand for law" bear unexpected correlations with the quantity of law.

Keywords: Chinese law, legislation, legislative processes, legislative institutions, rulemaking, supply of law.

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Introduction

How often does law get made in China, and what kinds of law? What motivates Chinese politicians to pursue lawmaking activities? These are neglected questions in legal and social scientific research on China. This may be because their significance for social science has not always been apparent. Recent legal theoretical scholarship makes a persuasive case that law is a fundamental (and fundamentally distinct) form of social ordering that vastly enhances humankind's capacity to expand the sphere of complex coordination (Shapiro 2013; Hadfield 2016). Despite this, in general little empirical research exists yet to explore the relationship between the supply and quantity of law, on the one hand, and the quality of social and political institutions, on the other. While law and economics scholars have offered insightful theories about the optimal quantity (along with other metrics such as detail and accuracy) of law from the perspective of social welfare (e.g. Kaplow 1992; Kaplow 2012; Shavell 2004), such theories have generated limited empirical research, especially regarding the non-judicial branches of government as sources of law.[1] Often, it is simply taken for granted that legislatures and executive branch offices make law. Whether they make *enough* law—and what induce politicians and bureaucrats to make more or less law—are still questions touched on only in disparate strands of research.

Political scientists, of course, have always studied policy formation in general and legislative institutions in particular (see recent reviews in McNollgast 2007 and de Figuerido and Stiglitz 2017). In several recent publications, political scientists studying China have begun to engage with questions about the incentives for and determinants of legislation. Truex (forthcoming) focuses on legislative delays in China's National People's Congress (NPC), arguing that analogues of U.S.-style legislative "gridlock" can be found in China's authoritarian regime. Lü et al. (2018) analyze NPC-member-sponsored legislative proposals in the area of education, and offer evidence of coalition formation behind particular legislations. Both works represent a renewed focus on People's Congresses (PCs) in China as institutions of legislation and policymaking, as opposed to mere sites of representation.[2] Their attention to the *output* of China's legislative institutions, or what these institutions *do*, as opposed to who occupy these institutions and their attitudes and beliefs, promises to bridge the interests of political scientists and those of scholars in legal and other disciplines who view legislatures as providers of law.

Notably, however, existing research on lawmaking in China has generally taken a case study approach. Scholars either consider the political processes behind the enactment of particular statutes (Tanner 1999; Lü et al. 2018), or, even when they examine the entire legislative agenda for a given period (e.g. Truex, forthcoming), take into account only one individual institution (e.g. the NPC).

[1] McNollgast (2007) observes that in "legal scholarship, most studies of the law focus on the courts, judges, cases and judicial doctrine. While the judiciary is an important source of law, judicial doctrines and decisions do not constitute all of law. Most law is set forth in legislation, executive decrees and bureaucratic decisions, yet these sources of law have not been as extensively studied as judicial law."

[2] Truex (forthcoming) observes that "[core] theories of authoritarian politics focus largely on democratization and often assume away the policy-making process itself." Notably, many of Chinese subnational congressional bodies that previous researchers examined (e.g. Manion 2015) may not even possess legislative power at all—a point that perhaps was not always recognized—and therefore lack direct relevance for the system of Chinese law.

Empirical work thus is supported at most by time series data. This limitation also characterizes existing studies of subnational legislative bodies in China (Cho 2009; Almén 2013; Manion 2015); researchers have been content to focus on particular provincial, city, or county PCs, rendering the case study method almost inevitable.

In contrast to the existing literature, this paper offers an empirical overview of the entire universe of subnational lawmaking in China during the 2000 to 2015 period. We examine the legislative and regulatory outputs of China's 31 provinces and 49 cities that possessed lawmaking authority during this time.[3] We also develop detailed topic classifications for such outputs. This allows us simultaneously to observe substantial within-country variations in the demand for and the capacity to make law and in policy priorities, and to rely on similarities in institutional structures across the country and control for common (nation-wide) shocks. Working on this broad canvas, we design analyses to address questions that are of interest both to legal scholars (e.g. how much and what kinds of law get made) and to political scientists (e.g. what the political incentives are for making law).

We assembled our data from publicly available sources. What render our data construction innovative are two underlying approaches. First, we analyze the Chinese system for lawmaking as (or analogously to) a parliamentary system. Much of the recent political science literature on China relies heavily on the democracy versus autocracy dichotomy, and ignores institutional differences among modern democracies.[4] However, an extensive body of political science literature (Huber and Shipan 2002; Moe and Caldwell 1994; Jensen and McGrath 2011) has shown that differences between parliamentary and presidential democracies are crucial to understanding differences in legislative patterns. In particular, in a parliamentary system, the executive and parliamentary branches often have unified political leadership. Consequently, parliamentary constraint on the executive branch and parliamentary deliberation do not feature prominently in legislative processes. Drawing on this insight, we gathered data not only on statutes but also on formal regulations and informal policy directives adopted by core executive offices, and treat these as alternative policy instruments, available to the same politicians who promulgate statutes.

Second, we adopt measurements well-grounded in Chinese administrative law, the details of which have long eluded casual observers of China's bureaucracy. Most importantly, we clearly distinguish between formal regulations and informal policy directives (IPDs). This allows us both to capture with precision an important form of formal lawmaking in China (the making of regulations), and to focus on a question previously rarely considered: why do Chinese politicians make law at all, when policies for the most part can be implemented through IPDs?

We report four sets of findings. First, provinces and cities differ in their policy foci. There is little explicit delineation of the respective policy spheres among different layers of subnational governments in China. Therefore it has generally been difficult to ascertain the divisions of labour between provincial and city governments in policymaking. We find novel answers to this question by looking at an obvious but previously neglected place: lawmaking outcomes.

[3] Prior to 2015, most prefectural-level cities in China had no lawmaking power at all. See Cui and Wan (2019) for an account of the expansion of city-level legislative power due to a 2015 legislative change.

[4] For scholarship coming out of (or influenced by) the U.S., often the U.S. political system is unreflectively adopted as the reference framework to stand in for all "democracy".

Second, the likelihood of Chinese politicians choosing formal policy instruments (i.e. statutes and regulations) over informal ones (i.e. IPDs) for policy implementation depends on policy type. Certain subjects are significantly more likely to be implemented through formal policy instruments, while it is the other way around for other subjects. Such correlations between policy content and instrument types are observed at both provincial and city levels. One explanation for this pattern is that policy matters for which wide social compliance and private enforcement may be important are more likely to be pursued through formal lawmaking, because public knowledge is a precondition for private enforcement (Hadfield and Weingast 2014). In contrast, policy matters in which public enforcement or implementation is dominant may lend themselves more easily to bureaucratic directives (Hadfield and Weingast 2016).

Thirdly, political tenure appears to have little impact on the pursuit of lawmaking by political leaders in Chinese provinces and cities. This stands in contrast to prior findings that career cycles of Chinese local politicians drive infrastructure spending, tax collection, and other performance metrics. In other words, some of the strongest predictors of Chinese politicians' activities that scholars have previously identified do not have application in lawmaking. This is consistent with a general pattern pervading our data, namely that the Chinese government seems to make very little law. The disuse of law, rather than its abuse, is the more important feature of the Chinese political system.

Finally, using the number of statutes, regulations, and IPDs as measures of quantities of law, we explore correlations between such quantities and demographic variables such as population and GDP. In previous scholarship, such correlations have been interpreted in terms of exogenous demands for law; in one formulation (Mulligan and Shleifer 2005), the extent of the market may determine the supply of law. We argue that such interpretations should be particularly plausible when applied to the context of subnational lawmaking in China, but find puzzling correlations between "the demand for law" and the supply of law that raise more questions than they answer.

Overall, we aim to show the importance and rewards of tackling the types of questions outlined at the beginning of this paper, and of the methodology we adopt. In particular, we emphasize that to understand both political incentives in lawmaking and legislative outcomes in China, a wider range of policy instruments needs to be considered than is customary. Our study also carries rich policy implications. For instance, the fact that certain policy subjects are best implemented through formal lawmaking processes underscores the irrationality of depriving subnational governments of formal lawmaking power, i.e. of China's high degree of legislative centralization. As another example, Chinese politicians' apparent indifference to lawmaking casts an interesting light on President Xi Jinping's recent effort to mobilize the legal system for political purposes (Zhang and Ginsburg, forthcoming).

As our inquiry is already quite broad-ranging, we restrict its scope in several important respects. We do not examine lawmaking at the national level. While this has been a focus of much prior scholarship, we believe lawmaking at the NPC may need to be considered alongside the adoption of formal regulations and IPDs in the executive branch, and in any case national-level lawmaking also includes actions of the State Council and its various ministries. We therefore leave the study of national-level lawmaking to separate work. Another limitation is that while we deploy rich panel data, our analysis is entirely descriptive and does not explore causal hypotheses about the determinants of legislative outcomes. Finally, we do not engage with many of the theses in existing political science and legal scholarship on China (e.g. "fragmented authoritarianism"). Instead, we focus on explaining our novel measures of legislative and regulatory outputs, and some of the previously undocumented

patterns that emerge from our data. Their full implications for the study of Chinese law and politics must be left to future analysis.

The rest of the paper proceeds as follows. Section 1 provides institutional background regarding the following: subnational lawmaking in China; the distinctions among statutes, formal regulations, and IPDs and their legal significance; and the reasons for viewing Chinese legislation through the lens of parliamentary polities. It also stresses the importance of the question: Why do Chinese politicians make law at all? Section 2 describes our data and discusses summary statistics. Section 3 presents evidence for the division of labor between provinces and cities. Section 4 describes the matches between policy types and the level of formality. Section 5 sets out evidence for the apparent irrelevance of political career considerations for lawmaking. Section 6 explores correlations between the quantity of law and general economic and demographic variables. Finally, Section 7 reviews the findings of the previous sections and discusses implications for research on Chinese law and politics as well as policy implications. The Conclusion discusses directions for further research.

1. Subnational Lawmaking in China

The analyses in this paper require a clear answer at the outset to the question: What constitutes "law" in China? Both within the Chinese government and among Chinese public law scholars, the answer is unambiguous. The Law on Legislation (2000) effectively lays out the "rules of recognition" for the Chinese legal system, and prescribes a hierarchy of general rules that have the force of law, as well as general principles regarding how they should be made. The Administrative Litigation Law (1989) instructs courts to apply essentially the same range of rules, so Chinese "law" is, consistent with usage elsewhere, what formally binds Chinese courts. The same concept of law is also reflected in many other statutes and in government practice, all with remarkable consistency. According to this concept, at subnational levels,[5] lawmaking can take two forms. At the provincial level, all People's Congresses may adopt local statutes (*difangxing fagui*), and People's Governments[6] (PGs) may adopt local government regulations (*difang zhengfu guizhang*). At the prefectural/city (*di/shi*) level—a level of government between the province and the county—only 49 cities out of a total of 333 jurisdictions had lawmaking power before 2015.[7] In these cities, PCs may adopt local statutes, and PGs local government regulations, just like their provincial counterparts. Therefore, both parliamentary and executive bodies can make law, although at a given level of government, parliament-made laws (i.e. statutes) tend to have superior force over executive-made ones (i.e. regulations).

The basic clarity of the Law on Legislation's "rules of recognition", however, has been obscured by a common government practice that creates much confusion. Chinese executive branch entities (at both national and subnational levels) regularly announce general rules and policies intended to be

[5] At the national level, the NPC enacts statutes (*falü*); the State Council enacts "administrative statutes" (*xingzheng fagui*); and national ministries enact ministerial regulations (*bumen guizhang*). The State Council and national ministries also issue IPDs. The distinction between formal regulations and IPDs also applies at the national level.
[6] The People's Government of any given geographic jurisdiction represents the central executive branch office for that jurisdiction. A provincial (city) PG is headed by the Governor (Mayor) and a group of Vice Governors (Mayors), just as the central government's State Council is headed by the Premier and Vice Premiers. This central office at any given level is distinct from specialized agencies at the same level, much like the national ministries are distinct entities from the State Council.
[7] As a result of the revision of the Law on Legislation in 2015, this number increased to 322.

enforced and complied with. However, few of them are promulgated as formal regulations. Most of these are adopted without the formal procedures stipulated by the Law on Legislation and are better labeled as informal policy directives (IPDs). Distinguishing between formal regulations (*guizhang*) and IPDs (*qita guifanxing wenjian* or "other normative documents") is a fundamental precept in Chinese administrative law: according to the Law on Legislation, the Administrative Litigation Law, and other statutes, the former has the force of law and the latter does not. This dichotomy is the Chinese version of a distinction that is almost universal among modern administrative states.[8] But perhaps not unlike analogous distinctions in other legal systems, it is lost on many citizens and even legal practitioners.[9] It is often falsely assumed that most of the rules promulgated by the executive branch are regulations, when in fact very few of them are (as documented in Section 2.a below).

In Appendix 1, we set out some of the key features of formal regulations in China that distinguish them from IPDs and render them much more analogous to statutes. For the purposes of our empirical analyses, the distinction means that in studying executive branch lawmaking, regulations should count as lawmaking while IPDs should not.[10]

Drawing a clear distinction between formal regulations and IPDs is not just an issue of measurement. It highlights an important question about the incentives for lawmaking. As we demonstrate below, even the core executive branch offices in China adopt very few formal regulations relative to IPDs. Government leaders simply informally announce commands, decisions, and directives and expect them to be implemented by subordinate bureaucrats and backed by the coercive power of the state. Many factors may explain this phenomenon. From a legal perspective, it is important to note but the Chinese judiciary operates by design as a civil law judiciary. In contrast to courts in common law systems, Chinese courts are supposed to apply the law instead of make law, and judicial decisions generally have no precedential value. When courts are not expected to make law, they should also not be expected to repudiate executive directives unless the latter are strictly in conflict with existing law. Consequently, the failure to pursue an item of policy through formal lawmaking, for the most part, does not prevent the policy from being implemented; simply put, it would not automatically be challenged in court.

The above discussion may seem to suggest that the distinction between formal regulations and IPDs does not matter. This may be true if one is only interested in the practical effects of the various policy instruments. But the conclusion is wrong when looking at the issue from a social science perspective, which begs the question: given the ease of implementing policy through IPDs, why do Chinese politicians pursue formal lawmaking—whether in the form of regulations or statutes—at all? When making law is largely unnecessary, why does law get made?

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[8] In the U.S. federal government, formal regulations are closely associated with the notice and comment procedure under the Administrative Procedure Act, which in turn is closely associated with the standard of judicial review set out in the Supreme Court's 1984 *Chevron* decision. See, e.g. Merrill and Hickman 2001, Pierce and Hickman 2018, and Sunstein (forthcoming). The practice of informal agency guidance and the judicial review of such practice, on the other hand, are quite different. See Hickman and Krueger 2007 and Epstein 2016.

[9] What is perhaps different from other jurisdictions is that many *scholars* of Chinese law often neglect this distinction. For recent scholarship emphasizing the distinction, see, e.g. Howson 2012 and Cui 2011.

[10] To put it differently, lawmaking in China occurs in the executive as well as in the parliamentary branch; however, much of what is casually assumed to be lawmaking in the executive branch is not.

It would be wrong to sweep this question aside by assuming that law is made only by parliamentary bodies, i.e. it is the job of PCs to make law, why they do so is not a meaningful question.[11] This position is untenable, however, for two reasons. The first is that, like modern administrative states elsewhere (Dubash and Morgan 2013; Potter and Shipan 2019), much Chinese law gets made in the executive branch.[12] Second and perhaps more importantly, regarding People's Congresses as uniquely important sites of lawmaking is problematic because the Chinese government is structured as a parliamentary system. Unlike presidential systems (exemplified by U.S. federal and state governments) in which the chief executive and Congress represent co-equal branches of government, executive branch leaders in parliamentary systems also lead the parliament, and therefore tend to more freely impose their will on the latter.

This second point deserves some elaboration. China's nominally democratic political institutions are designed to resemble parliamentary systems. PCs are either directly elected or elected by delegates from lower-level PCs, and once these parliamentary bodies are formed, they elect the heads of the PGs (i.e. the executive branch) in their respective jurisdictions.[13] The nominal power of the parliament to appoint or remove the heads of the executive branch underlies the concept of "parliamentary supremacy".[14] However, we know that even in modern democracies, parliamentary supremacy does not imply that the parliament competes with and constrains the executive. Instead, the head of the executive branch is often the leader of the winning political party (or coalition), whose political power far exceeds the parliamentary members of his or her party (Huber and Shipan 2002; Docherty 1997; Docherty 2005). Therefore it is the cabinet, not parliament, which dominates lawmaking; the cabinet proposes most bills, and parliament's ability to independently propose or amend legislation is comparatively weak. One observes a similar pattern in China. All scholars studying Chinese legislation agree that legislative proposals overwhelmingly originate from the executive branch, and that parliamentarians rarely block proposals advanced by the executive branch (Dowdle 1997; Tanner 1999; Potter 2003). However, this pattern is far from being unique to China's autocratic regime; the same is also observed in majority-controlled parliamentary democracies. The function of Communist Party control can be analogized to a party in a parliamentary democracy with a secure majority control combined with very strong party discipline.

We highlight this (perhaps imperfect) analogy between China's formal legislative system and parliamentary democracies because it suggests an important perspective for analyzing lawmakers' incentives. From this perspective, the same set of actors face a choice among a variety of instruments for implementing policy. A politician leading the executive branch—whether he is a provincial governor, a city mayor, or a Party secretary at either level—can propose legislation to the parliament in his jurisdiction in the hope of giving statutory form to a policy. Alternatively, he can simply adopt a formal regulation, which also possesses formal legal effect and is binding on courts, without coordinating with parliamentary bodies. Finally and most importantly, he can eschew formalities altogether and

[11] Actually, most PCs in China do not have lawmaking power, so it is not true that it is the job of PCs to make law. Consistently with this, PCs are often studied as sites of representations independently of their legislative activities (or lack thereof). Hence the study of lawmaking has mostly featured only as a branch of the study of PCs.

[12] At both national and subnational levels, the quantities of formal regulations are comparable to or exceed those of statutes.

[13] Constitution of the People's Republic of China (as last amended in 2018), Ch III.

[14] *Ibid*., Art 2 and 57. "Parliamentary supremacy" is also reflected in the legislative system, in that statutes have superior legal force over regulations adopted by the executive branch and can never be overridden by the latter.

implement policy through issuing IPDs. Which of these instrument types he chooses should depend on their relative benefits and costs. In other words, one can examine the incentives for lawmaking by examining preferences revealed through choices among policy instrument types.

This perspective points to studying statutes, formal regulations and IPDs alongside one another. Such a comparison could generate insights that would not otherwise be apparent. We take this approach, as it has the advantage not only of (i) not overemphasizing the role of the parliamentary branch in examining lawmaking, but also of permitting us (ii) to identify policy priorities through the examination of IPDs, and (iii) to detect differences between formal and informal policy instruments.[15]

We have so far focused on the characters of different legal and policy outputs from Chinese subnational governments. What about the institutions and processes for producing statutes, regulations, and IPDs? While there are interesting features to these institutions and processes, for our purposes the most important point is that *they are the same* across China. The procedures for making statutes, FRs and IPDs are essentially identical among provinces and cities. The technologies for the production of formal law and most informal policies can thus be held constant when examining subnational variations. This makes it more reasonable to attribute subnational variations in lawmaking outcomes to varying demands for, rather than varying supplies of, law.

With that said, the process for making statutes, regulations, and IPDs at subnational levels can be summarized as follows. Most legislative proposals come to a local PC from the executive branch, i.e. the mayor or governor. Some important legislations are supervised by the jurisdiction's Communist Party Committee, in which case the local Party Secretary may also be important. At the PC of a province or of a city authorized to make law, typically a committee comprising of congressional members and a Legal Affairs Commission (a subordinate bureaucratic body) engage in the review of proposed legislation. But unlike parliaments designed to be co-equal branches with the executive, both the capacity and incentives for congressional review and drafting are limited.

Within the executive branch, the chief executive's office is assisted by a Legislative Affairs Office (LAO) in designing plans for legislation and in drafting legislative proposals. This office typically draws on expertise from specialized regulatory agencies. The same office is also responsible for organizing the drafting of formal regulations, which the chief executive would approve and promulgate. The offices of governors and mayors also issue many IPDs. IPDs from a chief executive office may or may not draw on agency expertise, depending on the substance of the IPD. The LAO also may or may not be involved in IPD issuance.

Finally, many government agencies in provinces and cities (as opposed to provincial or city PGs) also issue numerous IPDs, but they do not have the power to make formal law. They must lobby the chief executive to either adopt a formal regulation or propose a statute to the local PC. It is this selection process that ensures that formal law tends to reflect the incentives of local political leaders, and not just the incentives and expediencies of the bureaucrats in specialized agencies. We exclude all agency IPDs from the scope of our study and focus on IPDs issued by governors' or mayors' offices, as only these IPDs shed light on the incentives of *lawmakers*.

[15] Strong differences between formal and informal policy instruments, such as those we discuss in Section 4, also lead us to reject a certain kind of agnosticism about the definition of law in China, which would treat an indefinite range of executive branch pronouncements as law.

2. Data and Descriptive Statistics

a. Data Construction

In 2000, the NPC enacted the Law on Legislation and fundamentally clarified the scope of law in China. In 2015, the same statute was amended to permit almost all prefectural cities in China to make law. Using the legal database Chinalawinfo, we gathered data for the 2000 to 2015 period on lawmaking in all of China's 31 provinces as well as the 49 cities that had legislative power during this time.[16] Our dataset thus covers the (i) enactment of local statutes (LS) by China's 31 provincial PCs and the PCs in 49 cities; and (ii) the adoption of FRs by the PGs of the same provincial and city jurisdictions. To shed light on formal lawmaking, we also collected (iii) the large volume (>160,000) of IPDs issued by the same executive entities in (ii). Appendix 2 provides further details regarding our data collection.

The main issue of note regarding data construction is that while identifying LSs and FRs is straightforward, identifying and counting IPDs is not. This is because the line between IPDs and government internal documents with no policy significance is blurry. Since 2005 (and especially 2008, when China enacted new open government information (OGI) regulations), the volume of publicly available IPDs increased substantially, which cannot be attributed to increases in policy announcements. We discuss this issue in detail in Appendix 2. We try to mitigate this concern in several ways. First, we manually classified the IPDs according to their titles, which identified a substantial fraction of government documents that lack policy significance (e.g. those relating to personnel). Second, as a result of the extensive classification exercise, we can confirm that a very high percentage of PG documents included in the Chinalawinfo database represents policy announcements. Third, the noisiness of IPD counts mainly affect our analyses of the correlates of the volume of policy announcements (Section 6), and the relationship of these announcements to political careers (Section 5). It affects our study of specialization between provinces and cities and of the choice between formal and informal instruments (sections 3-4) to a much lesser extent. Finally, while OGI initiatives in recent years increased the problem of noise, insofar as such an increase is similar across most local governments, year fixed effects in our regression analysis partially address the problem (as well as other problems of nationally-uniform changes in measurement).

After collecting 16 years of subnational legal and regulatory outputs of parliaments and core executive offices, we classified them into 39 topic categories. Appendix 3 sets out our classification scheme. While there is no "correct" scheme of classification, we believe ours is at once sufficiently detailed to convey strong intuitions about the topics involved, and not too detailed so as to render it difficult to make generalizations.

We also gathered economic and demographic data about the jurisdictions we study from standard sources. Finally, to test the relevance of individual politicians' incentives, for each of the provincial or city PGs we examine, we located the identities of the pair of top political leaders in each year: a province's Governor and Communist Party Secretary, or a city's Mayor and Party Secretary. Based on this data, we assign to each jurisdiction-year a pair of numbers that represents the length, up to that year, that each of the two political leaders has occupied that particular office.

[16] Restricting our data to after 2000 allows us to rely on the criteria of what counts as law stipulated in the Law on Legislation. Restricting our data to before 2016 allows us to focus on cities that have had decades of experience in making law, as opposed to those just beginning to make law in 2016.

b. Descriptive Statistics

Table 1 provides summary statistics for our main dependent and independent variables. In terms of the dependent variables, at the median a provincial PG issues 9 formal regulations a year but 147 IPDs, and a city PG issues 5 formal regulations and 78 IPDs a year. Informal policy instruments clearly dominate formal ones in the executive branch. In terms of legislation, at the median, each year a Chinese provincial PC enacted 13 statutes, while a city PC enacted 4.[17] Figure 1 presents the national trend in subnational lawmaking in the period we examine. Statutory enactments are cyclical and follow the same cycles at the provincial and city levels, and even provincial regulations seem affected by such cycles. Overall the quantity of formal lawmaking displays no increase (and even a slight decrease) over time. By contrast, the quantity of IPDs rose dramatically until 2008, likely reflecting the effect of OGI initiatives.

Figure 2 provides an initial look at the policy priorities of subnational governments in China. Here, we measure priorities in terms of national aggregates: the priority of topic A for all provincial statutes is defined by a fraction, the numerator of which is the total number of provincial statutes devoted to topic A during the 16-year period, and the denominator of which is the total number of provincial statutes enacted in this period. Such fractions are computed separately for LS, FR, and IPD, and separately for provinces and cities. Figure 2, panel (a) shows that 10% to 15% of IPDs relate to bureaucratic appointments ("personnel"), but this topic appears with much lower frequency among LSs and FRs. All other categories, however, appear to capture genuine policy content. For a number of the topics, the divergence in priority between provinces and cities is also visible. In Sections 3 and 4, we will explore patterns in policy priorities at the individual jurisdiction level.

3. Vertical Divisions of Labor in Policymaking

We first examine evidence that provincial governments in China specialize in different policy areas from city governments. The division of policy focus between different tiers of government in China is notoriously unclear. *De jure*, the central government reserves lawmaking power for itself in several policy areas (e.g. the structure of basic state institutions, criminal law, taxation, expropriation of property, dispute resolution, and international affairs), but explicit divisions of labor in other policy spheres are hard to find. *De facto*, most policies are implemented by government entities at county or lower levels. As Chinese provincial governments are generally thinly staffed, they engage in little direct public goods provision or direct law enforcement. Consequently, from a legal perspective, provincial and city governments exercise concurrent jurisdiction in most policy areas; provincial governments may insist on issuing commands, but often leave many gaps in policy guidance.

Social scientists have tended to study policy priorities in China according to expenditure allocations (e.g. Balla 2017). However, in any government, expenditure decentralization is complex because of the variety of transfer payments subject to different degrees of top-down control. Budgetary classifications are also far more rudimentary than regulatory divisions of labor. Our decomposition of provincial and city policy documents according to a detailed classification regime thus promises to shed novel light on the division of responsibilities between provinces and cities.

[17] The NPC during the same period enacted 14 statutes in a median year, so provincial PCs are roughly as active in the legislative sphere as the NPC.

For each of the 49 cities, we calculate the difference between the proportion, of the total number of a given type of policy instrument (LS, FR or IPD), that the city devotes to a given topic, and the same proportion devoted by the government of the province in which the city is located.[18] A positive difference indicates a greater focus on the policy by the city, while a negative difference indicates a greater focus on the policy by the province. The frequency distribution of such differences captures whether such divisions of labor are common across the country. Table 2 provides numerical summaries of city-province comparisons for all 39 policy topics. The figures in Appendix 4 visualize such divisions of labor.

Figure 1 of Appendix 4 displays topics in which cities specialize, defined as those topics on which cities tend to devote greater proportions of *all three* policy instrument types.[19] These include urban affairs, environment, construction and real estate, public health, transportation, and takings and relocation. It may seem intuitive for cities with dense populations and active urban development to focus on these matters. Note, however, that almost all rural areas in China are administratively allocated to the jurisdiction of cities, and cities are simply higher units of administration that encompass both rural counties and urban districts. So what Figure A.1 really displays is the greater *urban bias* of city governments as compared to provincial governments.[20]

Figure 2 of Appendix 4 illustrate policy areas of relative provincial specialization, again defined as subjects to which provinces devote greater attention across all policy instruments. Some of the topics confirm the relative urban bias of cities; provinces clearly dominate in policymaking in relation to the non-urban subjects of agriculture, minerals and energy, and water and irrigation. Provinces' greater activity in tax and public finance is consistent with China's high degree of centralization in tax policy. Interestingly, provinces also lead in the areas of labor and employment regulation, intellectual property and competition, population and marriage, sports, education, and the regulation of organizations.

We only compare the policy priorities of 49 cities in China with their respective provinces. Can one extrapolate the findings here to all of the other cities in China—those that, prior to 2015, possessed no lawmaking power and therefore were able to issue their own policies only through IPDs? Our definition of specialization in terms of greater policy attention across policy instrument types offers some comfort. It seems unlikely that provinces that dominate policymaking in a given policy area vis-à-vis those cities in it that can make law would cede such policy leadership to its other cities that lacked lawmaking power.

Greater provincial or city attention to a policy subject is not always uniform across policy instruments. In the areas of food and drugs regulation, regulation of markets, social security, management of state assets, provinces dominate in legislation, but cities are ahead in the issuance of formal regulations and IPDs. In public safety and social assistance, provinces lead in the enactment of both statutes and regulations, but lag behind cities in the issuance of IPDs (see Table 2). The reverse pattern is less common for cities: culture, history and heritage is the only policy topic where cities have a

[18] All proportions are calculated for the entire 2000-2015 period, given the low count of statutes and regulations for any single year.

[19] That is, we require specialization to manifest across policy instrument types: if a city specializes in one of these topics in enacting statutes, it also tends to do so in adopting FRs and IPDs.

[20] The specialization of cities on environmental regulation is somewhat surprising, especially given that environmental protection is a top regulatory subject for both cities and provinces (Figure 2).

lead in legislation but lags behind provinces in issuing either regulations or IPDs. One possible explanation for this is that once a parliamentary body (e.g. a provincial PC) enacts a statute, it often delegates responsibility to the executive branch to enforce it. The provincial executive offices may further delegate enforcement to lower-tier executive agencies. IPDs from the city executive branch may result from such delegation following the enactment of provincial legislation. In contrast, it is unlikely for a city legislature to respond to provincial-level executive orders.

Building on these findings, in the next section we explore more directly Chinese politicians' choices between formal and informal policy instruments. We show, first, that despite the differences between provinces and cities identified so far, certain policy subjects seem to dictate similar provincial and city choices between formality and informality. In addition, greater focus by a given level of government on a topic is more likely to lead to investment in formal lawmaking.

4. The Choice between Formal versus Informal Instruments

For any given policy subject and given type of policy instrument (LS, FR, or IPD), we again calculate the ratio of that type of policy instrument devoted to the subject to the total number of that type of policy instruments adopted in a jurisdiction from 2000 to 2015. For each policy topic, we then compute (i) the excess of the proportion of LSs devoted to it over the proportion of IPDs devoted to it in a jurisdiction, and (ii) a similar excess of FRs over IPDs. In Figure 3, we plot, for each 37 topics,[21] the distribution of jurisdictions based on the resulting pair of values. All observations to the right of the vertical axis represent jurisdictions that devoted a greater proportion of LSs to a topic than IPDs. All observations above the horizontal axis, meanwhile, represent jurisdictions that devoted a greater proportion of FRs to the topic than IPDs. For any topic that has a concentration of observations in the first quadrant, one can say that formality dominates. Conversely, for any topic that has a concentration of observations in the third quadrant, informality dominates. Provincial and city observations are plotted in the same graphs using different colors.

Figure 3 demonstrates clear biases towards formality or informality for some topics. There are three notable patterns. First, in the areas of regulation of markets, the regulation of general services, transportation, public safety, environmental regulation, population and marriage, and construction and real estate, the first quadrant has the highest concentration of observations, and few observations lie in the third quadrant.[22] Notably, this bias towards formality is shared between provinces and cities. Second, going to the other end of the spectrum (the last two pages of graphs of Figure 3), for the topics of management of state assets, tax and public finance, economic development, social security, medical and healthcare, food and drugs regulation, and the regulation of the financial sector,[23] informality dominates, again in both provinces and cities. Third, there are a number of topics for which provinces and cities appear to differ (to a visible extent) on their preferences for formality or informality. For

[21] For comparing policy priorities across instrument types, we remove two topics from consideration, since keeping them would suppress the fractions observed for other topics. In computing IPD fractions, we remove "personnel" from the total (denominator), as this topic is little represented in FR and LS. Similarly, in computing FR and LS, we leave out "archiving and cancelling documents".

[22] We plot the simple algebraic difference between fractions. If topic A accounts for 7% of LS, for example, whereas the it accounts for 2% of IPD, then the difference comes out visualization as 0.05. But in this case IPDs are 70% less likely than LS to cover topic A.

[23] Several other more obscure topics are also found in this group. Little policymaking is observed on the topics of foreign affairs and trade, as can be expected for subnational governments.

policies pertaining to social assistance, regulation of organization, agriculture, and labor and employment, cities opt for informality significantly more than provinces. In contrast, for the topics of urban affairs and education, cities opt for formality much more than provinces, even though the general bias—formality for urban affairs and informality for education—is preserved at both levels.

We believe that each of these three patterns can be explained. We begin with formality. Under Chinese law, there is no explicit legal requirement for policies to be implemented through formal lawmaking in any of the subject areas where formality appears to dominate. One plausible explanation for the prevalence of formality in these areas is that there are strong needs for relevant policies to become public and common knowledge. Enforcement by public agents alone would not suffice for rules on environmental protection, public safety, transportation, construction and real estate, and the regulation of businesses offering other services and of markets generally. One might say that these policy areas are inherently "public facing". The promulgation of policies in these spheres through formal procedures has the unique ability to provide the publicity that the rules are likely to require, while IPDs, though much less costly to promulgate, would not allow for similar benefits.

A competing explanation for formality is that in those areas in which a high level of compliance is desired, not only is public knowledge required, but the threat of sanctions for contravention is also beneficial. The imposition of administrative penalties in China generally requires basis in formal law.[24] Therefore it may be that policymakers have no choice but to resort to formal legal instruments when they desire to back policies by formal sanctions. If policies that require wide compliance are associated with the need both for public knowledge and for formal sanctions, it may seem unclear which factor drives the choice of formality. While this objection is intelligible, it can be countered by the fact that in practice, the imposition of penalties provided by law is infrequent in China (partly because of procedural requirements associated with the Administrative Penalty Law). Government employees tend to resort to other means of coercion or persuasion to secure compliance from regulated subjects. Knowing this, the expectation that additional compliance will be secured by virtue of formal sanctions should not be high. Therefore the benefit of formal lawmaking is not clear. It may be far more important for the public to know what the rules are. Thus, public knowledge of the possible application of sanctions is merely one component of the general publicity that certain policies require (and that formal lawmaking provides).

Our explanation for the choice of informality complements the explanation for the choice of formality. In the policy topics dominated by informality, we observe either of two institutional arrangements. One is the presence of public ownership, as reflected not only in the management of state assets, but also in education, healthcare (and therefore also drugs) and financial services. The other is the involvement of bureaucratic internal coordination: emergency response, performance measurement, and the implementation of policies to promote economic development are key examples. Taxation and social security are two policy areas that combine features of both institutional settings.[25] In both settings, policies matter more to bureaucrats and public employees than to the wide public; broad social compliance is less of an issue. For instance, as important as promoting economic development is to the Chinese government—nationally, it is the third most frequently appearing topic among IPDs—, it is not contingent on broad public compliance (or on the private enforcement of law).

[24] Administrative Penalty Law (1996), Articles 11 and 13.

[25] It is important to emphasize that tax collection in China still relies very little on voluntary compliance with general rules: public, common knowledge about what tax rules apply is secondary to private knowledge about what frontline tax administrators may exact (Cui 2015).

Therefore, regardless of who adopts these rules—provinces or cities—informal implementation carries no disadvantage.

The third pattern in Figure 3 that requires explanation is the diverging choices between formality and informality among provinces and cities. In the last section, we have seen that social assistance, regulation of organization, agriculture, and labor and employment are areas in which provinces appear to be policy leaders—in terms of the use of *all* policy instruments. While these topics do seem to go beyond bureaucratic coordination and issues of the public sector, it may be unclear whether they are public-facing. An explanation of the province-city divergence may be that once provinces, as the policy leaders in them, pursue formal lawmaking, cities tend not to invest in formality on the same subjects. Conversely, we know that cities lead in policymaking regarding urban affairs. Even though the regulation of urban affairs seems already inherently public-facing, cities may invest more in formal lawmaking in this area than provinces by virtue of being policy leaders in it.[26] In other words, where we do see city-province divergence, policy specialization may be a relevant explanation of who chooses formality; the choice may be a result of specialization (which itself is observed across policy instrument types).[27] For most topics, however, the intrinsic nature of the subject seems to dictate similar choices for cities and provinces.

5. Policymaking and Political Careers

A key idea underlying our data construction is that political leaders have at their disposal three types of instruments for announcing policies. The enactment of statutes is not the action of some entirely independent political body that is entirely unrelated to the issuance of formal regulations and IPDs. This implies that the individual incentives of political leaders may affect the promulgation of all three types of instruments. Examining the incentives of the provincial and city Party Secretaries, governors, and mayors[28] may provide insights into legislative processes more than studying the views of congressional members and legislative staff.[29]

Indeed, political scientists have made a number of claims recently about observed correlations between politicians' careers and policy outcomes in China. Guo (2009) argues that county political leaders time government expenditures in anticipation of increased chances of political promotion (in the 3rd and 4th year in office). Yu et al. (2016) show that city political leaders near retirement no longer engage in public expenditure competition.[30] One hypothesis, therefore, is that the promulgation of LS, FR, and IPDs may also reflect political cycles.

However, the summary statistics in Table 1 show that the median tenure in office of mayors and city Party Secretaries is only 3 years, while the median tenure of provincial leaders lasts 4 years.

[26] This is observed in Figure 3 to some extent in connection with some of the other areas of city specialization, too, e.g. construction and real estate.
[27] Education seems to present the only counterexample to this explanation. It is an area of provincial specialization, but cities opt for formal lawmaking on this topic more often than provinces.
[28] Chinese political leadership at the provincial and city levels is characterized by a well-known dyadic structure: the Party Secretary and Governor (Mayor) exercise dual leadership (Yao and Zhang 2015).
[29] For instances of the latter, see e.g. Manion 2015; Cui and Wan 2019.
[30] Lü and Landry 2014, using variation in space rather than over time, provide related evidence that political competition among county heads determines efforts in tax collection.

Typically, these political leaders get subsequently rotated to entirely different jurisdictions. One important value of making law is to implement long-term policy, especially since short-term policy objectives can be much more easily achieved through the less costly means of IPDs. In combination with short tenures in office, this implies that Chinese political leaders may lack incentives for lawmaking altogether: they rarely stay long enough to monitor the implementation of legislation they adopt and benefit politically from positive policy outcomes.

To shed light on these considerations empirically, we regress the volumes of policymaking on politicians' year of office, taking LSs, FRs, and IPDs as separate dependent variables.[31] We control for jurisdiction and year fixed effects in all regressions.[32] Figure 4 displays the predicted outcome of each individual year for four different types of politicians, with 5%-confidence-intervals also shown. While there are multiple incidents of a 3rd-year peak, the difference of 3rd-year outcomes from other years is not statistically significant. The only statistically significant differences among years are (1) the issuance of provincial IPDs by governors in their 1st year in office versus their 7th (or later) year, and (2) the adoption of city regulations by mayors in their 1st year in office versus their 7th (or later) year; in both cases, newer political leaders are more active.

In half of China's provinces, a convention prevails that the Party Secretary also serves as the Chairman of the provincial PC. We compare these provinces to those where there is no similar convention and the Party Secretary is generally a different person than the Congressional Chairman. There appears to be no difference in the level of legislation. The idea that the Communist Party controls legislation (and therefore may determine legislative volume) thus does not seem to be captured by such conventions of joint appointment.

6. The Determinants of the Supply of Law

Our final exercise explores the economic determinants of legal and policy outputs. A well-established law and economic literature (Kaplow 1992; Kaplow 2012) posits that the socially optimal amount of legal rules (*ex ante* lawmaking) depends on the relative cost and benefits of enacting law *ex ante* as opposed to *ex post*. Some legal scholars (e.g. Davis 2006) have conjectured that this dependence may be manifest in actual observed quantities of law as well. In the empirical literature, Mulligan and Shleifer (2005) develop a fixed-cost model of regulation, and argue that jurisdictions with larger populations are more likely to adopt regulations. They test the hypothesis using cross-sectional data on the quantity of statutes (measured by kilobytes of text) adopted in 37 U.S. states from 2001 to 2003, and find that more populous states regulate more (and adopt the same type of regulation earlier). Moreover, specific types of regulation (e.g., labor regulation) are more extensive in more populous states. By contrast, income per capita, the proportion of the urban population, and the number of lawmakers do not affect the quantity of legislation. Fukumoto (2008) models the legislature as a utility-maximizing monopoly that matches marginal benefit against the marginal cost of legislation. Socioeconomic and political changes increase the marginal benefit of law production, while low negotiation costs and ample legislative resources decrease its marginal cost. Fukumoto uses changes in inflation, GDP, and population to proxy for socioeconomic change, and the seat share of the governing party, the number of committees, and the number of veto players to proxy for the political cost of

[31] All years in which a politician has stayed in the same office for more than 7 years is coded as year 7.
[32] Ideally, we would also control for politician fixed effects, but our sample is not sufficiently large to permit such analysis (the standard errors become even bigger).

enactment. Based on cross-sectional data for 42 countries and time series data from Japan, he finds partial support for the model, although population change does not seem to drive the amount of legislation.[33]

Studying determinants of the supply of law faces at least two challenges.[34] The first is justifying the measure of the quantities of law. To legal scholars especially, using the lengths of legal texts (as in Mulligan and Shleifer 2005) or the numbers of statutes and regulations (as in Fukumoto 2008, Potter and Shipan 2019, and our own study) to measure the quantity of law may seem crude. However, judgments about the quantity of law that do not take into account such measures may also be unreliable (and are made rather infrequently). Moreover, when the sample of law is sufficiently large, it is plausible that any draw from the sample would capture roughly similar distributions of the underlying "true quantities" of law, however that is conceived.[35]

A second challenge is that, even accepting an economic model of lawmaking, both supply and demand may determine the quantity of law actually observed. Any claim for identifying a correlation between the demand for law and the actual observed quantity of law must assume that the supply of law is held constant, and vice versa. Past empirical analyses using cross-sectional or time-series data generally fail to provide plausible justifications for this assumption. Our data, by contrast, strongly supports such an assumption. The institutions for issuing LSs, FRs, and IPDs by provincial and city governments are basically identical across China, and were also essentially fixed during the 2000-2014 period. Thus, to the extent that economic and demographic patterns affect the demand for law and can be expected to impact the quantity of law produced, one should be able to observe such effects in subnational variations and variations over time. The use of jurisdiction and year fixed effects should also address many concerns about omitted variables. Overall, our rich dataset seems to represent a marked improvement over previous empirical evidence assembled to test the determinants of the supply of law.

To execute such a test, we regress the annual quantities of LSs, FRs, and IPDs observed in Chinese provinces and cities on an extensive set of independent variables. We adopt two different approaches to deal with the low annual count of LSs and FRs. First, we divide 16 years of observations for the dependent variables into four 4-year groups (2000 to 2003, and so on) and aggregate instrument counts for each period. We then use the means of the observed values of the independent variables for each 4-year period in regressions.[36] Second, we use individual-year observations, and apply negative binomial regressions. Tables 3 and 4 present the OLS regression results using the first method and with the independent variables in levels. In Tables 1 and 2 of Appendix 5, we present the negative binomial analysis with independent variables in logs. All regressions include jurisdiction and year fixed effects.

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[33] Both Mulligan and Shleifer 2005 and Fukumoto 2008 highlight (and cite other scholars who lament) the paucity of empirical research on legislative productivity, especially outside the United States.

[34] A third challenge poses less concern: causal impact may go in both directions between lawmaking and demographic change (and especially economic development). We generally know more about the determinants of the economic development than of legislation. Law is at most one among many causes of economic development, while little is known about any systematic determinants of the quantity of law. Therefore, any correlation between such quantity and economic/demographic variables can be informative as to the determinants of the former.

[35] For example, we count the number of LSs, FRs, and IPDs to measure the quantity of legal and policy output, and rely on the assumption (consistent with casual observation) that the word count of these types of documents has similar distributions across jurisdictions and years.

[36] We also try a permutation of different specifications using different combinations of logs and levels for the variables, and using first-year value rather than mean value for each 4-year period.

The results are very mixed. The OLS regressions suggest that at the provincial level, population is a significant positive predictor of LSs, reinforcing Mulligan and Shleifer's (2005) results. An increase of 1 million people is associated with 3-6 more statutes during a 4-year period. At the city level, population is also positively correlated with formal lawmaking, but the relation is no longer statistically significant. Also consistent with Mulligan and Shleifer 2005, GDP is a weak predictor of lawmaking, and is significantly (and positively) correlated with statutes only at the city level. Perhaps surprisingly, other proxies for the level of economic development, such as the number of large industrial firms, FDI, and fixed assets investment, do not offer significant (or consistent) predictions. The same can be said about measures of urbanization (urban area and ratio of urban population.) Finally, while public expenditures and public sector employees (not including government employees) are weak predictors of any type of instrument, the size of government employees turns out surprisingly to be a negative predictor of all three types.

Similar mixed results are obtained (Tables 1 and 2 in Appendix 5) when we apply negative binomial regressions to individual year observations, and when we use independent variables in logs (thus measuring the responsiveness of the outcome variables to changes in the explanatory variables). One possibility is that many of the factors that one might hypothesize to generate demand for law are closely associated with regions in China, so that regional fixed effects are absorbing much of the impact of these factors.[37] To test this possibility, we remove regional fixed effects. Tables 3 and 4 in Appendix 5 show the results from OLS regressions. At the provincial level (Table 3 in Appendix 5), population does come out to be a stronger positive predictor of LS quantity (as well as of IPDs), and GDP is a strong positive predictor of FR quantity. Fixed asset investments strongly predict IPD quantity, while the negative impact of government employees on all three instruments is accentuated. However, adjusted R^2 is significantly lower compared with the regressions using region fixed effects, indicating that omitted variables play a strong role. Moreover, at the city level (Table 4 in Appendix 5), removing region fixed effects yield significant coefficients with unexpected signs (e.g. population being a strong negative predictor of LS quantity, and GDP being strong negative predictors of all three instruments.) Again, including regional FE doubles the regression fit in most specifications.

In conclusion, especially given the plausibility of the assumption of identical production technologies for law across Chinese subnational governments, our evidence casts significant doubt on the (otherwise rather appealing) idea that the quantity of law is a straightforward function of the demand for law, as measured by standard economic and demographic variables.[38]

7. Discussion and Policy Implications

Our analyses of the legislative and regulatory outputs in Chinese provinces and select cities are preliminary and only descriptive, but we believe they suggest important new ideas for studying Chinese law and politics. For illustration, this section discusses three implications of our study.

a. Is There Even Rule by Law?

[37] The region FEs captures the average within-region variation of each explanatory variable.

[38] The mixed results also suggest that there is no single proxy for government size—the size of the budget, the quantities of formal and informal policy announcements, and the size of bureaucratic personnel seem to not even be positively correlated with one another.

Especially given that a legal system barely existed at the end of the Cultural Revolution in 1976, China is often applauded for having rapidly built a national legal apparatus to aid its economic development (Clarke et al. 2008). Recent scholarship on Chinese law and politics has instead emphasized that legal institutions and processes may implement a strategy of "rule by law" rather than norms of the rule of law. However, our study suggests that the reach of legal institutions and processes in China—i.e. the presence of rule by law or "thin" rule of law —may be substantially overestimated. That is, there is a risk that scholars have unjustifiably come to take the existence of basic legal ordering in China for granted. In emphasize how legal ordering in China may reflect authoritarian as opposed to democratic values (i.e. how does authoritarian legality differ from democratic legality? How are China's authoritarian legislatures similar to or different from Western, democratic legislatures?) scholars may be setting aside more basic and radical differences between the non-rule-based style of governance in China and Western legal systems.

Take, for example, the study in Lü et al. (2018) of coalition formation around the NPC's enactment of 4 statutes regarding education during the period from 1983 to 2007. The authors suggest that (i) bureaucrats bargain with one another publicly in the legislative process, and (ii) logrolling—trading of favors among different factions—may occur. While we do not question these characterizations of the NPC's legislative process, it seems vital to understand why these legislative initiatives on education policy took place at all. As Section 4 shows, education is a policy area where we observe an extreme tendency towards informality: Chinese provinces especially, but to a slightly lesser extent cities as well, overwhelmingly prefer IPDs to formal legal instruments when promulgating education policy. This observation is also consistent with a finding in Cui (2019) that China's Ministry of the Education is the least likely of all national ministries to adopt formal regulations in announcing policy.[39] Both the national and subnational observations can be rationalized by the fact that the education sector in China is largely publicly owned and operated. Therefore most government policies can be implemented through informal policy instructions directly targeted at bureaucratic subordinates. There seems to be little downside in bypassing the legal system altogether.

What, then, was really at stake in national education legislation? Lü et al. (2018) mention in passing that some of the education legislation they study helped secure education financing. As Section 4 also shows, public finance is another area where Chinese subnational governments strongly prefer informality.[40] Thus the public finance aspect of national education statutes does not explain why legislation was pursued at all. It seems that considering the motivation for legislation would have shed useful light on the bargaining and logrolling Lü et al (2018) purport to find in the NPC legislative process. Indeed, the finding that *once* the government decides to legislate, the process bears some of the marks of political bargaining seems less significant than the decision to legislate in the first place. One cannot begin to look for explanation of the latter, however, if it is simply taken for granted.

b. The Wisdom of Decentralizing Lawmaking

Section 4 showed that in many important policy areas (e.g. regulation of markets and of the environment, transportation, public safety, population and marriage, urban affairs, and construction and real estate), Chinese provinces and cities preferred the pursuit of formal lawmaking to the issuance of IPDs. This may potentially be explained by the fact that policy implementation in these areas

[39] For each regulation, the ministry issues close to 300 IPDs.

[40] Cui (2019) shows that China's Ministry of Finance and State Administration of Taxation, next to the Ministry of Education, issues the least quantities of formal regulations relative to the quantities of IPDs.

intrinsically requires compliance from the public and enforcement by private as well as public agents. In Section 3, we also noted that some of these policy subjects—environmental regulation, urban affairs, and construction and real estate—represent areas of greater city specialization relative to provinces. This policy specialization was manifest across different types of policy instruments.

Prior to 2015, only 49 "relatively large cities" in China possessed authority to make law. It was not until the amendment of the Law on Legislation in 2015 that the remaining 85% of Chinese prefecture-level cities began to be allowed to make law. This, of course, did not mean that governments in these cities did not engage in policymaking or regulation. Instead, they did so bypassing the legal system.[41] That is, before 2015, for the vast majority of cities in China, even if formal lawmaking was the socially optimal way of promulgating certain policies, it was not an option. There seems to be no need for a more decisive counterexample to the assumption that "rule by law" characterizes the operation of the Chinese state.

The 2015 decentralization of lawmaking power followed a decision by the Chinese Communist Party (CCP) in 2013 to encourage Chinese politicians to use law more often in policy experimentation (Cui and Wan 2019). The decision, however, was met with much pushback from national and provincial parliamentary bureaucrats who had enjoyed a monopoly over lawmaking power. Many even claimed that it was unnecessary to give cities lawmaking power, and that cities should be content with the supply of law from national and provincial levels. The evidence we present in Section 3, however, contradicts the idea that provinces supply enough law in all major policy areas. Moreover, the evidence in Section 4 supports the idea that lawmaking may sometimes be the most effective way to implement policy, implying that it was foolish to categorically withhold lawmaking power from so many city governments.

c. How to Improve Lawmaking Incentives

Zhang and Ginsburg (forthcoming) recently argued that the CCP, under Xi Jinping's leadership, has empowered rather than weakened China's legal institutions. They appeal mainly to China's judicial reform since 2013 (as well as the 2018 Constitutional amendment) to support their claim. We interpret Zhang and Ginsburg as arguing that the CCP has increasingly recognized the importance of "rule by law" for China's governance needs, and agree with the implication of their argument that there is much room for furthering even just "rule by law" (as opposed to the rule of law) in China. Indeed, the decentralization of lawmaking power in 2015, which makes "rule by law" possible for the first time for most Chinese city governments, is arguably just as compelling a piece of evidence for Zhang and Ginsburg's conclusion as those that they adduce.

However, there is no reason to think that just because the CCP wants more "rule by law" (supposing that is the case), there will be more "rule by law". We find little evidence that Chinese subnational politicians have much interest in making law in most policy areas. The much more common mode of policy promulgation and implementation is the issuance of IPDs, and it is illogical to treat governance by informal circulars as "rule by law". IPDs violate the "rules of recognition" for the Chinese

[41] The conflation of lawmaking with "regulation", in the sense of government control over market and social activities, is prevalent both in China and elsewhere. Conceptually the two are entirely distinct. One can have an enormous amount of regulation, e.g. by subjecting all activities to government approval, while having little law; this happens when the standards by which the government approves or disapproves activities are left unstated. Conversely, one can also have a lot of law with little government intervention (Hadfield and Weingast 2014).

legal system stated in the Law on Legislation, and our very data collection effort has taught us how hard it is to determine whether some IPD has policy significance (whereas no such difficulty arises for statutes and regulations). IPDs are directed primarily at bureaucratic subordinates and lack the basic characteristics of legal rules (such as common knowledge). Crucially, when a government promulgates few formal statutes and regulations in favor of mostly IPDs, there is little that the Chinese civil law judiciary can apply as "law" in adjudication. The professionalization and empowerment of the judiciary thus has very clear limitations. When there is no "law" to be applied, very often the most sensible thing for even an experienced judge to do is to defer to policy discretion of government agencies. To put it differently: without someone supplying the rules, adjudicators lacking the authority to make rules have no power to bring the governance of rules, as opposed to the governance of men.

Conclusion

In this paper, we examine the legal operations of China's vast administrative state, a seriously understudied aspect of China's legal system. We analyze the legal and policy output generated from 2000 to 2015 by 31 provincial governments, as well as 49 prefectural governments that possessed formal lawmaking power during this period. Our study expands, at a most basic level, the scope of existing knowledge about the Chinese legal system. There is little existing information on how much—and what kind of—law is being made in subnational jurisdictions in China, even though lower levels of the Chinese government carry out the bulk of government activities. Our presentation of such data fills crucial gaps in existing research.

Our descriptive exercise also aims at highlighting the importance of the question: why do Chinese politicians bother to make law at all? We believe this question is of first-order importance, because, contrary to the approach of most existing scholarship on Chinese law and politics, the supply of law in China cannot be taken for granted. Tackling this complex question, however, is also difficult. We did not find straightforwardly interpretable relationships between what might be postulated as proxies for the demand for law and the quantity of law, nor any clear impact of political leaders' career cycles. However, we did find biases towards and against legal formalities in different policy areas, and consider such findings a promising starting point for further exploration.

There are many questions that await further study based on our novel dataset. As mentioned in the Introduction, it would be useful to explore causal determinants of legislation as opposed to mere correlations with economic and demographic variables. A related topic that we have left to future research is the interaction between national and subnational legislation. A significant portion of Chinese national legislation delegates some further policymaking to provincial governments, so at least provincial lawmaking may be in part a function of national lawmaking, which is something we intend to investigate. Finally, the existing literature on Chinese legislatures places great emphasis on legislative processes, even though this often comes at the expense of the breadth of the data. It would be interesting to combine the study of legislative processes with the panel structure of our data so as to draw more compelling empirical conclusions.

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Table 1

Variables	N	Mean	Median	P25	P75	Max	Min	Sd
A. City level								
Local statues	784	6.210	4	3	7	77	0	6.364
Formal regulations	784	6.758	5	3	9	38	0	5.545
Informal policy directives	783	93.65	78	20	130	432	0	83.83
Population (millions)	768	5.219	5.505	2.943	7.105	12.28	0.739	2.608
GDP (100 thousands of millions)	768	2.609	1.623	0.781	3.410	18.10	0.0920	2.757
Ratio of Urban Population (%)	637	53.13	48.51	41.37	64.21	100	18.02	18.34
Urban area (00s Sq. km)	670	2.244	1.790	1.210	2.750	10.24	0.340	1.553
Total area (00s Sq. km)	768	123.1	109.1	74.34	137.9	531	2.360	95.41
Above size ind. firms (00s)	768	18.96	11.19	5.165	23.57	137.2	1.150	21.50
Public expenditure (100 millions)	700	307.6	186.7	83.57	406.2	3,522	14.73	336.9
FDI (100 millions)	717	14.22	6.156	1.620	19.63	140.0	0	19.69
Public sector employees (10,000s)	768	89.42	74.69	46.25	114.4	536.1	18.19	64.42
Assets (100 thousands of millions)	618	1.087	0.602	0.230	1.500	6.808	0.0224	1.213
Mayor tenure	248	3.452	3	2	4	11	1	1.880
Party secretary tenure	236	3.754	3	2	5	10	1	1.930
B. Province level								
Local statues	496	16.73	13	9	19	122	0	12.98
Formal regulations	496	12	9	6	14	182	0	12.11
Informal policy directives	496	175.2	147	109.5	219.5	523	16	95.67
Population (millions)	496	42.35	37.75	23.66	60.56	108.5	2.580	26.89
Population (millions)	496	42.35	37.75	23.66	60.56	108.5	2.580	26.89
GDP (100 thousands of millions)	496	27.04	20.73	10.41	36.75	108.0	2.759	21.34
Ratio of Urban Population (%)	279	49.71	47.20	40	56.02	89.60	20.85	14.92
Urban area (00s Sq. km)	409	12.09	8.647	5.237	13.55	139.7	0.690	16.03
Above size ind. firms (00s)	496	101.1	52.81	25.94	128.9	655.0	0.560	125.6
Public expenditure (100 millions)	496	1,923	1,188	519.9	2,972	12,828	59.97	1,870
FDI (100 millions)	466	43.64	19.38	3.672	61.21	357.6	0.000200	60.37
Public sector employees (10,000s)	404	211.2	190.6	144.1	282.4	542.1	13.66	110.0
Gov. employees (10,000s)	406	42.70	38.86	27.24	53.52	161	6.082	25.32
Lawyers per-millions of inhabitants	380	130.1	90.96	70.30	129.1	1,209	13.57	152.5
Assets (100 thousands of millions)	496	6.856	3.520	1.344	9.679	48.31	0.0640	7.953
Governor tenure	135	4.148	4	3	5	10	1	1.976
Party secretary tenure	138	4.101	4	3	5	14	1	2.229

Table 2: Policy specialization as measured by city-province difference in proportions

	Statutes			Regulations			IPDs		
Subject	<0	0	>0	<0	0	>0	<0	0	>0
Administration According to Law	29	0	20	24	1	24	21	0	28
Agriculture, Forestry, Fishery	39	0	10	45	1	3	42	0	7
Archiving and Cancelling Documents	29	0	20	24	0	25	5	0	44
Construction and Real Estate	15	0	34	8	0	41	5	0	44
Culture, History, and Heritage	21	0	28	26	2	21	31	0	18
Economic Development	26	4	19	20	6	23	34	0	15
Education	23	0	26	29	5	15	45	0	4
Emergency Response	26	19	4	25	12	12	13	0	36
Environment	15	0	34	12	0	37	8	0	41
Finance	8	38	3	13	28	8	36	0	13
Food and Drugs	33	4	12	18	4	27	19	0	30
Foreign Affairs	20	29	0	6	35	8	32	1	16
General Services	26	0	23	23	0	26	29	0	20
IP and Market Competition	30	3	16	27	8	14	32	0	17
Labor and Employment	35	0	14	39	0	10	30	0	19
Legal Services	26	5	18	16	23	10	19	7	23
Letters and Visits	38	9	2	6	39	4	29	0	20
Manufacturing	30	13	6	22	18	9	24	0	25
Medical and Health Care	25	1	23	19	5	25	21	0	28
Minerals and Energy	31	0	18	36	3	10	39	0	10
Performance Measurement	1	44	4	12	33	4	18	1	30
Personnel	33	2	14	25	7	17	28	0	21
Population and Marriage	28	0	21	24	3	22	29	0	20
Public Health	17	4	28	20	0	29	22	0	27
Public Information	26	0	23	32	0	17	29	0	20
Public Safety	30	0	19	28	0	21	13	0	36
Regulation of Markets	34	0	15	18	0	31	14	0	35
Regulation of Organizations	39	0	10	37	0	12	23	0	26
Science and Technology	24	0	25	25	3	21	25	0	24
Social Assistance	40	0	9	41	1	7	21	0	28
Social Security	22	6	21	16	0	33	6	0	43
Sports	28	3	18	28	13	8	32	0	17
State Assets	28	7	14	21	5	23	18	0	31
Takings and Relocation	12	11	26	14	7	28	7	0	42
Tax and Public Finance	33	1	15	40	0	9	37	0	12
Trade	8	41	0	3	43	3	37	0	12
Transportation	20	1	28	22	0	27	16	0	33
Urban Affairs	1	0	48	5	0	44	7	0	42
Water Conservancy and Irrigation	24	0	25	30	11	8	31	0	18

We calculate the difference between a city's proportion of an instrument devoted to a given topic and the proportion observed in the province in which the city is located. Each entry reports the number of cities (out of 49) where the difference is less or greater than or equal to zero.

Table 3: Determinants of published policy documents: province level. OLS regressions.

	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	1.8316	2.9641*	3.5336*	6.6124*	1.3794	1.0811	1.0272	2.7721	-7.4001	-9.9148	-10.4799	-9.1180
	[1.2507]	[1.7257]	[1.9547]	[3.4277]	[0.8146]	[1.3248]	[1.5269]	[2.3586]	[6.2445]	[6.7286]	[7.4678]	[17.1360]
GDP (100 thousands of millions)	-0.2346	-0.4388	-0.5677	-0.9646	-0.2330	-0.1426	-0.1687	0.2043	-0.8726	-3.0296	-2.2100	-5.1519
	[0.3251]	[0.4029]	[0.4075]	[1.0357]	[0.3365]	[0.4495]	[0.4724]	[0.3972]	[3.1200]	[2.4287]	[3.0905]	[4.9457]
Public expenditure (100 millions)		0.0039	-0.0012	0.0022		-0.0010	-0.0039	-0.0011		0.0559	0.0411	0.0359
		[0.0077]	[0.0093]	[0.0104]		[0.0062]	[0.0067]	[0.0089]		[0.0484]	[0.0505]	[0.0901]
Gov. employees (10,000s)		-1.6633**	-1.4878*	-3.4123***		0.4401	0.4115	0.2686		-5.6335	-6.6055**	-8.7473*
		[0.7713]	[0.7935]	[0.7677]		[0.5437]	[0.4175]	[0.7055]		[3.3627]	[2.8210]	[5.0574]
Fixed asset investments (100 thousands of millions)		-0.0003	1.1931	1.3904		0.0540	0.6635	1.1325		-0.9315	5.8983	6.3529
		[1.4057]	[1.5735]	[2.4531]		[1.3045]	[1.5410]	[1.8511]		[9.2000]	[11.1875]	[18.3702]
Public sector employees (10,000s)			0.1910	0.2834			0.2270	0.3949			2.3539**	2.4275
			[0.1459]	[0.4152]			[0.1419]	[0.3099]			[1.0264]	[2.8539]
Above size ind. firms (00s)			-0.0906	-0.1393			0.0085	-0.0481			0.0902	-0.3321
			[0.0744]	[0.1408]			[0.0586]	[0.0895]			[0.4389]	[0.6858]
FDI (100 millions)			0.0946	-0.3467			0.0358	-0.0788			-0.4217	0.3193
			[0.2106]	[0.2808]			[0.1159]	[0.1226]			[1.4239]	[2.6846]
Urban area (00s Sq. km)				1.3820**				-2.9509***				-4.1620
				[0.5875]				[0.5332]				[6.0397]
Ratio of Urban Population (%)				-1.0511				2.0462*				5.0337
				[2.2433]				[1.1027]				[9.3233]
Lawyers per-millions of inhabitants				0.0581				0.0228				0.6823
				[0.0688]				[0.0332]				[0.6826]
Observations	124	116	116	86	124	116	116	86	124	116	116	86
Adj. R2	0.22	0.22	0.22	0.32	0.43	0.41	0.42	0.52	0.67	0.68	0.69	0.57

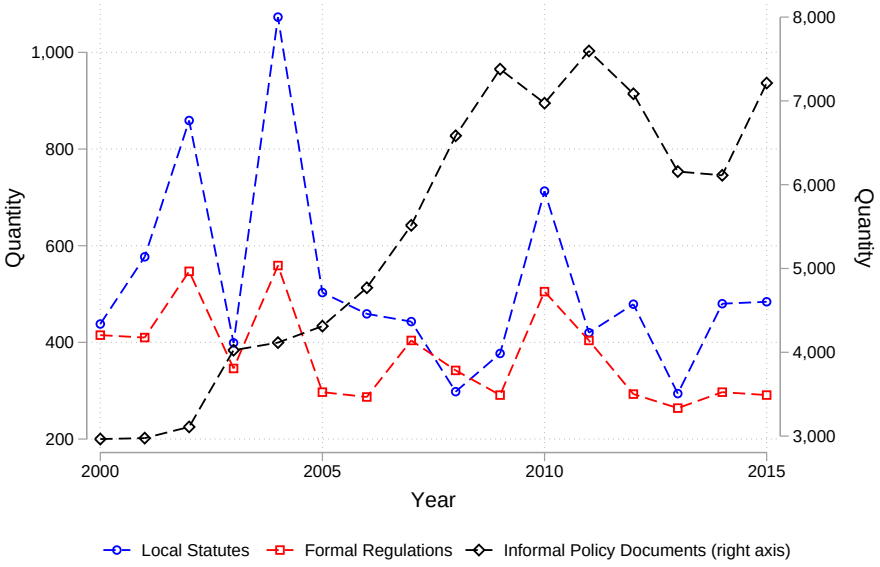
Results estimated using Ordinary Least Squares (OLS) with region and year FEs. All variables are in levels. The sample contains 31 provinces and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Years are binned into 4 time periods: 2000-2003, 2004-2007, 2008-2011, 2012-2015. Dependent variables are computed by adding the four years of each group. Independent variables are calculated by averaging the values of the correspondent variable within each time period. Some independent variables data is not available for all the years, especially for 2014 and 2015. Those missing values cases are ignored when averaging the variables. Hence, only if the four years of a time period are missing, the transformed observation is also considered as a missing value. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the province level reported in brackets.

Table 4: Determinants of published policy documents: city level. OLS regression

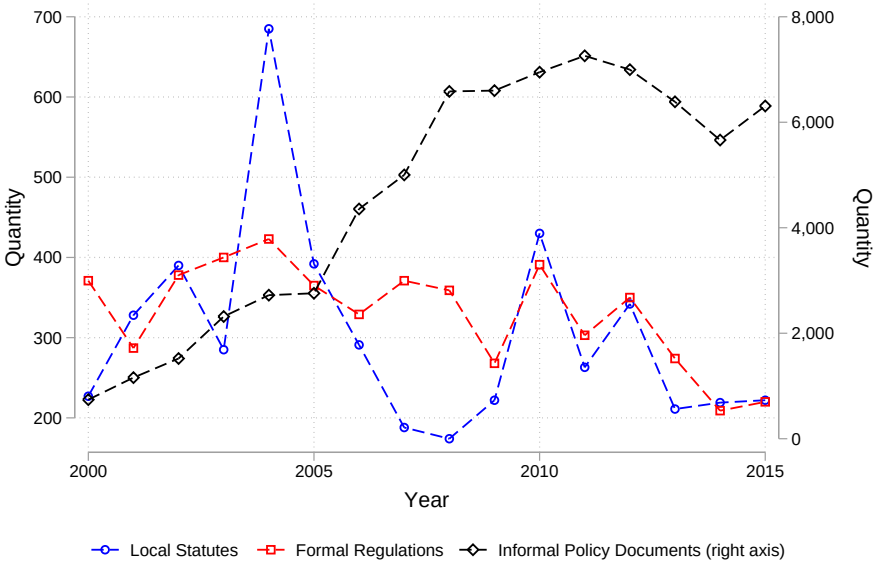
	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	0.6726	0.4211	5.0977	5.4149	-0.0119	-0.2685	0.0027	9.3537	23.3861	15.2561	32.7247	36.8170
	[3.8102]	[3.2426]	[3.6441]	[6.1877]	[4.1935]	[4.1501]	[4.1607]	[5.5826]	[60.7681]	[64.3145]	[68.7160]	[91.9352]
GDP (100 thousands of millions)	-0.3283	-0.2052	4.1179**	3.6284	0.1127	0.3438	0.7901	1.6547	-5.0389	-14.0529	8.6760	-55.6509
	[1.0778]	[1.1872]	[1.7505]	[2.5439]	[0.8216]	[1.2437]	[2.1027]	[2.9056]	[13.9183]	[13.7725]	[35.7576]	[48.4168]
Above size ind. firms (00s)		-0.0968	-0.1028	-0.0739		-0.1387	-0.1000	-0.0861		1.7885	1.8856	1.8088
		[0.1373]	[0.1174]	[0.1521]		[0.1287]	[0.1369]	[0.1492]		[1.5461]	[1.7170]	[1.7673]
Public sector employees (10,000s)		0.0098	0.0256	-0.0515		0.0105	0.0117	-0.0532		0.2601	0.3915	1.7073*
		[0.0875]	[0.0566]	[0.0520]		[0.0469]	[0.0474]	[0.0432]		[0.6431]	[0.5834]	[0.8721]
FDI (100 millions)			0.2802**	0.1928			-0.1445*	0.0164			0.0782	-2.3356
			[0.1133]	[0.1469]			[0.0775]	[0.0978]			[1.8761]	[1.7703]
Public expenditure (100 millions)			-0.0378**	-0.0098			0.0068	0.0389*			-0.1997	0.0607
			[0.0156]	[0.0282]			[0.0157]	[0.0223]			[0.4038]	[0.5067]
Urban area (00s Sq. km)			-6.7072*	-7.8708			-2.3508	-5.1633			-17.9676	-23.0400
			[3.9121]	[5.0893]			[3.1095]	[3.3019]			[31.7766]	[32.7655]
Ratio of Urban Population (%)				0.2083				-0.0890				2.9314
				[0.1732]				[0.1928]				[2.6853]
Fixed asset investments (100 thousands of millions)				-1.0572				-6.7471**				79.5160
				[2.6985]				[2.5255]				[48.8188]
Observations	192	192	192	164	192	192	192	164	192	192	192	164
Adj. R2	0.42	0.42	0.50	0.52	0.56	0.55	0.56	0.62	0.66	0.66	0.66	0.69

Results estimated using Ordinary Least Squares (OLS) with region and year FEs. All variables are in levels. The sample contains 49 cities and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Years are binned into 4 time periods: 2000-2003, 2004-2007, 2008-2011, 2012-2015. Dependent variables are computed by adding the four years of each group. Independent variables are calculated by averaging the values of the correspondent variable within each time period. Some independent variables data is not available for all the years, especially for 2014 and 2015. Those missing values cases are ignored when averaging the variables. Hence, only if the four years of a time period are missing, the transformed observation is also considered as a missing value. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the city level reported in brackets.

Figure 1: National Trends of Published Policy Instruments

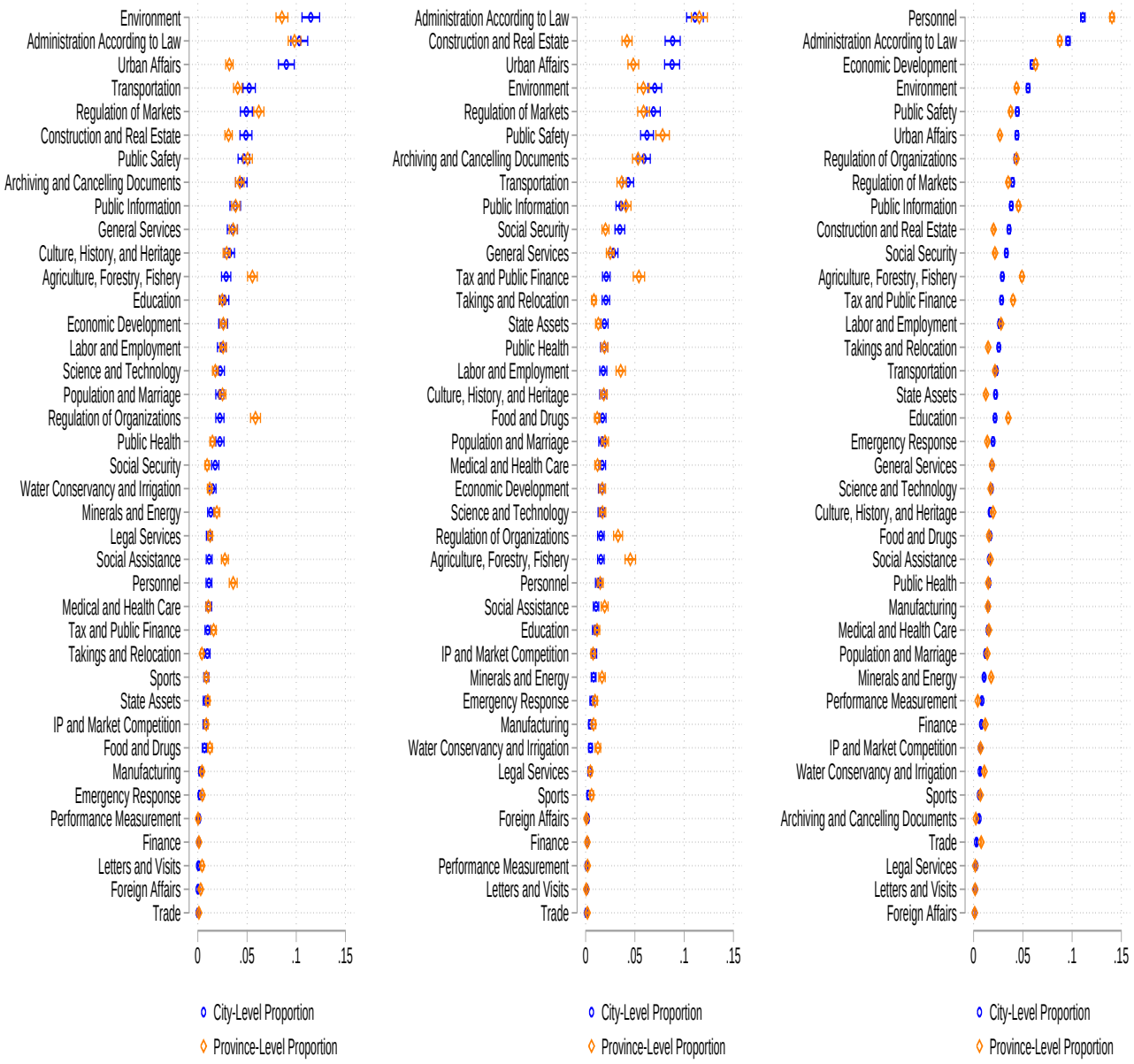


(a) Provinces



(b) Cities

Figure 2: Nationwide All-Years Proportions



(a) Local Statutes **(b)** Formal Regulations **(c)** Informal Policy Documents

Figure 3: Province and city (ordered by formality dominance at the province level)

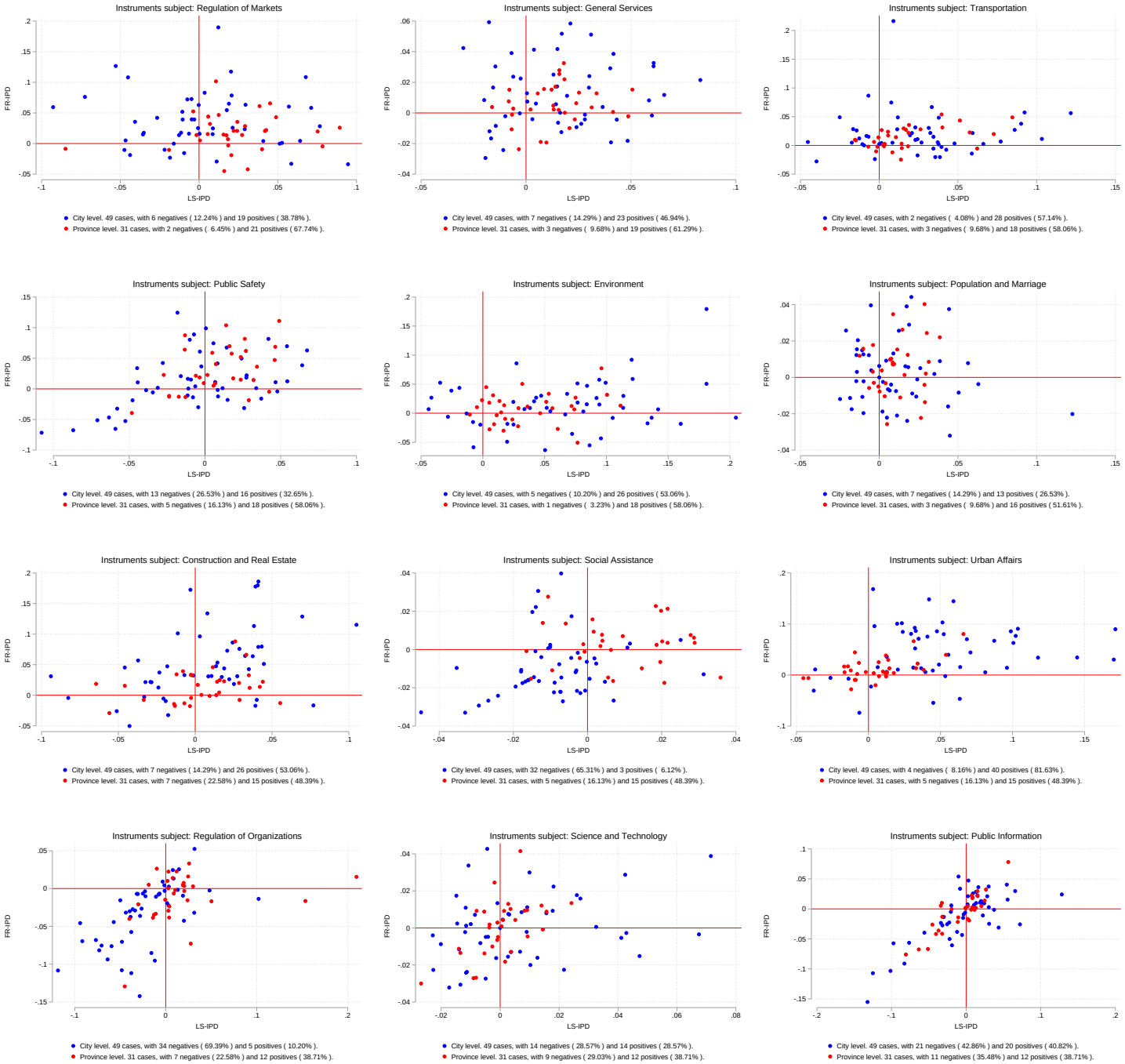


Figure 3 (cont.)**:** Province and city (ordered by formality dominance at the province level)

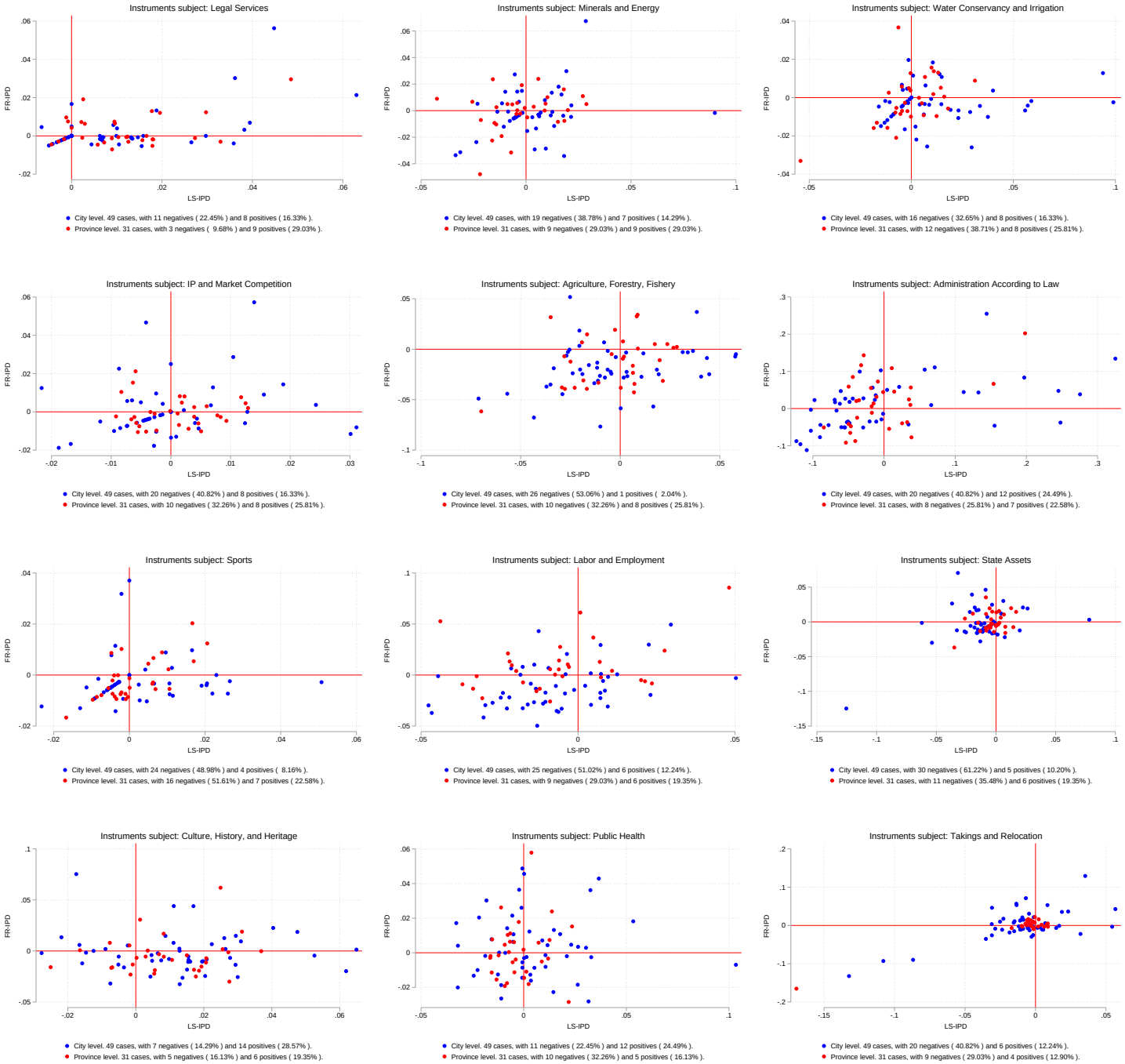


Figure 3 (cont.)**:** Province and city (ordered by formality dominance at the province level)

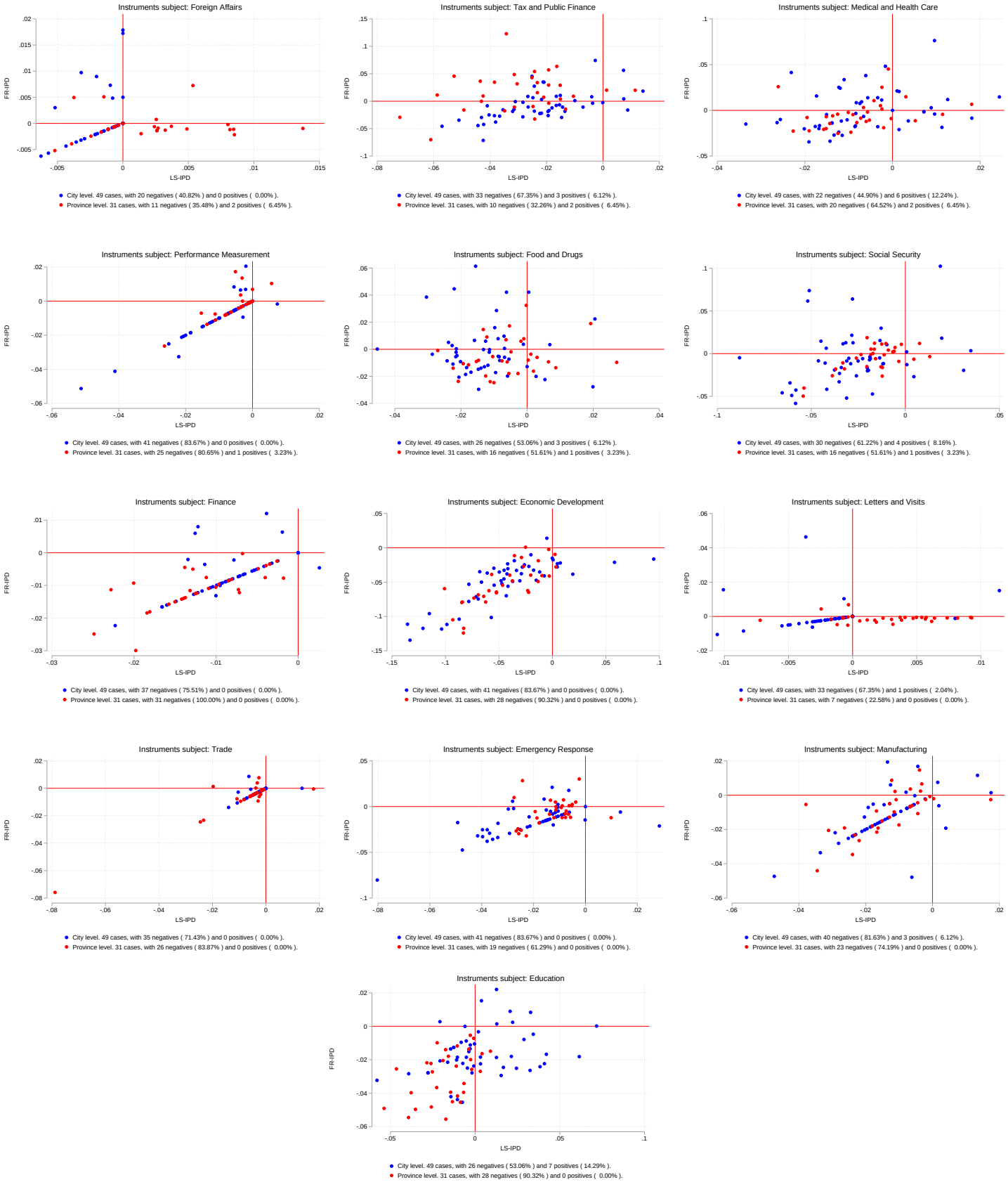
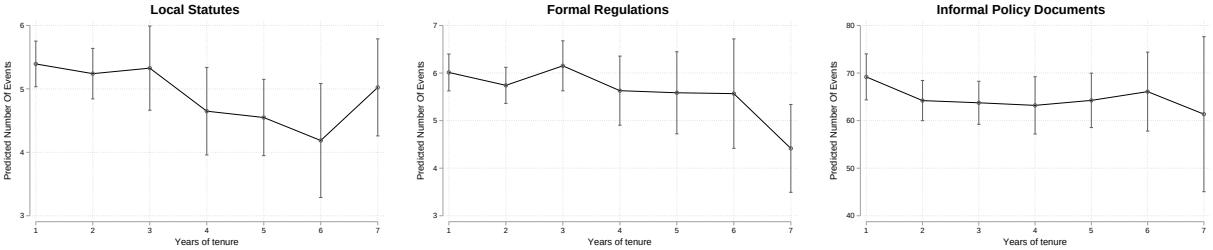
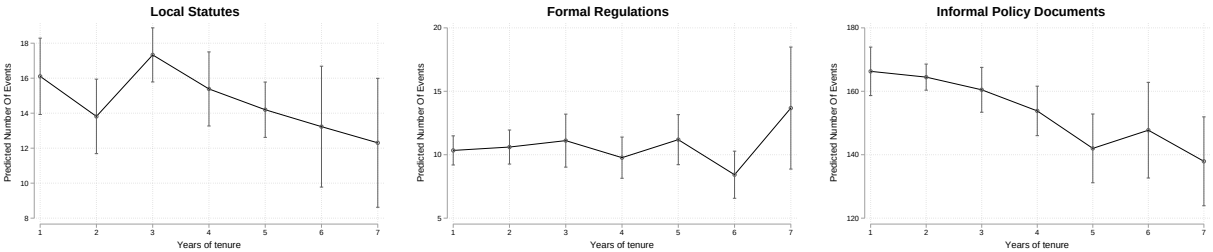


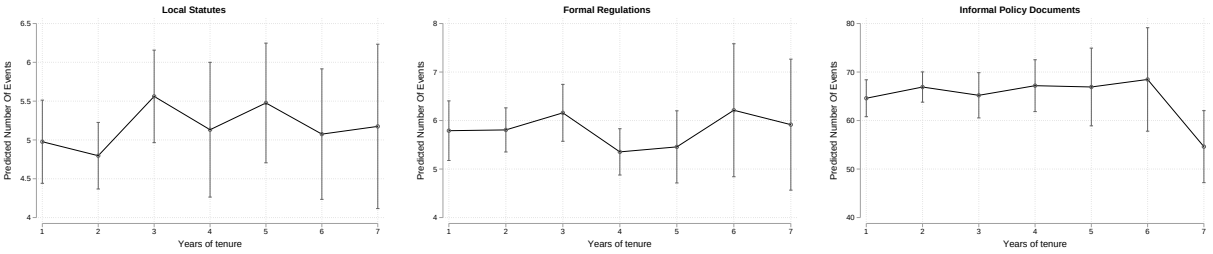
Figure 4: Political Cycles



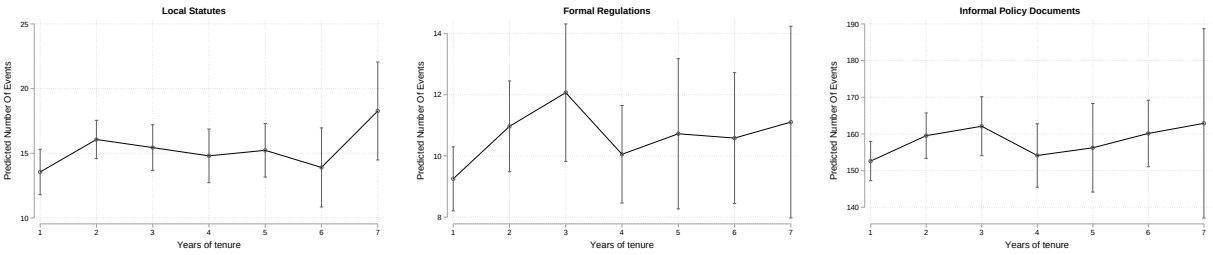
(a) Mayor's Political Cycles



(b) Governor's Political Cycles



(c) Municipal Party Secretary's Political Cycles



(d) Provincial Party Secretary's Political Cycles

Appendices

Appendix 1: Distinguishing between formal regulations and IPDs

Under Chinese law the distinction between formal regulations (FRs) and informal policy directives (IPDs) is black and white. Procedurally, since the enactment of the Law on Legislation in 2000, all FRs are issued as decrees (*ling*) in the names of the chief executive—at the provincial and city levels, governors and mayors. They are consecutively numbered and always published.

Substantively, six features of FRs distinguish them from IPDs:[42]

1. *Internal approval procedures*. FRs generally must be deliberated during meetings of the heads of the each lawmaking entity (e.g. provincial or city PG), and signed by and issued in the name of the head of the entity. By contrast, IPDs may not go through such deliberation, and are generally issued in the name of institutions and not of their chief executives.
2. *Public comment*. Drafts of proposed FRs must be published to solicit public comments, whereas public notice and comment is at most recommended and never required for IPDs.
3. *Publications*. FRs must be published to take effect. IPDs are often distributed only internally in the government bureaucracy.
4. *Non-retroactivity*. FRs are generally not permitted to have retroactive effect, unless they are "favorable to regulated subjects". By contrast, because IPDs do not have binding legal effect, are often intended to be merely interpretive, and/or state non-binding policy positions, they are not subject to explicit non-retroactivity requirements.
5. *Pre-enforcement review*. FRs are reviewable for their legality through non-judicial channels independently of their specific implementation; that is, pre-enforcement review of a problematic regulation can be sought from a superior agency or legislative entity, instead of waiting for a specific government action, challengeable in court, to be taken. By contrast, precisely because IPDs are not supposed to have the binding force of law, there is no mechanism for pre-enforcement review.
6. *Effect upon adjudication*. FRs constitute law in the sense that they are binding on courts, unless they conflict with laws of superior status. If a formal regulation is found by a court to conflict with higher law, the court must initiate non-judicial, legislative mechanisms for determining the legality of the regulation. Prior to such determination, courts generally do not have the choice of not applying an FR. However, courts, in reaching judgements, may decline to apply an IPD if it is deemed unreasonable. FRs are thus entitled to a high level of judicial deference. Moreover, FRs have superior legal effect over any IPD.

Like the administrative states in most other countries, Chinese executive branch agencies issue a whole slew of administrative guidance, interpretative documents, and informal policy statements that are intended to be generally enforced and complied with. However, IPDs are usually issued pursuant to agency protocols that also govern the issuance and transmission of internal documents that do not purport to have policy significance. The release of such internal documents to the public is not systematic and thus IPDs are generally not consecutively numbered.

[42] The features characterize FRs adopted at all levels of government. Variations in the frequencies of FR adoption thus cannot be explained by variations in procedural requirements.

While IPDs do not bind courts, courts may defer to the government positions stated in IPDs for a variety of reasons. The most common reason is that policy positions in formal laws and regulations are highly abstract or ambiguous, and detailed policy positions are developed only through IPDs. In such circumstances, it is unlikely that that the IPD would be in explicit conflict with superior law. Therefore, in applying the law, courts tend to defer to agency policy expertise and lack incentives to challenge agency policy. This is especially the case because the Chinese judiciary is of the civil law variety, and Chinese judges, unlike common law judges, generally do not set precedents.

Appendix 2: Construction of Dependent Variables

This appendix discusses the construction of our dataset on provincial and city statutes (LS), FRs, and IPDs.

The data on LS and FR from Chinalawinfo is straightforward as each type of instrument is identified consistently through numbering conventions adopted by the promulgating entities. In particular, an FR is identified by a governor or mayor decree (*ling*), and thus unmistakably distinct from IPDs. If a given legal instrument carries out the amendment of multiple prior laws, we count the instrument as one rather than multiple instances of lawmaking.

Because the classification of IPDs is inherently problematic, the measurement of IPDs is imprecise. While some national ministries have adopted the practice of issuing all policy documents of public relevance using a single format, few subnational governments have done so. And although Chinalawinfo's search function for "normative documents" (*guifanxing wenjian*) allows one to separate an executive branch entity's IPDs from its FRs, some of the documents generated by this type of search do not have policy significance.

The challenge of distinguishing between IPDs and other non-policy documents can be illustrated by one example. Consider announcements from the Shandong Provincial People's Government (PPG). The Shandong PPG issues multiple series of documents each year, including (a) *luzhengfa* (Shandong Government Issuance); (b) *luzhengzi* (Shandong Government Text); (c) *luzhengbanfa* (Shandong Government Secretariat Issuance); (d) *luzhengbanzi* (Shandong Government Secretariat Text); and (e) other types of issuances, including appointments, notices of meetings, telegrams, etc. Two distinctions are notable. First, it matters whether a document is issued under the name of the PPG—which means that it may have been approved by the committee of governors or at least one deputy governor—or whether it is an issuance of the PPG Secretariat. The latter may still be important, given that it comes from the province's central executive office, but it carries less weight than PPG documents. Thus (a) has greater weight than (c), and (b) has greater weight than (d). Second, it matters whether a document is intended for general circulation or addresses more specific readers. The former is more likely to state policy matters, and documents in categories (a) and (c) tend to conform to this type.

Nonetheless, documents in categories (a)-(e) may all advance policy positions; they simply do so with differing probability. None of these categories relates exclusively to the announcement and interpretation of policy and rules with general applicability. Unless a government agency or entity chooses to issue all and only its policy documents in a single format (or set of formats), the next best method for distinguishing between documents with and without policy relevance would be very crude, which is to simply see if the agency publishes them. For example, the rate of publication rate is the lowest for category (e).

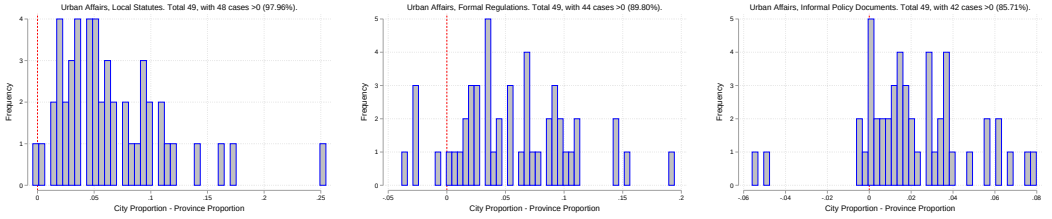
Therefore, measuring IPDs faces the dual problems of completeness and noise: some genuine IPDs may not be published (since publication is not always a requirement of their effectiveness); some government issuances that do not have general applicability may be included in our original data source as IPDs (a problem aggravated in recent years due to open government initiatives). Notwithstanding these problems—which we address in the ways discussed in Section 2—we gathered all IPDs issued by the relevant provincial and city PGs, and classified them (>160,000) according to their titles.

Appendix 3 Topic Classification scheme

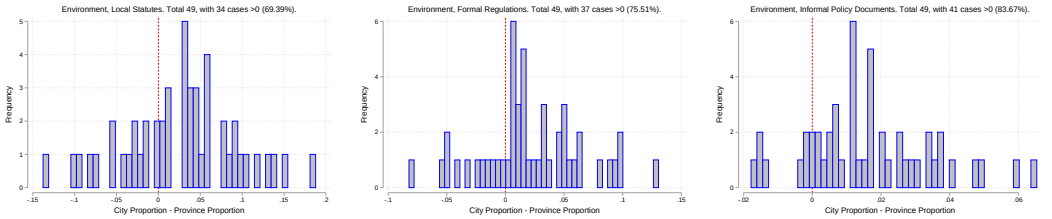
Public goods and services	General public regulation	Administration and general governance	Market regulation	Economic construction
1. 水利: water conservancy and irrigation 2. 财政税收: tax and public finance 3. 征收拆迁: takings and relocation 4. 社会扶助: social assistance 5. 医疗: medical and health care 6. 社会保障: social security 7. 科技: science and technology 8. 教育: education 9. 文化文物文史: culture, relic and history 10. 体育: sports	11. 市政: Urban affair 12. 劳动就业: labor and employment 13. 人口婚姻: population and marriage 14. 卫生: public health 15. 组织管理: regulation of organization 16. 社会安全: public safety 17. 公共信息: public information 18. 环境: environment	19. 依法行政: administration according to law 20. 人事: personnel 21. 文件清理: archiving and cancelling documents 22. 信访: letters and visits 23. 绩效: performance measurement 24. 应急: emergency response 25. 外事: foreign affairs	26. 市场管理: regulation of markets 27. 知识产权与市场竞争: IP and market competition 28. 食品药品: food and drugs 29. 农林渔牧: agriculture, forestry, fishery and husbandry 30. 矿产与能源: minerals and energy 31. 建筑与房地产: construction and real estate 32. 工业: manufacturing 33. 对外经贸: trade 34. 一般服务业: general services 35. 法律服务: legal services 36. 交通运输: transportation 37. 金融: finance	38. 经济发展: economic development 39. 国有资产: state assets

Appendix 4

Figure 1: City specialization

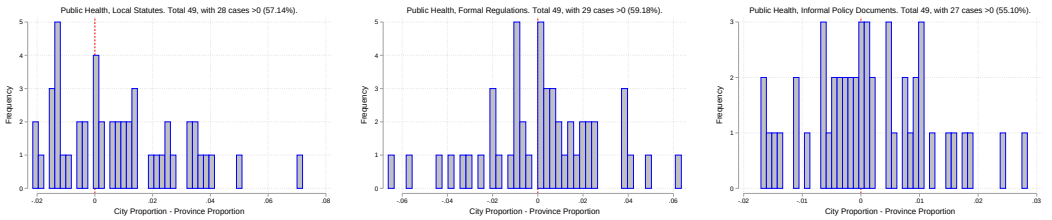


(a) Urban affairs

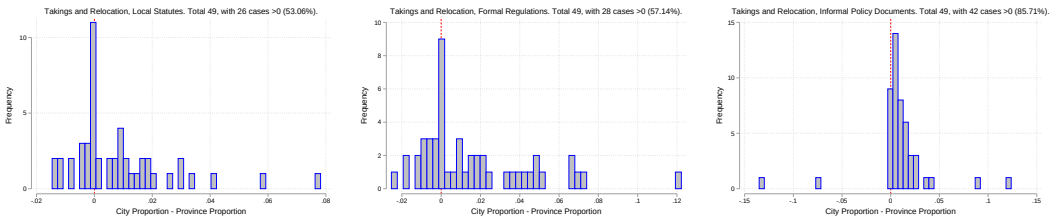


(b) Environment

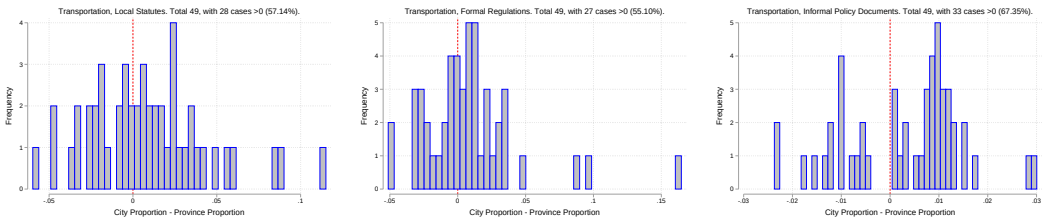
(c) Construction and Real Estate



(d) Public Health, Local Statutes



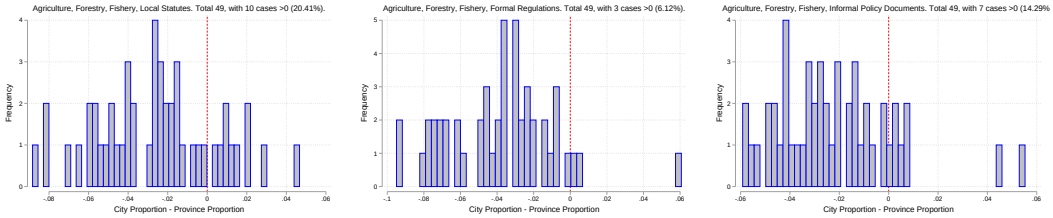
(e) Takings and Relocation



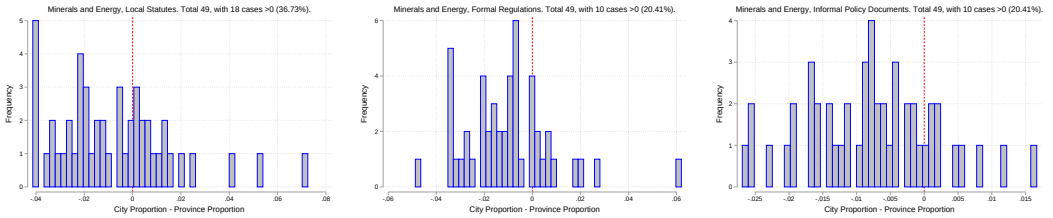
(f) Transportation

We calculate the difference between a city's proportion of an instrument devoted to a given topic and the proportion observed in the province in which the city is located. The graphs visualize the distribution of the difference for 49 cities. Positive differences are interpreted as greater policy attention from a city than its province.

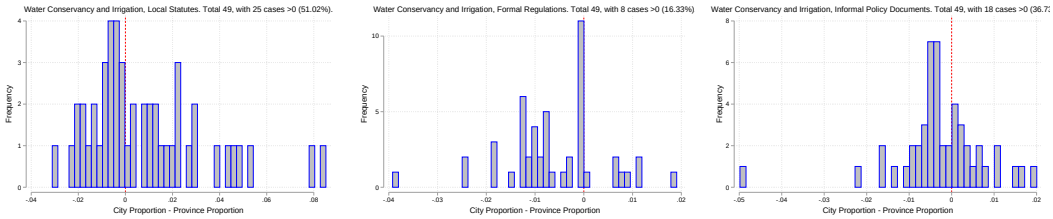
Figure 2: Provincial Specialization



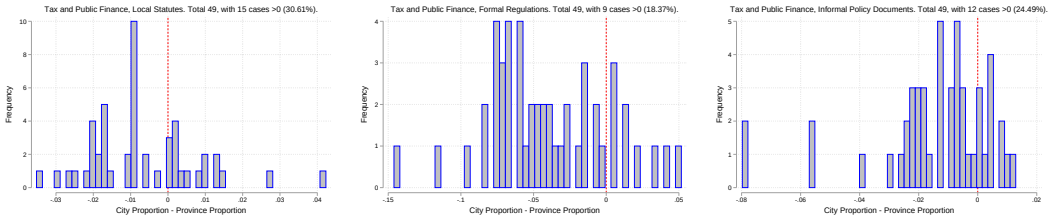
(a) Agriculture, Forestry, Fishery



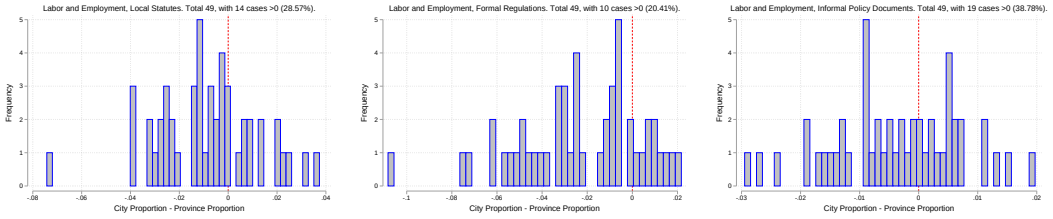
(b) Minerals and Energy



(c) Water Conservancy and Irrigation



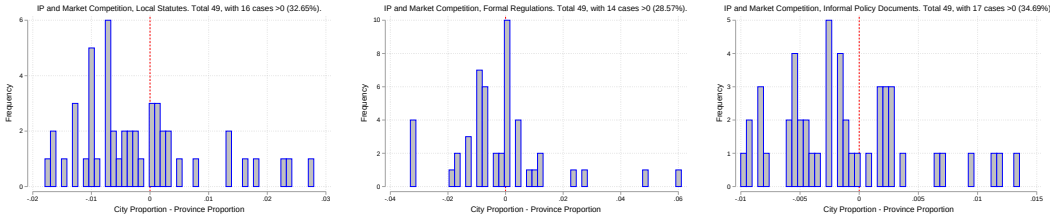
(d) Tax and Public Finance



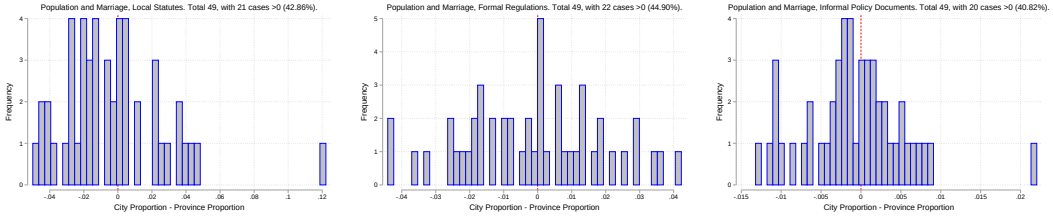
(e) Labor and Employment

We calculate the difference between a city's proportion of an instrument devoted to a given topic and the proportion observed in the province in which the city is located. The graphs visualize the distribution of the difference for 49 cities. Negative differences are interpreted as lesser policy attention from a city than its province.

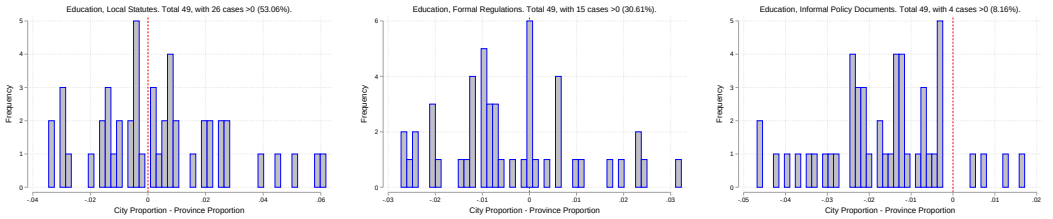
Figure 2 (cont.)**:** Provincial Specialization



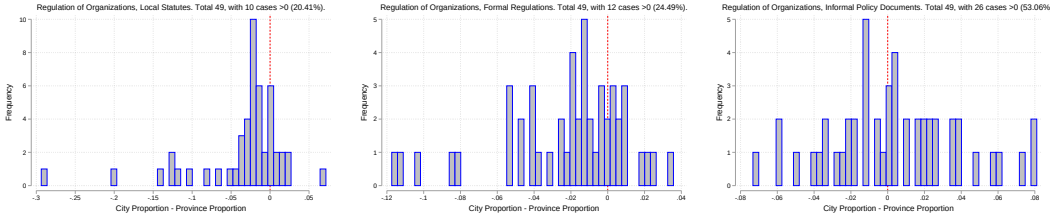
(a) IP and Market Competition



(b) Population and Marriage



(c) Education



(d) Regulation of Organizations

Appendix 5

Table 1: Determinants of published policy documents: province level. Negative Binomial regressions.

	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	-0.568	0.500	0.674	-1.483	-0.183	-0.161	0.478	3.508*	-0.665	-0.367	-0.195	-0.732
	[0.622]	[0.561]	[0.639]	[1.462]	[0.696]	[0.859]	[1.034]	[2.074]	[0.611]	[0.636]	[0.727]	[0.710]
GDP (100 thousands of millions)	-0.425	-0.236	-0.110	-1.002	-0.199	0.543	0.300	1.252	-0.019	0.280	0.267	-0.591**
	[0.355]	[0.567]	[0.518]	[1.150]	[0.303]	[0.514]	[0.484]	[1.223]	[0.352]	[0.316]	[0.322]	[0.248]
Public expenditure (100 millions)		0.383	0.349	1.012		-0.266	-0.070	0.673		0.358	0.195	0.530**
		[0.568]	[0.509]	[0.782]		[0.376]	[0.353]	[1.079]		[0.223]	[0.210]	[0.246]
Gov. employees (10,000s)		-0.422	-0.792**	-1.434		-0.110	-0.621	-4.989**		-0.439**	-0.669***	-0.109
		[0.338]	[0.396]	[1.550]		[0.448]	[0.426]	[1.946]		[0.214]	[0.195]	[0.507]
Fixed asset investments (100 thousands of millions)		-0.122	-0.032	-0.727		-0.253	-0.226	-1.448**		-0.288**	-0.075	-0.125
		[0.203]	[0.220]	[0.559]		[0.278]	[0.284]	[0.697]		[0.142]	[0.150]	[0.200]
Public sector employees (10,000s)			0.349	-1.589			1.171*	-0.972			0.448	-0.621*
			[0.589]	[1.234]			[0.613]	[1.411]			[0.324]	[0.348]
Above size ind. firms (00s)			-0.167	-0.522*			0.080	0.232			-0.113	0.035
			[0.115]	[0.293]			[0.162]	[0.440]			[0.082]	[0.103]
FDI (100 millions)			-0.077*	-0.026			-0.013	0.361***			-0.018	-0.023
			[0.045]	[0.173]			[0.048]	[0.131]			[0.036]	[0.057]
Urban area (00s Sq. km)				-0.654				-1.342**				-0.472
				[0.846]				[0.631]				[0.304]
Ratio of Urban Population (%)				0.045				0.011				0.019
				[0.061]				[0.056]				[0.016]
Lawyers per-millions of inhabitants				0.383*				0.342				0.153***
				[0.208]				[0.295]				[0.053]
Observations	491	401	364	172	491	401	364	170	491	401	364	167
Pseudo-R2	0.07	0.08	0.08	0.09	0.08	0.08	0.09	0.12	0.12	0.13	0.14	0.19

Results estimated using the Negative Binomial regression model with region and year FEs. Independent variables are in logs. The sample contains 31 provinces and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Individual years are used in these regressions. Some independent variables data is not available for all the years, especially for 2014 and 2015. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the province level reported in brackets.

Table 2: Determinants of published policy documents: city level. Negative Binomial regressions.

	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	-0.066	-0.199	-0.077	0.134	0.301	0.191	-0.377	-0.004	-1.715**	-1.209*	-0.950	-0.686
	[0.482]	[0.453]	[0.612]	[0.737]	[0.378]	[0.431]	[0.721]	[0.967]	[0.697]	[0.652]	[0.830]	[0.880]
GDP (100 thousands of millions)	0.106	0.161	0.264	0.238	-0.091	-0.019	-0.107	-0.251	0.028	0.283	-0.449	-0.726
	[0.211]	[0.216]	[0.285]	[0.314]	[0.227]	[0.248]	[0.383]	[0.388]	[0.669]	[0.807]	[1.256]	[1.336]
Above size ind. firms (00s)		-0.144	-0.136	-0.129		-0.189*	-0.106	-0.051		-0.300	-0.299	-0.414
		[0.129]	[0.157]	[0.178]		[0.098]	[0.121]	[0.128]		[0.335]	[0.355]	[0.329]
Public sector employees (10,000s)		0.117	0.169	0.036		0.100	0.354**	0.376*		-0.381	-0.130	0.032
		[0.164]	[0.168]	[0.152]		[0.119]	[0.169]	[0.207]		[0.274]	[0.334]	[0.396]
FDI (100 millions)			-0.067	-0.028			-0.047	-0.047			0.110	0.077
			[0.051]	[0.044]			[0.057]	[0.055]			[0.105]	[0.103]
Public expenditure (100 millions)			-0.029	-0.187			0.347	0.263			0.888*	0.739
			[0.299]	[0.344]			[0.342]	[0.392]			[0.494]	[0.534]
Urban area (00s Sq. km)			-0.205	-0.232			-0.168	-0.257			-0.518	-0.556
			[0.235]	[0.248]			[0.169]	[0.191]			[0.318]	[0.357]
Ratio of Urban Population (%)				0.018**				-0.001				-0.000
				[0.009]				[0.006]				[0.011]
Fixed asset investments (100 thousands of millions)				0.318**				0.225				0.805**
				[0.158]				[0.142]				[0.347]
Observations	760	760	541	456	760	760	540	455	759	759	540	454
Pseudo-R2	0.12	0.12	0.12	0.13	0.11	0.11	0.11	0.12	0.09	0.09	0.10	0.11

Results estimated using the Negative Binomial regression model with region and year FEs. Independent variables are in logs. The sample contains 49 cities and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Individual years are used in these regressions. Some independent variables data is not available for all the years, especially for 2014 and 2015. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the city level reported in brackets.

Table 3: Determinants of published policy documents: province level. OLS regressions.

	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	0.2703***	0.6710***	0.5102**	0.3577	0.0688	0.1344	-0.0766	0.1051	1.5532*	7.8609***	9.2342***	8.7428*
	[0.0858]	[0.2146]	[0.2270]	[0.3255]	[0.0713]	[0.1789]	[0.2274]	[0.2221]	[0.8939]	[2.2589]	[2.8954]	[4.9319]
GDP (100 thousands of millions)	0.1804	-0.0081	-0.2010	0.1281	0.5504***	0.5718***	0.4559***	0.3189	-1.1414	-2.4611*	-0.9320	-2.6623
	[0.1511]	[0.1603]	[0.1587]	[0.4054]	[0.1219]	[0.1139]	[0.1568]	[0.2802]	[1.4025]	[1.4281]	[1.8418]	[4.5438]
Public expenditure (100 millions)		0.0062	0.0034	0.0077		0.0001	0.0006	0.0000		-0.0232	-0.0057	-0.0428
		[0.0041]	[0.0043]	[0.0055]		[0.0023]	[0.0022]	[0.0031]		[0.0345]	[0.0400]	[0.0530]
Gov. employees (10,000s)		-0.6546***	-0.6872***	-0.4918		-0.1413	-0.2660	-0.1900		-9.1071***	-8.8717***	-11.2908***
		[0.2114]	[0.2015]	[0.4491]		[0.1702]	[0.1625]	[0.2196]		[2.7477]	[2.7657]	[3.9721]
Fixed asset investments (100 thousands of millions)		-0.3762	-0.2980	-1.0056		0.6331	0.3028	0.2214		12.4267*	13.1113*	20.8402**
		[0.7235]	[0.6849]	[0.8932]		[0.6366]	[0.7387]	[0.7291]		[6.7589]	[6.6951]	[8.4915]
Public sector employees (10,000s)			0.0498	0.0311			0.0643	0.0066			-0.3562	0.1284
			[0.0342]	[0.1142]			[0.0457]	[0.0502]			[0.6167]	[1.3905]
Above size ind. firms (00s)			-0.0218	-0.0186			0.0500	0.0461			-0.0171	0.0474
			[0.0322]	[0.0344]			[0.0362]	[0.0409]			[0.2695]	[0.2847]
FDI (100 millions)			0.1468**	0.0509			-0.0313	-0.0261			-0.8838	0.8629
			[0.0682]	[0.1602]			[0.0792]	[0.1005]			[0.9405]	[1.6888]
Urban area (00s Sq. km)				0.2046				0.0780				-3.3253
				[0.2108]				[0.0900]				[2.2007]
Ratio of Urban Population (%)				-0.0080				0.0706				-4.6313
				[0.7912]				[0.3151]				[5.5879]
Lawyers per-millions of inhabitants				-0.0326				0.0085				0.3212*
				[0.0253]				[0.0143]				[0.1732]
Observations	124	116	116	86	124	116	116	86	124	116	116	86
Adj. R2	0.14	0.17	0.17	0.15	0.22	0.25	0.26	0.24	0.30	0.41	0.40	0.24

Results estimated using Ordinary Least Squares (OLS) with year FEs. All variables are in levels. The sample contains 31 provinces and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Years are binned into 4 time periods: 2000-2003, 2004-2007, 2008-2011, 2012-2015. Dependent variables are computed by adding the four years of each group. Independent variables are calculated by averaging the values of the correspondent variable within each time period. Some independent variables data is not available for all the years, especially for 2014 and 2015. Those missing values cases are ignored when averaging the variables. Hence, only if the four years of a time period are missing, the transformed observation is also considered as a missing value. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the province level reported in brackets.

Table 4: Determinants of published policy documents: city level. OLS regressions.

	LS				FR				IPD			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Population (millions)	-0.5834	-1.1376***	-1.0124**	-0.7113	0.3595	-0.2794	0.1948	1.0029	12.2405*	12.3459	14.2648*	-2.8046
	[0.5297]	[0.3880]	[0.3986]	[0.4411]	[0.6429]	[0.4978]	[0.4806]	[0.7141]	[7.0381]	[7.6337]	[8.0390]	[9.6252]
GDP (100 thousands of millions)	1.8927***	-1.8315***	-3.6064***	-5.7757***	1.7995**	-1.2226	-4.8997**	-7.8671***	19.2999**	-48.3625***	-54.0878**	-94.3446**
	[0.5289]	[0.5589]	[1.2496]	[1.8393]	[0.7111]	[1.1425]	[1.8569]	[1.9235]	[9.4748]	[15.4475]	[25.4519]	[39.8228]
Total area (00s Sq. km)		-0.0046	-0.0040	-0.0012		0.0066	0.0048	0.0087		-0.3571**	-0.3765**	-0.3522***
		[0.0085]	[0.0090]	[0.0093]		[0.0207]	[0.0212]	[0.0244]		[0.1548]	[0.1526]	[0.1229]
Above size ind. firms (00s)		0.0974**	0.0653	0.0756		0.0821	0.1284**	0.0953**		4.8391***	5.5472***	6.1581***
		[0.0375]	[0.0503]	[0.0555]		[0.0595]	[0.0627]	[0.0385]		[1.0095]	[0.8193]	[1.1793]
Public sector employees (10,000s)		0.1476***	0.1258***	0.1125***		0.1249***	0.0507	0.0853*		1.4781**	1.1841*	1.9039**
		[0.0225]	[0.0257]	[0.0304]		[0.0451]	[0.0495]	[0.0446]		[0.5936]	[0.6525]	[0.7264]
FDI (100 millions)			0.1813**	0.0863			-0.0031	0.0504			-2.0397	-4.7066***
			[0.0693]	[0.0735]			[0.0917]	[0.0949]			[1.5650]	[1.2519]
Public expenditure (100 millions)			0.0090	0.0436*			0.0306***	0.0671***			0.0995	0.2624
			[0.0089]	[0.0235]			[0.0109]	[0.0165]			[0.3002]	[0.3197]
Urban area (00s Sq. km)			0.7349	-0.7475			3.1369***	0.8639			16.6387	17.4009
			[1.1833]	[1.4281]			[1.0192]	[1.1415]			[27.5708]	[29.1491]
Ratio of Urban Population (%)				0.1086				0.1470*				-0.3685
				[0.0688]				[0.0780]				[1.2881]
Fixed asset investments (100 thousands of millions)				0.8760				-2.1926				90.2585*
				[1.5529]				[1.5981]				[51.0084]
Observations	192	192	192	164	192	192	192	164	192	192	192	164
Adj. R2	0.13	0.24	0.26	0.25	0.16	0.23	0.28	0.35	0.38	0.50	0.51	0.57

Results estimated using Ordinary Least Squares (OLS) with year FEs. All variables are in levels. The sample contains 49 cities and 16 years (2000-2015). In IPD regressions, the subject Personnel Data is excluded when counting the total number of instruments of each province; while in LS-FR regressions, the subject Archiving and Cancelling documents is excluded. Additionally, within each type of instrument, the top 1% of observations (region-year level) with most documents are excluded from the regressions. Years are binned into 4 time periods: 2000-2003, 2004-2007, 2008-2011, 2012-2015. Dependent variables are computed by adding the four years of each group. Independent variables are calculated by averaging the values of the correspondent variable within each time period. Some independent variables data is not available for all the years, especially for 2014 and 2015. Those missing values cases are ignored when averaging the variables. Hence, only if the four years of a time period are missing, the transformed observation is also considered as a missing value. *** p-value < 0.01, ** p-value < 0.05 and * p-value < 0.10. Clustered standard errors at the city level reported in brackets.