**Online Supporting Information for “Bureaucratic Control and Strategic Compliance: How Do Subnational Governments Implement Central Guidelines in China?”**

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**Table B1: Pooled Event History Analysis after Including Policy Field Fixed Effects**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Degree of Control | -0.118 | -0.857\*\*\* | -0.201\*\* | -0.146 |
| (standardized) | (0.210) | (0.000) | (0.029) | (0.103) |
| Provincial Revenue  Control |  | -0.361\*\*\* |  |  |
|  | (0.000) |  |  |
| Mobilization |  |  | 0.556\*\* |  |
|  |  | (0.014) |  |
| Monitoring |  |  |  | 0.336 |
|  |  |  | (0.214) |
| Provincial Revenue | -0.181 | -0.249\*\* | -0.140 | -0.175 |
| (log form) | (0.116) | (0.013) | (0.209) | (0.129) |
| Mobilization | 0.362 | 0.294 | 0.394\* | 0.355 |
|  | (0.106) | (0.183) | (0.063) | (0.103) |
| Monitoring | 0.358\*\* | 0.341\* | 0.397\*\* | 0.404\*\* |
|  | (0.043) | (0.055) | (0.014) | (0.040) |
| Guideline Level | 0.968\*\*\* | 0.959\*\*\* | 0.836\*\*\* | 0.886\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Topic Salience | 7.113\*\* | 7.435\*\* | 8.626\*\* | 6.959\*\* |
|  | (0.038) | (0.027) | (0.017) | (0.043) |
| Guideline Length | 0.063 | 0.072 | 0.106 | 0.107 |
|  | (0.447) | (0.364) | (0.206) | (0.270) |
| Age\_Party\_Chief | -0.450\*\*\* | -0.453\*\*\* | -0.452\*\*\* | -0.451\*\*\* |
|  | (0.000) | (0.000) | (0.000) | (0.000) |
| Age\_Governor | 0.284\*\*\* | 0.298\*\*\* | 0.291\*\*\* | 0.287\*\*\* |
|  | (0.009) | (0.007) | (0.007) | (0.008) |
| Sameplace\_Party\_Chief | -0.078 | -0.084 | -0.102 | -0.086 |
| (0.701) | (0.684) | (0.625) | (0.677) |
| Sameplace\_Governor | -0.057 | -0.046 | -0.057 | -0.056 |
|  | (0.576) | (0.654) | (0.573) | (0.577) |
| Central Region | -0.127 | -0.144 | -0.087 | -0.126 |
|  | (0.489) | (0.445) | (0.627) | (0.491) |
| West Region | -0.172 | -0.188 | -0.124 | -0.167 |
|  | (0.311) | (0.272) | (0.453) | (0.327) |
| Northeast Region | -0.318\* | -0.336\* | -0.299 | -0.310 |
|  | (0.094) | (0.081) | (0.109) | (0.101) |
| Product Quality | -0.041 | 0.021 | 0.133 | 0.036 |
| & Commerce | (0.897) | (0.944) | (0.679) | (0.910) |
| Natural Resources | -0.255 | -0.269 | -0.301 | -0.274 |
| & Land | (0.358) | (0.319) | (0.261) | (0.322) |
| Environment Protect | -0.448\* | -0.425\* | -0.334 | -0.400 |
|  | (0.090) | (0.086) | (0.191) | (0.134) |
| Healthcare | -0.326 | -0.298 | -0.178 | -0.242 |
|  | (0.174) | (0.163) | (0.431) | (0.311) |
| AIC | 2519.661 | 2504.119 | 2510.452 | 2518.298 |
| Pseudo R2 | 0.2740 | 0.2792 | 0.2773 | 0.2750 |
| Observations | 2,763 | 2,763 | 2,763 | 2,763 |

Note: We did not report the estimates for constant and time dummies in the Table due to space limit. Observations are clustered by 42 central guidelines. P-values are enclosed in parentheses. Policy field “Safety inspection” and region dummy “East region” are reference groups and omitted in the table. Notably, the independent effect of degree of control appears to be insignificant in Model 1. However, after we add interaction terms in the model, the results (graphically shown in Panels E and Panel F of Figure A1) become substantially similar to our previous findings. ∗∗∗ p < 0.01, ∗∗ p < 0.05, ∗ p < 0.1.

**Table B2: Heckman Selection Model after Including Policy Field Fixed Effects**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1:  Straight Measure of  Content Coverage | | Model 2:  Refined Content Coverage after Removing Formulaic Sentences | |
| Variable | Selection | Outcome | Selection | Outcome |
| Degree of control | -0.136\* | -0.044\* | -0.126 | -0.048\* |
| (standardized) | (0.095) | (0.081) | (0.108) | (0.097) |
| Mobilization | 0.150 | 0.033 | 0.118 | 0.037 |
|  | (0.332) | (0.472) | (0.429) | (0.462) |
| Monitoring | 0.225\* | 0.063 | 0.223\* | 0.072 |
|  | (0.084) | (0.145) | (0.064) | (0.139) |
| Provincial Revenue | -0.105 | -0.044\*\* | -0.113\* | -0.059\*\*\* |
| (log form) | (0.123) | (0.015) | (0.087) | (0.006) |
| Guideline Length | 0.091\* | 0.015 | 0.092\* | 0.014 |
|  | (0.082) | (0.337) | (0.070) | (0.439) |
| Topic Salience | 4.321\*\*\* | 1.211\*\* | 4.598\*\*\* | 1.376\*\* |
|  | (0.007) | (0.020) | (0.004) | (0.017) |
| Age\_Governor | 0.174\*\*\* | 0.063\*\*\* | 0.167\*\*\* | 0.068\*\*\* |
|  | (0.003) | (0.001) | (0.005) | (0.002) |
| Sameplace\_ Party\_Chief | -0.062 | 0.008 | -0.061 | 0.012 |
| (0.520) | (0.786) | (0.539) | (0.709) |
| Sameplace\_Governor | -0.065 | -0.031\*\* | -0.058 | -0.036\*\* |
|  | (0.206) | (0.021) | (0.267) | (0.023) |
| Central Region | 0.080 | 0.001 | 0.077 | 0.002 |
|  | (0.411) | (0.960) | (0.417) | (0.955) |
| West Region | 0.025 | -0.004 | 0.006 | -0.010 |
|  | (0.779) | (0.887) | (0.942) | (0.762) |
| Northeast Region | -0.105 | -0.038 | -0.113 | -0.044 |
|  | (0.310) | (0.220) | (0.268) | (0.245) |
| Product Quality  & Commerce | 0.016 | 0.022 | 0.016 | 0.015 |
| (0.940) | (0.714) | (0.941) | (0.820) |
| Natural Resources  & Land | 0.069 | 0.013 | 0.037 | -0.005 |
| (0.784) | (0.865) | (0.875) | (0.957) |
| Environment | -0.286 | -0.079 | -0.283\* | -0.101 |
| Protection | (0.109) | (0.150) | (0.092) | (0.107) |
| Healthcare | 0.001 | 0.024 | -0.006 | 0.025 |
|  | (0.994) | (0.659) | (0.969) | (0.688) |
| Age\_Party\_Chief | -0.043\* |  | -0.054\* |  |
|  | (0.069) |  | (0.080) |  |
| Guideline Level | 0.049 |  | 0.069 |  |
|  | (0.154) |  | (0.154) |  |
| Total Obs. | 2,763 | 2,763 | 2,763 | 2,763 |
| Uncensored Obs. | 2,763 | 848 | 2,763 | 848 |
| Chi2(Wald Test: =0) |  | 121.13\*\*\* |  | 24.10\*\*\* |

Note: We did not report the estimates for constant and time dummies in the table due to space limit. Observations are clustered by 42 central guidelines. P-values are enclosed in parentheses. Region dummy “East region” and Policy field dummy “Safety inspection” are reference groups and omitted in the table.

∗∗∗ p < 0.01, ∗∗ p < 0.05, ∗ p < 0.1.

**Table B3: Steps to Identity and Remove Formulaic Sentences in Central Guidelines**

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| --- |
| 1. For each of the 42 central guidelines, randomly select 50 provincial documents which do NOT belong to the policy domain of, thus being irrelevant to, the specific central guideline. For example, if a central guideline is about environment protection, then randomly choose 50 provincial documents which are NOT about environment protection. |
| 1. Use automated text segmentation tool (We use a Python module *Jieba* in our research) to divide each central guideline and each provincial document into sentences and to continue cutting each sentence into words/phrases. |
| 1. Utilize the Longest Common Subsequence (LCS) algorithm to compare each sentence of a central guidelines (i.e. central sentence) with all the sentences of the 50 provincial documents we have randomly selected, and pick in each provincial document the sentence which reiterates maximum content of the central sentence. |
| 1. For each sentence of a central guideline, calculate the pseudo content coverage by examining how the central sentence is reiterated by the 50 provincial documents which are irrelevant to the central guideline. For the ith sentence in central guideline C, let denote the number of words/phrases in sentence i which are reiterated by provincial document . Let denote the total number of words/phrases in sentence i. Therefore, for sentence i, the pseudo content coverage equals to: |
| 1. Considering that longer sentences tend to have lower pseudo content coverage, adjusting the original value of pseudo content coverage is possible through the following steps:    1. On the basis of the length of each sentence, categorize central sentences, from the shortest to the longest, into 12 groups.    2. Calculate the average pseudo content coverage in each group.    3. Divide the original value of pseudo content coverage by the average pseudo content coverage in the group to which the central sentence belongs. |
| 1. Identify the central sentences which have high adjusted pseudo content coverage (select a threshold value, which equals 1.3 in our research). Label such sentences as “formulaic sentences.” 2. Delete sentences labeled as “formulaic sentences” in the central guidelines. |

**Table B4: Examples of Formulaic Sentences in Central Guidelines**

|  |  |
| --- | --- |
| Chinese | English Translation |
| “Formulaic sentences” are sentences in the central guidelines the most part of which   1. are too general to be issue-specific 2. and are repeatedly mentioned by different implementation documents. | |
| 地方各级人民政府要加强组织领导，把药品安全工作纳入重要议事日程，切实担负起保障本地区药品安全的责任。 | Local governments at all levels should strengthen organization and leadership, put drug safety high on the agenda, and take the responsibility to ensure drug safety in their jurisdictions. |
| 地方各级人民政府要加强领导，把这项工作纳入重要议事日程，建立领导责任制，切实抓好各项措施的落实。 | Local governments at all levels should strengthen leadership, put the task high on the agenda, establish leader responsibility system, and ensure the adoption of various measures. |
| 各地要高度重视，坚决把思想统一到党中央、国务院决策部署上来…确保规范土地出让收支管理政策的贯彻落实。 | All regions should attach great importance to the issue, bring their thoughts in line with the arrangements of central government, and ensure the enforcement of the policy to regulate the use of land sale revenue. |
| 各地区、各部门要充分认识节能减排的重要性和紧迫性，真正把思想和行动统一到中央关于节能减排的决策和部署上来。 | All regions and departments should understand the importance and urgency of energy saving and carbon emission reduction, bring their thoughts and actions in line with the arrangements of central government in energy saving and carbon emission reduction. |
| 坚持以邓小平理论和“三个代表”重要思想为指导，认真贯彻党的十六大精神，把食品安全工作放在突出位置抓紧抓好。 | (Local governments) should adhere to the guidance of Deng Xiaoping Theory and the important thought of “Three Represents,” keep in line with the spirit of the 16th National Congress of the CPC and put food safety as a top priority in daily work. |
| 以邓小平理论和“三个代表”重要思想为指导，深入贯彻党的十六大精神…加强农业标准化工作，促进农业增效、农民增收和农村经济全面发展。 | (Local governments) should adhere to the guidance of Deng Xiaoping Theory and the important thought of “Three Represents;” keep in line with the spirit of the 16th National Congress of the CPC; enhance the work in Agricultural Standardization; and boost agriculture, people’s income and economic conditions in the rural areas. |

**Table B5: Rerunning Pooled Event History Analysis on Two Subsamples**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Degree of Control< Median | Degree of Control  >= Median | Degree of Control  Whole Sample |
|  | Model 1 | Model 2 | Model 3 |
| Degree of Control | -0.302 | -0.375\*\* | -0.153\* |
|  | (0.544) | (0.025) | (0.083) |
| Provincial Revenue | 0.156 | -0.532\*\*\* | -0.181 |
|  | (0.226) | (0.001) | (0.112) |
| Mobilization | 0.418 | 0.717\*\*\* | 0.471\*\* |
|  | (0.178) | (0.004) | (0.028) |
| Monitoring | 0.178 | 0.417\*\* | 0.351\*\* |
|  | (0.456) | (0.033) | (0.040) |
| Guideline Level | 1.096\*\*\* | 0.522 | 0.949\*\*\* |
|  | (0.000) | (0.100) | (0.000) |
| Topic Salience | 5.207 | 10.840\*\* | 6.934\* |
|  | (0.319) | (0.035) | (0.058) |
| Guideline Length | 0.092 | 0.064 | 0.002 |
|  | (0.361) | (0.740) | (0.984) |
| Age\_Party\_Chief | -0.417\*\*\* | -0.488\*\*\* | -0.448\*\*\* |
|  | (0.001) | (0.000) | (0.000) |
| Age\_Governor | 0.184 | 0.362\*\* | 0.291\*\*\* |
|  | (0.215) | (0.028) | (0.008) |
| Sameplace\_Party\_Chief | 0.294 | -0.515 | -0.073 |
| (0.259) | (0.123) | (0.720) |
| Sameplace\_Governor | -0.182 | 0.077 | -0.060 |
|  | (0.168) | (0.646) | (0.556) |
| Central Region | 0.252 | -0.513 | -0.126 |
|  | (0.196) | (0.126) | (0.492) |
| West Region | 0.164 | -0.498\*\* | -0.176 |
|  | (0.449) | (0.033) | (0.294) |
| Northeast Region | -0.059 | -0.601\* | -0.322\* |
|  | (0.810) | (0.054) | (0.086) |
| Pseudo R2 | 0.2674 | 0.3010 | 0.2709 |
| Observations | 1,349 | 1,414 | 2,763 |

Note: We split the 42 central guidelines into two subsamples. One subsample contains all central guidelines whose degree of control exceeds the median, and the other subsample contains all the remaining central guidelines. We rerun the pooled event history analysis respectively on two subsamples. The table shows that bureaucratic control significantly decreases the compliance of provincial governments in the subsample which contains all the central guidelines with control level higher than the median. The results hint that the negative impact of bureaucratic control on the odds of subordinates to release implementation documents might intensify as the degree of bureaucratic control keeps growing. We did not report the estimates for constant and time dummies in the table due to space limit. Observations are clustered by 42 central guidelines. P-values are enclosed in parentheses. ∗∗∗ p < 0.01, ∗∗ p < 0.05, ∗ p < 0.1.

**Table B6: Procedure of Searching for Provincial Implementation Documents Corresponding to the Central Guidelines**

|  |
| --- |
| In this research, we use the “advance search” function in pkulaw.cn to search for provincial implementation documents corresponding to each central guideline. Here are the steps:   1. Select two keywords (or more than two keywords if the title is very long) from the title of a central guideline. Use the “advance search” in pkulaw.cn to find all the provincial documents the titles of which contain the above two keywords within five years after the release of the central guideline. 2. Among the searching results, if there are provincial documents the titles of which are highly similar to the central guideline, then we label these documents as the implementation documents corresponding to the central guideline. 3. For provincial documents the titles of which are not highly similar to the central guideline, we open each document and check the detailed content:    1. If a provincial document clarified in the content that it aims to implement the central guideline, then we label this document as an implementation document.    2. If a provincial document did not mention the central guideline, but its content is highly similar to that of the central guideline, then we label the document as implementation document.    3. Otherwise, the provincial document is not an implementation document. 4. Sometimes, the title of a provincial implementation document might be very different from the corresponding central guideline. Therefore we use an additional searching strategy to make sure we do not miss any important provincial implementation document:    1. We use the “advance search” to find all the provincial documents the content of which contains the title of the central guideline.    2. Among the search results, if a provincial document clarified in the content that it aims to implement the central guideline, then we label it as an implementation document.    3. If a provincial document does not say it aims to implement the central guideline (even though it mentions the central guideline), but its content is highly similar to the central guideline, and it does not clarify to implement any other central guideline, then we label it as an implementation document.    4. Otherwise, the provincial document is not an implementation document. |

Note: Searching process was conducted in June, 2019.

**Table B7: Human Coding Instruction (In Chinese)**

**项目介绍：**

1. 本项目试图人工对2003-2007年间42个社会监管类的中央规范性文件进行编码，由此衡量每一篇中央规范性文件对下级政府部门的“限权”程度(degree of bureaucratic control)。本文所指的社会监管领域包括“环境保护”，“医疗卫生”，“产品与食药质量”，“生产交通安全”，“国土资源”等。
2. “限权”是上级政府对下级政府进行管理的一种模式。“限权”指上级政府通过设定各种规则约束下级政府的自主决策权。
3. 中国的社会监管体系是一个多层级组织(multi-level organization)。上级监管组织（如中央政府）通过发布规范性文件，对下级监管组织（如地方政府）的行为进行管理与规范。在规范性文件中，某些内容属于典型的“限权”政策，旨在对下级政府社会监管方面的自主决策权进行限制。例如，在2004年国务院发布的《关于深化改革严格土地管理的决定》中，明确要求下级政府“在土地利用总体规划和城市总体规划确定的建设用地范围外，不得设立各类开发区(园区)和城市新区(小区)。”
4. 本项目需要对42个中央社会监管类政策中的每一个句子进行编码，分别判断一个句子是否属于“限权”类句子，或者是“无关”句子。
5. 本项目同时由两位编码员进行独立编码，并在编码结束后，对两个版本的编码进行比对。

**编码细则：**

1. 编码员将获得42个excel文件，分别对应42个中央规范性文件。
2. 每个excel表格中，第一列称作“policy”，显示中央文件中的句子，每一行一个句子。
3. Excel表格的第二列称作“bureaucratic control,”编码员需要判断每一个句子是否为“限权类”句子，即，是否为中央政府对地方政府的自主决策权进行限制的句子。如果是“限权”则在这一列填写“1”。如果不是则填写“0”。
4. 需要指出的是，“限权类”句子有两种情况。一种是直接对地方政府的权力进行限制，例如要求地方政府“禁止非法压低地价招商”。另一种情况是对被监管对象（例如工厂、煤矿、公司等等）进行限制，但是可能间接干预了地方政府的自主决策权。例如，中央要求“新建、改建、扩建矿井，必须坚持安全设施设计、施工、使用的“三同时”（与主体工程同时设计、同时施工、同时使用）原则”。虽然这句话是对矿井经营者进行限制，但是间接意味着地方政府不得批准不符合“三同时”条件的矿井开工运营。这种情况也算作对地方政府的“限权”政策。
5. 每完成一个政策的编码，请从头到尾浏览检查一遍，避免笔误或者填写错位。

**时间安排：**

1. 计划在7天时间内完成42个中央政策的编码工作。
2. 每天编码6个政策，晚上提交，并对编码内容进行讨论，尤其是对模糊不易判断的内容进行讨论。
3. 两位编码员需要独立编码。可以就宽泛的问题进行讨论但是不可以共享或比对具体的编码结果。