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Industrialization Policy by Indian State Governments: A Political Economy Explanation

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Abstract

We empirically examine whether state governments of India pursue policies that are favorable for industrialization as the industrial sector increases as a percentage of the state economy. Our estimation results show that as lagged industry share of state domestic product increases, various variables related to policies conducive to industrialization improve. The results can be interpreted as incumbent political leaders choosing policies that are favorable to industry as the industrial sector becomes an increasingly important support base for them politically.

概　要

本研究では、インド各州において州 GDP に占める産業部門の割合が高まるにしたがって、州政府が産業化にとって望ましい公共政策をとるかどうかを実証的に検証する。本研究の推計結果は、州 GDP に占める産業部門の割合の 1 期前の値が増加すると、産業化に適した政策に関連する様々な変数が改善することを示している。この推計結果は、産業部門が政権与党の政治家にとって重要な支持基盤になるとともに、彼らが産業部門にとって望ましい政策を採用していると解釈することができる。

JEL Classification No.: D7, H72, H76, O14.

Key Words: Political Economy; Industrialization Policy; Political Survival; Development Expenditure; Infrastructure; Law and Order.

1. Introduction

Economic development is a key requirement for enhancing peoples' standard of living and, when successfully pursued, is widely viewed as increasing the probability of incumbent political leaders' reelection in democratic countries. Nevertheless, not all governments necessarily implement policy conducive to economic development. As industrialization policy is, in general, supposed to promote economic development (e.g., Robinson, 2009),[1] we examine why some governments pursue industrialization policy, but others do not. More specifically, based on the widely accepted political theory on policy choice that incumbent political leaders choose policies favorable to their important support bases, we examine whether governments pursue industrialization policies as the share of the industrial sector in the economy expands.

Development economics has so far produced a voluminous body of literature on normative industrialization policy (see, for example, Rodrik, 2005, 2007). However, positive political economy analysis of industrialization policy, which analyzes the political processes by which industrialization policy is adopted and implemented, has been surprisingly scarce. Robinson (2009) calls the attention of economists and

[1] In this article, "industrialization policy" refers to a broad range of policies that help industrial activities.

international organizations to the void by stating: “To really promote industrialization in a society we need a positive theory of the political equilibrium of that society which leads to particular policy choices.” With this study, we attempt to make a small contribution in this area by showing that, one political factor, the influence of the industrial sector, may promote the adoption of industrialization policy by incumbent political leaders.

The theory of political survival of political leaders (e.g., Bueno de Mesquita, Smith, Silverson, and Morrow, 2003), an influential political theory on public policy choices, states that incumbent political leaders maximize the probability of remaining in office, regardless of the type of political regime. According to the theory of political survival, we can predict that governments would choose public policies that promote industrialization when the importance of the industrial sector in the economy becomes so large that political leaders benefit from the political support of the industrial sector in exchange for implementing such policies. However, it is very difficult to measure the extent of political influence itself. Thus, in this article we will seek indirect evidence by investigating whether Indian state governments implement policies favorable for the industrial sector as the share of the industrial sector in the economy expands.

We conduct empirical research, using data on the twenty-eight regional states of India for the period from 1980 to 2010. We examine the effect of the lagged industry share on various dependent variables related to public policies conducive to industrialization, such as the ratio of development expenditure to total state government expenditures, the ratio of development expenditure for economic services to total state government expenditures, electricity generated per person, surfaced road length per person, and the number of armed police per person, all of which have been identified as important factors for industrialization by previous studies and observers. Our estimation results show that the lagged industry share in the economy has a positive and significant coefficient for the various dependent variables mentioned above. The results are consistent with the hypothesis that, as the industrial share of state or domestic product rises, state governments tend to be responsive to the demands of the industrial sector.

The rest of the article is organized as follows. Section 2 briefly surveys the related literature and Section 3 provides relevant context on India. Section 4 explains our empirical strategy and the construction of the variables used for estimation. Section 5 presents our estimation results. Section 6 summarizes our results and concludes our article.

2. Previous Studies

Development economics has so far produced a voluminous literature on normative industrialization policy, which has shown which kinds of policy tools are desirable under what conditions and how to implement them in order to industrialize a country (see, for example, Rodrik, 2005, 2007). It has become obvious by now that these industrialization policies can be effective only if they are appropriately chosen and implemented. However, there still remains much to know about why some governments effectively choose and implement industrialization policy, but others do not.

Political scientists have long examined political processes that affect public policy choices. Among the many strands of political thought, for instance, elite theory argues that a small group of elites consisting of economic, political, and military leaders holds overwhelming control over policy decisions (e.g., Mills, 1956). In contrast to this view, pluralism claims that politics are not controlled by a small elite group, but instead guided by competition and coordination among numerous interest groups, leading to policy outcomes (e.g., Dahl, 1961). On the other hand, the statist approach asserts that public policy is not a reflection of the demands of interest groups, but rather the

government more or less autonomously determines public policy, independent of pressure from interest groups (e.g., Evans, Rueschemeyer, and Skocpol, 1985).

One influential theory that has emerged from this debate is the theory of political survival of political leaders (e.g., Bueno de Mesquita, Smith, Silverson, and Morrow, 2003), which states that incumbent political leaders maximize the probability of remaining in office, regardless of the types of political regime. On the basis of this theory, we presume in our study that incumbent political leaders choose policies that increase the probability of their political survival most effectively.

In the literature analyzing policy choices by governments, the clout of special interest groups has been highlighted (e.g., Grossman and Helpman, 2001). Special interest groups demand benefits from government policies in exchange for their political support, in terms of votes and political donations, to a politician or a political party. According to the theory of political survival, as long as a special interest group is perceived by politicians to be an important support base, the demands of the interest group may receive special consideration, and thus are likely to be reflected in government policy.[2]

[2] However, some scholars argue that politicians may also pay attention to the general interests of broad socioeconomic groups (Persson and Tabellini, 2000). For instance, empirical research on the determinants of non-tariff trade barriers has shown that not only industries that are politically organized, but also industries that are uncompetitive, exposed to the threats of imports, declining, or have a high unemployment rate are also likely to be protected by such barriers (e.g., Finger et al., 1982; Trefler, 1993;

A well-known instance of political influence of one socioeconomic group on public policy is that of landlords' opposition to land reform policy (see, for example, Kohli 2009a, b). Political economy scholars examining land reform have long argued that the leverage traditionally held by landlords in many countries impedes land reforms. As Banerjee (2001) argues, if land reforms make tenants the owners of land, he or she would invest more in land and capital (both physical and human), leading to an increase in the productivity of agriculture and personal income.[3] Higher incomes lead tenants to save and invest more, which enables them to raise incomes further. However, land reforms are, in many cases, opposed by landlords, who are afraid of losing wealth. This situation is considered to be an example of a poverty trap, from which a less developed economy finds it difficult to escape.

A famous example of the political impact of industrialists on policy is the Anti-Corn Law League. Dating back to the 19th century, the Anti-Corn Law movement was led by Richard Cobden and John Bright and was supported by the newly emerging class of industrialists in Manchester who advocated free trade and succeeded in repealing the Corn Laws in 1846. This event presents evidence that an increase in the political

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Lee and Swagel, 1997). These studies indicate that incumbent political leaders may choose policy favorable for general interests if they believe that it will enhance the probability of their political survival.

[3] Banerjee, Gertler, and Ghatak (2002) show that, in a successful case of land reforms in West Bengal in India, "the tenancy reform program called Operation Barga explains around 28 percent of the subsequent growth of agricultural productivity there."

influence of the industrial sector can change public policy in their favor. The literature on the political economy of trade theory have long investigated the determinants of trade policy, especially regarding the choice between open- and closed-trade regimes, and has provided evidence that politically organized industries are more likely to be protected by non-tariff barriers (e.g., Goldberg and Maggi, 1999; Gawande and Bandyopadhyay, 2000). Some scholars in this strand of research have shown that interest groups formed along industry sector lines have exerted significant political influence on trade policy (e.g., Irwin, 1996; Irwin and Kroszner, 1999; Magee, 1980; Busch and Reinhardt, 2000).[4]

As such, previous studies examining policy choice have highlighted the importance of political influence of certain socioeconomic groups. We could dare to say that it is common sense that public policy choices are more or less influenced by some socioeconomic groups. Nonetheless, there have been relatively few studies with political economy explanations for the adoption and implementation of industrialization policy. According to the theory of political survival, we can predict that governments choose public policies that promote industrialization when the importance of the industrial sector in the economy becomes so large that political leaders are able to

[4] Other scholars, however, have argued that coalitions formed along social class lines are more important (e.g., Rogowski, 1989; Mayda and Rodrik, 2005; O'Rourke and Sinnott, 2002).

benefit from the political support of industrial sector in exchange for implementing such policies.

Robinson (2009) states that "industry policy has been successful when those with political power who have implemented the policy have either themselves directly wished for industrialization to succeed, or been forced to act in this way by the incentives generated by political institutions." He refers to the Glorious Revolution in England in 1688, and argues, on the basis of Pincus (2009), that the success of the Revolution was a result of the Whig coalition, which included many politicians who had their own industrial enterprises and who aimed to stimulate manufacturing. According to Robinson (2009), the Whig coalition "started the Bank of England, facilitated the development of the transportation sector via canals and turnpike roads, reorganized the tax system and changed commercial policy." Thus, as the political power of industrialists expands, public policies favorable to industry are likely to be adopted and implemented.

In general, the share of the industrial sector increases as an economy develops from a stage of underdevelopment. Petty-Clark's Law states that as the economy develops, the main sector of the economy shifts from the primary sector (typically agriculture) to the secondary sector (mainly industry), and then to the tertiary sector (mainly services). The

traditional dual-economy model also asserts that along with economic development, the share of the industrial sector expands, absorbing surplus labor from the agriculture sector (e.g., Lewis, 1954; Fei and Ranis, 1964). Empirically, Kuznets (1966) has shown, based on data mainly on European countries, the U.S., and Japan, that the share of industry in the economy expands throughout the modern economic growth (see also Chenery, 1960).[5] As long as a structural change in the economy occurs, as projected by these studies and the share of industry expands through the process of economic development, then politicians would be forced to become more responsive to the demands from the industrial sector. Hence, policy conducive to industrialization would be undertaken seriously only well after industrialization has started; namely, once the industrial sector occupies an important part of the economy. On the other hand, in the least developed countries, where the industrial sector accounts for a tiny portion of the economy, industrialization policy is not likely to be pursued vigorously.

One difficulty in investigating the political influence of the industrial sector is obtaining an objective measure of political influence, which may depend on many ambiguous factors such as the mobilization of workers in the sector at election time, political donation provided both legally and illegally, and the prospect of future support

[5] India is an interesting exception to this law. Namely, the service sector has expanded more rapidly than industry, while the share of agriculture has shrunk.

by the sector to incumbent political leaders. Being constrained by such limitation in the data, for this study we instead seek indirect evidence. Namely, we investigate whether Indian state governments implement policies favorable for the industrial sector as the share of the industrial sector expands. The industrial sector can contribute to the survival of a political leader mainly through two channels: first, by persons in the sector voting for the politician in election, and second, by making political donations to the politician or his or her political party. Thus, both the number of voters and the size of political donations constitute the political bargaining power of the industrial sector. As an aggregate measure for the extent of this bargaining power, we use industry output as a variable, which can be decomposed into the number of workers employed in industry (roughly correlated with the number of voters) multiplied by the output per worker (roughly correlated with the available funds for political donations). The value of industrial output is normalized by state domestic product.

We conduct our empirical research using state-level data for India. The difference in electoral systems, the formal distribution of authority inside state governments and political cultures may also affect the political processes that determine the choice and implementation of public policy (see, for example, Persson, Tabellini, and Trebbi, 2003; Almond and Verba, 1963). These factors must be controlled for properly in

cross-national analysis, but this is difficult. By making comparisons between regional states within a single country, which follow more or less uniform formal rules, we can control for the variations in the political systems and legal frameworks in which public policy is made. Therefore, we can more precisely estimate the effect of the political influence of industrial sector. Moreover, Indian states vary significantly in terms of the extent of industrialization, the industrial policies adopted by state governments, and their political and social structure.[6] As Kohli (1987) argued, India is a "laboratory for comparative political analysis."

In this study we conduct estimation by linear regression with panel corrected standard errors (see, Beck and Katz, 1995) using state-level data on twenty-eight states for the period from 1980 to 2010.[7] The number of states and sample periods vary across the estimation due to the availability of data for each variable included in the estimation. Since the political process of formulating public policies precedes the implementation of the policy, we use one-period lagged industry share as our central explanatory

[6] Jenkins (2004) stated, "India's federal system has created 29 'mini-democracies' with almost identical institutional infrastructures, at least in terms of the formal systems of representation. India's States, moreover, operate under a set of common conditions, including New Delhi's foreign and economic policy framework and the legal protections enshrined in the Indian Constitution. These control variables represent a major boon to students of comparative politics who seek to understand and explain the divergent patterns and outcomes that the practice of democracy can produce."

[7] These twenty-eight states comprise all Indian states existing in 2010, except for the Andaman and Nicobar Islands, where the industrial sector is very small in the economy.

variable.[8] Caution must also be taken about the time lag between the decision to allocate budget expenditures on infrastructure project, such as the construction of a power station or road, and the completion of the project.[9] Our estimation results show that the lagged industry share has a positive and significant coefficient for various dependent variables. The results are consistent with the hypothesis that as the industry share of state domestic product rises, state governments tend to adopt policies conducive to industrial development.

3. The Indian Context

The Government of India previously adopted a highly restrictive industrialization policy, which required businesses to obtain approval for every aspect of corporate activity from the government. The burdensome licensing system was termed the "License Raj."[10]

[8] The fiscal year of state governments in India is from April 1st to March 31st. Vidhan Sabha (State Legislative Assemblies) typically hold budget, monsoon, and winter sessions each year.

[9] As is mentioned later, for the dependent variables that have attributes of stock variables (electricity generated per person, surfaced road length per person, and armed police per person), the industry share lagged further back in the past continues to show highly significant coefficients. However, this is not the case for development expenditure share.

[10] The Industries (Development and Regulation) Act of 1951 required both private and public firms to obtain a license to establish a new firm, expand a factory's capacity, start a new product, change its location, and so forth. The licensing process often took a long time and imposed a tremendous burden on firms. Due to the discretion of bureaucrats, the approval of a license was uncertain, which also induced corruption. A portion of the licensing system was abolished in the middle of the 1980s and most of the

This policy stance was relaxed in the middle of the 1980s under Rajiv Gandhi's administration and was more drastically liberalized in the early 1990s (in response to external pressure). In the period following the economic liberalization by the Central Government, political leaders of Indian regional state governments gained more freedom to adopt industrialization policy at the state level.

However, not all state governments seriously sought to promote industrialization in response to this opportunity. Bajpai and Sachs (1999) have evaluated policy reforms undertaken by Indian state governments in the 1990s in areas such as industrial policy, the power sector, infrastructure development, and the tax system, and then classified fifteen major states into reform-oriented states, intermediate states, and lagging reformers.[11] They also loosely demonstrated that reform-oriented states performed better in terms of the growth rates in per capita gross state domestic product in the 1990s compared with other states.

With respect to economic performance, many scholars have confirmed that gross state domestic product (GSDP) and per capita GSDP have diverged across Indian states

remainder was deregulated in 1991. The time period from 1951 to 1991 is called the "License Raj Era" in India.

[11] According to their classification, the reform-oriented states are Andhra Pradesh, Gujarat, Karnataka, Maharashtra, and Tamil Nadu; the intermediate states are Haryana, Orissa, and West Bengal; and the lagging reformers are Assam, Bihar, Kerala, Madhya Pradesh, Punjab, Rajasthan, and Uttar Pradesh.

since the 1990s.[12] For instance, Gaur (2010) has shown increases in a variety of inequality indices among Indian states. Comparing growth rates in the GSDP of fourteen major states between the 1980s and the 1990s, Ahluwalia (2000) has also shown that the degree of dispersion in the growth rates is higher in the 1990s than the 1980s. The World Bank (2006) reports that the increasing gap in the average growth rates of per capita GSDP between middle-income states and poorer states in the 1990s is mainly due to the accelerated growth of middle-income states, rather than slowing in the growth rates of poorer states. It appears that Ahluwalia (2000) ascribes a large portion of the divergence in the growth rates across states in the 1990s to the differences in state government policy, stating that "[s]ince the 'payoff' from superior management has increased because of liberalization it is very likely that variations in the quality of economic management will lead to greater inter-state variation in management performance than was the case earlier."[13,14]

[12] Interestingly, according to Mukherjee and Chakraborty (2010), the dispersion in indicators of human development in such areas as health and education has declined among Indian states.

[13] Ahluwalia (2000) emphasizes the importance of private investment, and says that "[p]rivate corporate investment is potentially highly mobile across states and is therefore likely to flow to states which have a skilled labour force with a good 'work culture', good infrastructure especially power, transport and communications, and good governance generally. The mobility of private corporate investment has increased in the post-liberalisation period since decontrol has eliminated the central government's ability to direct investment to particular areas, while competition has greatly increased the incentive for private corporate investment to locate where costs are minimized."

[14] Yet at the same time other scholars (e.g., Nagaraj et al., 2000; Aiyar, 2001; Trivedi, 2002; World Bank, 2006; Nayyar, 2008) have found evidence of conditional convergence. However, since the conditions with respect to human capital, infrastructure, public policy and so forth vary significantly across states, the conditional convergence does not reduce the disparity among states in the last two decades. In the words of Nayyar (2008), Indian states are "converging to very different steady states."

In this study, we examine the effect of industry share on various variables related to public policies conducive to industrialization, such as development expenditures as a percent of total government expenditures, development expenditures for economic services as a percent of total government expenditures, electricity generated per person, surfaced road length per person, and number of armed police per person. The Government of India classifies government expenditures into development and non-development expenditures. It is considered that "[d]evelopment expenditure has a beneficial impact and leads to economic and social development" (Reserve Bank of India, 2010). Electricity supply and road transportation are critical elements of infrastructure for industrial activity, which has been pointed out by many observers.[15] Maintaining law and order, primarily through the use of armed police, is also an important factor in attracting investment into a state.[16]

It may plausibly be argued that incumbent industrialists demand protection of their business by government regulations, rather than construction of infrastructure or

[15] For instance, Iarossi (2009), on the basis of the Investment Climate Survey data, constructed "Investment Climate Index" by principal component analysis. He considers three broad categories of business categories; namely, infrastructure, inputs, and institutions, and claimed that infrastructure and institutions are more critical bottlenecks for the business climate of Indian states. Furthermore, power outages and transportation are the most serious business constraints within infrastructure, while those within institutions are corruption and tax regulation.

[16] Bardhan (1984) reports that the government expenditure per Indian person on police, including Central Industry Security Force (CISF), evaluated at 1970 constant price, has risen by 70% between 1960 and 1980. CISF is an armed police force in charge of protecting industrial units, such as power plants, airports, and plants of public sector undertakings, and also provides consultancy services to private industrialists.

empowerment of police forces. Indian state governments, however, do not have strong control over the regulation of industry, which is mostly in the jurisdiction of the central government. Moreover, the Monopoly and Restrictive Trade Practices Act of 1969, which was subsequently replaced by the Competition Act of 2002, restricts governments from excessive protection of incumbent firms (however, neither act is effectively enforced). Thus, the improvement of infrastructure or law and order were among the main political demands from the industrial sector to state governments.

Political economy analysis on the choice of industrialization policy by Indian state governments has been relatively scarce. One of the notable exceptions is Sinha's (2005) comparison between Gujarat, West Bengal, and Tamil Nadu. She draws the conclusion that the Gujarat government was able to adopt effective industrialization policy because the electorate of Gujarat was more supportive of (less opposed to) industrialization policy because of its peculiar social structure such as more industrialized rural areas and weak support for the labor movement by political parties. Kennedy, Robin, and Zamuner (2013) compared Andhra Pradesh, Haryana, Kerala, and Orissa in terms of state-level policy responses to economic liberalization policy reforms by the central government. They argue that the policy choice of state governments is "an outcome of a political process based in part on the capability of local groups to promote their

interests." Baru (2000) documents that policy promoting industrialization in Andhra Pradesh by the Telugu Desam Party was in response to a new class of emerging industrialists such as those represented by Kammas, an influential caste in Andhra Pradesh, whose demands are not met by incumbent political parties that are more aligned with nation-wide business groups. Although these studies are illuminating, their approaches are mostly descriptive. Thus, our study complements theirs by providing statistical evidence for their arguments.

4. Empirical Strategy

4-1. Empirical formulation

Our basic estimation model is as follows:

$$Y_{it} = \alpha + \beta Ind_{i,t-1} + \delta Pol_{it} + \mu Soc_{it} + \rho FS_{it} + \theta_i + \theta_t + \varepsilon_{it},$$

where Y_{it} is the dependent variable, Ind_{it-1} is the share of industry output as a percentage of state net state domestic product (NSDP) in state i in year $t-1$, Pol_{it} and Soc_{it} are

vectors of political variables and social variables, respectively, of state *i* in year *t*, FS_{it} is fiscal space for discretionary spending by state government *i* in year *t*, and θ_i and θ_t are dummy variables for state and year, respectively. The error terms ε_{it} may be nonspherical, that is, they may be serially or contemporaneously correlated and heteroskedastic.

We conduct OLS estimation with panel-corrected standard errors in this study. Beck and Katz (1995) argue that this estimation method is superior to other estimation methods, such as the feasible generalized least squares for panel data with a narrow sample size and long time frame, which is typical in comparative politics. As previous studies in this field have also adopted this method (e.g., Saez and Sinha, 2009; Nooruddin and Chhibber, 2008), we use this estimation method as well.

Since some of the dependent variables are stock variables, as mentioned before, we also estimate the model using the lagged dependent variable as an explanatory variable as follows

$$Y_{it} = \alpha + \gamma Y_{i,t-1} + \beta Ind_{i,t-1} + \delta Pol_{it} + \mu Soc_{it} + \rho FS_{it} + \theta_i + \theta_t + \varepsilon_{it}$$

Since the lagged dependent variable is included as an independent variable, the estimated coefficients of the other independent variables measure the effect of each variable on the part of variance of the dependent variable unexplained by the lagged dependent variable. In other words, the coefficients capture the effects of the variable on the contemporaneous change in the dependent variable relative to the level of the dependent variable in the previous period. Furthermore, we conduct generalized method of moments (GMM) estimation because the estimation model has a dynamic structure when we include a lagged dependent variable as an explanatory variable.

Our dependent variables include development expenditure as a percentage of total state government expenditures; development expenditure for economic services as a percentage of total state government expenditures; total electricity generated per person; total surfaced road length per person; and number of armed police per person. These variables are closely related to the obstacles facing businesses (see, for example, the Enterprise Survey conducted by the World Bank in 2006 for India, available at http://www.enterprisesurveys.org/Data). These variables are linked to factors that have been shown to affect economic performance in previous studies (see, for example, Marjit, Sasmal, and Sasmal (2013) for the effect of the composition of state government

expenditures; Mitra, Varoudakis, and Véganzonès (2002) for infrastructure; and Kato and Sato (2013) for law and order).[17]

4-2. Construction of Variables and Data

The data on state government expenditures and electricity generation are obtained from the EPW Research Foundation database. The data on surfaced road length are obtained from the CMIE *States of India* database. The number of armed police is taken from *Crime in India*, annually published by the Ministry of Home Affairs, the Government of India.

Our most important explanatory variable is the share of industry output relative to state domestic product. We obtained data on the aggregate output of industry and state domestic product from the EPW Research Foundation database.

With respect to the public policy choices by governments, there are some broad political, social, and economic explanations. To control for these factors that may affect

[17] In addition to these variables, we tried Besley and Burgess' (2004) labor protection index, Ahsan and Pages' (2009) labor regulation indices, the ratio of sales tax to aggregate tax revenue, the ratio of sales tax to industry output, the ratio of electricity tariff for industry to that for agriculture, and the ratio of the value of property recovered to the value of property stolen as dependent variables for the same estimation model. However, we do not obtain significant estimated coefficients of lagged industry share for these dependent variables, probably because these dependent variables are imprecise in capturing the benefits to the industrial sector.

the policy choice of state governments, we construct a variety of political, social and economic variables.

First, to capture the extent of political competition, we include three kinds of concentration indices of political parties. First, our main variable is a polarization index; second, a fractionalization index; and third, the so-called "effective number of parties." The calculation formulae for the indices are given in details in Appendix B.[18] Although these three indices have widely been used in the previous literature to capture the competition among political parties, these indices grasp quite different aspect of the distribution of political parties, as is explained in Appendix B. Therefore, we alternatively include these three measures in the estimation. The data on winning seats of political parties in every state legislative assembly (Vidhan Sabha) election in the past can be obtained from the Election Commission of India website.

Other political factors have been identified as affecting public policy choices, such as the identity of political party (Alesina, 1987; Alesina and Roubini, 1999; Boix, 1997), political cycle (Nordhaus, 1975; Franzese, Jr., 2002), and voter turnout (Besley and Burgess, 2002; Chhibber and Nooruddin, 2004).[19] To control for such political factors,

[18] We have also constructed a polarization index and a fractionalization index based on the vote share obtained by each political party. However, those indexes are not significant and other results are more or less the same. Thus, we have omitted these results.

[19] Note that these studies pay attention to the effects on other dependent variables such as social welfare and infrastructure, but not industrialization policy.

we include an election year dummy variable and voter turnout in the estimation. The election dummy variable takes a value of one if the state legislative assembly election takes place in that year and zero otherwise. This variable is expected to affect the choice of public policy because incumbent political leaders may pursue policies that are visible to the target electorate when the next election draws near (see Nordhaus, 1975; Franzese, Jr., 2002; Khemani, 2004). The voter turnout variable takes the value of the voter turnout rate in the last election from the year of the election till the year before the next election. An increase in voter turnout reflects increased political activism, by which incumbent political leaders who perform well are more likely to win votes in election (Besley and Burgess, 2002). Moreover, in India, a rise in voter turnout in the 1980s and 1990s was caused by increased participation in elections by poorer segments of society, such as scheduled castes and scheduled tribes. If so, the income of the median voter would decline, which may influence the political strategy of incumbent political parties (see, for example, Chhibber and Nooruddin, 2004). The data on the year of each election and voter turnout rate are also available at the Election Commission of India website.

From a sociological viewpoint, social cleavages, induced by factors such as ethnic divisions, caste conflict, and social class confrontation, may restrict governments in

allocating public goods which are available to different groups (Alesina, Baqir, and Easterly, 1999; Chandra, 2004; Frankel and Rao, 1987). For instance, Chandra (2004) argues, based on her detailed analysis of the elites and voters of the Bahujan Samaj Party, that in a patronage-democracy such as India, ethnic demography plays a crucial role in whether an ethnic party succeeds in the election; in particular, the size of a party's target ethnic category should be large enough to allow the party to win. Frankel and Rao's edited book (1987) includes several important articles that show how interactions between castes, religion and ethnicity have changed a society characterized by the dominance of upper castes, in the relation to state power.[20] In order to control for effects of social cleavages, we include, in our estimation, variables capturing religious diversity, the heterogeneity of language distribution, and the population share of scheduled castes and tribes. It would also be desirable to control for population distribution of each caste, but the data has not been collected since the census in 1931. Moreover, to control for the conflict between social classes, Gini coefficient and poverty

[20] Rudolph and Rudolph (1987) also state that "[o]f the many cleavages that animate Indian politics, class usually matters less than other social formations, such as caste, religious and language communities, and regional nationalisms. Other cleavages rival or surpass class on political saliency because the consciousness and commitment focused on them are usually more transparent and accessible than those focused on class."

rates are included in the estimation. As another sociological variable, we also include literacy rate of the people in the state.[21]

The data on religion is available from Census data. The census is conducted every ten years in India. We use the data on of the relative number of followers of six major religions (Hindus, Muslims, Christians, Sikhs, Buddhists, and Jains) and calculate the fractionalization index for the state using the same formula for fractionalization index of political parties above.[22]

Similarly, we use the Census data for linguistic fractionalization index. In the 1971 Census, 1,652 languages were identified. However, many of these languages are only spoken by a small population. In our calculations, we only use the 22 scheduled languages and 100 non-scheduled languages highlighted in the 2001 Census, which are available at Census website of Government of India. The list of languages derived from the 1981 and 1991 Censuses is practically the same list of languages we are using from the 2001 Census, with only a few languages of minor importance being different.

[21] The original data of all these sociological variables are gathered either by the Census, which is conducted every ten years, or by National Sample Surveys, which are held roughly every five years. The values for the years in between are obtained by linear interpolation. Therefore, the estimated coefficients for those variables should be taken with caution, and we do not delve into the interpretation of those variables in depth.

[22] We treat "other religions" and "religion not stated" as two separate religious groups so that the sum of each religions' share add up to one. The shares of these two groups are so small that the calculated values of the indices are hardly affected by our treatment.

The population shares of scheduled castes and scheduled tribes, Gini coefficients for both rural and urban areas, and poverty rates are taken from the website of Planning Commission, with the original data collected through National Sample Surveys conducted by National Sample Survey Organization roughly every five years. Because rural and urban Gini coefficients are highly correlated, we use the weighted sum of them by rural and urban population shares.

Previous studies with respect to the effect of scheduled castes and scheduled tribes and religious distribution on policy choice have presented mixed results. For instance, Betancourt and Gleason (2000) find that rural areas with high concentrations of Muslims or scheduled castes have fewer doctors, nurses, and teachers. Banerjee and Somanathan (2007) show that areas with a higher proportion of scheduled castes have gained better access to high schools, health centers, and piped water between 1971 and 1991, while those areas with scheduled tribes and Muslims continued to be at a disadvantage. In the present paper we examine whether the proportion of scheduled castes and tribes in a state exerts a significant effect on industrialization policy. Our prediction is that these disadvantaged people may demand redistribution policies, and thus, reduce the funding available for industrial development.

In considering policy choices from an economic viewpoint, both state governments and the central government in India incurred budget deficits throughout the 1980s and the 1990s, and faced a heavy debt repayment burden at the beginning of the 21st century. In such a deeply stressed fiscal situation, state governments have less capacity to provide public goods and services to the people. State governments have, on average, reduced the relative share of development expenditures, especially on economic services, throughout the 1990s and through the early 2000s as a result of debt repayment obligations (Reserve Bank of India, 2010). In response to the critical level of public debt, the Fiscal Responsibility and Budget Management (FRBM) Act passed in 2003 and took effect in 2004 at the central level. Likewise, almost all state governments also adopted state-level FRBM Acts by 2006. Under these laws, state governments made a commitment to fiscal stability and responsibility and were restricted in taking on new debt. These measures left state governments even less room for filling budget deficit. We expect such limitations in government budgeting to affect the public policies chosen by state governments (Nooruddin and Chhibber, 2008).[23] To control for the effects of budget constraints, we include a variable for fiscal space available for discretionary

[23] They show that the fiscal space variable affects electoral volatility at Indian state legislative assembly elections.

spending by state governments, which captures the level of funding available for use by politicians. We calculate fiscal space according to the following formula:

$$\text{Fiscal space} = \frac{TotExp - (Civ\ Adm + Pension + GovOrg + DebtService)}{TotRev},$$

where *TotExp* is total expenditure of state government, *CivAdm* is the expenditure on civil administration and police, *Pension* is the expenditure on pensions, *GovOrg* is the expenditure for maintaining the organ of government, and *DebtServices* is payments on the debt of state government.[24]

Table 1 presents descriptive statistics of our dependent and independent variables. Table 1 confirms that both the dependent and explanatory variables have large variances across states and year. Table 2 shows simple correlations among the variables. No pair of explanatory variables has a very serious multicollinearity problem, though some pairs show somewhat high correlations. In particular, the correlation between religious

[24] Nooruddin and Chhibber (2008), based on their hearings in India, calculate the fiscal space variable as follows: *Fiscal space = (TotRev - (CivAdm + Police + DebtService) + Deficit) / TotRev*, where *TotRev* is total revenue of state government, *CivAdm* is the expenditure on civil administration including pensions and other retirement benefits, *Police* is the expenditure on police, *DebtService* is the payment on the debt of state government, and *Deficit* is the size of deficit that the central government allows state government to run. We use realized deficit in our study rather than deficit allowed in Nooruddin and Chhibber (2008). Our justification for the use of realized deficit is based on the optimization decisions of political leaders. Namely, even if a state government is allowed to run a certain amount of deficit, political leaders optimally decide how much of the allowable deficit spending they will use. Thus, it is possible that they may leave some portion of the allowed deficit unused to keep future fiscal freedom or avoid intervention from the Central Government. Thus, we believe that real fiscal deficit is a more desirable indicator for inclusion in the calculation of fiscal space.

diversity and fractionalization index of political parties is somewhat high, though the level is not of serious concern.

5. Estimation Results

Our estimation results are presented in Tables 3 through 7. Each table has a different dependent variable. In each table, columns (1)-(3) are the estimation results using polarization index based on the number of seats obtained by each political party in the Legislative Assembly, columns (4)-(6) are the results using fractionalization index based on the number of seats, and columns (7)-(9) are the results using effective number of political parties based on the number of seats. For columns (1), (4), and (7), the estimation is conducted using the panel corrected standard errors method (Beck and Katz, 1995) without lagged dependent variables. For columns (2), (5), and (8) the same estimation method is applied with the lagged dependent variable included as an explanatory variable. Therefore, the estimated coefficients of the explanatory variables capture the effect of the explanatory variables on the part of the dependent variable unexplained by the lagged dependent variable—in other words, the contemporaneous

change of the dependent variable. This formulation has been used in previous studies (e.g., Chhibber and Nooruddin, 2004; Saez and Sinha, 2009). All the estimation results reported in columns (1), (2), (4), (5), (7), and (8) are based on heteroscedasticity and autocorrelation robust standard errors. Since the inclusion of lagged dependent variable makes the estimation model dynamic, we also include the results of GMM estimation in columns (3), (6), and (9). As expected, the estimated coefficients of lagged dependent variable are highly significant at the 1 percent level in all the relevant columns of Tables 3 to 7.

The explanatory variable that is our main interest is the share of industry output as a percentage of state domestic product (hereafter called *industry share*). As already mentioned, we take one-period lagged industry share as our central explanatory variable because the political process of formulating public policies precedes the implementation of policy. This may also alleviate the concern about reverse causality from the dependent variable to *industry share*.

In all Tables, the R-squared value is highly significant and Wald tests reject the null hypothesis that all the coefficients of our linear model are zero.

First, Table 3 presents the estimation results for the ratio of development expenditure to total state government expenditures. The coefficients of *industry share*

are positive and statistically significant at the 5 percent level in columns (1)-(3) and at the 10 percent level in the rest of the columns. It is indicated that as the political influence of the industrial sector increases, the development expenditure ratio tends to increase. If the industry share increases by one sample standard deviation (0.084), the ratio of development expenditure rises by 1.5 percent (if we take the estimation result in column (1)).

Polarization index of political parties has a positive and statistically significant coefficient at the 1 percent level in columns (2) and (3) and the 5 percent level in (1), implying that as the level of political confrontation between large parties intensifies, the state government expands development expenditures. Effective number of political parties also has positive coefficients, though only at the 10 percent significance level. The coefficient for fiscal space is negative and significant. The population share of scheduled castes and scheduled tribes have positive and significant coefficients in some columns.

Table 4 presents the results with respect to the ratio of development expenditures for economic services to total state government expenditures. Development expenditures of Indian state governments can be further divided into those for economic services and those for social services. The former includes the expenditures on energy,

industry, mining, transportation, and communications, as well as agricultural and rural development; the latter includes expenditures on education, health care and public health, family welfare, nutrition, social security and welfare, and welfare of scheduled castes and tribes. We presume that the industrial sector is more concerned with expenditures for economic services, compared with development expenditures for social services. Our estimation results confirm that lagged industry share has positive coefficients at the 5 percent significance level in all columns of the table, except for columns (8) and (9), where the significance is at the 10 percent level. This confirms our prediction that the effects of industry share are more salient on the share of development expenditures for economic services than the share of aggregate development expenditures. According to the estimation results in column (1), if the industry share increases by one sample standard deviation (0.084), the ratio of development expenditure for economic services rises by 1 percent.

In addition, Table 4 shows an interesting contrast among the two proxy variables for political competition. While polarization index shows a positive effect on development expenditures for economic services, fractionalization index shows a negative effect on it at the five percent significance level. This seems to indicate that as the confrontation between large parties intensifies, they are required to consider the

perspectives of a broad range of socioeconomic groups, including the industrial sector. On the other hand, if political parties are fragmented, each party could potentially win the election with the support of a relatively small segment of society. Regarding the effects of the other control variables, poverty rate and literacy rate have significant negative coefficients, while religious fractionalization and the share of scheduled tribes have significant positive coefficients.

Table 5 shows the estimation results for electricity generated per person as the dependent variable. Insufficient and unstable supply of electricity has long been on the list of complaints to government from the industrial sector (Bureau of Research on Industry & Economic Fundamentals, 2012; FICCI, 2013). The estimation results show that lagged industry share has a positive and statistically significant coefficient at the 10 percent level in column (2) and the 5 percent level in columns (5) and (8). Note also that, although it is not considered to be significant at the traditional level, lagged industry share has a positive coefficient with p-values equal to 0.133 in column (3), 0.104 in (6), and 0.126 in (9), as mentioned in the note for Table 5. These results indicate that as the political influence of the industrial sector increases, state governments tend to expand electricity generation facilities. Based on the estimation results in column (5), one sample standard deviation rise in industry share causes a 0.009 GWh increase in

electricity generated per person. Population share of scheduled tribes has a positive and significant coefficient in columns (1), (2), (4), (7), and (8), and population share of scheduled castes has a positive and significant coefficient in columns (1), (4), (5), and (7).

Table 6 provides the estimation results for surfaced road length per person. The coefficient of lagged industry share is positive and significant at the 1 percent level in columns (3), (6), and (9), and at the 5 percent level in the rest of the columns of Table 6. Improvement of the road network, especially surfaced roads, may raise the productivity of industrial sector. The results in Table 6 indicate that state governments are politically responsive to requests from industrial sector. Based on the estimation result of column (3), one sample standard deviation increase in industry share extends the length of total surfaced road per person by 91 meters. Political competition variables are far from being statistically significant. In Table 6, we find that a higher population share of scheduled castes and tribes tends to reduce the length of surfaced road per person.

Lastly, Table 7 presents the estimation results for the number of armed police per person. Armed police are critical for maintaining law and order, which is desirable for

the industrial sector in India (FICCI, 2009), where robbery and burglary are rampant.[25] As seen in Table 7, the coefficient of the lagged industry share is positive and significant at the 1 percent level in all the columns of Table (7), which can be interpreted as indicating that as the political influence of industrial sector rises, the state government tends to raise the number of armed police per person. The estimation result in column (3) indicates that one standard deviation increase in industry share expands the number of armed police per person by 0.075. Estimation results for political competition variables show interesting contrasts. Polarization index has a positive and highly significant coefficient in columns (1)-(3), and fractionalization index has a negative and significant coefficient in columns (4)-(6). These results indicate that as the confrontation between large political parties intensifies, incumbent state government leaders tend to strengthen armed police; conversely, as the party system of the state becomes more fragmented, incumbent state government leaders tend to reduce the number of armed police. This might reflect the fact that incumbent political leaders use the police force to repress the political movements by rival parties in some Indian states.

Regarding the effect of other control variables, only armed police per person, among the dependent variables in this study, is statistically shown to increase in election

[25] Kato and Sato (2013) show that a threat to private property, proxied by the number of burglaries and robberies per population, exerts a negative impact on the economic performance of state-level manufacturing sectors.

years, as indicated by the positive coefficient for the election year dummy in Table 7. Linguistic fractionalization also has a positive and highly significant coefficient in most columns, but religious fractionalization does not. Population share of scheduled tribes has a negative and significant coefficient at the 5 percent level. This is an interesting result, if we recall the furious separatist movements in the northeastern states. Our estimation results may reflect the fact that over the whole of India, scheduled tribal people are politically less mobilized than other groups such as scheduled castes or Muslim people who have also been at a disadvantage in the past. Thus, states with high concentrations of scheduled tribes need fewer armed police per person to maintain law and order. Voter turnout has a negative and significant coefficient in columns (5), (6), (8), and (9) of Table 7. This might imply that higher voter turnout means democracy has taken root in those states, and state government tends to refrain from using the police force to restrain the political activity of rival parties. Lastly, the coefficient of literacy rate is significantly negative in columns (2), (3), (6), and (9). This might imply that as the literacy rate rises, people tend to refrain from violence, thus the state government needs fewer armed police.

To summarize the estimation results in Tables 3 through 7, we find that lagged industry share has a positive and significant coefficient on various dependent variables

that are closely related to pro-industry policies. Moreover, for some dependent variables, the industry share lagged further back in the past continues to show a highly significant influence.[26] Our estimation results are consistent with the hypothesis that as the industry share of state domestic product rises, state governments tend to adopt policies conducive to industrialization. In order to rigorously confirm that this occurs because the extent of political influence of industrial sector increases, we need to continue further investigation.

7. Conclusion

In this study, we examined the political influence of the industrial sector on the choice of public policies by political leaders of Indian state governments. Although our analysis is rather indirect, our estimation results indicate that as the share of the industrial sector increases, Indian state governments tend to increase development expenditures, improve electricity supply, construct more surfaced road, and make greater efforts to maintain law and order. These policies are all supportive of industrial

[26] This is true for electricity generated per person, surfaced road length per person, and armed police per person, but not for development expenditure share.

activity and desirable policy choices for state governments that aims to promote economic development. Since political leaders are concerned primarily with their own political survival, they would be unwilling to pursue these policies, unless they enhanced their probability of their political survival. Thus, in the least developed economies, where the share of the industrial sector is small, politicians would not be strongly motivated to undertake policies favorable for the industrial sector, which may trap these economies in a vicious cycle of underdevelopment.

Appendix A: Construction of variables and data source

(Dependent Variables)

Ratio of development expenditure (for economic services) to total state government expenditures: Data on state government expenditures are obtained from the EPW Research Foundation database.

Electricity generated per person: The amount of electricity generated is available from the EPW Research Foundation database. We divide the value by state population for normalization.

Surfaced road per person: Data on the total length of surfaced roads are available from the Centre for Monitoring Indian Economy's *States of India* database.

Armed police per person: Data on the number of armed police is available in *Crime in India*, annually published by the Ministry of Home Affairs, the Government of India.

(Independent Variables)

Industry share: Net State Domestic Product of each state and industrial output at current prices are both available from the EPW Research Foundation database. We divide the latter by the former to obtain the industry share.

Political competition variables: All data on Vidhan Sabha elections are obtained from the website of the Election Commission of India. The methods of calculation of the three indices are explained in Appendix B.

Turnout: Data on voter turnout rates are available at the website of the Election Commission of India.

Election year: Information on the timing of Vidhan Sabha elections in each state is available at the website of the Election Commission of India.

Religious fractionalization: Data on religious distribution are available from Census data. Data on the relative number of followers of six major religions (Hindus, Muslims,

Christians, Sikhs, Buddhists, and Jains) are used to calculate the fractionalization index using the same formula for fractionalization index of political parties. We treat "other religions" and "religion not stated" as two separate religious groups so that the sum of each religion's share adds up to one. The shares of these two groups are so small that the calculated value of the indices is not affected by our treatment to a noticeable degree. For the years between Censuses, we linearly interpolated the numbers.

Linguistic fractionalization: Census data on linguistic distribution is used. We include the 22 scheduled languages and the 100 non-scheduled languages highlighted in the 2001 Census, which are listed on the Census website of the Government of India. For the 1981 and 1991 Censuses, the list of languages identified is nearly the same as those in Census 2001, with only minor differences. For the years between Censuses we linearly interpolated the numbers.

SC share and ST share: The population share of scheduled castes (SC) and scheduled tribes (ST) are available from the Planning Commission website and the original data were collected through National Sample Surveys conducted by the National Sample Survey Organization approximately every five years. For the years in between National Sample Surveys, we linearly interpolated the numbers.

Poverty rate: Data on poverty rates are available from the Planning Commission website and the original data were collected through National Sample Surveys conducted by National Sample Survey Organization approximately every five years. For the years in between National Sample Surveys, we linearly interpolated the numbers.

Weighted GINI coefficients: Gini coefficients for both rural and urban areas are available from the Planning Commission website and the original data were collected through National Sample Surveys. Since the rural and urban Gini coefficients are highly correlated, we take their weighted sum by using population shares as weights.

Literacy rate: Data on literacy rates are obtained from Census data. For the years in between Censuses, we linearly interpolated the numbers.

Fiscal space: The formula for the calculation of the fiscal space variable is explained in the main body of the article. We obtain the data necessary for the calculation from the EPW Research Foundation database.

Appendix B: Construction of Political Competition Variables

The fractionalization index of political parties is calculated by the following formula:

$$\text{Fractionalization index} = 1 - \sum_{i=1}^{n} (sh_i)^2,$$

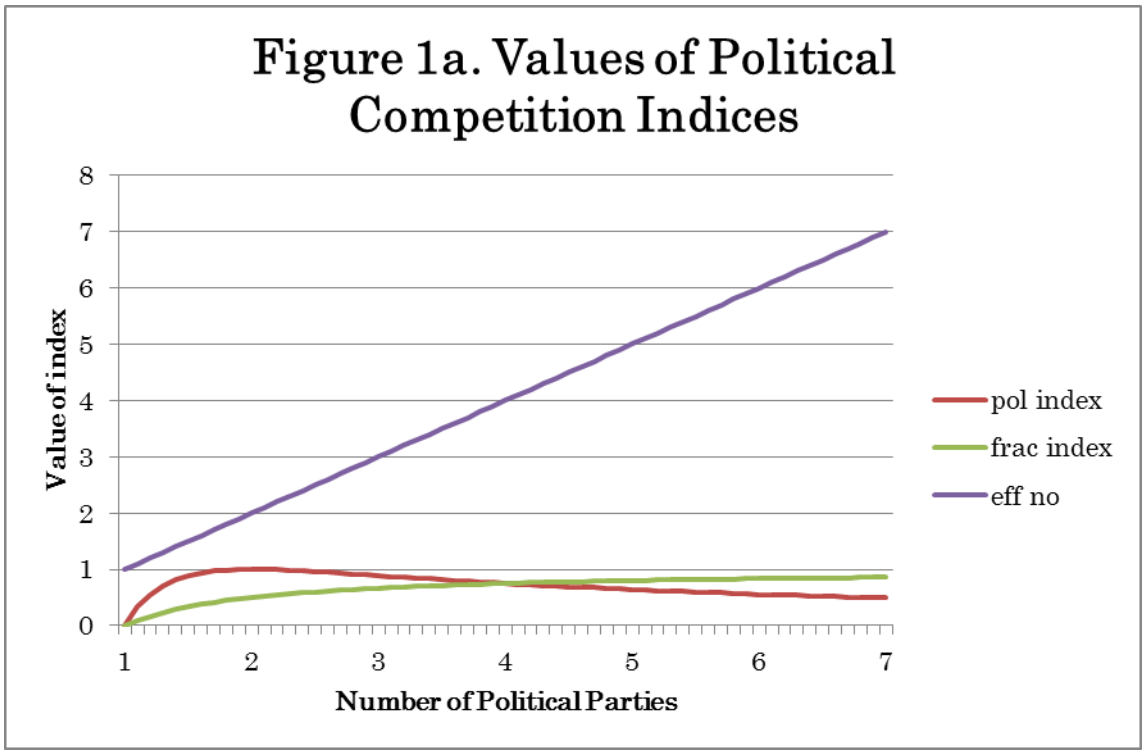
where sh_i is the share of seats in state assembly that party i won in the last election (see Alesina et al., 1999). The fragmentation index is one minus the Herfindahl index of political parties. The second variable is polarization index, which is calculated by the following formula:

$$\text{Polarization index} = 1 - \sum_{i=1}^{n} \left(\frac{0.5 - sh_i}{0.5}\right)^2 sh_i \ ,$$

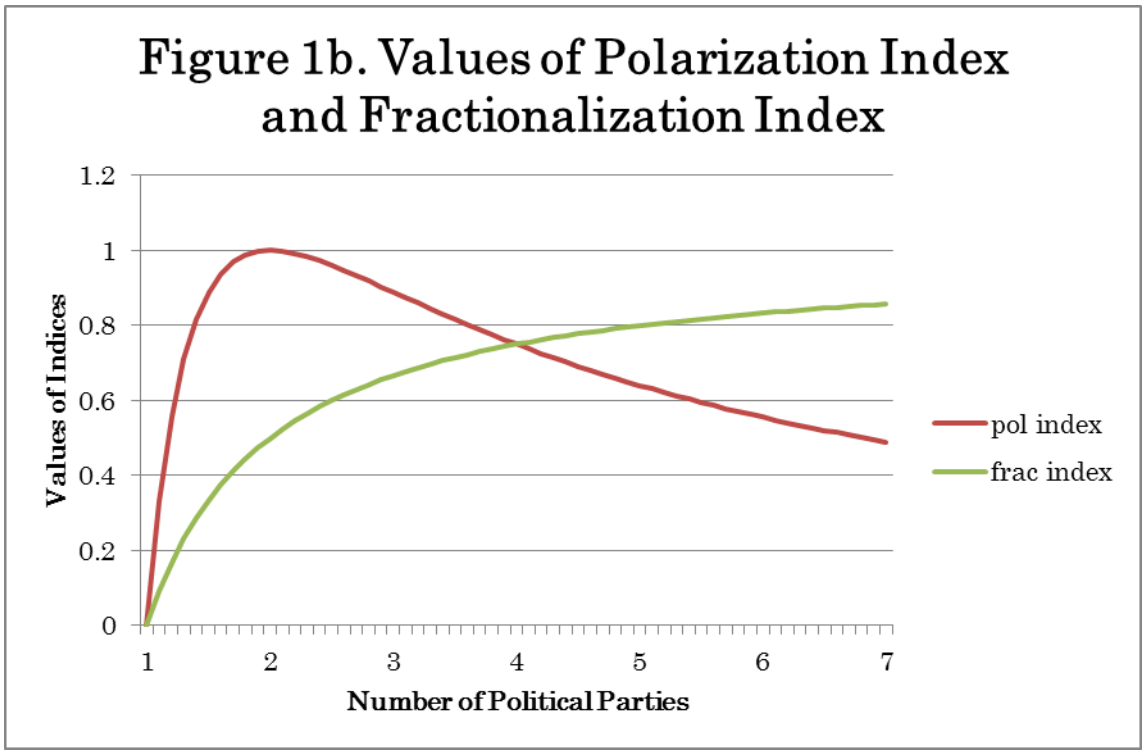
where sh_i is defined as above. The polarization index captures the extent of confrontation among largest parties, and the index takes a value between 0 and 1, reaching the largest value when two parties each win half of the assembly seats, respectively. The third variable is "effective number of political parties," which is the inverse of the Herfindahl index of political parties. This variable is calculated by the following formula:

$$\text{Effective number of political parties} = \frac{1}{\sum_{i=1}^{n} (sh_i)^2},$$

where sh_i is defined as above. The effective number of parties has often been used in political science and has been shown in some previous studies to significantly affect the allocation of government budget (e.g., Chhibber and Nooruddin, 2004; Saez and Sinha, 2009).



Note: Refer to the footnote to Table 1 for an explanation of the variables.



Note: Refer to the footnote to Table 1 for an explanation of the variables.

To clarify the differences between the fractionalization index, polarization index, and effective number of political parties, we illustrate the change in the three variables as the number of parties with equal share increases. As is shown in Figure 1a, the effective number of political parties linearly increases, while the fractionalization index monotonically increases, but with a declining rate of marginal increase. In contrast from these two variables, polarization index reaches its highest value when the number of the parties is two and thereafter monotonically decreases (Montalvo and Reynal-Querol, 2005). Although these three indices (or extensions of them) have widely been used in

the previous literature to capture the competition among political parties (and socioeconomic groups), these indices grasp quite different aspects of the distribution of political parties. Therefore, we include the three of them alternatively in the estimation.

To construct these indices for political parties, we treat each individual candidate as a separate party. Furthermore, to calculate the indices, we assume that each individual candidate equally shares the total votes that all of the individual candidates obtained in the election. The number of individual candidates is sometimes very large. For instance, 6,557 individual candidates contested in the state assembly election held in Uttar Pradesh in 1993; thus, a thorough calculation of the vote share of each individual candidate is not realistic in terms of costs.

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Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
dev exp ratio	789	0.494	0.222	0.052	0.894
dev exp econ ratio	789	0.249	0.126	0.021	0.665
energy generated	778	0.229	0.220	0	1.061
surfaced road	805	2.024	1.476	0.106	11.608
armed police	804	1.026	1.496	0	9.563
industry share	805	0.243	0.084	0.039	0.579
polarization index	798	0.316	0.163	0.037	1
fractionalization index	798	0.594	0.165	0.000	0.955
effective no parties	798	3.059	2.265	1	22.323
voter turnout	798	68.6	11.4	23.8	91.5
election year	868	0.200	0.401	0	1
fiscal space	789	0.756	0.067	0.546	0.936
linguistic fractionalization	805	0.407	0.230	0.063	0.926
religious fractionalization	753	0.335	0.169	0.073	0.733
SC share	794	11.75	8.04	0	28.85
ST share	794	21.79	27.29	0	94.75
weighted Gini	637	0.276	0.042	0.160	0.454
poverty rate	805	29.75	12.77	3.42	67.68
literacy rate	868	59.50	14.76	24.12	93.61

Note: dev exp ratio: the ratio of development expenditure to aggregate state government expenditure
dev exp econ ratio: the ratio of development expenditure for economic services
to aggregate state government expenditure
energy generated: the volume of generated energy divided by the population of state
surfaced road: the total length of surfaced road divided by the population of state.
armed police: the number of armed pokicemen divided by the population of the state
industry share: the ratio of industry output to net state domestic product
polarization index: the polarization index of political parties.
fractionalization index: the fractionalization index of political parties.
effective no parties: the effective number of political parties
voter turnout: the voter turnout rate of the last Vidhan Sabha election of the state
election year: dummy variable that takes one in the election year, and zero otherwise.
fiscal space: the ratio of funding for discretionary spending by state government.
linguistic fractionalization: the fractionalization index of liguistic distiribution of the sate.
religious fractionalization: the fractionalization index of religious distribution of the state.
SC share: the population share of scheduled castes.
ST share: the population share of scheduled tribes.
weighted Gini: the weighted sum of urban and rural Gini coefficinets with population as weights.
poverty rate: the population share of people living under the povrty line.
literacy rate: the population share of literate people.

Table 2: Correlation among variables

	dev exp ratio	dev exp econ ratio	energy generated	surfaced road	armed police	industry share	polarization index	fractionalization index	effective no parties	voter turnout	election year	fiscal space	linguistic fractionalization	religious fractionalization	SC share	ST shrae	weighted Gini	poverty rate	literacy rate
dev exp ratio	1																		
dev exp econ ratio	0.9493	1																	
energy generated	−0.221	−0.1708	1																
surfaced road	−0.393	−0.3193	0.1103	1															
armed police	−0.3067	−0.2544	−0.2881	0.5163	1														
industry share	−0.2196	−0.1925	0.3813	0.324	−0.058	1													
polarization index	0.1025	0.0716	−0.3005	−0.044	0.1796	−0.1598	1												
fractionalization index	−0.2045	−0.277	−0.0895	−0.1291	−0.0888	−0.105	−0.0868	1											
effective no parties	−0.0743	−0.1432	−0.1315	−0.11	−0.0099	−0.116	0.3628	0.7204	1										
voter turnout	−0.2605	−0.3299	−0.1251	0.2671	0.4132	0.0491	−0.0406	0.1256	0.0854	1									
election year	0.0087	0.0096	0.015	0.0082	−0.0212	0.0337	−0.0084	0.0184	0.0345	0.005	1								
fiscal space	0.4151	0.5076	−0.1074	0	−0.0626	0.1773	0.0693	−0.3671	−0.1733	−0.1484	0.0379	1							
linguistic fractionalization	−0.2032	−0.1248	−0.3903	0.4066	0.5519	−0.0941	0.1166	0.0072	0.0063	0.3088	−0.0248	0.0093	1						
religious fractionalization	−0.1883	−0.2096	−0.0531	0.232	0.3065	−0.0299	0.2798	0.3332	0.282	0.2519	−0.0185	−0.1552	0.3064	1					
SC share	0.2173	0.1671	0.3007	−0.3873	−0.4602	−0.1091	−0.241	−0.1456	−0.1914	−0.2218	0.0162	−0.024	−0.5813	−0.3907	1				
ST shrae	−0.2231	−0.1769	−0.2808	0.4999	0.6907	−0.0875	0.0371	−0.1114	−0.0618	0.2701	−0.0307	−0.0469	0.5648	0.0675	−0.6053	1			
weighted Gini	−0.0188	−0.0192	0.3331	0.0754	−0.4937	0.2934	−0.0682	−0.02	−0.0155	−0.1857	0.0464	0.1756	−0.5077	−0.0974	0.2597	−0.4619	1		
poverty rate	0.3567	0.305	−0.391	−0.4405	−0.3186	−0.1535	0.0515	−0.0655	−0.0537	−0.3073	0.0334	0.3206	−0.0676	−0.3066	0.0892	−0.0639	0.0485	1	
literacy rate	−0.607	−0.6603	0.2881	0.439	0.2952	0.3807	0.0436	0.2341	0.1624	0.4567	−0.0257	−0.4531	−0.0044	0.3066	−0.3122	0.1711	0.1475	−0.5112	1

Note: refer to the note of Table 1 for the explanation of variables.

Table 3: The effect of industry share on development expenditure

Dependent Variable: Development Expenditure/Aggregate Expenditure

Independent Variable	GMM						GMM						GMM					
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
dev exp ratio (−1)			0.4208	(0.0502) ***	0.4706	(0.0352) ***			0.4477	(0.0513) ***	0.4976	(0.0349) ***			0.4444	(0.0507) ***	0.493615	0.034823 ***
polarization index	0.0674	(0.0316) **	0.0790	(0.0255) ***	0.0788	(0.0188) ***												
fractionalization index							−0.0104	(0.0283)	−0.0113	(0.0218)	−0.0112	(0.0191)						
effective no parties													0.0022	(0.0016)	0.0027	(0.0014) *	0.0026	(0.0014) *
election year	−0.0039	(0.0042)	−0.0041	(0.0048)	−0.0040	(0.0047)	−0.0042	(0.0041)	−0.0041	(0.0049)	−0.0041	(0.0047)	−0.0046	(0.0041)	−0.0049	(0.0049)	−0.0049	(0.0047)
voter turnout	0.0006	(0.0006)	0.0001	(0.0004)	0.0001	(0.0003)	0.0003	(0.0006)	−0.0004	(0.0005)	−0.0004	(0.0003)	0.0003	(0.0006)	−0.0003	(0.0004)	−0.0004	(0.0003)
fiscal space	−0.1899	(0.0888) **	−0.1144	(0.0750)	−0.0998	(0.0667)	−0.2084	(0.0898) **	−0.1411	(0.0751) *	−0.1291	(0.0667) *	−0.2127	(0.0898) **	−0.1419	(0.0752) *	−0.1291	(0.0665) *
linguistic fractionalization	0.0017	(0.1198)	−0.0229	(0.0763)	−0.0239	(0.0773)	0.0430	(0.1268)	0.0209	(0.0745)	0.0199	(0.0775)	0.0257	(0.1261)	−0.0004	(0.0749)	−0.0012	(0.0775)
religious fractionalization	0.0357	(0.0874)	−0.0859	(0.0589)	0.0871	(0.0708)	0.0144	(0.0931)	−0.0691	(0.0627)	0.0698	(0.0720)	0.0059	(0.0915)	0.0512	(0.0606)	0.0516	(0.0710)
SC share	0.0086	(0.0041) **	0.0032	(0.0027)	0.0025	(0.0028)	0.0104	(0.0044) **	0.0049	(0.0027) *	0.0042	(0.0027)	0.0102	(0.0044) **	0.0047	(0.0027) *	0.0040	(0.0027)
ST shrae	0.0054	(0.0023) **	0.0024	(0.0016)	0.0021	(0.0015)	0.0061	(0.0024) ***	0.0029	(0.0016) *	0.0026	(0.0015) *	0.0062	(0.0023) ***	0.0032	(0.0016) **	0.0029	(0.0015) **
poverty rate	−0.0009	(0.0011)	0.0000	(0.0008)	0.0001	(0.0006)	−0.0013	(0.0012)	−0.0003	(0.0008)	−0.0002	(0.0006)	−0.0012	(0.0012)	−0.0003	(0.0008)	−0.0002	(0.0006)
weighted Gini	−0.2105	(0.1772)	−0.1323	(0.1223)	−0.1204	(0.1247)	−0.2303	(0.1881)	−0.1473	(0.1241)	−0.1347	(0.1255)	−0.2223	(0.1871)	−0.1349	(0.1241)	−0.1223	(0.1252)
literacy rate	−0.0023	(0.0017)	−0.0020	(0.0012)	−0.0018	(0.0011) *	−0.0018	(0.0018)	−0.0013	(0.0012)	−0.0011	(0.0011)	−0.0020	(0.0018)	−0.0014	(0.0012)	−0.0013	(0.0011)
industry share (−1)	0.1775	(0.0878) **	0.1501	(0.0717) **	0.1393	(0.0594) **	0.1592	(0.0904) *	0.1250	(0.0723) *	0.1124	(0.0595) *	0.1633	(0.0904) *	0.1284	(0.0726) *	0.1157	(0.0593) *
R^2	0.9125		0.9559				0.9047		0.955				0.9057		0.9552			
Wald chi2 (p-value)	43037.87 (0)		17336.52 (0)		15709.59 (0)		37396.62 (0)		116123 (0)		15507.23 (0)		38094.28 (0)		116942.4 (0)		15591.23 (0)	
rho	0.444		0.068				0.489		0.066				0.484		0.066063			
AR1 test p-value					0						0						0	
AR2 test p-value					0.227						0.211						0.235	
No. of obs	590		589		589		590		589		589		590		589		589	

Note: refer to the note of Table 1 for the explanation of variables.
Numbers in parentheses are heteroskedasiticity and autocorrelation robust standard errors.

Table 4: The effects of industry share on development expenditure on economic services

Dependent Variable: Development Expenditure for Economic Services/Aggregate Expenditure

Independent Variable	GMM						GMM						GMM					
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
dev exp econ ratio (−1)			0.3936	(0.0475) ***	0.4448	(0.0348) ***			0.3872	(0.0483) ***	0.4391	(0.0350) ***			0.3979	(0.0480) ***	0.4488	(0.0348) ***
polarization index	0.0201	(0.0194)	0.0289	(0.0157) *	0.0292	(0.0125) **												
fractionalization index							−0.0412	(0.0183) **	−0.0311	(0.0146) **	−0.0292	(0.0129) **						
effective no parties													−0.0018	(0.0010) *	−0.0011	(0.0010) **	−0.0010	(0.0009)
election year	−0.0020	(0.0028)	−0.0029	(0.0033)	−0.0031	(0.0032)	−0.0016	(0.0028)	−0.0025	(0.0033)	−0.0027	(0.0031)	−0.0018	(0.0028)	−0.0027	(0.0033)	−0.0029	(0.0032)
voter turnout	0.0003	(0.0004)	0.0000	(0.0003)	−0.0001	(0.0002)	0.0003	(0.0004)	−0.0002	(0.0003)	−0.0002	(0.0002)	0.0002	(0.0004)	−0.0002	(0.0003)	−0.0003	(0.0002)
fiscal space	0.0602	(0.0609)	0.0308	(0.0534)	0.0282	(0.0449) *	0.0631	(0.0606)	0.0246	(0.0527)	0.0207	(0.0446)	0.0622	(0.0610)	0.0216	(0.0530)	0.0179	(0.0447)
linguistic fractionalization	0.0105	(0.0843)	−0.0020	(0.0537)	−0.0023	(0.0522)	0.0349	(0.0822)	0.0240	(0.0526)	0.0232	(0.0518)	0.0312	(0.0840)	0.0196	(0.0529)	0.0190	(0.0521)
religious fractionalization	0.1154	(0.0606) *	0.1204	(0.0393) ***	0.1165	(0.0482) **	0.1314	(0.0615) **	0.1319	(0.0419) ***	0.1271	(0.0487) ***	0.1146	(0.0615) *	0.1156	(0.0407) ***	0.1112	(0.0482) **
SC share	0.0009	(0.0026)	−0.0002	(0.0017)	−0.0004	(0.0018)	0.0015	(0.0025)	0.0006	(0.0017)	0.0005	(0.0018)	0.0016	(0.0026)	0.0006	(0.0017)	0.0005	(0.0018)
ST shrae	0.0032	(0.0012) ***	0.0016	(0.0009) *	0.0014	(0.0010)	0.0031	(0.0012) ***	0.0016	(0.0009) *	0.0014	(0.0010)	0.0033	(0.0012) ***	0.0018	(0.0009) **	0.0016	(0.0010)
poverty rate	−0.0019	(0.0007) ***	−0.0010	(0.0005) *	−0.0009	(0.0004) **	−0.0020	(0.0007) ***	−0.0011	(0.0005) **	−0.0010	(0.0004) **	−0.0020	(0.0007) ***	−0.0011	(0.0005) **	−0.0010	(0.0004) **
weighted Gini	−0.0552	(0.1224)	−0.0450	(0.0850)	−0.0421	(0.0843)	−0.0654	(0.1210)	−0.0573	(0.0850) **	−0.0543	(0.0840)	−0.0665	(0.1233)	−0.0560	(0.0852)	−0.0526	(0.0843)
literacy rate	−0.0029	(0.0011) ***	−0.0018	(0.0008) **	−0.0016	(0.0007) **	−0.0028	(0.0011) **	−0.0016	(0.0008) **	−0.0014	(0.0007) *	−0.0027	(0.0011) **	−0.0015	(0.0008) *	−0.0013	(0.0007) *
industry share (−1)	0.1170	(0.0537) **	0.0936	(0.0442) **	0.0865	(0.0400) **	0.1166	(0.0533) **	0.0904	(0.0440) **	0.0829	(0.0397) **	0.1126	(0.0540) **	0.0848	(0.0445) *	0.0771	(0.0398) *
R^2	0.8604		0.9273				0.8632		0.9273				0.8595		0.927			
Wald chi2 (p−value)	4669.9 (0)		47945.46 (0)		9334.82 (0)		4739.17 (0)		47586.76 (0)		9399.09 (0)		18381.26 (0)		47905.37 (0)		9342.81 (0)	
rho	0.436		0.071				0.428		0.072				0.441		0.07001			
AR1 test p−value					0						0						0	
AR2 test p−value					0.976						0.901						0.922	
No. of obs	590		589		589		590		589		589		590		589		589	

Note: refer to the note of Table 1 for the explanation of variables.

Numbers in parentheses are heteroskedasiticity and autocorrelation robust standard errors.

Table 5: The effects of industry share on energy generated per person

Dependent Variable: Electricity Generated Per Person

Independent Variable	GMM						GMM						GMM					
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
energy generated (−1)			0.8531	(0.0410) ***	0.8572	(0.0292) ***			0.8501	(0.0405) ***	0.8549	(0.0289) ***			0.8529	(0.0404) ***	0.8569	(0.0289) ***
polarization index	−0.0074	(0.0221)	−0.0066	(0.0152)	−0.0063	(0.0199)												
fractionalization index							−0.0137	(0.0246)	−0.0290	(0.0179)	−0.0286	(0.0199)						
effective no parties													0.0002	(0.0010)	−0.0011	(0.0009)	−0.0010	(0.0015)
election year	0.0041	(0.0037)	0.0073	(0.0046)	0.0073	(0.0049)	0.0042	(0.0037)	0.0077	(0.0046)	0.0077	(0.0049)	0.0040	(0.0037)	0.0075	(0.0046)	0.0075	(0.0049)
voter turnout	−0.0001	(0.0006)	−0.0002	(0.0003)	−0.0002	(0.0004)	−0.0001	(0.0005)	−0.0001	(0.0003)	−0.0001	(0.0003)	−0.0001	(0.0005)	−0.0001	(0.0003)	−0.0001	(0.0003)
fiscal space	0.0208	(0.0769)	0.0046	(0.0598)	0.0039	(0.0707)	0.0209	(0.0773)	0.0078	(0.0591)	0.0068	(0.0703)	0.0192	(0.0773)	0.0063	(0.0592)	0.0055	(0.0705)
linguistic fractionalization	0.4191	(0.2254) *	−0.0151	(0.0699)	−0.0167	(0.0828)	0.4188	(0.2232) *	−0.0061	(0.0703)	−0.0079	(0.0824)	0.4147	(0.2248) *	−0.0111	(0.0706)	−0.0126	(0.0828)
religious fractionalization	0.2122	(0.1482)	−0.0505	(0.0662)	0.0498	(0.0742)	0.2139	(0.1489)	−0.0717	(0.0652)	0.0706	(0.0750)	0.2121	(0.1487)	0.0572	(0.0662)	0.0563	(0.0742)
SC share	0.0164	(0.0060) ***	0.0040	(0.0025)	0.0039	(0.0031)	0.0165	(0.0059) ***	0.0039	(0.0024) ***	0.0038	(0.0031)	0.0163	(0.0060) ***	0.0039	(0.0024)	0.0038	(0.0031)
ST shrae	0.0093	(0.0030) ***	0.0027	(0.0015) *	0.0026	(0.0018)	0.0093	(0.0030) ***	0.0023	(0.0015)	0.0022	(0.0018)	0.0093	(0.0030) ***	0.0025	(0.0015) *	0.0024	(0.0018)
poverty rate	0.0041	(0.0016) ***	0.0002	(0.0007)	0.0002	(0.0007)	0.0042	(0.0016) ***	0.0003	(0.0007)	0.0003	(0.0007)	0.0042	(0.0016) ***	0.0003	(0.0007)	0.0002	(0.0007)
weighted Gini	−0.7487	(0.3453) **	−0.1640	(0.1356)	−0.1619	(0.1406)	−0.7479	(0.3412) **	−0.1682	(0.1344)	−0.1658	(0.1402)	−0.7466	(0.3437) **	−0.1670	(0.1346)	−0.1650	(0.1406)
literacy rate	−0.0020	(0.0024)	−0.0008	(0.0008)	−0.0008	(0.0012)	−0.0020	(0.0024)	−0.0009	(0.0008)	−0.0009	(0.0012)	−0.0021	(0.0024)	−0.0008	(0.0008)	−0.0008	(0.0012)
industry share (−1)	0.0544	(0.0929)	0.0969	(0.0496) *	0.0971	(0.0646) +	0.0563	(0.0930)	0.1042	(0.0499) **	0.1044	(0.0642) ++	0.0553	(0.0930)	0.0980	(0.0494) **	0.0982	(0.0642) +++
R^2	0.6551		0.9649				0.6644		0.9649				0.6585		0.9649			
Wald chi2 (p-value)	1951.4 (0)		76756.25 (0)		13460.61 (0)		4641.5 (0)		29931.27 (0)		13526.42 (0)		1974.36 (0)		30306.32 (0)		13467.44 (0)	
rho	0.764		0.009				0.757		0.011				0.762		0.009			
AR1 test p-value					0						0						0	
AR2 test p-value					0.003						0.009						0.009	
No. of obs	564		564		564		564		564		564		564		564		564	

Note: refer to the note of Table 1 for the explanation of variables.
+: p-value=0.133; ++: p-value=0.104; +++: p-value=0.126.
Numbers in parentheses are heteroskedasiticity and autocorrelation robust standard errors.

Table 6: The effects of industry share on surfaced road length per person

Dependent Variable: Total Surfed Road Length Per Person

Independent Variable	GMM						GMM						GMM					
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
surfaced road (-1)			0.8152	(0.0555) ***	0.8112	(0.0261) ***			0.8205	(0.0545) ***	0.8186	(0.0258) ***			0.8223	(0.0547) ***	0.8178	(0.0258) ***
polarization index	-0.4482	(0.3110)	-0.2093	(0.1997)	-0.2142	(0.1306)												
fractionalization index							0.2657	(0.3113)	0.0494	(0.1810)	0.0509	(0.1324)						
effective no parties													-0.0020	(0.0094)	-0.0072	(0.0073)	-0.0072	(0.0098)
election year	0.0084	(0.0269)	0.0151	(0.0323)	0.0148	(0.0325)	0.0073	(0.0268)	0.0146	(0.0325)	0.0144	(0.0327)	0.0100	(0.0267)	0.0173	(0.0325)	0.0170	(0.0328)
voter turnout	-0.0063	(0.0041)	-0.0018	(0.0022)	-0.0018	(0.0023)	-0.0045	(0.0036)	-0.0005	(0.0017)	-0.0005	(0.0022)	-0.0042	(0.0036)	-0.0005	(0.0017)	-0.0005	(0.0022)
fiscal space	-0.7375	(0.6192)	-0.6314	(0.4174)	-0.6350	(0.4640)	-0.7887	(0.6193)	-0.5548	(0.4328)	-0.5562	(0.4639)	-0.7538	(0.6195)	-0.5523	(0.4343)	-0.5550	(0.4641)
linguistic fractionalizatio	2.3586	(1.2123) *	0.5905	(0.4923)	0.5998	(0.5400)	2.0666	(1.2171) *	0.4597	(0.4483)	0.4625	(0.5400)	2.1863	(1.2110) *	0.5206	(0.4528)	0.5281	(0.5422)
religious fractionalizatio	0.0782	(0.7648)	-0.3154	(0.3748)	0.3141	(0.4942)	0.0813	(0.7638)	-0.3550	(0.3760)	0.3541	(0.5019)	0.1362	(0.7489)	0.4159	(0.3588)	0.4156	(0.4968)
SC share	-0.0881	(0.0460) *	-0.0324	(0.0173) *	-0.0327	(0.0191) *	-0.0995	(0.0485) **	-0.0377	(0.0188) **	-0.0379	(0.0189) **	-0.0992	(0.0479) **	-0.0368	(0.0185) **	-0.0372	(0.0189) **
ST shrae	-0.0871	(0.0373) **	-0.0238	(0.0159)	-0.0241	(0.0104) **	-0.0899	(0.0385) **	-0.0249	(0.0162)	-0.0251	(0.0105) **	-0.0916	(0.0384) **	-0.0256	(0.0164)	-0.0261	(0.0105) **
poverty rate	-0.0256	(0.0128) **	-0.0058	(0.0043)	-0.0059	(0.0045)	-0.0244	(0.0132) *	-0.0050	(0.0044)	-0.0050	(0.0045)	-0.0242	(0.0132) *	-0.0049	(0.0043)	-0.0050	(0.0045)
weighted Gini	2.7550	(2.2415)	-0.1681	(0.8612)	-0.1535	(0.8737)	2.8184	(2.3256)	-0.1334	(0.8765)	-0.1256	(0.8786)	2.8138	(2.3372)	-0.1805	(0.8676)	-0.1623	(0.8798)
literacy rate	-0.0105	(0.0179)	-0.0080	(0.0074)	-0.0081	(0.0074)	-0.0105	(0.0184)	-0.0093	(0.0075)	-0.0093	(0.0074)	-0.0098	(0.0182)	-0.0090	(0.0074)	-0.0091	(0.0074)
industry share (-1)	2.0914	(0.9240) **	1.0706	(0.4635) **	1.0800	(0.4150) ***	2.0000	(0.9225) **	1.0984	(0.4645) **	1.1030	(0.4170) ***	2.0072	(0.9236) **	1.0915	(0.4599) **	1.1028	(0.4172) ***
R^2	0.74		0.9586				0.7266		0.958				0.7283		0.9585			
Wald chi2 (p-value)	5236.92 (0)		54864.52 (0)		13200.25 (0)		4814.75 (0)		53979.18 (0)		13057.67 (0)		4990.66 (0)		55027.79 (0)		13038.23 (0)	
rho	0.689		-0.011				0.706		-0.005				0.703		-0.013			
AR1 test p-value					0						0						0	
AR2 test p-value					0.328						0.334						0.325	
No. of obs	590		590		590		590		590		590		590		590		590	

Note: refer to the note of Table 1 for the explanation of variables.
Numbers in parentheses are heteroskedasiticity and autocorrelation robust standard errors.

Table 7: The effects of industry share on number of armed policemen per person

Dependent Variable: Number of Armed Policemen Per Person

Independent Variable	GMM						GMM						GMM					
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
armed police (−1)			0.5704	(0.1345) ***	0.6148	(0.0281) ***			0.6262	(0.1290) ***	0.6373	(0.0278) ***			0.6503	(0.1286) ***	0.6472	(0.0276) ***
polarization index	0.5635	(0.1699) ***	0.3480	(0.1124) ***	0.3121	(0.0720) ***												
fractionalization index							−0.4215	(0.1728) **	−0.1773	(0.0967) *	−0.1726	(0.0731) **						
effective no parties													−0.0043	(0.0049)	−0.0021	(0.0040)	−0.0021	(0.0054)
election year	0.0187	(0.0156)	0.0328	(0.0177) *	0.0327	(0.0175) *	0.0220	(0.0165)	0.0352	(0.0186) *	0.0352	(0.0178) **	0.0185	(0.0166)	0.0332	(0.0183) *	0.0332	(0.0180) *
voter turnout	0.0012	(0.0016)	−0.0004	(0.0010)	−0.0006	(0.0012)	−0.0017	(0.0015)	−0.0023	(0.0009) ***	−0.0023	(0.0012) *	−0.0024	(0.0016)	−0.0024	(0.0009) ***	−0.0024	(0.0012) **
fiscal space	−0.4187	(0.2965)	−0.3455	(0.2156)	−0.3283	(0.2506)	−0.3861	(0.2920)	−0.4063	(0.2161) *	−0.4018	(0.2539)	−0.4581	(0.3003)	−0.4040	(0.2129) *	−0.4055	(0.2556)
linguistic fractionalization	0.8536	(0.4302) **	0.4908	(0.2129) **	0.4645	(0.2908)	1.2764	(0.4460) ***	0.6803	(0.2144) ***	0.6676	(0.2952) **	1.1410	(0.4254) ***	0.6074	(0.2035) ***	0.6103	(0.2977) **
religious fractionalization	0.0459	(0.2769)	−0.1638	(0.1919)	0.1586	(0.2660)	0.0978	(0.2831)	−0.1776	(0.1994)	0.1761	(0.2732)	−0.0392	(0.2634)	0.0778	(0.1768)	0.0775	(0.2721)
SC share	−0.0419	(0.0235) *	−0.0231	(0.0113) **	−0.0214	(0.0103) **	−0.0257	(0.0213)	−0.0129	(0.0102)	−0.0127	(0.0103)	−0.0252	(0.0210)	−0.0128	(0.0099)	−0.0128	(0.0103)
ST shrae	−0.0537	(0.0305) *	−0.0327	(0.0154) **	−0.0308	(0.0056) ***	−0.0505	(0.0297) *	−0.0295	(0.0149) **	−0.0291	(0.0057) ***	−0.0473	(0.0294)	−0.0274	(0.0143) *	−0.0275	(0.0057) ***
poverty rate	−0.0015	(0.0050)	0.0008	(0.0024)	0.0009	(0.0024)	−0.0032	(0.0046)	0.0000	(0.0022)	0.0000	(0.0025)	−0.0036	(0.0044)	−0.0002	(0.0021)	−0.0003	(0.0025)
weighted Gini	0.3582	(0.6737)	−0.0301	(0.3907)	−0.0427	(0.4688)	0.1952	(0.6612)	−0.1624	(0.3835)	−0.1619	(0.4756)	0.2212	(0.6415)	−0.1506	(0.3755)	−0.1507	(0.4792)
literacy rate	−0.0171	(0.0120)	−0.0119	(0.0068) *	−0.0112	(0.0040) ***	−0.0145	(0.0113)	−0.0091	(0.0063)	−0.0089	(0.0040) **	−0.0150	(0.0114)	−0.0088	(0.0061)	−0.0088	(0.0040) **
industry share (−1)	1.2923	(0.4255) ***	1.0227	(0.3207) ***	0.9682	(0.2203) ***	1.2975	(0.4277) ***	0.9068	(0.3010) ***	0.8932	(0.2228) ***	1.3063	(0.4327) ***	0.6580	(0.2871) ***	0.8671	(0.2241) ***
R^2	0.8669		0.9622				0.8747		0.9655				0.878		0.967			
Wald chi2 (p−value)	1556.89 (0)		7788.77 (0)		20711.69 (0)		3764.62 (0)		8979.19 (0)		20067.58 (0)		1914.78 (0)		20628.76 (0)		19798.72 (0)	
rho	0.601		0.080				0.567		0.021				0.546		−0.006			
AR1 test p−value					0						0						0	
AR2 test p−value					0.139						0.103						0.092	
No. of obs	590		590		590		590		590		590		590		590		590	

Note: refer to the note of Table 1 for the explanation of variables.
Numbers in parentheses are heteroskedasiticity and autocorrelation robust standard errors.