Politics-Politics Duality, Accountability, and Rural Public Service Performance: Evidence from a Transition Economy

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Abstract
The relationships between politicians and executives, which are termed as politics-administration relationships, lie in the heart of public administration. The lack of professional administration in transition economies like China gives birth to what we termed ‘politics-politics relationships,’ the relations between the secretary of the Chinese Communist Party (CCP) Committee and the governor of the government. Does the duality of partial and democratic politicians make a difference for the operation and performance of public affairs? The question is empirically examined in the paper. Such relationships are predicted diversely by agency theory, stewardship theory, and informal accountability theory. We place our analysis in the context of Chinese village self-governance after the establishment of democratic election since the end of 1990s, where elected village committee (VC) heads and appointed village Party branch (VPB) secretaries have potential power struggle. Using a national survey of more than 300 village heads in China, we find that party-state duality has no significant influence on public goods provision (e.g. running water and cable television). Our study supports informal accountability theory and contributes to the theoretical development and comparative research of politics-administration relationships.

Keywords
Politics-Politics Duality; Accountability; Public Service Performance; Institutional Transition; China; Village Election; Politics-Administration Dichotomy
Introduction

The power structure of top leadership teams underpinning the operation of organizations has been studied extensively and inter-disciplinarily. The duality of CEO and chairman of board of directors is shown by numerous corporate governance studies to be one of the crucial antecedents of corporate performance (Boyd 1995; Peng, Zhang, and Li 2007). The relationships between politicians and administrators in Western democratic countries, where politics and administration are mostly constitutionally divided, are viewed as one of the fundamental issues in public administration research and practices (Rosenbloom 2008). In transition economies like China, the lack of professional administration gives birth to the significance of relationships between partial politicians and governmental executives (democratic politicians) (Guo 2001). Does the duality of partial politician and democratic politician make a difference for the operation and performance of public affairs? The question is theoretically and empirically examined in the paper.

The paper aims to empirically reveal the relationships between top leadership structure (especially the duality of their positions) and task performance. Such relationships are predicted diversely by agency theory, stewardship theory, and informal accountability theory, demanding more systematical investigation. We place our analysis in the context of Chinese village level governance after the formal establishment of democratic election since the end of 1990s. Using a national survey of more than 300 village heads in China, we find that party-state duality has no significant influence on the quality of public goods provision. Our study supports
informal accountability theory and contributes to the theoretical development and comparative research of politics-administration relationships.

The paper is structured as follows. We introduce the traditional politics-administration relationships and their variations in the institutional context of China in the first section. We then review the mainstream theoretical perspectives on the relationships between politics-politics duality and public service performance, and propose research hypotheses to be tested in the paper. Data sources and analytical methods are presented in the third section, and results are then reported. We lastly discuss theoretical implications and practical recommendations of our findings, as well as limitations and future research directions.

The Institutional Background of Politics-Administration Relationships in China

The traditional politics-administration dichotomy

The relationships between politicians and executives lying in the heart of public administration have been debated for almost half of the 20th century (Svara 1998). Traditionally, the Webber’s style of politics-administration dichotomy is the underpinning of bureaucracy. In such arrangement, the main role of politicians is policy making, whereas administrators tackle the task of policy implementation (Rosenbloom 2008). Distinguishing their duties is the prerequisite of formal bureaucracy, and is also the requirement of social division of labor. The partial separation of powers among legislature, executive, and judiciary is essential for power
balance and healthy evolution of their relationships. Politicians and executives have relatively clarified positions and career channel, and some sorts of overlap are permitted. The independence of professional, apolitical, and merit based civil servants are also crucial for the politics-administration dichotomy (Podger 2009).

The degree of the separation between politics and administration is variable at different administrative levels and in different countries, showing the diversity of politics-administration relationships. For instance, their relations are intertwined in the United States while clarified in the British Commonwealth member countries (Podger 2009). A great deal of works has mainly focused on their dichotomy, though recent studies emphasize their complementarity and variation of continuum (Svara 2008). As Demir argues, the literature on political-administrative relations can be divided into three schools: separation, political, and interaction, distinctive from previous dichotomy between separation and opposite (Demir 2009). The relations between politics and management are more complex in reality, a continuum rather than a dichotomy may be appropriate for our knowledge (Demir and Nyhan 2008). Evidence from city managers in the United States demonstrates that there is a continuum in elected official-public administrator relations, which complicates the traditional view of dichotomy (Demir 2009). The role overlaps between elected officials and public administrators on policy and administration are diverse, illuminating a more variable vision of their relations. Administrators play a significant role in political decision making, which is vital to our understanding of public management (Nicholson-Crotty 2009).
The last quarter of the 20th century has witnessed the rise of the New Public Management (NPM) movement, in which the public demands running governments like business and reshaping the relations among politicians, administrators, markets, and citizens. The politics-administration relationships become a key issue when many countries are involved in the NPM movement (Box 1999). More recently, the strengthening role of administrators in the political process as well as the increasing involvement of politicians in process of policy implementation give birth to more emphases placed on their interaction and complementarities (Svara 2001; Demir 2009). How to reconcile the tensions between politicians and executives, however, is still an unsolved problem both in research and practice.

The politics-politics relationships in China

Institutions as the main constitutes of contexts contribute to the contingency of numerous theories (Whetten 2009), in which the politics-administration dichotomy is one of them accounts albeit being understood little. The Western prevailing principal-agent conflict is transformed to the principal-principal conflict due to lack of formal institutions in emerging economies, making corporate governance and investor protection there distinct (Young et al. 2008). Meanwhile, institutional transition gives birth to the politics-politics dichotomy for the deficiency of professional civil service tradition, which substitutes the politics-administration dichotomy and becomes the underpinning of public administration (Guo 2001). Although research on politics-administration dichotomy has been accumulated rapidly in Western context
(Svara 2008; Demir 2009), we know little about their counterparts in developing countries.

The politics-administration relationships in China are profoundly different from most Western countries. Although China has a long tradition of merit-based, professional civil service in the ancient times, the revolution and reform during the last century approximately destroyed it (Podger 2009). The lack of professional administration gives birth to what we termed ‘politics-politics relationships,’ the relations between secretaries of the Chinese Communist Party (CCP) Committee and governors of the government, which are mixed and complicated with the focal politics-administration relationships.

The separation of their positions and roles (Dangzheng fenli) has been one of the key political reform agendas at the end of 1980s. The duality of party secretary and governor become increasingly less and less, though it’s relatively more at the lower levels. However, their separation generated new issues in practice (Guo 2001). The overlapped duties between party secretary and governor result in their role ambiguity and conflict. Their positions are exchangeable, for party secretaries can be promoted to the positions of governor at the upper level, and governors can be transferred to other regions or promoted as party secretaries. Power struggle is harmful for the operation of government. The emerging of factions belonging to the two leaders is also harmful for their collaboration in the operation of public affairs. The issues of accountability also emerge, since who should be held accountable by who for what is not distinct. Governors are punished for their wrongdoings in most cases, as shown in
news reports, and may become scapegoats of decision mistakes by party secretaries.

The intertwined relationships between party secretary and governor are complex and demonstrate varieties among different levels of government and diverse functional departments. For example, more professional departments, such as auditing, statistics, education, science, industry regulations, are dominant by executives rather than party secretaries; whereas in more political and less professional departments, the voice of party secretaries is louder than governors. The variation may reflect the dual requirements of ‘redness’ and ‘expertness’ (political honesty and executive professionalism, youhong youzhuang) in Mao China, which disappeared slowly in the ear of reform and opening up. Their relations in the real world depend on their power distribution and cognitions, though there are some formal regulations on division of labor. Furthermore, the adoption of democratic election at the grassroots complicates their relations. For instance, the relationships between village head and party secretary have changed when public election is institutionalized. At township level, experiments of direct election also restructured the interaction between government executive and party secretary.

As an old Chinese proverb says, ‘One mountain cannot abide two tigers (yishan burong erhu).’ The power struggle between party secretaries and governors can be regarded as two tigers coexist on one mountain, and their conflict and fight is inevitable. Their relative power positions can be described simply in a matrix, in which four choices emerge (as shown in Figure 1). In the ideal design by central policymakers, party secretaries make policies and governors implement policies and
provide policy advices. However, their power distribution and relations are contingent by several external, organizational, and individual factors, and may deviate from what the central policymakers would like to see. The formally regulated division of power and roles usually conflicts with their cognitive competency and personal perceptions, which is also the roots of contradiction.

The politics-politics relationships at the grassroots level

At the village level, for instance and easy to understand, the implementation of public direct elections in the end of 1990s raises more complex problems, particually issues around the structure of power and the relations between the village committees and the party branches (Guo and Bernstein 2004).\(^1\) Previously, both party secretaries and village head are appointed by township governments, and their relations are principally harmonious due to their common interests and sources of power. Village committee chairmen are elected by the villagers and increasingly behave on behalf of villagers after the reform of election systems, however, make their relations with the still appointed party secretaries worsened (as shown in Figure 2). Though villagers’ congresses can be involved in their interaction as the third tiger, however, they are not standing committees and at best paper tigers right now (Tan 2010).

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\(^1\) The actual implementation of village election has not been earlier than the end of 1990s, though the Organic Law of the Villagers Committees (for Trial Implementation) has been firstly promulgated in 1987.
To be simple, we take the village (or community), the lowest level of administrative hierarchy in China, as our unit of analysis. Village direct elections have dramatically changed rural political ecology of China in recent years (O'Brien and Li 2000; Manion 2006), especially relations between heads of elected village committee (VC) and village Party branch (VPB) (Guo and Bernstein 2004). The VC chairman, elected bottom up by the village assembly or representative assembly (VRA), represents interests of their constituents; whilst the VPB secretary, elected ostensibly by members of VPB but appointed top down in nature, takes accountability for the township government. The relations between VC chairman and VPB secretary, typified by (electoral) politics-(partial) politics dichotomy and are different from Western (electoral) politics-administration dichotomy, shed light on continuing debates around the topic. Furthermore, the college graduated village officials scheme (daxuesheng cunguan), selecting promising graduates to be VC chairmen or VPB secretaries, or their subordinates or assistants, was adopted to improve the professionalism of rural governance, adding the third leg and complicating the existing politics-politics conflict.

Due to interest conflicting and accountability collision occurred frequently, duality of VC chairman and VPB secretary (vijiantsiao) has been explored by practice as the prescription to their subtle tensions (Guo and Bernstein 2004; Tan 2010), however its effectiveness has not been systematically studied. Specifically, we investigate the
impact of dichotomy/duality of VC chairman and VPB secretary on achievements of their main missions --- the quality of rural public service deliver.

Theories and Hypotheses

Agency theory, stewardship theory, and informal accountability theory predict duality-performance nexus as negative (Boyd 1995), positive (Peng, Zhang, and Li 2007), and none (Tsai 2007), without explicit conclusions supported by evidences.

Agency theory

Agency theory treats principal and agent as a dyadic relation. The principal entrusts tasks to the agent through contracts, and the agent gets respective pay for task completeness. The agent cost emerges due to information asymmetry of the principal and opportunism of the agent (Eisenhardt 1989). The incentive compatibility can be achieved if the principal and agent are the same persons. Thus the position overlapping of the principal and agent reduces agent cost and then improves organizational performance. However, principal is usually dispersed, and the duality of agent and one principal may harm other principals’ interest. Prior research on CEO-chairman duality reveals it may not good news for investors, particuially minor investors (Peng, Zhang, and Li 2007). The duality of principal and agent may result in the dysfunction of governance structure, and supply him the opportunity to expropriate interest of outsiders (Boyd 1995). We speculate the duality of VC chairman and VPB secretary are harmful for village governance and public interest, since the concentration of power in one person may undermine the force of
democracy.

**Hypothesis 1a:** The duality of VC chairman and VPB secretary has negative effects on rural public service performance due to agency cost and power struggle.

**Stewardship theory**

Contrary to the assumption and prediction of agency theory, in which rational self-interest is underlined, the self-achievement of agents is emphasized by the stewardship theory (Davis, Schoorman, and Donaldson 1997). The duality of leadership puts more authority and responsibility on the shoulders of the leaders, whose conscientiousness and efforts increase and contribute to performance improvement. Furthermore, the leadership duality improves efficiency of decision-making, enhances communication of leadership teams, and avoids potential conflict among split leaders if any. The public expenditure of potential luxurious life by leaders is also saved due to their duality. All the advantages argued in stewardship theory are helpful to improve public performance (Peng, Zhang, and Li 2007), and we propose our competing hypothesis in accordance.

**Hypothesis 1b:** The duality of VC chairman and VPB secretary has positive effects on rural public service performance for the benefit of incentive compatibility.

**Informal accountability theory**

Leaders equipped with public power ought to be taken accountable, or they may abuse their power and endanger public interest. Accountability mechanisms can be split into formal and informal ones as argued by recent literature (Tsai 2007) (Romzek, LeRoux, and Blackmar 2009). The formal accountability mechanisms such as democratic
election, media monitoring, and bureaucratic control, are usually emphasized in institutional reform agendas. The formal accountability mechanisms can not work as design without the underpinning institutional framework, e.g. the division of power among legislature, executive, and judiciary. What really important in less developed and transition regions, however, is informal accountability approach rather than formal accountability mechanisms (Tsai 2007). As shown in Putnam’s (1993) classic study in Italy, the work of democracy depends on social capital (Putnam, Leonardi, and Nanetti 1993). Thus, no matter armed with what sorts of formal accountability mechanisms, the operation of public affairs can not be improved without appropriate context. The informal accountability mechanisms, e.g. social capital of Putnam (1993), solidary groups in Tsai (2007), and leader reputation in Hall (Hall et al. 2004), are increasingly highlighted as substitute of formal accountability approaches. Traditionally formal institutions ought to be supplemented by informal mechanisms, (West 2004), (Scott 2000), especially in the context where formal institutional arrangements are lack of legitimacy and effectiveness (e.g. transition economies or developing countries).

Owing to less developed democracy in Chinese villages, the duality of VC chairman and VPB secretary may have little influence on public service. What’s more crucial in village affairs is informal accountability, in which solidary groups are most explainable (Tsai 2007). As such, we predict the effects of village chairman-secretary duality are negligible.

**Hypothesis 1c:** The duality of VC chairman and VPB secretary has negligible
effects on rural public service performance since what matters dominantly is the existence and effectiveness of informal accountability mechanisms.

**Data and Methods**

**Sample**

We employ data from a nationwide village self-governance survey conducted by the Ministry of Civil Affairs of China in 2005 to empirically clarify the conflicting predictions of the three theories. Using probabilities proportional to size measures (PPS) sampling approach, 3564 residents and cadres from 520 villages and communities, 260 towns, 130 counties were covered in the survey. Two questionnaires for villages and rural cadres respectively were used, and we employ questionnaires for cadres to conduct village-level statistical analysis. 371 usable questionnaires (each for one village) were collected, representing response rate of 98.2%. Information on the socioeconomic status, election and self-governance, and leadership structure of villages were asked in the questionnaire, providing sufficient details to understand their governance and development. The background and process of the survey can be found in Wang (Wang 2008), and his analysis ensures the reliability of the dataset.

**Measures**

**Independent variables.** There are several types of leadership position cross-holding between the VC and the VPB. The incumbent VC chairman can be the VPB secretary,
vice VPB secretary, or only member of the VPB, and the incumbent VPB secretary may also be the VC chairman, vice VC chairman, or merely member of the VC. To simplify the analysis, we treat the duality of VC chairman and VPB secretary as a binomial variable. If the VC chairman and the VPB secretary are the same person, the variable is scored as 1, otherwise as 0.

**Dependent variables.** There is enormous gap of public service delivery between urban and rural areas in China. The quantity, sorts, accessibility, and quality of public services are all less satisfactory in rural areas, though they have been ameliorated during past decades (Tsai 2007). The accessibilities of running water, electric power, and cable television are all crucial public services in contemporary villages and were asked in the questionnaire. The public service variables are all binomial variables. If there is such service in the village, we score it as 1 and 0 otherwise.

**Control variables.** The geographic and socioeconomic factors that may influence cost and benefit of rural public service delivery are controlled in the estimation. First, we control three geographic variables: The distance of the village from town center, we code 0 if the village is located in the town center and assign specific kilometers if not; the geographic location of village, we code 1 if it is located in mountainous terrain, or 0 if in plain, hilly, or other regions; the number of natural villages is also controlled to reflect spatial dispersion of village residents. Second, the size of village is measured by its total population. Third, we control the average net income of villagers. Lastly, the public expenditure of the VC per capita was not asked in the survey, and we use the total debt of the VC as a substitute.
The village election quality may influence public goods provision as revealed by previous studies, and should be taken into account in our analysis (Zhang et al. 2004; Wang and Yao 2007; Wang 2008). The election quality index is composed of the implementation of six procedural rules set by the Organic Law of the Villagers Committees promulgated in 1998, including: public selection of election committee, openness of candidate nomination, openness of final candidate selection, multi-candidacy for VC chairs, tallying ballots in public, and use of secret ballot booths. We code each rule 1 if the election practices in accordance with the legal requirements and 0 otherwise. The index consists of the sum of these six scores and ranges from 0~ 6, higher score denoting higher election quality.

Methods

We apply Logistics regression methods to estimate the effects because the dependent variables are binomial and the Ordinary Least Squares (OLS) method is not applicable. We run the regression independently by public services to find the real effects of the duality of VC chairman and VPB secretary.

Results and Discussions

Results

As shown in Table 1, 26% of villages are involved with duality of VC chairman and VPB secretary. Although some regions have conducted policy experiments of VC chairman-VPB secretary duality to mitigate their potential conflict and negative
influence, its existence has not been widespread. Almost all of villages in the sample are supplied with electric power, leaving little variation for further analysis and we drop its analysis then. Running water and cable television are delivered in approximate 50-60% of villages.

Insert Table 1 about here

The duality of VC chairman and VPB secretary has no significant effects on rural public service performance, no matter for running water or cable television (see Table 2). The results are more in accordance with the informal accountability theory as stated in H1c, and the predictions of agency theory and stewardship theory are not supported by our estimations.

Insert Table 2 about here

As for control variables, village population and per capita net income have significant positive effects on both types of public services. Larger and richer villages have sufficient resources to arrange public expenditure and provide public goods, and villagers there demand more and higher than their counterparts in relatively smaller and poorer villages. Election quality has negative effects on public service performance, though its effects are not statistically significant. Just as argued by informal accountability theory, election as formal accountability mechanism can not
work without informal institutions (Tsai 2007). Lastly, the distance of village from town center is an obvious obstacle for provision of cable television but not for running water, and the potential reason may be the difficulty of public infrastructure construction.

**Theoretical contributions and Policy implications**

The traditional politics-administration dichotomy is extended and transformed into the politics-politics relationships in the paper, to take into account the contextual uniqueness of transition economies. The relationships between VC chairman and VPB secretary are depicted in details, and their power struggle and potential countermeasures are discussed. Although duality of VC chairman and VPB secretary has been advocated by many rural governance reformers, it has no significant effect on public service performance. The empirical finding supports informal accountability theory rather than agency theory or stewardship theory. Our study contributes to the understanding of partial and democratic politician power conflict in transition economies, where professional civil servants make little but incremental help.

The control of the CCP on leading cadres has not been weakened during the last decades, or rather strengthened by the means of personnel management (Chan 2004). The relationships between party and state cadres are still one of the fundamental reform agendas in the future of China. As shown in the paper, the complementarity of political appointees and career executives should be considered seriously when they are selected and combined together, and when they are actually interacted. ‘One size
does not fit all.’ Both of their separation and duality are optional and dependent on the situations faced. To deepen rural governance in China, the professionalism of executives ought to be enhanced, though their entrance may generate potentially complicated conflict. Further more, the ‘voice and exit’ rights of citizens should be promoted and enlarged to the processes of the CCP committee, which will contribute to the accountability of cadres as well as their consciousness (Tan 2010).

Limitations and future research directions
Some limitations of our analysis should be pointed out. First, we utilize cross-sectional data to estimate correlations between partial-democratic political duality and public service performance, leaving causal inference to be future work. The duality of VC chairman and VPB secretary could be changed during a long run even in a single village, and time series data may provide the opportunity to conduct such examination. Further research ought to develop longitudinal dataset to conduct more robust causality analysis. Second, our operationalization of the leadership power structure at grassroots level is relatively simplistic, and future researchers could conduct in-depth investigation to unlock the black box of power struggle between the VC chairman and the VPB secretary. For e.g., how do VC chairman communicates with VPB secretary? Who has dominant voice in decision making? How do they reconcile conflict? Third, public service performance as a multidimensional construct is difficult to conceptualize and measure, and our operationalization strategy in the paper can be improved in future studies. Lastly, we examine the performance impact
of VC chairman-VPB secretary duality, and the antecedents of duality could be investigated in future research.

Conclusion

The relationships between politicians and executives, which are termed as politics-administration dichotomy, lie in the heart of public administration. The lack of professional administration gives birth to what we termed ‘politics-politics relationships,’ the relations between secretary of the CCP Committee and governor of the government. The characteristics, consequences, as well as emerging prospects of the politics-politics relationships are empirically examined in this paper. The paper aims to empirically reveal relationships between duality of top leaders’ positions and task performance, which are predicted diversely by agency theory, stewardship theory, and informal accountability theory, demanding more systematical investigation. We place our analysis in the context of Chinese village level governance after the formal establishment of democratic election since the end of 1990s, where elected village committee (VC) heads and appointed village Party branch (VPB) secretaries have potential conflict. Using a national survey of more than 300 village heads in China, we find that party-state duality has no significant influence on the quality of public goods provision. Our study supports informal accountability theory and contributes to the theoretical development and comparative research of politics-administration relationships.
Acknowledgements

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<table>
<thead>
<tr>
<th>Party Secretary</th>
<th>Governor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong-Weak</td>
<td>Strong-Strong</td>
</tr>
<tr>
<td>(Party secretary-Governor)</td>
<td>(Party secretary-Governor)</td>
</tr>
<tr>
<td>Weak-Weak</td>
<td>Weak-Strong</td>
</tr>
<tr>
<td>(Party secretory-Governor)</td>
<td>(Party secretory-Governor)</td>
</tr>
</tbody>
</table>

Figure 1 Power struggle: two tigers within one mountain?

![Power struggle diagram]

- Election within the CCP (mainly by the standing committee)
- Appointed by the upper level (actually controlled by the CCP)
- Top down
- Pre-election
- Bottom up
- Post-election
- Public election (formalism in reality)

Figure 2 Adoption of democratic election at the grassroots level
### Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tr>
<td>duality</td>
<td>368</td>
<td>0</td>
<td>1</td>
<td>.26</td>
<td>.438</td>
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<tr>
<td>electric power</td>
<td>368</td>
<td>0</td>
<td>1</td>
<td>1.00</td>
<td>.052</td>
</tr>
<tr>
<td>running water</td>
<td>368</td>
<td>0</td>
<td>1</td>
<td>.55</td>
<td>.498</td>
</tr>
<tr>
<td>cable television</td>
<td>368</td>
<td>0</td>
<td>1</td>
<td>.60</td>
<td>.492</td>
</tr>
<tr>
<td>Distance to town center</td>
<td>368</td>
<td>0</td>
<td>45</td>
<td>6.231</td>
<td>6.3796</td>
</tr>
<tr>
<td>Mountainous terrain</td>
<td>368</td>
<td>0</td>
<td>1</td>
<td>.27</td>
<td>.443</td>
</tr>
<tr>
<td>Number of natural villages</td>
<td>367</td>
<td>1</td>
<td>43</td>
<td>4.24</td>
<td>5.262</td>
</tr>
<tr>
<td>Village population</td>
<td>368</td>
<td>232</td>
<td>18900</td>
<td>2273.07</td>
<td>1825.553</td>
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<tr>
<td>Per capita net income</td>
<td>361</td>
<td>100</td>
<td>14000</td>
<td>2739.87</td>
<td>2001.331</td>
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<tr>
<td>Total debt</td>
<td>368</td>
<td>0</td>
<td>6980</td>
<td>73.897</td>
<td>441.6879</td>
</tr>
<tr>
<td>election quality</td>
<td>367</td>
<td>1</td>
<td>6</td>
<td>5.2153</td>
<td>.96947</td>
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<tr>
<td>Valid N (listwise)</td>
<td>359</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Table 2: Regression of party-state duality on public service performance

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>running water</th>
<th>cable television</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duality</td>
<td>-.315</td>
<td>.264</td>
</tr>
<tr>
<td>Distance to town center</td>
<td>-.023</td>
<td>.019</td>
</tr>
<tr>
<td>Mountainous terrain</td>
<td>.321</td>
<td>.278</td>
</tr>
<tr>
<td>Number of natural villages</td>
<td>-.034</td>
<td>.023</td>
</tr>
<tr>
<td>Village population</td>
<td>.000**</td>
<td>.000</td>
</tr>
<tr>
<td>Per capita net income</td>
<td>.000***</td>
<td>.000</td>
</tr>
<tr>
<td>Total debt</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>election quality</td>
<td>-.152</td>
<td>.120</td>
</tr>
<tr>
<td>Constant</td>
<td>-.288</td>
<td>.666</td>
</tr>
<tr>
<td>-2 Log likelihood</td>
<td>438.188</td>
<td>406.999</td>
</tr>
<tr>
<td>Chi-square</td>
<td>56.454***</td>
<td>77.336***</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.195</td>
<td>0.262</td>
</tr>
</tbody>
</table>

Note: * p<0.1, ** p<0.05, *** p<0.01.