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# Making Reform Work: Evidence from a Quasi-natural Experiment in Rural China

WANG Fang, MA Xiao and CHEN Shuo

*Why are some reforms successfully adopted while others are not? This article addresses the question by exploring the variation in the adoption of China's "One-Issue-One-Meeting" reform. The reform, initiated by the central government in 2000, encourages rural villages to voluntarily adopt a new governing procedure that seeks to enhance local public goods provision. Using data from the 2005 Chinese General Social Survey, the authors find that villages with a more homogenous population measured by surname fractionalisation are more likely to adopt the procedure. Applying a generalised spatial two-stage least squares estimation, the authors also found a spatial spillover effect of the reform: the likelihood of a village undertaking the reform increases when its neighbouring villages also do so, and such effect is more pronounced if the neighbouring village is economically better off. This suggests a potential learning mechanism underlying the neighbourhood spillover.*

## INTRODUCTION

Structural reforms are conducive to economic development, yet not all reforms take effect with the outcomes that reformers have idealised. While some reforms accrue mass support for a smooth adoption, others face tremendous difficulties just to kick-start. These inconsistencies raise several questions that are worth investigating. Why are reforms successfully adopted in some places but not in others? How do local factors facilitate or impede institutional changes imposed from the higher-level authorities?

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Although answers to these questions are of great interest to policymakers, scholars have yet to arrive a conclusion.<sup>1</sup> The lack of consensus may be attributable to the methodological challenges of studies on reforms. First, reforms differ remarkably in terms of content and context. The varying outcomes of reforms could be caused jointly by the differences both in the nature of the reforms and in factors exogenous to them. Second, reforms are often implemented as a result of a central mandate, making localities mere policy takers. The variation in the adoption of a reform across regions could therefore be a function of the central leader's intention to prioritise the implementation in certain areas, or the result of heterogeneities in local factors.<sup>2</sup> To study the underpinnings of reforms that were successfully implemented, a setting in which not only the attributes of the reform but also the degree to which higher-level intentions to implement the reform can be held constant across regions is needed.

This article explores the factors underpinning adoption of reforms by examining local variations in the adoption of the "One-Issue-One-Meeting" (*yishi yiyi*) reform (hereafter OIOM reform) in rural China. The reform is the central government's attempt to transform the ways in which decisions regarding local public goods are made in rural areas. The key element of the reform is the voluntary adoption of a democratic meeting procedure that would allow rural communities to raise funds and also permit their labourers to finance local public goods projects.

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<sup>1</sup> Impediments to the successful implementation of reform may include incumbent risk (see North 1990; Acemoglu and Robinson 2006); short time horizons of the ruling elites (Besley and Persson 2011); absence of veto players (Gehlbach and Malesky 2010); entrenched interest groups (Fernandez and Rodrik 1991); absence of external threats (Bates 2001); lack of a proper federal system (Weingast 1995; Montinola, Qian and Weingast 1995); and persisting conflicts (Colliner 2007; North, Wallis and Weingast 2009), among many others. See Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press, 1990); Daron Acemoglu and James A. Robinson, "Economic Backwardness in Political Perspective", *The American Political Science Review* 100, no. 1 (2006): 115–31; Timothy Besley and Torsten Persson, *Pillars of Prosperity: The Political Economics of Development Clusters* (Princeton, NJ: Princeton University Press, 2011); Scott Gehlbach and Edmund J. Malesky, "The Contribution of Veto Players to Economic Reform", *The Journal of Politics* 72, no. 4 (2010): 957–75; Raquel Fernandez and Dani Rodrik, "Resistance to Reform: Status Quo Bias in the Presence of Individual-specific Uncertainty", *The American Economic Review* 81, no. 5 (1991): 1146–55; Robert H. Bates, *Prosperity & Violence: The Political Economy of Development* (New York: W.W. Norton & Company, 2001); Barry R. Weingast, "Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development", *Journal of Law, Economics and Organization* 11 (1995): 1–31; Gabriella Montinola, Qian Yingyi and Barry R. Weingast, "Federalism, Chinese Style: The Political Basis for Economic Success in China", *World Politics* 48, no. 1 (1995): 50–81; Paul Collier, *The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It* (New York: Oxford University Press, 2007); Douglass C. North, John Joseph Wallis and Barry R. Weingast, *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History* (Cambridge: Cambridge University Press, 2009).

<sup>2</sup> For a comprehensive discussion on the various determinants of local reforms, see Xu Chenggang, "The Fundamental Institutions of China's Reforms and Development", *The Journal of Economic Literature* 49, no. 4 (2011): 1076–151; Cai Hongbin and Daniel Treisman, "Did Government Decentralization Cause China's Economic Miracle?", *World Politics* 58, no. 4 (2006): 505–35.

Several features of the OIOM reform offer an ideal setting to isolate the impact of local factors contributing to the successful adoption of reforms. First, the reform was introduced by the central government as a standard programme. It does not include designs that are tailored to different regions. Second, the adoption of the OIOM procedure is, in principle, voluntary. Each village has the right to decide whether it wants to adopt the procedure. (Typically, localities are forced by the centre to adopt certain policies.) Third, not all villages responded to the reform with the same degree of enthusiasm. In 2004, four years after the central government legislated OIOM, 69 per cent of villages across China had reportedly adopted the procedure, with notable variations within and across provinces.<sup>3</sup>

Applying a nationwide sample of 401 villages from the 2005 Chinese General Social Survey, the authors attempt to investigate why some villages embraced the OIOM reform while others did not. The authors conceptualise OIOM adoption as a process of consensus-making within the village community, and policy learning among the neighbouring villages. Results from the authors' baseline estimation suggest that the procedure is more likely to be adopted in villages with a less fractionalised lineage composition, a factor that is commonly associated in the literature with the collective action problem.<sup>4</sup> This pattern remains robust after accounting for a wide range of alternative explanations, such as the average household income level, quality of village elections, village leader's educational level and existing level of public goods.

Moreover, by creating a spatially weighted lag of the dependent variable—whether a village adopted OIOM—and applying a generalised spatial two-stage least squares (GS2SLS) estimation, the authors observe a spatially interdependent pattern in reform adoption. The chance of a village adopting OIOM increases if all of the other villages located in the same county also adopted it. The authors further argue that the spillover effect of adoption is due to the village's desire to emulate those neighbouring villages that are economically more successful, instead of simply engaging in herd behaviour. The authors corroborate the argument by showing that the spillover effect is not randomly patterned: the adoption of OIOM by those relatively affluent villages, compared to the relatively poor ones, has a greater impact on the likelihood of their neighbour's adoption.

<sup>3</sup> The estimate is from the village module of the 2005 Chinese General Social Survey. The survey includes two modules: a village module in which the village leaders answered the questions on their villages, and a household module in which village residents answered questions on their households.

<sup>4</sup> Alberto Alesina, Reza Baqir and William Easterly, "Public Goods and Ethnic Divisions", *The Quarterly Journal of Economics* 114, no. 4 (1999): 1243–84; James Habyarimana, Macartan Humphreys, Daniel N. Posner and Jeremy M. Weinstein, "Why Does Ethnic Diversity Undermine Public Goods Provision?", *The American Political Science Review* 101, no. 4 (2007): 709–25; Asim Ijaz Khwaja, "Can Good Projects Succeed in Bad Communities?", *The Journal of Public Economics* 93, no. 7 (2009): 899–916; Edward Miguel and Mary K. Gugerty, "Ethnic Diversity, Social Sanctions, and Public Goods in Kenya", *The Journal of Public Economics* 89, no. 11 (2005): 2325–68; Xu Yiqing and Yao Yang, "Informal Institutions, Collective Action, and Public Investment in Rural China", *The American Political Science Review* 109, no. 2 (2015): 371–91.

These results relate to several important streams of literature on comparative institutional change. First, the results suggest that consensus on and cooperation in political issues are more likely to emerge in places where their population has a more homogenous composition.<sup>5</sup> In the context of rural China, encompassing and embedded social entities like lineage groups serve as effective focal devices that allow residents in village communities to coordinate and hold their leaders accountable,<sup>6</sup> and to induce consensus on financing local public goods projects.<sup>7</sup>

Another important stream of literature posits institutional change and various political and economic outcomes as a function of neighbourhood spillover.<sup>8</sup> Using subnational-level data, the authors' findings suggest that the adoption of local reforms may be subject to similar neighbourhood dynamics. The potential learning mechanism that the authors uncover is consistent with one of the core foundations of China's economic reform: the reform deepens as a process of "experimentation, learning, and imitation"<sup>9</sup> among localities.<sup>10</sup>

This article proceeds as follows. The second section provides the background information on the OIOM reform, focusing on factors that are theoretically pertinent to adoption of the reform at the village level. The third section presents the data and measurements, followed by empirical estimation and discussion in the fourth section. The fifth section concludes the findings.

## VILLAGE GOVERNANCE AND THE "ONE-ISSUE-ONE-MEETING" (OIOM) REFORM IN CHINA

China's village governance has undergone several waves of major changes in the past decades. The introduction of village elections in 1987 marked China's first efforts in establishing autonomous local governance. While the election of village committees has acquired saliency in the political life of China's countryside, empirical research has yet to establish a conclusive relationship between village elections and the quality of local governance. For example, Manion argues that the local electoral process leads to congruence between village leaders and their electorates, and Shen and Yao find that

<sup>5</sup> Alesina, Baqir and Easterly, "Public Goods and Ethnic Divisions"; Habyarimana et al., "Why Does Ethnic Diversity Undermine Public Goods Provision?"; Khwaja, "Can Good Projects Succeed in Bad Communities?"; Miguel and Gugerty, "Ethnic Diversity, Social Sanctions, and Public Goods in Kenya".

<sup>6</sup> Lily L. Tsai, "Solidary Groups, Informal Accountability, and Local Public Goods Provision in Rural China", *The American Political Science Review* 101, no. 2 (2007a): 355–72; Lily L. Tsai, *Accountability without Democracy* (Cambridge: Cambridge University Press, 2007).

<sup>7</sup> Xu and Yao, "Informal Institutions, Collective Action".

<sup>8</sup> See, for example, Harry H. Kelejian, Peter Murrell and Oleksandr Shepotylo, "Spatial Spillovers in the Development of Institutions", *The Journal of Development Economics* 101 (2013): 297–315; Daron Acemoglu, Camilo García-Jimeno and James A. Robinson, "State Capacity and Economic Development: A Network Approach", *The American Economic Review* 105, no. 8 (2015): 2364–409.

<sup>9</sup> Montinola, Qian and Weingast, "Federalism, Chinese Style."

<sup>10</sup> Cai and Treisman, "Did Government Decentralization Cause China's Economic Miracle?"; Xu, "The Fundamental Institutions of China's Reforms and Development".

village elections have helped to alleviate inequality among villagers.<sup>11</sup> Tsai, however, finds a null relationship between the presence of village elections and local public goods provision.<sup>12</sup>

A key issue of village elections is that they only address the problem of leader selection. In recent years, an increasing number of local grievances have emerged as a result of local officials' malpractice in village management, some of which have led to violent conflicts between villagers and local authorities.<sup>13</sup> The gradual reduction in (and eventually the complete abolition of) agriculture taxes from the early 2000s exacerbated the tensions, leaving many localities in the dire situation of continuing to finance local public goods.<sup>14</sup>

Against this background, the OIOM reform was introduced in 2000 with the central government's passage of the "Provisional Regulations of Funding and Labor Management at the Village Level". The goals of the reform are twofold. First, the reform allows villages a greater degree of autonomy in proposing and financing a wide range of local public goods projects. Second, it fosters more active participation of ordinary villagers in managing their village. According to the Provisional Regulation, each time village officials propose a new project, a meeting of village residents must be convened. The passage of any proposal needs the approval from the majority of the meeting attendants.<sup>15</sup>

A major feature of OIOM is that it is not backed by the threat of coercion from the central government (as are village elections). Instead, the decision to adopt OIOM is left to the discretion of the village. Once a proposal regarding a public goods project is passed through OIOM, the village authority needs to report the case to the township government for final approval and documentation. Evidence from previous studies suggests that localities have experienced considerable improvements in village finances and public goods provisions after their adoption of OIOM.<sup>16</sup>

Despite its benefits, OIOM reform has not been adopted with the same vigour by all localities. A nationwide sample shows that about 69 per cent of villages had

<sup>11</sup> Melanie Manion, "The Electoral Connection in the Chinese Countryside", *The American Political Science Review* 90, no. 4 (1996): 736–48; Shen Yan and Yao Yang, "Does Grassroots Democracy Reduce Income Inequality in China?", *The Journal of Public Economics* 92, no. 10–11 (2008): 2182–98.

<sup>12</sup> Tsai, "Solidary Groups, Informal Accountability"; Tsai, *Accountability without Democracy*.

<sup>13</sup> See, for instance, Kevin J. O'Brien and Deng Yanhua, "Repression Backfires: Tactical Radicalization and Protest Spectacle in Rural China", *The Journal of Contemporary China* 24, no. 93 (2015): 457–79.

<sup>14</sup> See, for example, Hiroki Takeuchi, "Survival Strategies of Township Governments in Rural China: From Predatory Taxation to Land Trade", *The Journal of Contemporary China* 22, no. 83 (2013): 755–72.

<sup>15</sup> See, Article 8, *Provisional Regulations of Funding and Labor Management at the Village Level*, Ministry of Agriculture, People's Republic of China, July 2000.

<sup>16</sup> See, for example, Zhou Mi and Zhang Guangsheng, "Yishi yiyi zhidu yu cunji gonggong touzi: Jiyu dui 118 wei cunshuji diaocha de jingyan fenxi" (One-Issue-One-Meeting and Rural Public Goods Investment: An Empirical Investigation of 118 Village Party Secretary), *Nongye jishu jingji (Journal of Agriculture Technology and Economics)*, no. 1 (2009): 88–92; James Kung, Cai Yongshun and Sun Xiulin, "Rural Cadres and Governance in China: Incentive, Institution and Accountability", *The China Journal* 62 (2009): 61–77.

adopted the procedure by 2005, but with substantial variations across provinces and within each province (see Table 1). Why do some villages adopt the reform while others do not?<sup>17</sup>

TABLE 1  
PERCENTAGE OF VILLAGES ADOPTING “ONE-ISSUE-ONE-MEETING” (OIOM), BY PROVINCE

Province	Percentage
Hebei	72.7
Shanxi	25.0
Inner Mongolia	75.0
Liaoning	72.2
Jilin	100.0
Heilongjiang	100.0
Jiangsu	80.0
Zhejiang	50.0
Anhui	87.5
Fujian	75.0
Jiangxi	58.3
Shandong	50.0
Henan	52.8
Hubei	58.3
Hunan	95.0

<sup>17</sup> In the authors' sample, 100 per cent of villages in Jilin, Heilongjiang and Yunnan had adopted the OIOM. This could be due to either a sampling oversight or mandatory requirements for OIOM implementation in these places. In terms of sampling, the authors identified 24 sampled villages in Jilin, Heilongjiang and Yunnan provinces. However, the authors highlighted that with 401 villages in their full sample, they should observe 50 villages in these three provinces. The apparent undersampling in these three provinces could have led to the situation that all of the sampled villages happened to have adopted OIOM. The authors also examined the level of lineage fractionalisation in these villages, and the average of *LG\_FRAC* is 0.34, lower than the national average of 0.40. It is therefore likely that the sampling oversight could have driven the said results (amplifying the effect of lineage fractionalisation). On the other hand, it is also likely that the 100 per cent implementation rate in these provinces was due to mandates from the higher levels of government. A search for the provincial-level documents in these provinces yielded that only Heilongjiang provincial government had issued a policy document that mandated compulsory implementation of the OIOM (see Heilongjiang Provincial Commission on Agriculture, 2003, “Opinion on Comprehensively Implementing the One-Issue-One-Meeting Procedure” [“Guanyu quanmian kaizhan yishi yiyi chouzi choulao gongzuo de yijian”]). Yunnan and Jilin did not have similar compulsory requirements. (For example, in a 2004 document, the Yunnan provincial government encouraged villages to “determine and manage democratically, commensurate with each village's capability”, village finances (see Bureau of Agriculture, Yunnan Provincial Government, 2004, “Provisional Regulation on Village-level Funding and Labour Management” [Guanyu cunji fanwei nei chouzi choulao guanli zaxing banfa de tongzhi]). To deal with the potential bias introduced by villages in these provinces, the authors omitted villages in Jilin, Heilongjiang and Yunnan provinces and fitted the remaining sample to their baseline model (see column (4) in Table 3). The authors' core explanatory variable *LG\_FRAC* remains significant. The authors would like to thank an anonymous reviewer for bringing to their attention this issue in the data.

TABLE 1 (cont'd)

Province	Percentage
Guangdong	73.3
Guangxi	66.7
Hainan	0.0
Chongqing	75.0
Sichuan	82.8
Guizhou	61.1
Yunnan	100.0
Shaanxi	66.7
Gansu	40.0
<b>National Average</b>	<b>69.9</b>

Source: The Chinese General Social Survey (CGSS) 2005.

The sample does not include villages in Tibet, Xinjiang, Ningxia, Beijing, Tianjin and Shanghai.

#### a. Lineage Homogeneity within Villages

It makes logical sense to analyse and examine the internal factors that govern the formation of consensus among village residents. As OIOM exclusively targets public goods provision, it is naturally associated with the collective action problem. When social institutions within the village mitigate this problem, consensus is possible among villagers.<sup>18</sup> Many comparative studies point to the fact that homogeneity among people in a community is conducive to cooperation.<sup>19</sup> People belonging to the same groups tend to share similar preferences or “culture materials” (in other words, language and norms of interaction), and this facilitates coordination of collective action within the group more perhaps than among people of different groups. Other studies also point to the role of “selective incentives”<sup>20</sup> created by the existing social arrangement. In-depth studies on rural China find that encompassing and embedding solidary groups, such as village temple and lineage groups, facilitate the advancement of common interests by imposing a “moral cost” on non-compliant members.<sup>21</sup>

Lineage groups—as a typical type of solidary group—perform important social and political functions in the Chinese countryside. The presence of dense lineage networks could serve to mediate disputes among villagers and enhance local public

<sup>18</sup> Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton, NJ: Princeton University Press, 1993); Eliana La Ferrara, “Kin Groups and Reciprocity: A Model of Credit Transactions in Ghana”, *The American Economic Review* 93, no. 5 (2003): 1730–51; Avner Greif, *Institutions and the Path to the Modern Economy* (Cambridge: Cambridge University Press, 2006).

<sup>19</sup> See, for example, Alesina, Baqir and Easterly, “Public Goods and Ethnic Divisions”; La Ferrara, “Kin Groups and Reciprocity”; Habyarimana et al., “Why Does Ethnic Diversity Undermine Public Goods Provision?”.

<sup>20</sup> Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, MA: Harvard University Press, 1965).

<sup>21</sup> See, for example, Tsai, “Solidary Groups, Informal Accountability”; Tsai, *Accountability without Democracy*.



goods provision.<sup>22</sup> Anecdotal evidence also suggests an association between shared surnames and a high level of trust and cooperation within villages.<sup>23</sup> It is therefore expected that localities with more homogenous lineage networks are likely to derive a consensus in adopting OIOM. Homogeneity in lineage affiliations provides a focal point for villagers to coordinate with each other, prevents the formation of polarised camps along narrow family interest lines and also ensures there are enough coherent supporters to make adoption of a democratic decision-making procedure like OIOM a viable option. Dominance by a single, large lineage group in the village also reduces the number of “exit options” for non-compliant members and therefore the cost of opposition becomes relatively high.

### *b. Lineage Homogeneity and Local Collective Action: Two Cases*

A comparative study of cases provides suggestive evidence that lineage homogeneity is conducive to spontaneous grassroots action in local governance. The authors focus on two similar localities: Leye county in Baise, Guangxi province, and Jiangyou county in Mianyang, Sichuan province. The two cases are similar in various socio-economic and environmental dimensions. Both counties are located in plateau areas at over 500 metres above sea level and are also comparable in size—Leye covers 2,617 square kilometres and Jiangyou, 2,719 square kilometres. The two municipalities where the two counties are located are also at similar levels of development. In 2004 (the year of the survey), the per capita disposable income in Baise was 6,687 yuan, whereas that in Mianyang was 7,179 yuan. Their per capita education spending and fiscal revenue are also quite similar.

Despite the similarities, the two localities differ significantly in their levels of lineage homogeneity. According to local gazetteers, there were only 156 surnames among Leye residents in the early 1990s, and the top four surnames constituted 60 per cent of the county population,<sup>24</sup> whereas Jiangyou had over 1,000 surnames and the top four surnames constituted less than 30 per cent of the county population.<sup>25</sup> The two localities also demonstrated a stark contrast in how actively citizens contributed to local projects. In the early 2000s, the county governments of Leye and Jiangyou attempted to improve the rural infrastructure by offering funds and eliciting voluntary

<sup>22</sup> Philip C.C. Huang, “Between Informal Mediation and Formal Adjudication”, *Modern China* 19, no. 3 (1993): 251–98; Tsai, “Solidary Groups, Informal Accountability”; Tsai, *Accountability without Democracy*; Xu and Yao, “Informal Institutions, Collective Action”.

<sup>23</sup> Xiao Tangbiao, *Cunzhi zhong de zongzu (Lineage Group in Village Governance)* (Shanghai: Shanghai shudian chubanshe [Shanghai Bookstore Publishing House], 2001); He Xuefeng, *Cunzhi moshi (Modes of Village Governance)* (Jinan: Shangdong renmin chubanshe [Shandong People’s Publishing House], 2009).

<sup>24</sup> The Commission for the Compilation of Leye County Gazetteer, *Leye xianzhi (Leye County Gazetteer)* (Nanning: Guangxi renmin chubanshe [Guangxi People’s Publishing House], 2002), pp. 115–6.

<sup>25</sup> The Commission for the Compilation of Jiangyou County Gazetteer, *Jiangyou xianzhi (Jiangyou County Gazetteer)* (Chengdu: Sichuan renmin chubanshe [Sichuan People’s Publishing House], 2000), pp. 175–6.

labour from rural residents. The Leye county government invested a total of 20.21 million yuan in rural facilities and successfully elicited voluntary labour that amounted to 4.5 million yuan.<sup>26</sup> By contrast, government investment in Jiangyou did not lead to voluntary contributions (in labour) from local residents.<sup>27</sup>

The comparison of Leye and Jiangyou provides suggestive evidence that the level of lineage fractionalisation could affect local collective actions. Neither county is in the authors' survey sample. To prove that the observed trend in these two counties is no coincidence, the authors refer to the survey sample and chose from it two counties that are closely similar to the two cases. Baise county belongs to the same municipality (Baise) as Leye,<sup>28</sup> and Mianzhu county is located only 80 kilometres from Jiangyou. The sampled villages in this pair manifest similar attributes as those in Leye and Jiangyou. Villages in Baise have, on average, a lower level of lineage fractionalisation than those in Mianzhu. The top three surnames encompass on average 94.5 per cent of the population in sampled villages of Baise county and only 30.3 per cent in those of Mianzhu county. Accordingly, the rate of OIOM adoption is higher among Baise villages (40 per cent) than among Mianzhu villages (26 per cent). The qualitative evidence, taken together, suggests that homogeneity in local communities could be an important factor in driving collective actions that contribute to local public goods provision.

### *c. Spatial Spillover of Reforms*

An often neglected yet important aspect in assessing the dynamics of reforms is the spatial interdependence of local policies. Scholarship in international political economy has revealed a tendency for policy convergence among different countries, due to factors such as geographic proximity and trade.<sup>29</sup> Yet much less scholarly attention has been paid to such dynamics at the subnational level.<sup>30</sup> A major obstacle to studying local policy diffusion in authoritarian regimes like China is that since policy adoption at the local level is often mandated by the central, it is difficult to empirically parse out the autonomous policy choices formed as a result of interactions among local actors.

<sup>26</sup> The Commission for the Compilation of Leye County Gazetteer, *Leye xianzhi (Leye County Gazetteer)*, p. 182.

<sup>27</sup> The Commission for the Compilation of Jiangyou County Gazetteer, *Jiangyou xianzhi (Jiangyou County Gazetteer)*, p. 794.

<sup>28</sup> Baise was a county in the Baise area. In 2003, the Baise area was reorganised into the Baise municipality and Baise county was renamed Youjiang district.

<sup>29</sup> William Easterly and Ross Levine, "Africa's Growth Tragedy: Policies and Ethnic Divisions", *The Quarterly Journal of Economics* 112, no. 4 (1997): 1203–50; Beth A. Simmons and Zachary Elkins, "The Globalization of Liberalization: Policy Diffusion in the International Political Economy", *The American Political Science Review* 98, no. 1 (2004): 171–89.

<sup>30</sup> See Kelejian, Murrell and Shepotylo, "Spatial Spillovers in the Development of Institutions"; Acemoglu, García-Jimeno and Robinson, "State Capacity and Economic Development".

The voluntary principle of the OIOM reform provides an opportunity to examine whether local policy choices are subject to the pattern of spatial interdependence. Economic reform, in its course of China's history, has been a process by which underdeveloped regions learned and replicated policies of the "early developer" regions.<sup>31</sup> The fact that officials at the local grassroots level are given a certain degree of freedom in local governance and are subject to a merit-based evaluation system creates strong incentives for localities to emulate the policies of regions that are economically more successful.<sup>32</sup>

A key difference between villages and higher levels of local government is that villages often have very limited scope of authority. Villages lack the organisational capacity to systematically gather information about distant regions. Also, rural areas draw much less media attention, and this implies that the exemplary effect of a successful policy in the countryside usually does not get the same publicity as that in the cities or at the provincial level. These facts suggest that villages tend to be more heavily influenced by nearby villages, rather than by distant "examples". If the decision to adopt OIOM indeed follows a "learning mechanism", such a pattern is more likely to emerge among villages that are in close proximity to each other.

The authors present the data and empirical strategies to test these hypotheses in succeeding sections.

## DATA AND VARIABLES

The authors use a nationwide sample of 401 villages from the 2005 Chinese General Social Survey data.<sup>33</sup> The survey includes two modules. The first contains village-level information solicited from the village head and the second contains individual-level information provided by villagers. The dependent variable is coded from one of the questions in a questionnaire formulated for village heads, to find out the amount of money raised through OIOM in 2004. The dependent variable is coded as "1" if the village head indicates having raised funds through OIOM, and "0" otherwise.<sup>34</sup> As noted earlier, about 69 per cent of the villages in the sample reported that they had adopted OIOM to raise funds for public goods projects.

<sup>31</sup> Montinola, Qian and Weingast, "Federalism, Chinese Style"; Xu, "The Fundamental Institutions of China's Reforms and Development".

<sup>32</sup> Kevin J. O'Brien and Li Lianjiang, "Selective Policy Implementation in Rural China", *Comparative Politics* 31, no. 2 (1999): 167–86; Susan H. Whiting, *Power and Wealth in Rural China: The Political Economy of Institutional Change* (Cambridge: Cambridge University Press, 2001); Martin Edin, "State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective", *The China Quarterly* 173 (2003): 35–52.

<sup>33</sup> There are, in total, 76 counties in the CGSS sample, so in each county there are 5.28 villages on average.

<sup>34</sup> In the authors' sample (of 401 villages), 277 had raised money through OIOM. Twenty-five villages had also used OIOM for other purposes, such as mobilising labour. The authors also used a similar coding to code these villages that used OIOM for alternative purpose, such as raising funds to mobilise labour, coding them as "1" as well, and the results calculated are robust (see column (5) in Table 3).

The first independent variable measures the degree of lineage fractionalisation in a village (*LG\_FRAC*) or the distribution of the village population among different lineage groups. The village module provides information on the share of the population with the top three surname groups.<sup>35</sup> The authors transform the share of population by following the coding strategy as Taylor and Hudson have suggested for the measurement of ethnolinguistic fractionalisation.<sup>36</sup>

$$LG\_FRAC_i = 1 - \sum_1^s \pi_s^2 = \sum_1^s \pi_s(1 - \pi_s)$$

(1)

and  $i = 1, 2, \dots, N$ ;  $s = 1, 2, 3$

In equation (1),  $\pi_s$  denotes the proportion of people with the surname  $s$  in village  $i$ . The resulting *LG\_FRAC* can be interpreted as measuring the probability that two randomly selected individuals in village  $i$  share the same surname  $s$ . A small *LG\_FRAC* value implies dominance by a single, large lineage group in a village, whereas a large *LG\_FRAC* value suggests greater heterogeneity in villagers' lineage affiliations.

The authors control for a wide range of factors that may also affect the outcome. Average household income is used as a proxy for the level of economic development in a village, as a majority of previous works point to the impact of economic prosperity on various political activities,<sup>37</sup> including village governance in rural China.<sup>38</sup> To ensure normality of the data, the authors take the natural logarithm of the income data (*LN\_INCOME*).

The authors also control for the quality of village elections—the most important political institution in rural areas. Recent studies suggest that the quality of local elections is directly linked to the level of political participation.<sup>39</sup> Different forms of village election are then identified. Villages where more than half the villagers reported

<sup>35</sup> Although surname groups do not exactly correspond to lineages, they nonetheless provide a good probabilistic measure for the presence of lineages. See, for example, Xu and Yao, "Informal Institutions, Collective Action".

<sup>36</sup> Charles L. Taylor and Michael C. Hudson, *World Handbook of Political and Social Indicators* (2nd ed.) (New Haven, CT: Yale University Press, 1972).

<sup>37</sup> See, for example, Seymour Martin Lipset, "Some Social Requisites of Democracy: Economic Development and Political Legitimacy", *The American Political Science Review* 53, no. 1 (1959): 69–105; Adam Przeworski and Fernando Limongi, "Modernization: Theories and Facts", *World Politics* 49, no. 2 (1997): 155–83; Carles Boix and Susan C. Stokes, "Endogenous Democratization", *World Politics* 55, no. 4 (2003): 517–49.

<sup>38</sup> Kevin J. O'Brien, "Implementing Political Reform in China's Villages", *The Australian Journal of Chinese Affairs* 32 (1994): 33–59; David Zweig, *Freeing China's Farmers: Rural Restructuring in the Reform Era* (Armonk, NY: M.E. Sharpe, 1997); Amy B. Epstein, "Village Elections in China: Experimenting with Democracy", in *China's Economic Future: Challenges to US Policy*, ed. Joint Economic Committee, Congress of the United States (Armonk, NY: M.E. Sharpe, 1997), pp. 403–21; Shi Tianjian, "Village Committee Elections in China: Institutional Tactics for Democracy", *World Politics* 51, no. 3 (1999): 385–412.

<sup>39</sup> Pierre F. Landry, Deborah Davis and Wang Shiru, "Elections in Rural China: Competition without Parties", *Comparative Political Studies* 43, no. 6 (2010): 763–90.

that they nominated their candidates in village elections are coded “1” for the dummy *NOMINATED*, whereas villages in which a majority of the villagers reported that the candidates were appointed by village Party secretaries or township cadres are coded “1” for the dummy *APPOINTED*. If both types were reported without a distinct majority, the village is coded “1” for the dummy *MIXED*. Based on the findings, 63 per cent of the villages in the samples reported that the election candidates were nominated by villagers, 25 per cent reported candidates appointment by village Party secretaries or township cadres, and 12 per cent reported appointment by mixed methods.

Taking into consideration that local policy preferences are typically a function of leadership idiosyncrasies,<sup>40</sup> the authors also control for the education level of the village committee head (*VIL\_EDUCATION*)—a categorical variable ranging from no education to high school and above—as well as the total number of years current village head has been in office (*VIL\_TENURE*).

As OIOM targets exclusively local public goods projects, how well localities are endowed with public goods may also affect their chance of adopting it. The authors employ three measures to account for the public goods stock: the literacy rate (*LITERACY*), the number of teachers per villager (*PC\_TEACHER*) and the number of doctors per villager (*PC\_DOCTOR*).

The authors also include the total number of households in each village (*HOUSEHOLD\_NO*) as a control, given that a large group poses challenges to overcoming collective action problems and to reaching a consensus.<sup>41</sup> The authors use the number of households instead of the number of individuals because the vote count is based on households instead of individuals according to the OIOM rules. Table 2 presents the descriptive statistics of these variables.

TABLE 2  
DESCRIPTIVE STATISTICS OF THE VARIABLES

Variables	Observations	Mean	SD
Number of Villages	401		
Adopted OIOM	277		
Did not Adopt OIOM	124		
Lineage Fractionalisation ( <i>LG_FRAC</i> )	401	0.400	0.170
Per Household Income ( <i>LN_INCOME</i> )	401	9.001	0.521
How Candidates for Village Election are Selected	401		
<i>APPOINTED</i>	101		
<i>NOMINATED</i>	252		
<i>MIXED</i>	48		

<sup>40</sup> See, for example, James Kai-sing Kung and Chen Shuo, “The Tragedy of the Nomenklatura: Career Incentives and Political Radicalism during China’s Great Leap Famine”, *The American Political Science Review* 105, no. 1 (2011): 27–45.

<sup>41</sup> Pamela E. Oliver and Gerald Marwell, “The Paradox of Group Size in Collective Action: A Theory of the Critical Mass”, *American Sociological Review* 53, no. 1 (1988): 1–8; Olson, *The Logic of Collective Action*.

TABLE 2 (cont'd)

Variables	Observations	Mean	SD
Education Level of Village Head ( <i>VIL_EDUCATION</i> )	395		
No Education	2		
Primary School	26		
Middle School	162		
High School and Above	205		
Years of Village Head in Office ( <i>VIL_TENURE</i> )	394	8.282	7.937
Literacy Rate (per cent)	393	9.103	11.006
Number of Doctors per Villager ( <i>PC_DOCTOR</i> )	363	0.003	0.006
Number of Teachers per Villager ( <i>PC_TEACHER</i> )	299	0.009	0.012
Number of Households ( <i>HOUSEHOLD_NO</i> )	395	529.889	399.247

Notes: SD denotes standard deviation; OIOM denotes “One-Issue-One-Meeting”.

As noted in the second section, the likelihood of a village adopting OIOM may differ notably contingent on whether its neighbouring villages also do so. To account for the geographical association, the authors create a spatial weighted lag of the dependent variable (*LAG\_OIOM*). They first construct a 401 by 401 matrix, with each row denoting one of the 401 villages in the sample ( $V_i$ ), and the value of each unit on the columns representing its relationship with the remaining 400 villages (in other words, weights). Villages located in the same county as  $V_i$  each receive a weight of  $1/\theta$  ( $\theta$  denotes the number of villages located in the same county as  $V_i$ ), whereas other villages receive a weight of “0”. The authors next multiply the weights by the dichotomous measure of whether a village has adopted OIOM and sum up the results by rows. The spatially weighted lag measures the prevalence of OIOM adoption by nearby villages in the same county for each village.

## ESTIMATION AND RESULTS

### a. Baseline Models: Internal Homogeneity

The authors first analyse how each village’s internal cohesiveness may affect adoption of the reform. As the dependent variable—village’s adoption of OIOM—is a binary one, the authors apply logistic estimation in the models.

Table 3 presents the results. Column (1) includes the key variable of interest—lineage fractionalisation—and a control for household income in the baseline estimation. Column (2) considers other village-level control variables including how candidates are selected in village elections, the education qualification of the village leader, the cumulative number of years the current village leader has been in office and the literacy rate of the villagers. Column (3) accounts for public goods stock in each village, measured by the number of doctors and teachers per villager, and the total number of households. Column (4) omits villages in Jilin, Heilongjiang and Yunnan and runs/ executes the full model with the truncated sample (see earlier discussion in fn [17]). As shown in column (5), the authors use an alternative measure of the dependent

variable that includes not only villages using OIOM to raise funds but also those using OIOM for other purposes (see fn [35] for details). The authors cluster the standard errors by county in all of the models.

TABLE 3  
BASELINE ESTIMATION ON THE DETERMINANTS OF OIOM ADOPTION

Logistic Estimation					
Dependent Variable: Adoption of OIOM					
	Models				
	(1)	(2)	(3)	(4)	(5)
<i>LG_FRAC</i>	−1.081*** (0.426)	−0.899** (0.443)	−0.910** (0.316)	−0.877** (0.355)	−0.957*** (0.271)
<i>LN_INCOME</i>	0.251** (0.133)	0.211 (0.136)	0.243** (0.124)	0.216** (0.112)	0.210** (0.097)
Village Election:					
<i>NOMINATED</i>		0.482*** (0.157)	0.493*** (0.157)	0.462*** (0.144)	0.552*** (0.115)
<i>MIXED</i>		0.406* (0.238)	0.439** (0.220)	0.411** (0.200)	0.569** (0.275)
<i>APPOINTED</i> (reference)					
<i>VIL_EDUCATION</i>		0.053** (0.028)	0.021* (0.011)	0.027 (0.014)	0.030* (0.017)
<i>VIL_TENURE</i>		−0.005** (0.002)	−0.020** (0.010)	−0.025** (0.012)	−0.041** (0.023)
<i>HOUSEHOLD_NO</i>			−0.126 (0.239)	−0.155 (0.284)	−0.174 (0.336)
<i>LITERACY</i> (per cent)		0.006 (0.006)	0.004 (0.008)	0.004 (0.007)	0.004 (0.008)
<i>PC_TEACHER</i>			−5.319 (10.032)	−4.521 (11.239)	−6.661 (12.302)
<i>PC_DOCTOR</i>			−11.008 (15.129)	−8.362 (19.425)	−12.021 (16.337)
Intercept	−1.296 (1.206)	−1.817 (1.286)	−3.092 (1.557)	−2.854 (1.748)	−3.097 (1.967)
Joint <i>p</i> -value	0.007	0.039	0.052	0.053	0.055
No. of Observations	393	387	279	255	279
Pseudo <i>R</i> <sup>2</sup>	0.021	0.052	0.078	0.071	0.074

Notes: Standard errors in parentheses, corrected for clustering within each county.

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

The results from the baseline models lend support to the first hypothesis regarding community homogeneity. The variable measuring lineage fractionalisation remains significant at the 0.05 level across the five models. Given that a higher value of *LG\_FRAC* denotes a more diverse body of villagers in terms of lineage affiliations, the

negative coefficient suggests that OIOM is more likely to be adopted in villages with a more homogenous population. The effect of lineage fractionalisation also remains stable after controlling various factors. The coefficient ranges from  $-0.877$  to  $-1.081$ . A one-unit increase in *LG\_FRAC* (in other words, from a situation in which all villagers belong to the same lineage to one in which every single villager belongs to a different lineage) would reduce the chance of adoption by 31 to 36 per cent.

Household income is positively associated with the probability of adopting OIOM. Economic well-being provides a material base for an individual's active participation in village governance. OIOM requires villagers' voluntary contribution, in the form of either labour or money, to the collective welfare, and such a contribution is unlikely to happen if the economic situation does not suffice even for the basic life needs of the individual. A higher level of economic development also means that the failure to reach a consensus on public goods provision would incur higher costs—more valuable collective or individual assets may be endangered due to the lack of certain public goods (for example, roads and dams).

The form of village elections is also significantly correlated with the probability of adoption of OIOM. In models (2) and (3), the authors control the variables for candidates in village elections nominated by villagers or through mixed methods, and use villages whose candidates were appointed by the township cadres or the village Party secretary as a reference group. The results suggest that villages whose candidates were nominated by villagers are 16.9 per cent more likely to adopt OIOM than villages whose candidates were appointed (villages whose candidates were nominated by mixed methods are 12.5 per cent more likely to adopt OIOM than villages whose candidates were appointed), and such an effect is significant at the 0.01 level. This is consistent with the existing understanding of the role of local elections in the Chinese countryside: that election fairness influences people's enthusiasm for political participation,<sup>42</sup> and that officials nominated by voters are more responsive to the preferences and demands of the electorate.<sup>43</sup>

Personal characteristics of village leaders also seem to be important. The authors control for the level of the village leader's education by using an ordinal variable *VIL\_EDUCATION*, and, as shown in models (2) and (3), villages with better-educated leaders are more likely to adopt the OIOM procedure. The effect of the length of the current village leader's tenure is negatively associated with the probability of adoption, corresponding to the intuition that entrenched interests in the *status quo* may constitute an impediment to progressive institutional changes.<sup>44</sup> Although OIOM does not directly weaken the power of village leaders, it nevertheless places them under informal checks by empowering ordinary villagers with a greater say in village governance. These leaders are thus expected to be potential opponents of OIOM adoption. Their prolonged

<sup>42</sup> Landry, Davies and Wang, "Elections in Rural China".

<sup>43</sup> Melanie Manion, "Good Types' in Authoritarian Elections: The Selector Connection in Chinese Local Congresses", *Comparative Political Studies* 50, no. 3 (2017): 362–94.

<sup>44</sup> See, for example, Fernandez and Rodrik, "Resistance to Reform".



tenure also suggests that they may have accumulated enough political or economic resources to forestall the OIOM adoption (for example, by buying off a key portion of the community members).

The existing level of public goods stock is not significantly correlated with the probability of adoption. The negative coefficients, however, suggest a lower demand for public goods projects (through OIOM) when the level of provision is already high.

### *b Spatial Spillover of OIOM Adoption*

The authors examine how external factors may be correlated with the probability of adoption. The authors argue that the probability of a village adopting the reform may also be a function of the interactive learning process among localities that are in close proximity to each other. To operationalise such an influence, the authors create a spatially weighted lag of OIOM adoption status ( $LAG\_OIOM$ ), and the weights are based on whether two villages are located in the same county. The spatial lag of the adoption status alone, however, does not capture the full neighbourhood externalities. Each village is also subject to influence by unobserved, random characteristics of the neighbouring villages. The formal relationship is shown as follows:

$$y_i = \rho W y_i + X_i \beta + X_i' \delta + \mu_i$$

and  $\mu_i = \sigma W \mu_i + \varepsilon_i, i = 1, 2, \dots, N$  (2)

In equation (2),  $y_i$  denotes the outcome variable—the adoption of OIOM;  $\rho W y_i$ , the spatially weighted lag of adoption status for villages within the same county; and  $\rho$ , the coefficient for the spatial lag;  $X_i$  is a vector for the key explanatory variable, lineage fractionalisation;  $\beta$  is a vector of the coefficient for this variable;  $X_i'$  and  $\delta$  represent a matrix of other control variables and their coefficients, respectively; and  $\mu_i$  represents the residual of the model, which is a function of the spatially weighted lag of the residuals of other villages, plus an error term.

As  $y_i$  is a function of  $\mu_i$ , which means its spatial lag  $W y_i$  on the right-hand side of the equation is also a function of  $\mu_i$ , the use of standard maximum likelihood estimation for equation (2) does not address the problem of endogeneity. In the context of this study, the decision of a village to adopt OIOM is influenced by the decisions of its neighbouring villages, and its own decision would in turn have an impact on the decisions of its neighbours. To deal with the endogeneity problem, the authors apply the GS2SLS procedure developed by Kelejian and Prucha.<sup>45</sup> This approach is a

<sup>45</sup> Harry H. Kelejian and Ingmar R. Prucha, “Generalized Spatial Two-stage Least Squares Procedure for Estimating a Spatial Autoregressive Model with Autoregressive Disturbances”, *The Journal of Real Estate Finance and Economics* 17, no. 1 (1998): 99–121; Harry H. Kelejian and Ingmar R. Prucha, “A Generalized Moments Estimator for the Autoregressive Parameter in a Spatial Model”, *The International Economic Review* 40, no. 2 (1999): 509; Harry H. Kelejian and Ingmar R. Prucha, “Estimation of Simultaneous Systems of Spatially Interrelated Cross Sectional Equations”, *The Journal of Econometrics* 118, no. 1–2 (2004): 27–50.

special form of the generalised method of moments for models with spatial interdependent variables. It uses exogenous factors and their spatial lags (which in this case are the covariates in vector  $X_i$  and matrix  $X_i'$  and their spatial lags  $WX_i$  and  $WX_i'$ ) as instruments for the endogenous regressor. The estimators of GS2SLS are considered to be consistent and asymptotically normal,<sup>46</sup> and are not subject to influence from the “omitted common factors” in the spatial interdependence.<sup>47</sup>

The authors estimate only the spatial lag of the dependent variable, lineage fractionalisation, and per household income in the first model, and include other village-level control variables in the second model. The spatial lag of the dependent variable ( $LAG\_OIOM$ ) is treated as the endogenous regressor. In the third model, per household income is also treated as an endogenous variable (along with  $LAG\_OIOM$ ). The authors exclude the variables that were not significant in the baseline estimation. The  $p$ -values of Hansen J-statistics of over-identification tests for the instruments are not significant across the three models, suggesting endogeneity is a less significant source of biases.<sup>48</sup> Table 4 presents the results.

The results suggest that the effect of neighbourhood externalities is substantial and significant. The probability of a village adopting the OIOM reform increases by 10 to 19 per cent if all of the other villages in the same county also adopt it, equivalent to the effect of a five to seven per cent increase in average household income. The effect of lineage fractionalisation is consistent with the authors’ estimation in the baseline model that the more fragmented a village population is in terms of lineage affiliation, the less likely it is to adopt OIOM, holding all else constant. Having competitive village elections in which villagers nominate their candidates also continues to be a crucial determinant of adoption, and the prolonged tenure of current village leaders reduces the probability of adoption.

<sup>46</sup> Kelejian and Prucha, “Estimation of Simultaneous Systems”.

<sup>47</sup> See Debabrata Das, Harry H. Kelejian and Ingmar R. Prucha, “Finite Sample Properties of Estimators of Spatial Autoregressive Models with Autoregressive Disturbances”, *Papers in Regional Science* 82, no. 1 (2003): 1–26. Although the form of the dependent variables suggests the use of a logistic estimator, the maximum likelihood estimator is invalid when variables and/or errors are spatially dependent (because of the violation of the identically and independent distribution assumption). For use of the linear model in estimating the outcome of a spatially dependent dummy, see Guido W. Imbens and Jeffery M. Wooldridge, “Instrumental Variables with Treatment Effect Heterogeneity: Local Average Treatment Effects”, in *What’s New in Econometrics?* NBER Summer Institute Method Lectures, no. 5 (2007).

<sup>48</sup> The Hansen J-test was not developed in the context of spatial models with spatial lags in both the dependent variable and the error terms, but it is still an informative criterion for the over-identification test. For example, see Kelejian, Murrell and Shepotylo, “Spatial Spillovers in the Development of Institutions”.

TABLE 4  
SPATIAL INTERDEPENDENCE OF OIOM ADOPTION

Generalised Spatial Two-stage Least Squares (GS2SLS) Estimation			
Dependent Variable: Adoption of OIOM			
	Models		
	(1)	(2)	(3)
<i>LAG_OIOM</i>	0.113*** (0.019)	0.117*** (0.020)	0.179*** (0.020)
<i>LG_FRAC</i>	-0.192** (0.097)	-0.219** (0.108)	-0.134*** (0.020)
<i>LN_INCOME</i>	0.070* (0.039)	0.077* (0.042)	0.145*** (0.039)
Village Election:			
<i>NOMINATED</i>		0.488*** (0.106)	0.371* (0.182)
<i>MIXED</i>		0.303** (0.158)	0.269 (0.775)
<i>APPOINTED</i> (reference)			
<i>HOUSEHOLD_NO</i>		0.169 (0.233)	0.236 (0.258)
<i>VIL_EDUCATION</i>		0.110 (0.476)	0.081* (0.047)
<i>VIL_TENURE</i>		-0.069 (0.088)	-0.026*** (0.008)
Intercept	-0.487 (0.690)	-0.570 (0.775)	-1.269 (0.910)
No. of Observations	393	387	387
Spatial Autocorrelation Coefficient ( $\sigma$ )	0.078	0.072	0.185
Adjusted R <sup>2</sup>	0.418	0.487	0.483

Notes: Standard errors in parentheses.

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

*c. “Herd Mentality” vs. Learning: The Mechanism Underlying Spatial Spillover*

Having found evidence for the spatial spillover of OIOM adoption, the authors focus their attention on verifying the underlying mechanisms. They argue that the spatial spillover in the adoption of OIOM is due to a village’s desire to learn and adopt the policies of villages that are more successful. But an alternative explanation, in which villages adopt the policy simply by emulating the neighbouring villages without a particular goal in mind, would result in an observationally equivalence. The authors term the alternative explanation the “herd mentality” mechanism. In China, herd mentality is not a rare phenomenon among local officials, and often, this leads to formulation of policies that have disastrous consequences, such as when officials jumped onto the bandwagon in reporting inflated output figures among localities during the

Great Leap Forward, or the fever in recent years to construct costly but largely useless “showpiece projects” (for example fancy government buildings and squares).

While both learning and herd mentality mechanisms, to some extent, reflect the local officials’ common career incentives, a policy adopted as a result of herd mentality may not necessarily benefit the localities, especially in the long run. This raises the question: Is the prevalence of OIOM also due to herd mentality?

The authors conduct additional analyses to identify the underlying mechanisms by creating two separate spatial lags of the dependent variable, *LAG\_OIOM\_H* and *LAG\_OIOM\_L*. The variable *LAG\_OIOM\_H* is the spatially weighted impact of adopting OIOM by those in-county villages that have a higher per capita revenue than the village being influenced, and the variable *LAG\_OIOM\_L* is the spatially weighted impact by those that have a lower per capita revenue. If the herd mentality were the underlying mechanism for the spatial spillover, the variables *LAG\_OIOM\_H* and *LAG\_OIOM\_L* would be expected to have equal influence on a village’s chance of adopting OIOM. In other words, whether a village is affected by its neighbours is not conditioned on its neighbours’ economic well-being. If the spatial spillover were subject to the learning mechanism as in the authors’ argument, the variable *LAG\_OIOM\_H* would be expected to have a more pronounced impact on the outcome variable. The model for the test is as follows:

$$y_i = X_i\beta + \rho_1 W_1 y_i + \rho_2 W_2 y_i + \mu_i$$
$$\text{and } \mu_i = \sigma W \mu_i + \varepsilon_i, i = 1, 2, \dots N \tag{3}$$

In equation (3),  $X_i\beta$  represents the vectors of the key covariates and their coefficients.  $W_1 y_i$  and  $W_2 y_i$  are the two separate spatial lags of the variables *LAG\_OIOM\_H* and *LAG\_OIOM\_L*, respectively,  $\rho_1$  and  $\rho_2$  and are their coefficients. The instruments that the authors employ to estimate model 3 include  $X_i$ ,  $W_1 X_i$  and  $W_2 X_i$ .

TABLE 5  
EXPLORING THE MECHANISMS FOR SPATIAL INTERDEPENDENCE

Generalised Spatial Two-stage Least Squares (GS2SLS) Estimation		
Dependent Variable: Adoption of OIOM		
Models		
	(1)	(2)
<i>LAG_OIOM_H</i> ( $\rho_1$ )	0.261*** (0.078)	0.279*** (0.061)
<i>LAG_OIOM_L</i> ( $\rho_2$ )	0.102* (0.056)	0.089 (0.078)
<i>FRAC</i>		-0.114*** (0.042)
<i>LN_INCOME</i>		0.098** (0.051)

(cont'd overleaf)

TABLE 5 (*cont'd*)

Generalised Spatial Two-stage Least Squares (GS2SLS) Estimation		
Dependent Variable: Adoption of OIOM		
	Models	
	(1)	(2)
Intercept	−0.441 (0.528)	−0.625 (0.692)
No. of Observations	397	387
Spatial Autocorrelation Coefficient ( $\sigma$ )	0.113	0.079
Adjusted $R^2$	0.311	0.503

Notes: Standard errors in parentheses.

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table 5 presents the results of the test. Model (1) only includes the two spatial lags. The variable *LAG\_OIOM\_H* is not only significant at the 0.01 level, its effect is also substantively larger than that of *LAG\_OIOM\_L*, which is only significant at the 0.1 level. After controlling for lineage fractionalisation and average household income in model 2, the *LAG\_OIOM\_H* remains significant (and its effect even increases slightly), while the *LAG\_OIOM\_L* is no longer significant at the 0.1 level. Localities are indeed influenced by their neighbours, but a closer look reveals that such an influence comes exclusively from those neighbours that are economically better off, not from those that are worse off. This result lends support to the authors' theory for a learning mechanism in explaining the spatial spillover of the reform.

#### *d. Discussion*

The analyses so far lend support to the main hypotheses. The probability of a village adopting OIOM increases when there are fewer factions among its population, and when its neighbours also adopt the procedure. Several of the control variables also appear to have consistent and robust effects on the outcome, which may merit further discussion.

The authors' analysis suggests that villages whose candidates for elections are nominated by villagers are more likely to adopt OIOM than those whose candidates are appointed by the township cadre or village Party secretary. This pattern is consistent with the findings of several recent studies in Chinese local politics. First, how villagers perceive and trust the village authority may influence their willingness to participate in village governance. Using a survey data on rural elections in China, Landry, Davis and Wang find that precedents of contested elections increase villagers' political participation—measured by voter turnout and the chance of ordinary villagers running for office in subsequent elections.<sup>49</sup> An important feature of contestation, as they reveal, is whether voters have choices between candidates. In villages where the current leader

<sup>49</sup> Landry, Davis and Wang, "Elections in Rural China".

came to office via uncontested means, villagers' desire to participate in and contribute to village governance is expected to be relatively low. The OIOM reform is not viable without the active participation of and support from the majority of the villagers. Second, the connectedness between the village leaders and the ordinary villagers may be a factor. Manion finds that local congressmen/women (at the township and county levels) who are nominated by the voters instead of by the Party organ not only have better knowledge of local affairs, but are also more responsive to the demands of the local population.<sup>50</sup> Although OIOM takes place at the village level, the same mechanism that Manion suggests at the township or county level should also apply. OIOM requires a collective consensus among members of the community on public goods projects, and village leaders could play a pivotal role in accelerating the process by coordinating and adjusting the conflicts of interest among villagers. However, this will not be achieved if the village leaders are not well connected with the villagers and if they are not willing to respond to villagers' preferences.

It is beyond the scope of this article to further differentiate between the participation or the voter connection mechanisms, and the two mechanisms to some extent supplement each other in the context of OIOM adoption. The findings about the effect of competitive village elections once again suggest that the substance of the election matters more than the mere presence of the electoral institutions.

## CONCLUSION

This article inquires why reforms are successfully adopted in some places but not in others by exploiting the local variations in adoption of the OIOM reform in rural China. Findings have shown that the reform is more likely to be adopted in villages with a more homogenous population in terms of lineage affiliation. In addition, a spatially interdependent pattern in the spread of adoption has an impact on a village's chance of adopting OIOM, contingent on whether its neighbouring villages also adopt it. The authors argue that such spillover is due to a village's desire to learn and emulate the policies of those villages that are economically better off. The authors have corroborated this argument with additional evidence.

The findings buttress the claim that China's market reform is a process of "experimentation, learning, and imitation" among localities.<sup>51</sup> It renders several important policy implications for future reformers. In order for a new policy to be successfully implemented, the reformer would do better to start in places with fewer divisions within the population, a higher level of economic development and stronger local institutions that can hold local officials accountable. Once the policy succeeds in these places, it is expected to generate an exemplary effect on neighbouring areas, lowering the future cost of implementation there.

<sup>50</sup> Manion, "Good Types' in Authoritarian Elections".

<sup>51</sup> Montinola, Qian and Weingast, "Federalism, Chinese Style".

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