

# Do College Graduates Serving as Village Officials Help Rural China?

## ONLINE APPENDIX

*By* GUOJUN HE AND SHAODA WANG

### **Appendix A. CGVO Assignment**

In most of China, the assignment of CGVOs is determined entirely by higher levels of government, while villages and CGVOs are not allowed to choose. However, since the exact assignment rules are not known to us, it is important to understand the factors determining CGVO assignment.

There are two main hypotheses regarding assignment decisions. The first is that higher levels of government choose villages based on time-invariant characteristics. For example, governments may prioritize richer and/or larger villages where they expect a CGVO's expertise to help boost economic development. The second hypothesis is that higher levels of government assign CGVOs in response to local economic shocks.

We first test whether the treated villages were systematically different from the control villages before the CGVO program was launched along a variety of socio-economic variables in a cross-sectional setting. We estimate a logit model in which the dependent variable is whether a village has a CGVO during our sample period, and the independent variables are socio-economic conditions in 2006, a year before the CGVO program started to expand.

The regression results are shown in columns (1) to (4) of Appendix Table 1. First, village population and per capita net income are included to test whether CGVO assignments are affected by village size or income. We find no relationship between CGVO assignment and village size or income. Second, we add the outcomes of interest in the regressions, i.e. subsidized population (number of subsidized residents per 1,000 people), poor-quality housing (number of poor-quality houses per 100 households), and registered poor households (number of registered poor households per 100 households). Again, none of them are statistically significant. Third, we include local government size (number of government officials in the

village council) and quality of government officials (proportion of government officials educated to a level of “high school and above”) in the regression. The results show that CGVO assignment is uncorrelated with village government size or quality. Finally, a set of time-invariant basic village characteristics are also included, including terrain (flat, hilly or mountainous), its main industry (agriculture, forestry, livestock or fishing), whether the village is located in a suburb, whether it forms a town center, and whether it is a designated poor village. None of them are statistically significant.

An alternative way to test these relationships is to fully exploit the longitudinal structure of the data and estimate the association between CGVO assignment and village-level socioeconomic variables using a logit model with duration dependence. Specifically, the probability of a village receiving a CGVO at time  $t$  is modeled as:<sup>1</sup>

$$(1) \quad P(CGVO_{it} = 1|X_{it}) = \frac{e^{X_{it}\beta+f(t)}}{1+e^{X_{it}\beta+f(t)}}$$

where  $CGVO_{it}$  is a dummy variable, which equals 1 if village  $i$  has a CGVO in year  $t$ , and 0 otherwise,  $P(CGVO_{it} = 1|X_{it}) = h(t, X_{it})$  is the probability of receiving a CGVO conditional on a set of variables, and  $f(t)$  is a flexible function of time  $t$ .

When the dependent variables are all set to zero, the baseline hazard rate can be written as a function of time duration  $t$ ,  $h_0(t) = \frac{e^{f(t)}}{1+e^{f(t)}}$ .  $f(t)$  allows the baseline hazard rate of receiving a CGVO to vary over time  $t$ . In effect, the logit model has the following form:

$$(2) \quad \log\left(\frac{P_{it}}{1-P_{it}}\right) = \beta_0 + \beta_1 * X_{i,2006} + \beta_2 * Z_i + f(t) + \varepsilon_{it}$$

where  $P_{it}$  is the probability of receiving a CGVO for village  $i$  at time  $t$ ,  $X_{i,2006}$  are the time-invariant welfare measures in 2006 (a year before the CGVO program), and  $Z_i$  are the time-invariant basic village characteristics. Time duration  $f(t)$  is approximated by a 4th order polynomial function of  $t$ .<sup>2</sup>

---

<sup>1</sup> Traditional logit or probit models assume duration independence, i.e. the probability of being treated at any point in time is always the same. This is not a valid assumption here because the probability of receiving a CGVO increases over time. Without taking into account duration dependence, the standard errors estimated from a traditional logit or probit model would be wrong.

<sup>2</sup> Approximating the time duration using a non-parametric method generates similar findings. The results are available upon request.

In columns (5) to (8) of Appendix Table 1, we include the same set of variables as in columns (1) to (4). The findings remain the same: none of these pre-determined village conditions have any effect, indicating that the assignment of CGVOs is likely to be exogenous to the village.<sup>3</sup>

In this longitudinal setting, we can also test the second hypothesis – whether CGVO assignment depends on village-level economic shocks – by including time-varying covariates in the regressions. Appendix Table 2 summarizes the results. The independent variables are changes in village population, income, poor housing, subsidized population, registered poor households, government size and quality of local government officials before the introduction of the CGVO program. None of these variables are statistically significant at a conventional level, indicating that economic shocks before the CGVO program did not affect CGVO assignments.

Whether the assignment decision is driven by time-varying shocks is critical to subsequent impact analysis. To identify causal effects, our main econometric model relies on variations in CGVO assignments across time and place in a difference-in-differences (DID) setting. The results in Appendix Table 2 confirm that CGVO assignments are not correlated with observed time-varying factors, suggesting that DID is likely to be a valid approach for estimating the impacts of the CGVO program.

---

<sup>3</sup> The conclusions are the same if we use data from other years before 2006.

Appendix B. CGVO Self-Evaluation Forms

Appendix B1: Sample 1

山西省大学生村官年度考核登记表  
(2013 年度)

填表日期: 2016年1月6日

姓名	[Redacted]	性别	男	出生年月	1982.08
选聘时间	2008.09	学历	本科	政治面貌	群众
任职单位及职务	[Redacted]				
本年度受表彰情况					
年度工作总结	<p>一、加强学习,提高自身素质 认真学习党的十八届三中全会精神,关注国际国内时事新闻,参加SYB创业培训班。通过学习,不断提高理论素养,更好地服务农村。</p> <p>二、所在村的各项工作</p> <p>1. 环境卫生整治和村容村貌补植补栽工作。一年来,我村加大了对村环境卫生的整治力度,确定专人负责定期清扫和检查,对村中的一条主干道保持长期保洁,对道路两侧排水沟和其他进行清理,对花池所缺苗木进行补植补栽,通过整改,使村容村貌得到很大的改善。</p> <p>2. 低保的评议和复核。4月份,我村组织对村低保进行评议和复核,通过民主公平的原则,进行评选,并对结果进行公示。</p> <p>3. 新型农村养老保险和新型农村合作医疗的征收工作,通过逐户走访,顺利完成了这两项工作任务。</p> <p>4. 天眼工程的安装。按照镇党委安排,我村进行了天眼工程安装中心设在村及村会议室,共安装五个摄像头,分别安装在进出村的路口,该工作对村治安起到重要作用。</p> <p>5. 计划生育抚养费征收工作。对村计生户进行走访和征收,已完成了户的抚养费征收工作。</p>				

**Translation:**

Point 2 (Contribution to the Village): Select and double-check the Poverty Subsidy Applications. "In April (2013), I helped select and double-check the eligibility of the poverty-subsidy applicants. The beneficiaries were democratically determined by group voting, and the results were publicized to the entire village."

**Notes:** This form is used by Shanxi Province to evaluate the CGVO performance in 2013.

Appendix B2. Sample 2

**山西省大学生村官年度考核登记表**  
(二〇一三 年度)

填表日期: 2014年 1月 6日

姓名	[Redacted]	性别	女	出生年月	1988.09
选聘时间	2009.09	学历	专科	政治面貌	党员
任职单位及职务	[Redacted]				
本年度受表彰情况	“六个一”活动评为优秀				
年度工作总结	<p>这一年来,我积极深入农村,协助村委开展了一些日常工作,取得了一定的成绩,学习了不少农村基础知识和工作经验。现将我这一年来的工作思想情况汇报如下:</p> <p>1. 在这一年的工作时间里,最大的收获就是通过“六个一”活动使我在接触工作,熟悉农户的过程中,做听了农户的心声,了解村中的实际现状,并力所能及的对一些困难群众进行了帮扶为他们写信中提供了一些方便;</p> <p>2. 积极参加村两委召开的各项工作,认真做会议记录,协助村两委做好我村的各项工作;</p> <p>3. 通过在网收集一些致富信息及科学种植等资料,再通过观看远程教育让他们了解一些科学种植方法;</p> <p>4. 低保户名单的评定工作,在此次工作中我们认真走访每一个写低保申请的农户,切实了解他们的实际困难,确保在源之上把款发,经过我村两委班子开会研究,综合各方面的实际情况考虑后最终确定了该村新的低保人员名单;</p> <p>5. 在村绿化工作中,与村两委干部一起商讨村绿化苗木的品种以及多次去苗木地实地考察价格,按照村级实际对村中的主街道和两柏村南通仁义路段进行了绿化;</p> <p>6. 在新型农村养老保险和农保的收缴工作中,我同其他村干部积极宣传鼓励村民进行参与,保证每一家庭都能够正确了解国家政策,得以享受政策实惠,并圆满完成了村中的收缴工作。</p>				

**Translation:**

Point 1. "Over the past year, I have become more familiar with the conditions of the villagers and better understood their needs through deep conversations with them. I tried to offer some help to those who really have difficulties in life."

Point 4. "When deciding the beneficiaries of the poverty subsidy, I visited every applicant's home and collected detailed information on their living conditions. We held a village committee meeting and finalized the list of beneficiaries."

**Notes:** This form is used by Shanxi province to evaluate CGVO performance in 2013.

Appendix B3. Sample 3

# 山西省大学生村官年度考核登记表

(2014年度)

填表日期: 2015年1月16日

姓名	[Redacted]	性别	女	出生年月	1985.10
选聘时间	2009.9	学历	本科	政治面貌	党员
任职单位及职务	[Redacted]				
年度受表彰情况					
年度工作总结	<p>一、思想学习方面: 一年来积极学习党的十八大及十八届三中、四中全会精神, 中央省市县“两会”精神, 党的群众路线教育实践活动会议精神 和习近平系列讲话精神, 学习党章, 学习焦裕禄、段爱平事迹先进 典型, 使学有榜样, 赶有目标, 提高了自身的认识水平和思想觉悟。</p> <p>二、工作方面: 1. 扎实开展了群众路线教育实践活动, 切实转变工作作风, 成立了活动组织, 收集民意查摆问题, 召开了专题组织生活会及民主 评议党员会, 树立了群众观点, 增进群众感情。 2. 顺利地进行了社区两委班子的换届选举工作。 3. 完善服务功能, 热心服务居民, 在社区党委办事处的有力支持下, 投资14万元建立了中城社区日间照料中心和便民服务站, 树立了中城 社区党组织形象, 真正以实际行动践行了党的群众路线。 4. 为丰富社区居民的文化生活, 构建学习型文化社区, 积极与县文体局 联系, 为中城社区图书室捐书500余册, 给居民再学习提供了一个平台。 5. 城镇低保工作是一项惠民工程, 对今年申请的低保对象都做到了 资料审核, 入户调查, 开展民主评议并及时向社会公示, 做到公平、 公正、公开, 并接受居民监督。 6. 严把审核关, 对初审上报的廉租房货币申请人员进行审核, 走访调查, 每户申报家庭成员组成、住房情况、家庭经济收入等 基本情况, 真正使困难群体享受到国家的惠民政策。</p>				

**Translation:**

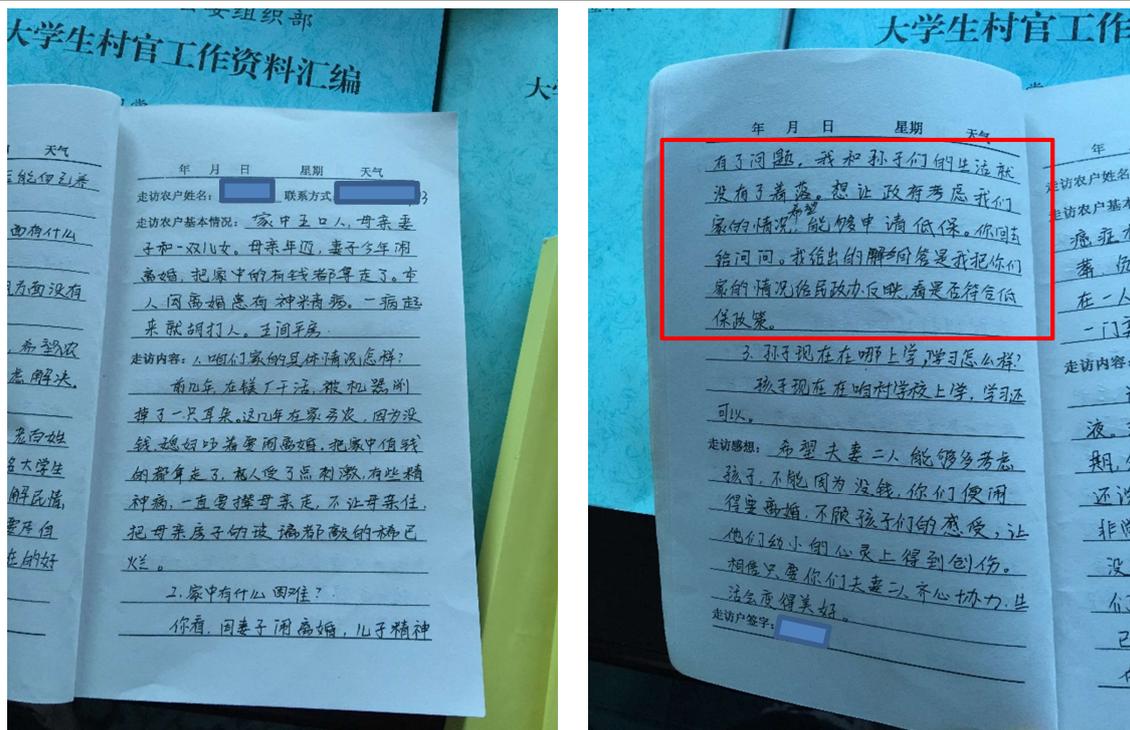
Point 5. "For every poverty subsidy applicant, I strictly followed the procedures of screening application materials, conducting household surveys, organizing group evaluations, and publicizing results."

Point 6. "For all of the applicants for the government's subsidized housing program, I screened their materials, conducted household surveys, and especially focused on checking their current housing conditions, demographic compositions, and financial situations."

Notes: This form is used by Shanxi province to evaluate CGVO performance in 2014.

**Appendix C. Village Condition Notebooks**

Appendix C1. Sample 1



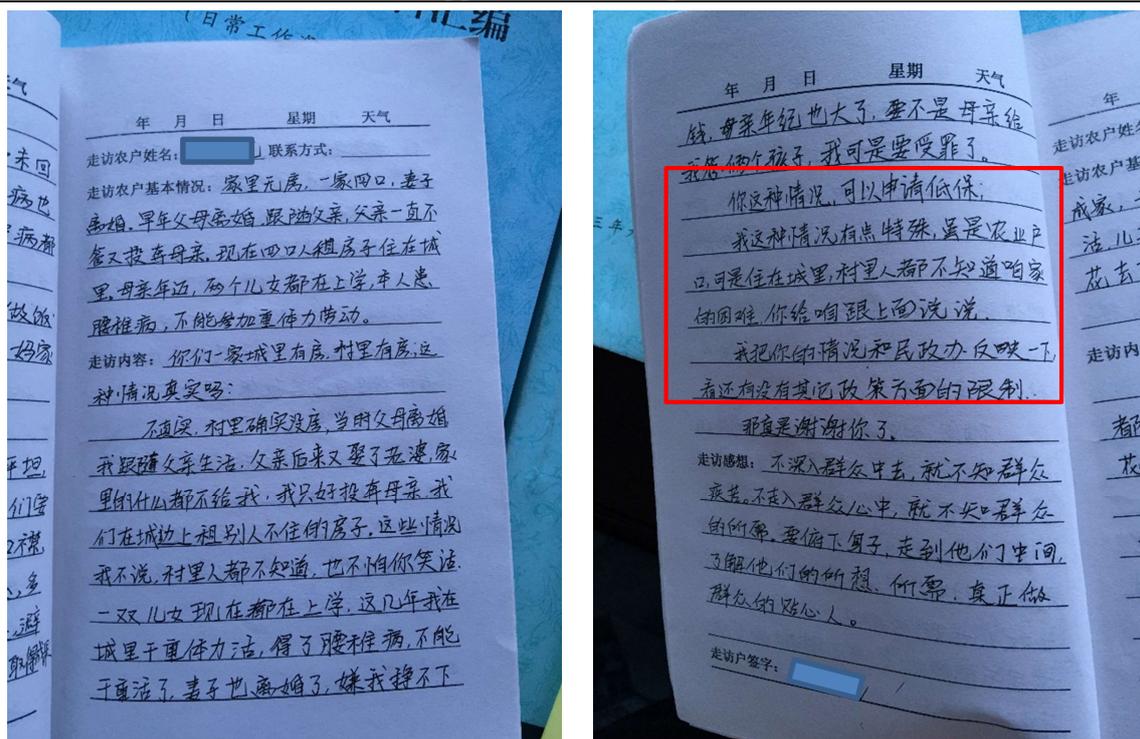
**Translation:**

The villager said: "Please help relay the actual conditions of our family to the government and ask them whether we qualify for subsidies."

The CGVO responded: "I will inform the local Bureau of Civil Affairs about your conditions and see whether you qualify for the subsidy programs."

**Notes:** The village condition notebooks were used by CGVOs to record their daily work and document villagers' living conditions. These documents are archived by the Organization Department of the Central Committee of the Communist Party of China.

Appendix C2. Sample 2



**Translation:**

The CGVO advised the villager: "Given your conditions, you should consider applying for the poverty subsidy."

The villager responded: "My case is a special one. Although I am a rural resident, my house is in the suburban areas close to the city, so the villagers are not familiar with my real conditions and don't really understand my difficulties. Please help relay my information to the government."

The CGVO responded: "I will talk to the local Bureau of Civil Affairs and see what they can do."

**Notes:** The village condition notebooks were used by CGVOs to record their daily work and villagers' living conditions. These documents are archived by the Organization Department of the Central Committee of the Communist Party of China.

**Appendix Table A1. Probability of CGVO Assignment: Pre-CGVO Levels**

	CGVO Assignment							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Population	0.18 (0.23)	0.20 (0.31)	0.07 (0.36)	0.17 (0.37)	0.18 (0.20)	0.22 (0.28)	0.12 (0.28)	0.26 (0.30)
Per capita Income	-0.05 (0.28)	-0.32 (0.43)	-0.40 (0.45)	-0.32 (0.50)	-0.03 (0.27)	-0.32 (0.43)	-0.43 (0.45)	-0.41 (0.47)
Poor Housing		0.04 (0.20)	0.02 (0.20)	0.09 (0.22)		-0.01 (0.18)	0.00 (0.18)	0.04 (0.19)
Subsidized Population		-0.21 (0.40)	-0.22 (0.40)	-0.15 (0.42)		-0.21 (0.34)	-0.21 (0.35)	-0.11 (0.37)
Registered Poor HHs		-0.05 (0.32)	-0.05 (0.32)	-0.13 (0.33)		-0.11 (0.26)	-0.11 (0.26)	-0.21 (0.28)
Government Size			0.07 (0.10)	0.05 (0.09)			0.05 (0.04)	0.04 (0.04)
Government Quality			-0.00 (0.01)	-0.01 (0.01)			0.00 (0.01)	-0.00 (0.01)
Terrain				0.38 (0.41)				0.29 (0.35)
Pillar Industry				0.25 (0.79)				0.59 (0.69)
Suburb				0.24 (0.50)				0.23 (0.39)
Town Center				-0.30 (0.43)				-0.16 (0.34)
Designated Poor Village				0.04 (0.78)				-0.08 (0.62)
Precipitation				-59.17 (112.64)				-98.75 (108.80)
Temperature				0.01 (0.02)				0.01 (0.02)
Time Duration			-		4th Order Polynomial			
Pseudo R <sup>2</sup>	0.00	0.01	0.02	0.03	0.19	0.21	0.21	0.22
Observations	233	143	143	143	2,421	1,479	1,476	1,476

**Notes :** The probability of CGVO assignment is estimated using logit models. In columns (1) - (4), we estimate cross-sectional regressions in which the dependent variable is the eventual treatment status and the independent variables are village characteristics in 2006. Robust standard errors are reported in parentheses. In columns (5)-(8), we estimate the associations using a logit model with duration dependence with the panel data. We include a fourth order polynomial function to approximate the duration. Standard errors are clustered at the village level and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table A2. Probability of CGVO Assignment: Pre-CGVO Shocks**

	CGVO Assignment					
	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta$ in Village Population (by 1000)	0.30 (0.27)	0.37 (0.29)	0.31 (0.27)	0.31 (0.28)	0.32 (0.27)	0.30 (0.27)
$\Delta$ in per capita Income (by 1000 yuan)	0.19 (0.15)	0.13 (0.16)	0.37* (0.19)	0.15 (0.16)	0.19 (0.14)	0.20 (0.14)
$\Delta$ in the Share of Poor Housing (by 100)		-0.93 (0.59)				
$\Delta$ in Subsidy Rate (by 100)			0.33 (0.24)			
$\Delta$ in the Share of Registered Poor HHs (by 100)				0.21 (1.03)		
$\Delta$ in Government Size (by 100)					-7.72 (7.47)	
$\Delta$ in Government Quality (by 100)						0.04 (0.92)
Time Duration	4th Order Polynomial					
Pseudo R <sup>2</sup>	0.15	0.15	0.18	0.15	0.15	0.15
Observations	1,803	1,463	1,184	1,660	1,799	1,799

**Notes:** The probability of CGVO assignment is estimated using logit models with duration dependence. We include a fourth order polynomial function to approximate the duration. The independent variables are changes in socioeconomic conditions before the CGVO program. Standard errors are clustered at the village level and reported in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table D1. Robustness Checks: CGVO and Subsidies**

	Subsidized Population (per 1000, log)				Poor Housing (per 100 households, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.18** (0.07) (0.12) (0.10)	0.18** (0.07) (0.12) (0.10)			-0.07 (0.05) (0.05) (0.07)	-0.07 (0.05) (0.05) (0.07)		
L.CGVO			0.20*** (0.07) (0.12) (0.11)	0.20*** (0.07) (0.12) (0.11)			-0.15*** (0.05) (0.08) (0.10)	-0.15*** (0.06) (0.10) (0.10)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
P-Y FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,102	2,102	2,102	2,102	2,417	2,417	2,417	2,417
R <sup>2</sup>	0.67	0.67	0.67	0.67	0.78	0.78	0.78	0.78

*Notes:* This table estimates the impacts of CGVOs on poverty subsidies and poor-quality housing using within province variation in CGVO assignment. We include village fixed effects and province-year fixed effects in all regressions. Below the estimated coefficients are standard errors clustered at the province-year, provincial and village level respectively. The asterisks indicate significance levels corresponding to standard errors clustered at the province-year level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table D2. Robustness Checks: Registration Effect**

	Registered Poor Households (per 100, log)				People with Disabilities (per 1000, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.16*** (0.05)	0.16*** (0.05)			0.08 (0.07)	0.08 (0.07)		
	(0.05)	(0.05)			(0.08)	(0.08)		
	(0.08)	(0.08)			(0.07)	(0.08)		
L.CGVO			0.20*** (0.06)	0.20*** (0.06)			0.12* (0.07)	0.13* (0.07)
			(0.07)	(0.07)			(0.10)	(0.10)
			(0.08)	(0.08)			(0.10)	(0.10)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
P-Y FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,654	2,654	2,654	2,654	1,826	1,826	1,826	1,826
R <sup>2</sup>	0.69	0.69	0.69	0.69	0.75	0.75	0.75	0.75

*Notes:* This table estimates the impacts of CGVOs on registered poor households and people with disabilities using within province variation in CGVO assignment. We include village fixed effects and province-year fixed effects in all regressions. Below the estimated coefficients are standard errors clustered at the province-year, provincial and village level respectively. The asterisks indicate significance levels corresponding to standard errors clustered at the province-year level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table E1. Robustness Checks: Dropping Villages with CGVOs before 2007**

	Subsidized Population (per 1000, log)				Poor Housing (per 100 households, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.20*	0.19			-0.07	-0.07		
	(0.11)	(0.11)			(0.05)	(0.05)		
	(0.10)	(0.10)			(0.07)	(0.07)		
	(0.11)	(0.11)			(0.07)	(0.07)		
L.CGVO			0.23**	0.22**			-0.13*	-0.13*
			(0.10)	(0.10)			(0.07)	(0.07)
			(0.11)	(0.11)			(0.08)	(0.08)
			(0.11)	(0.11)			(0.08)	(0.08)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,067	2,067	2,067	2,067	2,376	2,376	2,376	2,376
R <sup>2</sup>	0.62	0.62	0.62	0.62	0.75	0.75	0.76	0.76

*Notes:* This table estimates the impacts of CGVOs on poverty subsidies and poor-quality housing. We exclude villages that received CGVOs before 2007 from the sample. We probe the robustness of estimate accuracy by clustering the standard errors at three different levels: provincial, village, and village and province-year level (multi-way clustering suggested by Cameron, Gelbach, and Miller (2011)). These standard errors are respectively reported in the parentheses below the estimated coefficients. Our preferred specification clusters standard errors at the provincial level. As we only have 19 provinces, we address the small sample bias in the clustered standard errors using wild bootstrapping, a method recommended by Cameron, Gelbach and Miller (2008). The significance levels indicated by asterisks are based on wild bootstrapped p-values, which are similar to the simple significance levels using standard errors clustered at the provincial level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table E2. Robustness Checks: Dropping Villages with CGVOs before 2007**

	Registered Poor Households (per 100, log)				People with Disabilities (per 1000, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.09 (0.06) (0.07) (0.08)	0.09 (0.06) (0.07) (0.08)			0.09 (0.07) (0.07) (0.08)	0.09 (0.07) (0.07) (0.08)		
L.CGVO			0.15** (0.07) (0.08) (0.09)	0.15** (0.07) (0.08) (0.09)			0.16* (0.09) (0.09) (0.10)	0.16* (0.09) (0.09) (0.09)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,608	2,608	2,608	2,608	1,792	1,792	1,792	1,792
R <sup>2</sup>	0.65	0.65	0.65	0.65	0.73	0.73	0.73	0.73

**Notes:** This table estimates the impacts of CGVOs on registered poor households and people with disabilities. We exclude villages that received CGVOs before 2007 from the sample. We probe the robustness of estimate accuracy by clustering the standard errors at three different levels: province, village, and village and province-year level (multi-way clustering suggested by Cameron, Gelbach, and Miller (2011)). These standard errors are respectively reported in the parentheses below the estimated coefficients. Our preferred specification clusters standard errors at the provincial level. As we only have 19 provinces, we address the small sample bias in the clustered standard errors using wild bootstrapping, a method recommended by Cameron, Gelbach and Miller (2008). The significance levels indicated by asterisks are based on wild bootstrapped p-values, which are similar to the simple significance levels using standard errors clustered at the provincial level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table F1. Robustness Checks: Using Alternative CGVO Dummy**

	Subsidized Population (per 1000, log)				Poor Housing (per 100 households, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.20*	0.20*			-0.09*	-0.09**		
	(0.11)	(0.11)			(0.04)	(0.04)		
	(0.10)	(0.10)			(0.07)	(0.07)		
	(0.11)	(0.11)			(0.07)	(0.07)		
L.CGVO			0.20*	0.20*			-0.14**	-0.14**
			(0.10)	(0.10)			(0.06)	(0.06)
			(0.10)	(0.10)			(0.08)	(0.08)
			(0.10)	(0.11)			(0.08)	(0.08)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,102	2,102	2,102	2,102	2,417	2,417	2,417	2,417
R <sup>2</sup>	0.61	0.61	0.61	0.61	0.76	0.76	0.76	0.76

**Notes:** This table estimates the impacts of CGVOs on poverty subsidies and poor-quality housing using an alternative CGVO treatment dummy. In these regressions, a village is considered treated starting from the first year it received a CGVO, and until the end of our study period in 2011, regardless of whether a CGVO left a village during the period. We probe the robustness of estimate accuracy by clustering the standard errors at three different levels: provincial, village, and village and province-year level (multi-way clustering suggested by Cameron, Gelbach, and Miller (2011)). These standard errors are respectively reported in the parentheses below the estimated coefficients. Our preferred specification clusters standard errors at the provincial level. As we only have 19 provinces, we address the small sample bias in the clustered standard errors using wild bootstrapping, a method recommended by Cameron, Gelbach and Miller (2008). The significance levels indicated by asterisks are based on wild bootstrapped p-values, which are similar to the simple significance levels using standard errors clustered at the provincial level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Appendix Table F2. Robustness Checks: Using Alternative CGVO Dummy**

	Registered Poor Households (per 100, log)				People with Disabilities (per 1000, log)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CGVO	0.10*	0.10*			0.12	0.11		
	(0.06)	(0.06)			(0.07)	(0.07)		
	(0.07)	(0.07)			(0.07)	(0.07)		
	(0.08)	(0.08)			(0.08)	(0.08)		
L.CGVO			0.14**	0.14**			0.16*	0.16*
			(0.06)	(0.06)			(0.09)	(0.09)
			(0.08)	(0.08)			(0.09)	(0.08)
			(0.09)	(0.09)			(0.09)	(0.09)
Controls	N	Y	N	Y	N	Y	N	Y
Village FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Obs.	2,654	2,654	2,654	2,654	1,826	1,826	1,826	1,826
R <sup>2</sup>	0.65	0.65	0.65	0.65	0.73	0.73	0.73	0.73

**Notes:** This table estimates the impacts of CGVOs on registered poor households and people with disabilities using an alternative CGVO treatment dummy. In these regressions, a village is considered treated starting from the first year it received a CGVO and until the end of our study period in 2011, regardless of whether a CGVO left a village during the period. We probe the robustness of estimate accuracy by clustering the standard errors at three different levels: provincial, village, and village and province-year level (multi-way clustering suggested by Cameron, Gelbach, and Miller (2011)). These standard errors are respectively reported in the parentheses below the estimated coefficients. Our preferred specification clusters standard errors at the provincial level. As we only have 19 provinces, we address the small sample bias in the clustered standard errors using wild bootstrapping, a method recommended by Cameron, Gelbach and Miller (2008). The significance levels indicated by asterisks are based on wild bootstrapped p-values, which are similar to the simple significance levels using standard errors clustered at the provincial level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.