Confidence in local self-governments and rural housing programs

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Abstract

Strengthening local self-governments is assumed to be essential for successfully delivering public utilities and implementing rural development programs. Despite specific evidence on the influence of confidence in local political institutions on the firm and household level behavioural changes, little is known on the causal effect of confidence in local self-governments on availing support under rural housing programs. Using nationally representative Indian household data, this paper explores whether confidence in local self-governments increases a rural household's likelihood of availing government support for house construction. Identification of this empirical investigation relies on the exogenous variation of the instrument that measures the difficulty faced in casting votes. The results suggest that greater confidence in local self-governments is associated with a higher likelihood of availing government support by the household for house construction. The outcome is reasonably robust to alternate specifications with potential confounders and when the instrument can be plausibly exogenous.

Keywords: Confidence in institution; local self-government; rural housing; India JEL Codes: C26; D12; I38; O18

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1 Introduction

Providing stable and affordable housing to the socio-economically deprived rural population is believed to be a ladder out of poverty. It continues to be one of the essential drivers for achieving many of the Sustainable Development Goals. There are primarily two ways to cover the targeted group under the rural housing programs. First and foremost, supply-side interventions by the government in improving the delivery channels through decentralised local governments (Bardhan & Mookherjee, 2006). For instance, in India, the government enacted and initiated steps to strengthen the three-tier *Panchayat Raj* (local self-government) system where the primary responsibility of beneficiary identification to programme implementation was vested in the *Gram Panchayat Raj* (GP) i.e., village level self-government, while the allocation of funds and effective monitoring of its utilisation were under the purview of *Panchayat Samiti* i.,e., the block level administrative committee and *Zilla Parishad*, i.e., the district level administrative committee. Second is the demand side intervention, such as credit-linked subsidy schemes (CLSS) to boost the demand for stable and affordable housing among the rural poor.

The supple side interventions are sometimes hindered due to corruption and the social and political elites' capture of local political institutions (Sen, 1992; Pandey, 2010). As local self-governments play a crucial role in delivering essential public services in developing countries (Acemoglu & Robinson, 2006; Rodrik. Subramanian, & Trebbi, 2004), the supply-side interventions are also not likely to offer the desired result, given there is a lack of confidence of the targeted poor in the local political institutions and the state. Until the households repose their faith and confidence in the local self-governments, it seems difficult for the state government to implement any developmental program. Target groups might not come forward and submit their application for benefits under the developmental program due to prior experience of poor delivery of the existing programs by the local self-governments or corruption in local public institutions (Clausen, Kraay, & Nyiri, 2011). As GP is the primary contact point between the state and the rural household, a lack of confidence in local self-governments is expected to create hindrances to bringing poor households under the coverage of the rural housing programs. A vast body of literature explores the extent of elite capture in government-run developmental programs, including rural housing programs (Chatterjee & Pal, 2021; Panda, 2022). However, little is known regarding the relationship between a household's confidence in local government and coverage under government-run rural housing programs. Given this context, this paper studies Indira Awas Yajona, a rural housing program in India. It elucidates the following research question: Is beneficiaries' confidence in local government critical for the successful implementation of rural housing programs? This paper, on a nationally representative household dataset, empirically explores whether the likelihood of getting covered under a government-run rural housing program is higher for households with confidence in local self-governments than those without confidence in local self-governments. To my knowledge, this question has not been explored explicitly in the extant literature.

Estimating any causal effect of household confidence in local governments on the coverage of rural housing programs is challenging due to the potential endogeneity of the confidence in local self-governments. For instance, a selective coverage of the rural housing programs among politically connected households might reverse-cause the confidence in local self-governments. Another challenge is to rule out any plausible factor, such as the slow release of the allocated funds from the higher tier administrative bodies to the local selfgovernments, that might simultaneously impact the coverage of rural housing programs and households' confidence in local self-government. This paper uses an instrumental variable (IV) regression approach to address these issues. The confidence in local self-governments is instrumented by a variable on the households' freedom in casting votes in recent elections.

This paper is linked to two constituents in the literature. First, the work that corroborates the relationship between confidence in political institutions and their effectiveness in delivering public utilities (Caldeira & Gibson, 1995; Mishler & Rose, 2005; Clausen et al., 2011; Stevenson & Wolfers, 2011; Soko, Kaitibie, & Ratna, 2023). This paper suggests a close relationship between confidence in the local self-governments and the effective implementation of rural development schemes. Second, recent literature suggests a close relationship between trust in political institutions and the changing behaviour of firms and households. This strand of literature has documented corroborative evidence on the effect of confidence in local self-governments on firm-level innovation (Focacci, Kovac, et al., 2023), household repayment behaviour (Georgarakos & Fürth, 2015), individual vaccination (Hill, Allemand, & Burrow, 2023), household health insurance enrollment (Afriyie, Masiye, Tediosi, & Fink, 2023), and household adoption of cleaner cooking energy (Soni & Chatterjee, 2023). Building on this idea, this paper contributes to the literature by offering corroborative evidence of the criticality of rural households' trust in the local self-governments for the broader adoption of rural housing programs by the socio-economically deprived section of the community.

The outcome of this study is expected to be important to the policymakers for adopting mechanisms that would reduce mistrust, if any, so that the prospective beneficiaries of the rural housing programs do not lose confidence in the local self-governments. Besides, the outcome of this study would also be helpful to the policymakers as it is essential to curb corruption and local conflict to boost confidence in local selfgovernments (Clausen et al., 2011; Blanco & Ruiz, 2013).

The rest of the paper is arranged as follows. The next section offers background information. Section 3 outlays the empirical strategy. Section 4 outlays the discussion of the results. Section 5 provides the robustness tests, and Section 6 concludes.

2 Background and motivation

2.1 Indira Awas Yajona

Housing, one of the basic amenities, is critical to the survival and well-being of the population. House ownership ensures economic security and indicates a social status in the community. Access to a stable house not only protects the habitats from extreme climatic conditions, ownership of a house enormously boosts self-confidence and human dignity, improves health, and enhances the scope of income generation. Thus, adequate availability of affordable housing is expected to act as a catalyst for economic development and inclusive growth. While providing stable, affordable, and accessible housing to the citizens is one of the primary challenges across the world, rural areas face a substantial disadvantage compared to urban areas regarding housing. Therefore, it is desirable and essential for the state to introduce and successfully implement development schemes to arrange stable and affordable housing for the households in the rural community's socio-economically challenged section.

The first housing programme in rural India, the Village Housing Scheme, was launched during the Second Five-Year Plan in 1956. However, rural housing has attracted desired attention from policymakers since the Indira Awas Yojana (IAY) was launched in 1985-86 as a sub-scheme under the Rural Landless Employment Guarantee Programme (RLEGP). In rural India, housing shortage was estimated to be around 18.8 million in 1985 (Hirway, 1987). IAY, India's first-ever comprehensive rural housing scheme, became an independent scheme on January 1, 1996. The target group under IAY was the rural households living below the poverty line and belonging to the marginalised section, i.e., Scheduled Castes (SC), Scheduled Tribes (ST), and freed bonded labourers. IAY was grounded on four contemplations: (a) providing substantial subsidies to people experiencing poverty for building houses; (b) the poor household is expected to use household labour to construct the house majorly; (c) low-budget houses are supposed to make use of local building materials and to involve locally available skillset; and (d) the grassroots level political institutions should involve in identifying beneficiary, releasing fund, and monitoring the implementation of the scheme (Sudarshnam & Kumar, 2005).

2.2 Confidence in local political institution

Most recent studies focus on the effect of confidence in local political institutions on firm and household-level behavioural changes. Focacci et al. (2023) suggest that trust in the local Slovenian government rooted in better governance, effective provisioning of public goods, impartial administration, and minimum corruption offers a conducive environment for the local firms to be highly innovative and positively contribute to economic growth. In the context of participation in the financial markets, Bu et al. (2022) suggest that Chinese households that face corrupt public institutions exhibit minimal trust in the political institutions and usually avoid investing in the stock market. Similarly, Georgarakos and Fürth (2015) suggest that repayment arrears occur more frequently in the European regions where the public believes political institutions are corrupt and untrustworthy. In the healthcare sector, Hill et al. (2023) suggest that an individual's greater trust in local political institutions is associated with a higher likelihood of vaccination in Switzerland. However, Afriyie et al. (2023) suggest a weak association between trust in government and health insurance enrollment in Zambia. In the context of adopting greener energy, Soni and Chatterjee (2023) offer corroborative evidence that the likelihood of adopting cooking stoves and liquified petroleum gas is higher among Indian households with confidence in the local government. This paper explores a new dimension of plausible association of confidence in local self-governments with coverage of a rural housing program in India.

3 Empirical framework

3.1 Data

This study uses household data from the nationally representative India Human Development Survey I (IHDS-I) 2005 (Desai, Vanneman, et al., 2015), encompassing data from 26,734 rural households spreading over 1504 villages across 33 states. The University of Maryland, United States and the National Council of Applied Economic Research, India, jointly conducted the survey. The dataset provides detailed household information on demography, level of education, income, consumption expenditure, support received from the government for house construction (if any), and confidence in local self-governments.

The variable available in the IHDS-1 that would be useful for this study is *Did your household receive* government support for house construction, latrines, or chulha ² and confidence in Village Panchayats³ / Nagarpalika ⁴ to implement public projects. Since 1996, IAY has been the government-sponsored major rural housing program implemented pan-India; we may assume that the households are primarily the beneficiaries of the IAY. Furthermore, the dataset consists of information on a variable; many people find it difficult to get to vote when there is an election. In the most recent national election, did you vote yourself? that has been used as an instrumental variable. Table I offers the summary statistics of the dependent variable, explanatory variable, instrumental variable, and control variables used in this study.

²Cooking stove

³Village level local self-government

⁴Municipality

Variable	Description	No. of	Mean	Standard	Minimum	Maximum
		Obs		Deviation		
Dependent Variable						
Did your household receive any support from	No=0 Yes=1	25790	0.1205	0.0355	0	1
the government for house construction						
Explanatory variable						
Household's confidence in local self-governments	Confident $= 1$	25790	0.8037	0.3971	0	1
for implementing public projects	Not Confident $=0$					
Instrumental variable						
In the most recent election,	No=0 Yes=1	25790	0.9351	0.2463	0	1
did you find it difficult to vote?						
Control variables						
Social caste of the household	Oppressed section $= 0$	25750	0.2680	0.4429	0	1
	Higher caste= 1					
Household income per capita (log)	Numeric	24284	10.1398	1.0034	2.7899	15.188
Monthly consumption per capita (log)	Numeric	25790	6.3963	0.6628	1.3862	10.5782
Number of persons who live under the same roof and	Numeric	25790	5.3635	2.6336	1	38
share the same kitchen for more than six months						
Number of children	Numeric	25790	1.7864	1.6531	0	17
Number of adults	Numeric	25790	2.8197	1.4080	0	14
Highest adult education (years of education completed)	Numeric	25790	6.3379	4.9044	0	15
Number of married women in the household	Numeric	25790	1.2614	0.7399	0	8
Number of married men in the household	Numeric	25790	1.2088	0.7262	0	8
Does the household own or cultivate any land?	No=0 Yes=1	25790	0.6030	0.4892	0	1

Table 1: Summary Statistics

Note: Oppressed Section includes SC, ST and OBC

3.2 Identification strategy

To examine the plausible influence of confidence in local self-governments on availing government support for house construction, this paper runs the following linear probability model for household h in village v:

$$HouseSupport_h = \alpha_v + \beta.GovtConfidence_h + \gamma.X_h + \epsilon_h \tag{1}$$

where HouseSupport is a binary variable and will take the value one if the household received financial

support from the government for house construction, otherwise zero; α_v refers to the village fixed effect to control unobserved village-specific heterogeneity: *GovtConfidence*, the key explanatory variable, is also a binary variable that takes value one if the household has confidence in the local self-governments, otherwise 0. The vector X refers to the set control variables in the regression.

Conditional of the control variables, till the key explanatory variable *GovtConfidence* is uncorrelated with the error, ϵ , the estimated coefficient β would indicate a causal impact of confidence in local self-government on availing government support for house construction. However, the conditional exogeneity may not hold good due to omitted variable bias. To overcome this challenge, a wide range of demographic variables, such as, number of children and adults in the household, educational background, number of married women and men, consumption expenditure and engagement in agricultural activity, are taken as control variables in the regression. Regarding simultaneity, there might be variables that would influence confidence in local self-governments as well as availing government support for house construction. For example, while belonging to lower social strata and financial weakness make a household eligible for government-sponsored rural housing programs, social and economic backwardness might also influence a household's confidence in local self-governments that are at times observed to be captured by the economic and political elites (Sen, 1992; Pandey, 2010). To overcome the plausible econometric challenge of simultaneity, this paper includes per-capita income ⁵ and caste in the vector X. Potential endogeneity could also be attributed to reverse causality. It might also be possible that a poor household that could access financial benefits from the local government for house construction would repose high confidence in the local self-governments.

If rural households are randomly assigned with confidence in local self-governments and lack of confidence in local self-governments, then comparing the mean of the households availing government support for house construction between the treatment group (with confidence in local self-governments) and the control group (households that lack confidence in local self-governments) will suggest the true causal impact of confidence in local self-governments on availing government support for house construction. In the absence of such a hypothetical process of randomisation, a true causal effect of confidence in the local self-governments could be consistently estimated if there is a component of the vector X that directly influences confidence in the local self-governments but can be legitimately excluded from the set of variables affecting availing government support for house construction. However, the very component would influence the availing of government support for house construction only through the channel of confidence in local self-governments. For conducting a similar quasi-experiment, this paper takes an instrumental variable approach. This study uses the exogenous variation in the instrumental variable (IV), *Vote*, a dummy variable taking value one if the household could cast vote in the recent national election without difficulty, and zero otherwise. In

⁵This variable is used in logs to account for potential outliers.

other words, if the household was not debarred from casting a vote and was free to exercise his(her) political opinion, then the IV will take the value of one. At the same time, if the household found it difficult to cast a vote, then the value of the IV is zero.

The instrumental variable regression is employed using the two-stage least squares (2SLS), and the following regression specification is used in the paper:

$$GovtConfidence_h = \alpha_v + \beta.Vote_h + \gamma.X_h + \epsilon_h \tag{2}$$

$$HouseSupport_h = \alpha_v + \beta. Vote_h + \gamma. X_h + \epsilon_h \tag{3}$$

$$HouseSupport_h = \alpha_v + \beta.GovtConfidence_h + \gamma.X_h + \epsilon_h \tag{4}$$

Equation (2) represents the first stage effect of the IV, i.e., *Vote* on *GovtConfidence*, an endogenous variable. Equation (3) captures the reduced form effect of *Vote* on *HouseSupport*. Equation (4) suggests the IV estimate of *GovtConfidence* on *HouseSupport*. The estimated coefficient β would indicate evidence of a causal influence of confidence in self-governments on availing government support for house construction.

This paper considers *Vote* as an IV as if someone was debarred from casting a vote or found it challenging to get to vote, s(he) was likely to lack confidence in local self-governments. That is, it can be hypothesized that *Vote* is correlated with *GovtConfidence* but can influence *HouseSupport* only through *GovtConfidence*. A significantly high first-stage F statistic (greater than 10) would suggest rejecting the null hypothesis that *Vote* is a weak instrument. Furthermore, *instrumental relevance*, i.e., *Vote* is relevant for explaining variation in *GovtConfidence*, is confirmed by regressing *GovtConfidence* on *Vote* and the results suggest that the relationship of *GovtConfidence* with *Vote* is positive and statistically significant. However, the *instrumental exogeneity* (exclusion restriction) would hold good if *HouseSupport* is influenced by *Vote* only through the channel of *GovtConfidence*. As this seems to be a fairly strong assumption, a few robustness checks are offered for establishing instrument validity. It might still be argued that households self-select and relocate to villages that offer the least hustle in casting votes owing to some omitted variables in the regression specification. These omitted variables might also influence the regressand, i.e., *HouseSupport*. However, recent empirical investigations (Munshi & Rosenzweig, 2016; Roychowdhury, 2019) indicate that spatial mobility is uncommon in the Indian context. Furthermore, entropy balancing ensures that the dataset is rightly balanced around the explanatory variable, *GovtConfidence*.

4 Results

The ordinary least squares (OLS) results, as specified in Equation (1), are reported in Columns 1, 3, and 5 in Table 1. It is fairly evident that confidence in local self-governments is strongly associated with households' availing of government support for house construction. As expected, coefficients associated with the variables - household income and social caste are of negative sign as the rural housing program i.e., Indira Awas Yajona, was primarily targeted at the socioeconomically oppressed section of the community. The explanatory variable remains significant even after controlling for demographic variables and village fixed effect. Although statistical significance of the key explanatory variable, i.e., *GovtConfidence*, suggests a strong association between *HouseSupport* and *GovtConfidence*, they are not necessarily true causal estimates due to potential endogeneity as elaborated under the *Identification strategy*.

This paper uses an instrumental variable approach to overcome the challenge of potential endogeneity. The results of the IV regression are reported in Columns 2, 4, and 6 in Table 1. Here, the instrumental variable is a dummy variable taking value one if the household could cast vote in the recent national election without difficulty and zero otherwise. Whether the household found it difficult to cast a vote in the recent election should not be correlated with availing government support for house construction. However, experiencing difficulty casting a vote might adversely affect the rural household's confidence in local self-governments. Moreover, given the lack of confidence in local self-governments, the target group of the rural housing programs might not come forward to avail benefits for house construction. The value of the first-stage F-stat, as reported in column 6, is 32.81, indicating that the instrument is not weak. Even after controlling for village-fixed effect and household income, caste and demographic variables, the causal effect of confidence in local self-governments support for house construction is fairly evident in column 6. The downward bias of the linear regression estimates of *GovtConfidence* than the instrumental variable approach is plausibly ascribed to endogeneity that was grossly unaddressed under the linear regression.

Dependent variable: Did the household receive any support from the government for the construction of houses?						
	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)
GovtConfidence	0.0217***	0.4629***	0.0202***	0.4870***	0.0210***	0.4757***
	(0.0049)	(0.1369)	(0.0048)	(0.1351)	(0.0049)	(0.1377)
Household Income	-0.0129***	-0.0199***			-0.0110***	-0.0183***
	(0.0022)	(0.0033)			(0.0022)	(0.0044)
Social caste			-0.0522***	-0.0483***	-0.0521***	-0.0461***
			(0.0041)	(0.0050)	(0.0041)	(0.0052)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Village fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0226	0.0113	0.0260	0.0103	0.0271	0.0115
Observations	24284	24284	25790	25770	24284	24264

Table 2: Results of ordinary least squares and instrumental variable regression

Notes: Using the IHDS – I dataset (2005), columns 1, 3, and 5 suggest an ordinary least square regression and columns 2, 4, and 6 suggest a distinct instrumental variable (IV) regression. The estimated coefficient *GovtConfidence* suggests the household's confidence in Village Panchayats (local self-governments) to implement public projects. Columns 1 and 2 report results after controlling for village fixed effect, household income, and demographic variables as discussed under *Identification strategy*. Columns 3 and 4 report results after controlling for village fixed effect, social strata, i.e., caste, and demographic variables. Columns 5 and 6 present results from the fully specified regression with all controls and village fixed effect. Robust standard errors are given in parentheses. *** p < 0.01; ** p < 0.05; * p < 0.1

5 Robustness

5.1 Exclusion restrictions

A prime concern in adopting the instrumental variable technique is the strict exogeneity assumption. One potential apprehension in this study could be that the rural households that found it difficult to vote in the last election might not also attend the public meeting called by the local self-governments. Moreover, the household's non-participation in the public meetings organised by the self-governments might also affect the household's availability of financial grants for house construction under the rural housing programs. This will likely invalidate the instrument as *Vote* does not influence *HouseSupport* only through the confidence in local self-governments. To overcome such a challenge, a measure of whether any member from the household attended a public meeting called by the local self-governments is involved in the IV regression, and the 2SLS estimates do not suggest any significant deviation in the influence of confidence in local self-governments on

availing government support for house construction (refer Figure 1).

Figure 1: Validity of instrument: including potential confounders



Any household member's attendence in public meeting

Another concern could be that the household's affinity to a member of the local self-government might simultaneously influence the confidence in local self-governments and availing financial support from the government for house construction. For instance, Panda (2022) offers evidence of political elite capture in Indira Awas Yajona. To address this challenge, a measure of rural household's closeness to any member of the local self-governments is taken in the IV regression. The estimated coefficient in Figure 1 indicates that including the additional control variable on the household's closeness to the local self-governments does not alter the IV regression results.

5.2 Plausibly exogenous

To overcome the challenge of strict exogeneity, at least partially, this paper follows Conley et al. (2012), which suggests the usefulness of 'plausibly exogenous' instruments in drawing causal inferences. Considering that the proposed instrumental variable is 'plausibly exogenous', the following regression is estimated:

$$HouseSupport_{h} = \alpha.GovtConfidence_{h} + \beta.Vote_{h} + \gamma.X_{h} + \epsilon_{h}$$

$$\tag{5}$$

where HouseSupport is a binary variable and will take the value one if the household received financial support from the government for house construction, otherwise zero; GovtConfidence, the key explanatory, is also a binary variable that takes value one if the household has confidence in the local self-governments, otherwise 0; *Vote*, a dummy variable taking value one if the household could cast vote in the recent national election without difficulty, and zero otherwise. The vector X refers to the set control variables in the regression.

The results reported in Table 2 are founded on the assumption that $\beta = 0$ and that the IV is strictly exogenous. Now, if the IV is not strictly exogenous, i.e., $\beta \neq 0$ but close to zero, the IV is plausibly exogenous. First, following Biswas and Das (2022), the upper bound of β is estimated. Then, by setting β from 0 to the upper bound, the lower and the upper bounds of α for the influence of confidence in local self-governments on availing government support for house construction is estimated. Results reported in Table 3 suggest that $\beta = 0.0679$, close to zero. Therefore, the estimated upper and bound values of the α would offer a conservative estimate for the true causal influence of confidence in local self-governments on availing government support for house construction.

 Table 3: Validity of the Instrument Variable

Government support for house construction	$\beta(UpperBound)$	$\alpha(LowerBound)$	$\alpha(UpperBound)$
GovtConfidence	0.0679	0.7746	-0.7374

Note: Notes: Using the IHDS - I dataset (2005), the regression reports the plausible causal impact of confidence in local self-government on availing government support for house construction. The regression is controlled for the village fixed effect and demographic variables discussed under the *Identification strategy*. Robust standard errors are given in parentheses.

5.3 Entropy balancing

Another potential concern could be whether the data used for empirical investigation is balanced over the key explanatory variable *GovtConfidence*. One may argue that rural households with confidence in local self-governments (treatment group) are considerably different from the rural households that lack confidence in local self-governments (control group). Entropy balancing, which makes the control group comparable with the treatment group, is followed to address this concern. Equation (1) is estimated once again on the re-balanced data. Results reported in Table 4 indicate that the statistically significant association of confidence in local self-governments with availing government support by the household for house construction is reasonably robust to any plausible dissimilarity of the control group from the treatment group.

-		• • •		
from the government for the construction of houses?				
	OLS	IV		
	(1)	(2)		
GovtConfidence	0.0210***	0.4757		
	(0.0038)	(0.1377)		
Demographic controls	Yes	Yes		
Village fixed effects	Yes	Yes		
First stage F-stat		32.81		
R^2	0.0271	0.0115		
Observations	25384	25264		

Table 4: Results of OLS and IV regression using entropy balanced data

Dependent variable: Did the household receive any support

Note: Using the IHDS – I dataset (2005), column I and column 2 suggest an OLS and IV regression, respectively, with balancing data. The estimated coefficient *GovtConfidence* indicates an association of confidence in local self-governments with availing government support for house construction. Results in both the columns are controlled for village fixed effect, household income, caste, and demographic variables as discussed under the *Identification Strategy*. Robust standard errors are given in parentheses. *** p < 0.01; ** p < 0.05; * p < 0.1

5.4 Heterogeneity of effects

As the Indira Awas Yajona was targeted for the poor rural households belonging to the socially disadvantaged group, to repose further confidence on our IV regression results, equation 1 is estimated on two groups – socially disadvantaged (i.e., Scheduled Caste, Scheduled Tribe and Other Backward Class) and upper caste. Results in Table 5 suggest that the coefficient of *GovtConfidence* is of positive sign and statistically significant for the socially disadvantaged group. However, the key explanatory variable is imprecisely estimated for the rural households belonging to the upper caste.

from the government for the construction of houses?				
	Socially disadvantaged	Upper caste		
	(1)	(2)		
GovtConfidence	0.5890***	0.1354		
	(0.1787)	(0.1875)		
Demographic controls	Yes	Yes		
Village fixed effects	Yes	Yes		
First stage F-stat	53.17	47.75		
R^2	0.0136	0.0113		
Observations	18505	6759		

Table 5: Heterogenous confidence in local self-governments based on social strata

Dependent variable: Did the household receive any support

Each column suggests a distinct instrumental variable (IV) regression using the IHDS – I dataset (2005). The estimated coefficient *GovtConfidence* suggests the association level of household confidence in local self-governments with availing government support for house construction. All regressions are controlled for village fixed effect; Control variables are as discussed under *Identification strategy*. Robust standard errors are given in parentheses. *** p < 0.01; ** p < 0.05; * p < 0.1

5.5 Concerns regarding nonlinearity

There might still be concerns about nonlinearity as the regressand in equation 1 is a binary variable. To address this concern, probit, a limited dependent model, is used to explore the likelihood of availing government support for house construction by the household with confidence in local self-governments. The results reported in Column 1 in Table 6 suggest that confidence in local self-governments boosts the likelihood of availing government support for house construction. Furthermore, the marginal effect, as reported in Column 2, indicates that households with confidence in local self-governments have a 37.45 per cent higher probability of availing government support for house construction than households that lack confidence in local self-governments. The result of the IV regression, as reported in column 6 in Table 2, offers a reasonably similar estimate. This might extend support to a conservative estimate of the causal effect of confidence in local self-governments on availing government support by the household for house construction.

Dependent variable: Did the household receive any support				
from the government for the construction of houses?				
	Coefficient Marginal effe			
	(1)	(2)		
GovtConfidence	0.1116***	0.3745***		
	(0.0269)	(0.1272)		
Demographic controls	Yes			
Village fixed effects	Yes			
Maximum likelihood \mathbb{R}^2	0.023			
Maximum likelihood R^2	0.032			
Akaike information criterion	0.716			
Bayesian information criterion	-238121.476			
Observations	25284			

Table 6: Results of the probit model of confidence in local self-governments on availinggovernment support for house construction

Column 1 suggests the coefficients of the probit model. Column 2 suggests the marginal effect after the probit model. The regressions are controlled for the village fixed effect and demographic variables discussed under the *Identification strategy*. Robust standard errors are given in parentheses. *** p < 0.01; ** p < 0.05; * p < 0.1

6 Conclusion

This paper explores whether confidence in local self-governments influences the availing of government support for house construction by rural households belonging to the socioeconomically oppressed section of society. Two complementary empirical techniques are adopted to overcome the potential challenge of endogeneity. First, the linear regressions are used with a comprehensive set of control variables. Region-specific heterogeneity is captured through village fixed effect. Although the outcome of the linear regression suggests that confidence in local self-governments is strongly associated with the availing of government support by the socioeconomically oppressed rural households for house construction, they are not necessarily true causal estimates due to potential endogeneity. Therefore, the instrumental variable approach is adopted to draw causal evidence (if any). This paper uses the exogenous variation in the instrumental variable, a dummy variable taking value one if the household could cast vote in the recent national election without difficulty and zero otherwise. *Instrumental relevance* was confirmed as the variable on availing government support for house construction has a statistically significant relationship with the instrumental variable. *Instrumental exogeneity* was conservatively established as the IV regression was fairly robust to several alternate specifications with potential confounders. Furthermore, as the IV also seemed to be plausibly exogenous, the results of the IV regression would offer a conservative causal effect of confidence in local-self-governments on availing government support by the socioeconomically oppressed rural households for house construction.

The result of this study has the following policy relevance: First, the conventional wisdom suggests that strengthening the supply-side infrastructure is critical for the successful implementation of rural development programs. However, this paper offers corroborative evidence that confidence in the local self-governments is crucial for availing government support to the socioeconomically oppressed rural households for house construction. That is, the lack of confidence of the targeted poor in the local political institutions will likely impact the successful implementation of the government-sponsored rural development programs. Second, policymakers need to adopt mechanisms to increase confidence in local self-governments. In other words, governments might need to identify the factors responsible for dampening rural households' confidence in local political institutions and initiate processes to remove those bottlenecks.

Although this paper offers first-ever empirical evidence of the relevance of confidence in local selfgovernments on availing government support by rural households for house construction, the study is limited to a rural housing program. In future, the scope of the study might be expanded to the employment guarantee programs and urban areas.

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