The Impact of Information on Preferences for Allocating Land in Nepal

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Fieldwork: Daayitwa

Location: Nepal

Sample: 672 household heads

Initiative(s): Governance Initiative (GI)

Target group: Rural population

Outcome of interest: Citizen satisfaction

Intervention type: Community participation Housing and neighborhoods

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Climate change, natural disasters, and urbanization are all forcing governments to reevaluate where people live. As a result, governments often have to consider how to distribute land to citizens fairly, which requires relying on different allocation methods—some more efficient than others—to prevent corruption and maintain community satisfaction. Researchers introduced a randomized information intervention to see if providing information on how different allocation methods work would shift the preferences of beneficiaries of a Nepalese land allocation program. On average, the information intervention did not change preferences for how land should be allocated, and about half of participants still preferred allocation methods that were less likely to match them with their desired plot of land.

Policy issue

Climate change, natural disasters, and urbanization are all forcing governments to reevaluate where people live. As a result, governments often have to consider how to distribute unoccupied land or subsidized housing to citizens fairly. In these types of allocation programs, impartial and transparent allocation methods are an important way of preventing corruption and maintaining community satisfaction. Governments commonly use simple allocation methods like uniform random lotteries (URL), or “pure lotteries”—where each potential beneficiary is equally likely to be allocated a given good— for these programs, but other allocation methods have the potential to more efficiently match goods with individuals’ preferences, while still remaining fair and transparent.

A particularly efficient allocation method is known as a random serial dictatorship (RSD), or a “choice-based lottery”. In this method, a first person is randomly chosen to select their preferred good from the entire range of goods to be distributed. After this person makes his or her selection, a second person is randomly chosen who can select their good from the remaining options, and so on until all options have been selected. Under the RSD method, individuals are more likely to receive an allocation they prefer than under a pure lottery, which is important if program success relies on people accepting their allocation. Despite

the potentially optimal nature of the choice-based lottery allocation method, beneficiaries often prefer pure lottery strategies, making these a more common policy solution. Could providing information on the benefits of the choice-based lottery increase support for using this mechanism in government allocation programs?

Context of the evaluation

In 2015, a series of earthquakes destroyed 800,000 homes and caused irreparable damage to 112 communities in rural Nepal. The geological risks in the damaged communities prompted Nepal's National Reconstruction Authority (NRA) to launch a village relocation program where households in impacted communities would be allocated land in safer areas. In general, the NRA asked households to relocate less than a mile from their current residence and nearly all households from the impacted communities were eligible for relocation.

Relocation officials wanted to ensure a fair and transparent allocation process for beneficiary households. The NRA partnered with the researchers to find out which land allocation strategy impacted communities preferred before they were resettled but after relocation sites were identified. Through community engagement teams, the research team informed households in four target villages of the potential land allocation methods and reported community-level preferences back to government officials for consideration.

The four surveyed villages tended to be mountainous, ethnically homogenous, and relied on agriculture for their economic livelihoods. The average household had a monthly income of NPR 14,300 (US$130) with 4.4 household members, meaning households were poorer and smaller than the national rural average. Households were also familiar with the planned relocation site as nearly all had visited it before.



Tanchok village, Nepal.

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Details of the intervention

While collecting data on community preferences for land allocation strategies for the NRA, researchers introduced a randomized information intervention to understand if providing more information on how different allocation strategies work would shift beneficiaries' preferences. Within the four villages, researchers interviewed 672 household heads and randomly selected half of them to participate in an informational presentation immediately before they answered questions about their land allocation preferences.

The participants receiving additional information reviewed a map of a relocation site that another village outside of the sample would be moving to. The map showed the unique plots available for households and was color coded to show that households chose some plots as their favorite more often than others (with every plot having at least a few families ranking it as their favorite). Researchers wanted to show that households within a village could have a range of preferences of where they would like to live in the new relocation community. Participants also learned about different land allocation methods by listening to a short narrative and participating in interactive demonstrations. Afterwards, participants reported which of the potential allocation strategies they preferred. They also completed a short quiz testing their understanding of the allocation strategies. In the comparison group, participants received the same information intervention but only after reporting their initially preferred allocation method.

Additionally, all participants in both groups answered questions about how closely they believed their personal preferences for relocation plots aligned with other households in their village before receiving any information. Participants on average believed their preferences were relatively different than those of other households.

To further evaluate individuals' allocation preferences, a sample of 576 household heads also participated in a lab-in-field experimental game, during which they selected an allocation method to distribute three randomly determined cash prizes among participants. Participants could only choose between a URL strategy or a strategy closely related to RSD, known as a random dictatorship lottery. The game was carried out either in an anonymous or non-anonymous setting to determine the effect of social pressure.

Results and policy lessons

On average, the information intervention did not change preferences for how land should be allocated, and about half of participants still preferred allocation methods that were less likely to match them with their desired plot of land. The lab-in-field game examined potential drivers of lottery allocation preferences, finding altruism and social pressure did not influence individual preferences, but changing prize incentives did.

Participants understood the different allocation methods but did not change their support for the choice-based lottery on average. After the information intervention, participants answered 83 percent of questions correctly during a comprehension quiz on the allocation strategies. However, participants were not more supportive of the RSD method after receiving the information intervention. Nearly half of participants preferred the pure lottery method, despite simulations based on respondents' specific stated land preferences indicating that the choice-based lottery was more likely to allocate participants their desired plot of land (17 percent chance under URL and 75 percent chance under RSD). Participants' comprehension of the possible allocation methods was not related to individual preferences and cannot explain the substantial support for the pure lottery method.

Support for the choice-based lottery varied by prior beliefs on how village and individual preferences aligned. Participants who believed their individual location preferences were unique compared to the rest of their community increased their support for the RSD

method by 12.3 percentage points (26 percent) relative to the comparison group. On the other hand, those who believed their preferences were very common reduced their support for the RSD method by 17 percentage points (26 percent). This suggests that preferences for lottery strategies may be influenced by how closely aligned an individual believes their preferences for the allocated goods are to the other potential beneficiaries.

Participants' preferences responded to changes in incentives, but not opportunities for altruism or social pressure. During the lab-in-field game, 56 percent of people preferred the pure lottery method while 44 percent preferred the random dictatorship method when they were expected to benefit equally from both. However, support for the random dictatorship method increased by 3 percentage points for each additional 100 NPR (about US$1) that participants were expected to win from selecting the method. Additionally, when participants had the opportunity to choose an allocation method that would maximize their personal prize winnings or maximize the total prize winnings across participants, 84 percent of individuals chose to maximize their own winnings. Further, stated preferences did not change based on whether the game was played in an anonymous setting or not. Together, these results suggest that neither altruism nor social pressure were important factors in shaping preferences for different allocation methods.

Overall, providing information on different allocation methods did not change people's preferences for how land was allocated on average, and many people still preferred the pure lottery method that was less likely to benefit them. However, individuals shifted their preferences in response to changing financial incentives in a lab-in-field game. Further research on the relationship between different preferences for both goods and allocation methods could improve community engagement and lead to more inclusive, informed, and effective policies.