

Nudging Inactive Landowners toward Participation in Conservation Easement

A Survey Experiment with Non-industrial Private Forest Owners in Japan

○Hinako Yano* · Yohei Mitani**

1. Introduction and Objectives

As the aging of the rural population intensifies, more and more forest land has been abandoned by inactive private landowners. It is crucial to facilitate such inactive landowners to participate in an easement program that helps conserve, restore, and enhance their forest land. This study uses a pre-registered RCT to investigate whether program information nudges increase landowners' willingness to participate in a forest conservation easement program in Kumakogen municipality in Japan. This municipality program was designed to enhance forest management, and enrolled landowners entrust their forest management to the municipality. In our RCT, the treated landowners received a simplified and personalized program information booklet. We expect that nudges help to approach inattentive, inactive landowners and encourage them to participate more in the program when compared with a conventional solicitation with a full information booklet.

The objectives of this paper are twofold. First, we investigate the determinants of landowner participation behavior in a forest conservation easement program. In addition to the site and owner characteristics, which are commonly included in most landowner behavior studies, we include a nudge treatment as one of the explanatory variables of willingness to participate in the program. Our findings offer significant implications for other rural regions facing aging populations and the necessity of improving private forestland management. Given that aging is a global phenomenon, this study serves as a pioneering exploration of the behaviors of elderly landowners.

Next, we investigate the impact of nudging elderly and inactive landowners on their willingness to participate in the easement program. While nudges have been widely tested in the context of agri-environmental program participation, there is no literature focused on inactive landowners, except for Weigel et al. (2021), who tested nudges on non-operating landowners in the United States in conservation program participation setting. In addition to inactiveness, our sample is characterized by aged landowners, which enables us to explore the potential of nudges on inactive landowners in an aging society. Specifically, we use a personalized and simplified booklet as nudges and investigate whether program information nudges increase landowners' willingness to participate in the program. Compared to conventional solicitation, we expect the nudges to help approach inattentive, inactive landowners and encourage them to participate in the program.

* Graduate School of Agriculture, Kyoto University,
〒606-8502 Kitashirakawa Oiwake-cho, Sakyo-ku, Kyoto
E-mail: yano.hinako.57m@st.kyoto-u.ac.jp

** Graduate School of Agriculture, Kyoto University

2. Methodology

We use an RCT that randomly assigned all eligible landowners to either a treated or control group. Randomization was done at the household level. The treated landowners received a simplified and personalized program information booklet, while the control landowners received a full information booklet. The solicitation package, distributed in mid-November 2023 to 6,588 landowners, asked landowners about their forest management plan and elicited their intention to participate in the program. Additionally, it gathered data on demographic characteristics of the landowners and their past, current, and future management practices.

3. Results

A final sample of 3,095 forest owners was obtained after excluding 37 blank responses, resulting in a response rate of 62.6% (3,095/4,943). Among the respondents, 72.4% are 65 years or older, and 63.8% reported that they had not managed their forests at all in the past 10 years, providing descriptive evidence of aging owners and inactive forest management. Overall, 35.9% of respondents are willing to participate in the program. Consistent with previous studies (Mitani and Shimada, 2021), the results indicate that absentee and inactive forest landowners are more likely to be willing to enroll in the program. In addition, bequest intention and experience in outsourcing forest management are positively associated with willingness to participate. In contrast, landowners who wish to continue to outsource to their current contractor are less likely to be willing to participate in the municipality's program. Regarding the site and resource characteristics, larger forest size, higher average volume per area, and a lower ratio of productive tree species are positively associated with their willingness.

The results indicate that the difference in participation between the treatment group (36.1%) and the control group (35.6%) is not statistically significant ($p=0.78$). Furthermore, we conducted subgroup analyses for each of the following factors: residential status, forest size status, and landowner age, revealing that in any subgroup, the nudges do not significantly affect the willingness to participate at the 5% significance level.

4. Conclusion

This study is motivated by the need for improved management of forests owned by aging and inactive landowners. The results highlight the potential of an easement program to undertake the forests of inactive landowners and serve as a viable option for forest management for those considering bequest. Overall, the nudges have no effect on program participation, even at the subgroup level. Nonetheless, this study contributes valuable evidence on the impact of nudges on elderly and inactive private landowners from a large-scale RCT.

References

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