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What do smallholders value in a reforestation project? evidence from a choice experiment in Madagascar

NICOLAS KLAS, TOBIAS HELLMUNDT, KRISZTINA KIS-KATOS, ZANETA KUBIK

University of Göttingen, Department of Economics, Germany

Abstract

Effective development projects depend on community engagement and local ownership, yet smallholder-focused initiatives have repeatedly delivered mixed results. A key open question remains how to design programmes that better align with local needs. Our study addresses this gap by eliciting smallholder preferences over reforestation programme design in northern Madagascar, with particular attention to how past participation determines demand for future interventions.

We conduct a discrete choice experiment (DCE) with over 2,700 respondents across three regions, spanning both participants and non-participants in an earlier reforestation programme. Respondents chose among hypothetical project designs varying along four attributes: cash payment levels, payment structure (individual versus group), tree species (native versus exotic), and land certification support. Comparing preferences across the two groups allows us to identify experiential learning effects among past participants and test for social-learning spillovers to their neighbours.

Our findings reveal that cash payments, while valued, are not the primary driver of programme demand. Instead, secure land tenure emerges as the dominant preference: beneficiaries value comprehensive certification support—including follow-up with local authorities—almost as highly as the maximum cash payment of 100,000 Ariary over 2.5 years. This preference is sharpest among households in areas where the prior programme failed to deliver promised land certificates, and is concentrated among respondents who perceive corruption or land grabbing as prevalent. Past programme exposure thus generates experiential learning that intensifies demand for institutional support precisely where local governance is weakest—a dynamic not observed among non-participants. Preferences over payment mechanisms and tree species exhibit meaningful heterogeneity, with intra-group trust attenuating, rather than reversing, the general dispreference for group payments and a substantial share of respondents favouring native trees, contrary to prior evidence from Madagascar.

These results offer practical guidance for designing more effective and scalable smallholder reforestation programs, while contributing to a growing literature using DCEs as tools for evidence-based development project design.

Keywords: Choice experiment, community-based projects, land tenure security, reforestation