Local Institutions and Better Forests: Empirical Evidence from Community Level Data

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Abstract

Common-pool resources (CPRs) constitute important sources of livelihoods to millions of people around the world. Though renewable in the sense that they can be replenished through natural/biological means, these resources are depleted if use exceeds the maximum sustainable yield over extended period of time. Moreover, these resources are under severe pressure for various reasons including sheer lack of adequate human cooperation. On the other hand, common pools are resources suited for joint-use arrangements, that is, for common-property regime. The fact that these resources are shared between generations and their life span exceeds the membership span of the current (joint) users makes the efficient use of these resources an interesting subject of inquiry. The aim of this research is, therefore, to empirically analyze the role of biophysical (resource) attributes, attributes of community (users), and institutions as they determine forest conditions (better forest outcome). Key research questions include: why is it that some local CPRs are successful (sustainable and durable) while others fail? That is, what factors determine better forest outcome? How do biophysical (resource) attributes, attributes of community (users), and institutions matter? We abstract from economic theory of common-property resources (Gordon, 1954; Ostrom 1990; North, 1990; Williamson, 1986) as our theoretical framework. Specifically, we draw on Elinor Ostrom's recent contributions to common-property theory (Ostrom 2005, 2009, 2010) as our conceptual framework. We use a dataset of 110 community forests in Ethiopia collected during 2012. The dataset covers four major regions of Ethiopia: Oromiya, SNNP, Amhara and Tigrai. Four indicators of outcome (forest quality) are considered as

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dependent variables in our analysis. That is, (i) user group's ranking of subsistence value of forest; (ii) forester's ranking of subsistence value of forest; (iii) user group's ranking of commercial value of forest; and, (iv) forester's ranking commercial value of forest. Because the dependent variable(s) in question assume ordinal values, we employ ordered logit model for the empirical analysis. Preliminary findings suggest that access to infrastructure specifically distance to main road and distance to nearest market; biophysical (resource) attributes including forest size, slope and agro-ecology; community attributes including number of beneficiary households, forest dependency and number of years since establishment; institutions (or institutional factors) as existence of rules regarding forest access and the extent to which penalties are complied with; as well as regional factors are important determinants of success (better outcome) in forest commons.

JEL classification: Q23

Keywords: local CPR institutions; forest commons; better forest outcome; ordered logit model.