

## **Property Rights and Household Time Allocation in Urban Squatter Communities: Evidence from Peru**

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### **Abstract**

In recent years, a handful of policy initiatives have arisen to address tenure insecurity of untitled households by promoting formal property institutions in urban slums of developing countries.<sup>1</sup> While cost-benefit analyses generally suggest that governments are more efficient suppliers of property rights, these claims tend to ignore the cost of informal tenure arrangements, including the time allocated to informal property protection at both the household and the community level. In particular, a number of authors such as Carter et al. (1994, 1996) and Galal and Razzaz (2001) have noted that informal institutions often arise to compensate for the absence of formal property protection. In such settings, one of the principal gains of strengthening property institutions is to shift the burden of land protection and enforcement away from individual households and informal neighborhood groups to the state.

This paper assesses the time cost of informal tenure arrangements in urban squatter communities by exploring the relationship between exogenous acquisition of a land title and household time allocation across public and private activities inside and outside the home. I use data from a dramatic nation-wide titling program in Peru in which 1.2 million property titles were distributed to urban squatters on public land, the largest urban property rights reform that has occurred in the developing world. This paper brings together new data on leisure activities and participation in neighborhood organizations among households in the program target population with previous findings on household labor supply from Field (2002). With both pieces of evidence, I examine whether improvements in tenure security that result from giving property titles to urban squatters are associated with an increase in the amount of time allocated to labor and private leisure activities outside the home, a reduction in the level of land-related neighborhood governance and an increase in the role of formal law enforcement at the neighborhood level.

My empirical strategy takes advantage of the Peruvian titling program as a natural experiment by making use of staggered regional program timing as a source of exogeneity in obtaining a property title. A general difficulty in studying the influence of property titles and a weakness inherent in the past literature are the endogeneity concerns that arise in comparing titled and untitled households. In particular, the tenure status of a given household is generally a

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<sup>1</sup> For an overview, see "Land, Security, Property Rights and the Urban Poor: Twenty Five Years of World Bank Experience." World Bank Briefing Note 8. 2001.

function of the household demand for legal protection, which is likely to be related to factors affecting household and community time allocation choices. The Peruvian reform, in which all households were “assigned” property titles irrespective of household demand for formalization, helps isolate the causal effect of property titling on household behavior by allowing me to compare households in early program neighborhoods to households in late program neighborhoods, all of which lie within the set of eventual program participants. Because it is impossible to completely rule out potential endogeneity of program timing, the second technique of my identification strategy is to make use of a comparison group of households in early and late neighborhoods that already possessed a property title before the program. In this manner I estimate the program effect in a difference in difference framework, in which the difference in the behavior of program beneficiaries and non-beneficiaries in early program areas is compared to the difference in late program areas.

My results indicate that land titling is indeed associated with substantial changes in household and community time use patterns suggestive of a shift in the burden of land protection from individual households and community groups to the state. First, urban land titling is associated with a greater number of both labor and leisure hours spent outside the home: newly titled households work an average of 17% more hours than do squatter households awaiting a title and are also 38% more likely to participate in organized activities outside the home. Secondly, although household members in titled communities spend a greater number of total leisure hours in activities outside the home, they are significantly less likely to participate in neighborhood groups responsible for public goods provision, including property allocation and protection. Meanwhile, the number of households that have used the formal judicial system is significantly higher in titled communities. All of these results suggest that households in titled communities indeed devote fewer human resources to informal property protection, both at the individual household and community level.

## References

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