Heterogeneous motivations of households in coca growing regions: The case of an indigenous community in Peru.

Author: Jaqueline Garcia – Yi and Ulrike Grote
Leibniz University of Hannover, Germany

Coca (Erythroxylum coca) is a native bush from the Amazon rainforest in South America. The leaves of this bush have been used traditionally for thousands of years in Peru and Bolivia, especially by indigenous populations. Traditional uses include chewing coca leaves as a stimulant to overcome fatigue, hunger and thirst; drinking coca tea to combat altitude sickness; and coca leaf offerings during religious ceremonies. Moreover, indigenous people exchange coca leaves socially to show affection and respect. Coca is, therefore, a social cohesion facilitator and an important part of indigenous Andean cultural heritage.

On the other hand, since the 1970's, coca has increasingly been grown in South America as raw material for cocaine extraction. Cocaine is an addictive natural alkaloid, produced mainly in the leaves of the coca bush. The possession and distribution of cocaine is illegal in most countries. Of the total extension of land being cultivated by this crop worldwide, Colombia’s coca production areas represent 43%, Peru’s 38%, and Bolivia’s 19%. Growing coca to supply narcotrafficking businesses is a profitable activity, and has shown a steady increase during recent years in Peru. If this trend continues, Peru could soon overtake Colombia as the world’s largest coca producer, a status that the country has not occupied since the mid-1990’s.

Coca cultivation is not common to all farmers living in coca growing regions of Peru. Some farmers decide to grow coca, while others do not, although all farmers seem to face the same economic and social incentives. The specific reasons for this divergence are still not clearly identified. Due to the absence of household-level data, there is a lack of research on individual farmers’ motivations. Most of the research efforts to date have used aggregated data and focused on the causes of coca cultivation at macro (community, regional or
national) level. It is expected that a greater understanding of the specific functions that coca plays at the individual level would assist in designing more effective anti-drug policies. Therefore, the main question of this research is: facing the same socio and economic incentives, why do some farmers decide to cultivate coca and others do not?

To answer this question, a household-level questionnaire was designed and conducted with 508 farmers in an indigenous community located in Alto Tambopata valley, a mountainous rainforest region in the Peruvian Amazon located on the border with Bolivia. This region has shown an increase in coca cultivation significantly above the national average during the last years. The data collected was analyzed under homogenous and heterogeneous assumptions. The methods used in this research consist of Cragg models, including standard and latent class specifications.

The results suggest heterogeneity among farmers' motivations for cultivating coca. It seems that one group of farmers cultivate coca mainly for traditional purposes (35% of the coca growers), while the other cultivate coca mostly for commercial considerations (65% of the coca growers). For the traditional growers group, smaller total agricultural plot areas, less availability of family labor, lower perceived quality of land, steeper slopes, and greater distance to roads statistically significantly increase the number of coca bushes.

On the contrary, for commercially motivated coca growers, larger total agricultural plot areas, better soil quality and lower distance to the road were all associated with an increase in the number of coca bushes. Thus, for the traditional group, coca growing seems to be a part of a poverty reduction strategy related to the productive use of marginal areas, while the commercial group seems to follow a deliberate allocation of better lands to the commercial production of coca.

The results also suggest that pride in being a coffee grower and participation in organic coffee certification have an overall statistically significant negative effect on the number of coca bushes.

On the contrary, other common components of anti-drug development policies, such as education and road constructions, unexpectedly have a significant and positive influence on the number of coca bushes. These latter results could be of temporal nature, given that road access seems to reduce transaction costs first for commercial coca farmers and then for the other farmers, and education enhances the quality of life of all farmers.

Jaqueline Garcia-Yi is a Peruvian economist. She completed her doctoral studies and currently works as Postdoctoral Research Associate at Leibniz University of Hannover in Germany.

Ulrike Grote is a professor and Director of the Institute of Environmental Economics and World Trade at Leibniz University of Hannover in Germany.

As a LACEEP grant holder, the project was supervised by Dr. Fredrik Carlson, University of Gothenburg in Sweden.

For further information and other LACEEP funded projects, please access: http://www.laceep.org

This work was carried out with the aid of a grant from the Latin American and Caribbean Environmental Economist Program (LACEEP)

Support was also provided by BMZ (the Federal Ministry for Economic Cooperation and Development, Germany) through the DAAD (German Academic Exchange Service).