

## **Poverty, Language, and Participation in Non-Farm Labor Markets in Rural Paraguay**

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### **Abstract:**

Paraguay is a society comprised of two vastly different populations. One population is urban, Spanish-speaking or bilingual, has benefited from public education and is employed in the formal sector. The other population is rural, speaks Guaraní, has little or no formal schooling, is self-employed or works at home, and is poor. Multiple obstacles inhibit rural residents from accessing social services and from improving their economic status.

In 2003, 51% of rural Paraguayans were living in poverty, and 31% in state of indigence. Although there has been a growing Latin American literature on the importance of off-farm employment opportunities in relieving rural poverty, in Paraguay rural development policies have generally concentrated on supporting agriculture. Research in other countries of Latin-America points out that the rural non-farm income represents a high and growing share the total income of rural households. In Latin-America rural non-farm employment is above 20%, in all countries and accounts for more than 40% of rural income. The literature also notes a close association between rural off-farm economic activity and poverty reduction (Lanjouw and Lanjouw 2001, Ellis 1998). Nonetheless, there has been relatively little analytical work on the joint determinants of off-farm activity and poverty reduction. This paper examines the factors influencing participation in non-farm employment and income among rural individuals in Paraguay.

A two stage econometric approach is used to analyze participation in the non-farm labor market and non-farm earnings. The first stage analyses whether non-farm labor participation is related to human capital attributes and other characteristics of the individual and of the household. The second stage model examines attributes influencing the income level. The empirical results suggest that female heads of households are more likely to participate in non-farm employment. Belonging to a large household positively affects the probability of being employed in a non-farm sector, and has a positive and significant effect on the level of non-farm income. Education, measured by years of schooling, is positive and statistically significant both for the probability of access to rural non-farm employment and for level of income. An additional year of schooling increases non-farm income by 6%. The fact that rural non-farm employment constitutes a labor alternative for the younger residents, is shown by the negative signs of the coefficients of the age variable. Speaking only Guaraní reduces the probability of being employed in the non-farm sector, as well as reducing the income received in non-farm activities by 31%. Ownership of assets and access to electrical energy service, are not significant in the non-farm income equation, but are statistically significant in the probability of non-farm employment. As expected, the ownership of land and the ownership of machinery appears to

induce the property owners to concentrate their activities on the farm sector rather than in non-farm labor market. Access to electricity increases the probability of non-farm labor participation.