

Analysis of Food Security in Guatemala

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Introduction

The first of the Millennium Development Goals 2015 was to eradicate extreme poverty and hunger in the world. However, this goal has not been fulfilled in several countries including Guatemala. For example, according to the World Food Programme, the chronic undernutrition rate for children under 5 in this country is 49.8 percent, the highest in the region and the fourth highest in the world⁽³⁾.

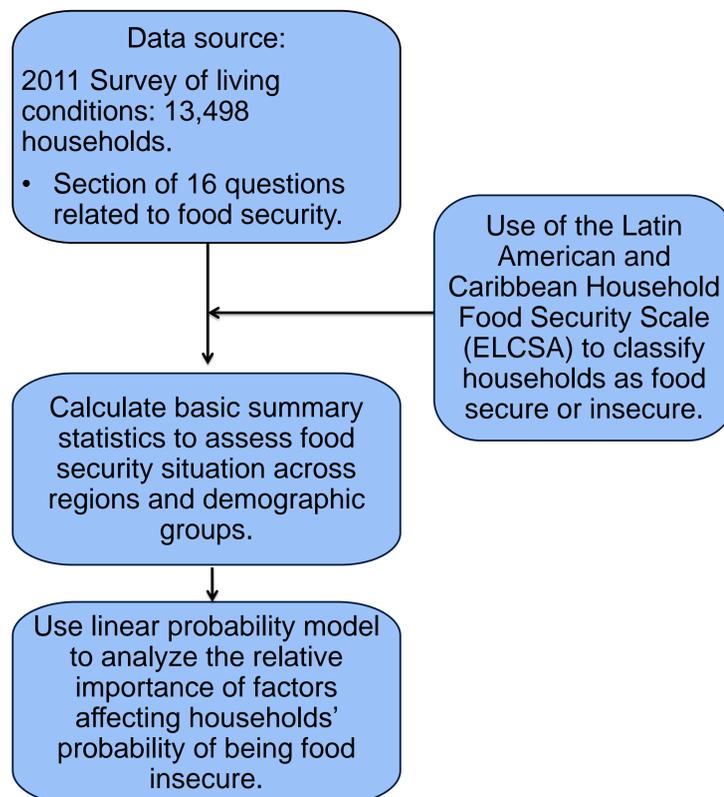
Food security was defined by the World Food Summit (1996) as “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”⁽⁷⁾. Thus, the concept of food (in)security is closely related with nutrition and hunger problems.

Few previous studies have analyzed the situation of food security in Guatemala. Moreover, most of these studies were only descriptive, were conducted several years ago, or focused on a specific region in the country^(2,4,5,6).

Objective

The objective of this study was to assess the situation of food security in Guatemala using data from the 2011 Survey of Living Conditions (ENCONVI). In contrast to previous research efforts, this study analyzes the situation of food security in Guatemala using the latest nationwide survey of living conditions. In addition, we analyze the relative importance of factors affecting the probability of being food insecure.

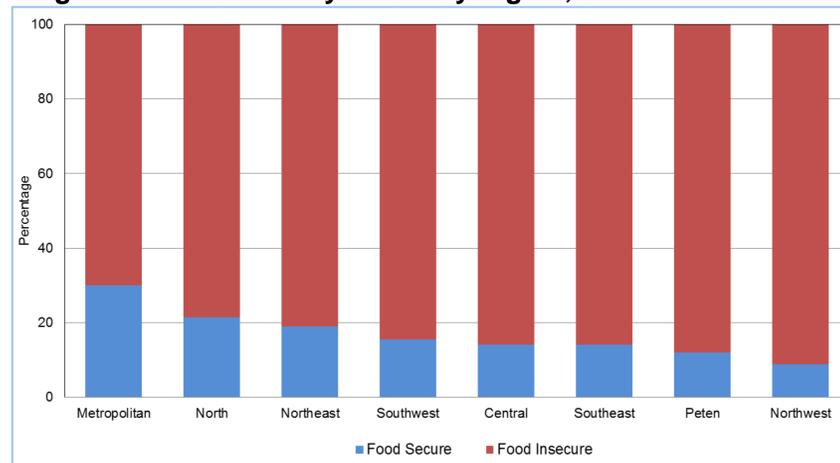
Methodology



Results & Discussion

The summary statistics show that more than 70% of the population in Guatemala is food insecure. Moreover, there is some regional variation in the incidence of food insecurity in the country (Figure 1).

Figure 1: Food security status by region, 2011



Source: Melgar, H., & Samayoa, L. (2011).

Parameter estimates in the Linear probability (LP) model measure the effect of the variables on a household's probability of being food insecure (Table 1). For example, each additional family increase the a household's probability of been food insecure by about 2%.

Table 1: Linear probability model results (n=13,498 households)

Variable	Parameter Estimates	Robust Standard Errors
Intercept	0.744 ***	0.016
North Region (Yes=1; No=0)	-0.068 ***	0.017
Northeast Region (Yes=1; No=0)	0.024 *	0.014
Southeast Region (Yes=1; No=0)	0.055 ***	0.015
Central Region (Yes=1; No=0)	0.073 ***	0.014
Southwest Region (Yes=1; No=0)	0.017	0.013
Northwest Region (Yes=1; No=0)	0.052 ***	0.017
Petén Region (Yes=1; No=0)	0.056 ***	0.021
Female household head (Yes=1; No=0)	0.015 *	0.008
Indigenous ethnic group of head (Yes=1; No=0)	0.043 ***	0.008
Rural location (Yes=1; No=0)	0.040 ***	0.008
Date of interview (July-August) (Yes=1; No=0)	0.044 ***	0.012
Interaction between rural location and date of interview	-0.027 *	0.016
Presence of children (Yes=1; No=0)	0.088 ***	0.009
Primary & Middle education (Yes=1; No=0)	-0.047 ***	0.007
University education (Yes=1; No=0)	-0.227 ***	0.019
Number of members in household	0.013 ***	0.002
Total expenditure per year (thousands of quetzales)	-0.002 ***	0.000

*, **, ***, denote statistical significance at the 0.1, 0.05 and 0.01 level, respectively

The LP model also identified education and ethnicity of the household head, location of the household, ethnicity and presence of children as the most important demographic factors associated with food insecurity.

Conclusions

Food insecurity is a very important problem in Guatemala affecting almost 3 out of 4 households in the country. In some regions, almost 9 out of 10 households are food insecure.

Some of the same factors associated with poverty such as low levels of education and location of the household are also important determinants of food insecurity.

Recommendations

Results of this study can be used to better target policies and programs aimed to reduce food insecurity in the country.

In the long run, policies designed to reduce poverty including education and family planning will also help to alleviate the problem of food security.

More research is needed to evaluate the effectiveness of current food security policies in the country. More research is also needed to compare the analysis of food security using different indicators.

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Acknowledgments

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