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Case Study

Hunger in Madagascar: A Case Study

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Abstract

This paper is a continuation of a larger study which assesses hunger in African countries. The purpose of these papers in this is to look at the scope of hunger in countries and then to identify the factors that predict hunger in each individual country. This is the 5th paper in the series and is concerned with hunger in Madagascar, one of Africa's and the world's hungriest countries. The paper is important for several reasons. One is the fact that it, like all the country level papers, is based on a national probability sample, something the literature stresses is lacking and needed to improve hunger research. A second is that all the papers in the series, including this one, found that the literature's suggestion that gender and the rural-urban dimension are significant predictors of hunger. These studies have provided a consistent list of significant hunger predictors. Employment in the country's agricultural sector, wealth as measured by asset ownership, education and age were consistent significant predictors, .The surprising findings were related to respondent perception of the role of government in addressing hunger, questions like the way the government was handling whether people had enough to eat or addressing the living standards of the poor. The major policy implication of this and earlier papers is that governments need to reach out to citizens, presenting them with their food related plans and assuring them that the government is doing everything within its power to address hunger in their countries.

Keywords

hunger, Madagascar, hunger predictors, respondent perceptions of government actions, national probability sample

1. Introduction

This paper is a continuation of a larger project where the purpose is to demonstrate that existing survey research provides a means to assess the scope of hunger in African countries. Because this study reports on a project that generated national probability samples and utilizes a self-report

measure to assess hunger, the results may be seen to reflect a country's total hunger level. That is because persons found in each country's sample might have been respondents that could have been enumerated in formal hunger statistics as well as unreported persons that reflect what is known as hidden hunger.

2. Hunger

Among the various meanings of hunger, one refers to the want or scarcity of food in a country, and it is in that sense that this note addresses hunger. There are formal measures which include those who demonstrate clear cut hunger. In the latest UN Food and Agriculture Organization Report (2019), the estimate was that 925 million people were hungry worldwide, and that 239 million people in sub-Saharan Africa were hungry or undernourished. This made Africa the continent with the second largest number of hungry people, following Asia and the Pacific with 578 million. Due to the difference in population sizes, Sub-Saharan Africa had the largest proportion of hungry-undernourished people, estimated at 30 percent of the population compared to 16 percent in Asia and the Pacific. What is known as hidden hunger is a major issue and there are an estimated two billion persons that are affected by a chronic deficiency of essential vitamins and minerals. Among this population the signs of malnutrition and hunger are less visible, but it has negative and long-term consequences for long-term health, productivity and cognitive development (Muthayya et al., 2013).

2.1 Hunger in Sub-Saharan Africa

As Clover (2004) has suggested, while the right to food is one of the most consistently acclaimed assertions in international human rights law, yet no other human right has been so frequently and spectacularly violated. Her discussion of food insecurity in Sub-Saharan Africa leads to the conclusion that hunger is a multi-faceted issue in Africa, and that just growing more food will not eradicate the problem. Agriculture is important and Clover points out that Africa has gone from being a key agricultural commodity exporter into being a net importer; the African continent now receives the most food aid. Perhaps the most important point Clover made was to suggest hunger will not be eradicated by just throwing money at the problem.

2.2 Hunger in Madagascar

Madagascar is one of the poorest and hungriest countries on the Planet. The World Food Program (2015) noted that 92 percent of the population lives on less than two US dollars per day, and Concern World Wide (2019) listed Madagascar as one of four countries that suffer from a level of hunger that is alarming; The country was ranked 114 out of 117 countries in terms of the degree of hunger in the country. Climate change is also a major focus of the literature devoted to hunger in Madagascar, especially as it affects small holder farmers (Harvey et al., 2014). Small farmers in Madagascar are portrayed as particularly vulnerable to extreme weather events, particularly cyclones, which cause significant crop loses.

2.3 Measuring Hunger

As Godecke et al. (2018) have indicated, measuring hunger remains problematic. This does not mean that hunger has been ignored. For example, there has been an effort in the research community to develop hidden hunger measures, indices and maps. These indices and mapping efforts have been productive and are useful here because they highlight the role of several important factors that are addressed in this paper. One of these is fact that African farmers may be hungrier than the rest of the population, and that gender may also be a significant factor, with women hungrier than men.

Both Godecke et al. and Muthayya et al. point to the lack of national probability samples as the primary hunger research roadblock in Africa. This study does use a national probability sample, with the objective being to identify policy related factors that possibly help alleviate hunger problems at the country level, Madagascar in this instance.

3. Data

The study's data source is the Afrobarometer Project, Round 6. The project started 1999 with 12 countries in Round 1 and by 2016 when the 6th Round survey was completed in there were 36 countries included in the survey. The surveys utilize a standardized questionnaire, with new items added to the next administration of the instrument. Sampling sized are either 1,200 or 2,400 depending on the country's population.

The procedures used in all the Afrobarometer surveys are explained in in Bratton, Mattes and Gymah-Boadi (2005).

3.1 Measures

The study's questionnaire included what is called The Lived Poverty Index used in the Afrobarometer studies which was adopted from Mattes (2003). One of the five questions in the Index askes "over the past year, how often, if ever, have you or anyone in your family gone without enough food to eat". Fixed responses to this question were: never, just once or twice, several times, many times, always. These responses were coded as follows: Never = 1, just once or twice = 2 and many times and always = 3. These categories provide the basis for the ordered logistical analysis presented in the Results section.

The study's independent variables were basic socio-demographic variables included in the questionnaire and the significant factors that predicted hunger in the earlier papers. Each of these paper looked at hunger and the factors that predicted it at the country level. These countries were Burundi (Fry, 2017), Benin (Fry, 2018a), Zambia (Fry, 2018b) and Madagascar (Fry, 2020).

4. Results

This study's sole analytic procedure was to conduct an ordered logistical regression analysis and the results of that procedure appear in Table 1.

Table 1. The Results of Madagascar's Ordered Logistical Analysis

Variable	Coefficient	Standard	Z	P
Education	-.38	.07	-5.33	.000
Ag worker	.81	.18	4.56	.000
Total assets	-.28	.07	-3.83	.000
Enough to eat	-.55	.18	-3.14	.000
Age	.28	.09	3.16	.000
Extra funding prior	.44	.16	2.86	.000
Living stands-poor	-.43	.19	2.30	.000
Job status	-1.09	-1.94	1.78	.08
Urban-rural	.25	.14	-1.77	.08
Gender	.08	.14	-.59	.55
Occupation	.04	.05	.67	.50
Reduce gap-poor	-07	.22	-.33	.74
Number of observations				1,129
Chi square				215.15
Probability				.000
Pseudo R2				.09

Table 1 shows that nine independent variables reached statistical significance in Madagascar's ordered logical regression analysis. This was to be expected in that most of the independent variables in the regression equation had been found to be significant predictors of hunger in the previous studies. Again, gender and the urban rural dimension were found not to be significant predictors. The ordered logical regression produced a pseudo R square of 09.

5. Discussion

As mentioned above, what is unusual about this Afrobarometer file is that it contains respondent surveys from some of the World's and Africa's hungriest countries, Madagascar is one of those nations, and the fifth country to be included in this series of papers; the others were Burundi, Benin, Tanzania, and Senegal. Perhaps what is most important about these earlier papers is that the two major factors identified in the literature as hunger predictors were not significant predictors in any of these countries, namely gender and the rural-urban dimension. A consistent set of predictive factors did emerge from this study. As expected, factors like poverty and employment in the agricultural sector were found to be consistent predictors of hunger, but the most striking findings were respondent's perception of the government's handling of food related problems, like assuring people have enough to eat, The major implication of this and earlier papers is that governments need to reach out to citizens, presenting their

food related plans and assuring them that the government is doing everything within its power to address hunger in their countries.

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