

# Mapping the Impact of Cash Transfers on Food Insecurity in Brazil (2004-2009)

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## Researcher Bio

Russell Bither-Terry is a Ph.D. candidate in Political Science at UNC Chapel Hill. His dissertation is on the politics of anti-hunger policy in Brazil, focusing on the *Fome Zero* (Zero Hunger) initiative under President Lula (2003-2010). He spent the 2010-2011 academic year in Brasília conducting interviews (with a brief trip to Piauí to visit one of the pilot municipalities for *Fome Zero*). He grew up in Alaska, California and Montana and received his B.A. from Willamette University in Salem, Oregon in 2002. His hobbies include guitar, songwriting, cooking and yoga. He welcomes your comments (rbt@email.unc.edu).

## Introduction

### Abstract

In 2003 Brazil declared a nationwide effort to eradicate hunger. The conditional cash transfer *Bolsa Família* (Family Allowance) is one key anti-hunger policy. I show that the expansion of *Bolsa Família* coverage partially corresponds to the reduction in food insecurity between 2004 and 2009.

### The Vision: Three Meals a Day

"If at the end of my term every Brazilian person has three meals per day, I will have fulfilled my life's mission..."

--President Lula (2003-2010)



	2004	2009	Change
<b>Food Secure</b>	65%	69.8%	+4.8
<b>Light Insecurity</b>	18%	18.7%	+0.7
<b>Moderate Insecurity</b>	9.9%	6.5%	-3.4
<b>Severe Insecurity</b>	7%	5%	-2.0

### Hunger in Decline

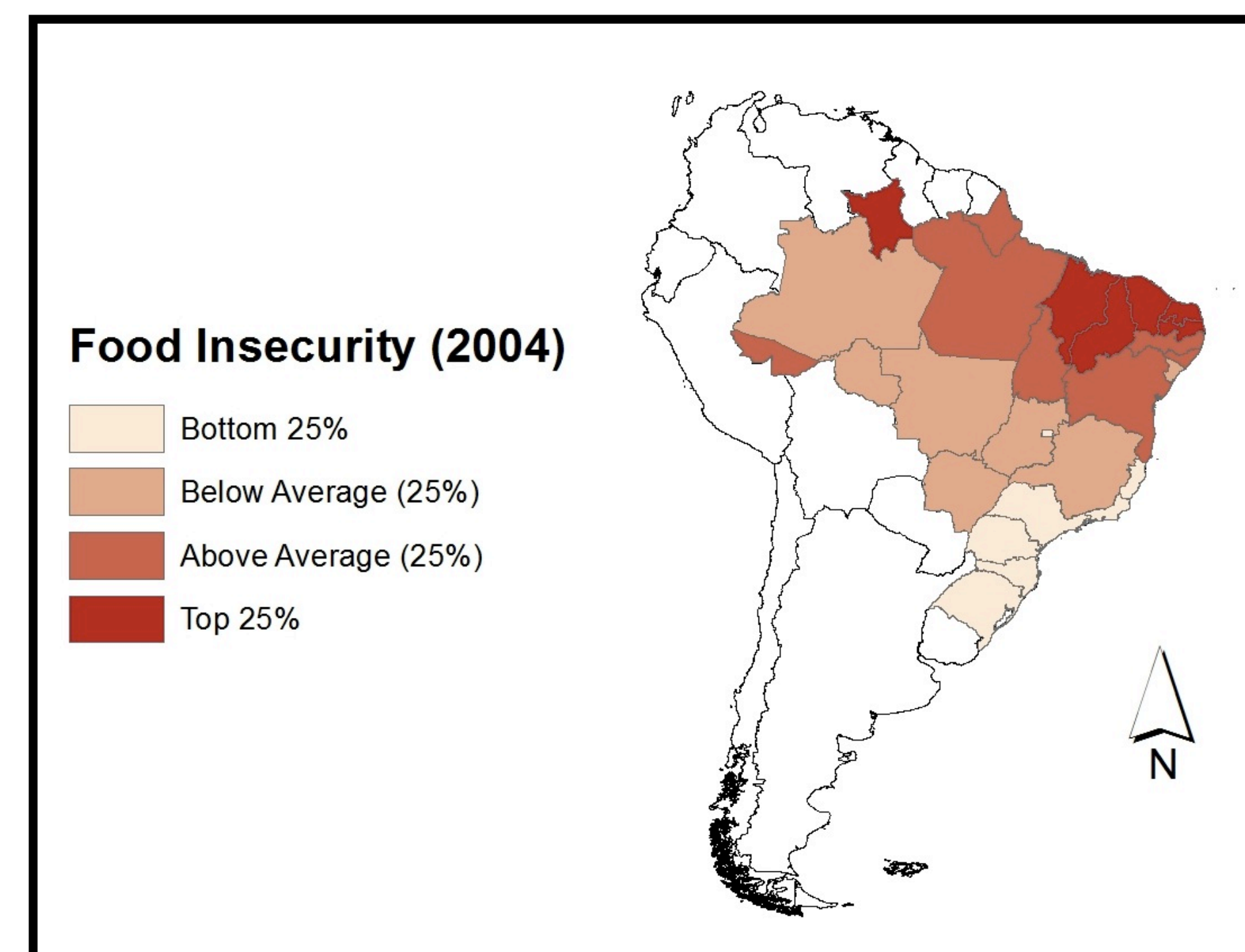
The table above shows the change in food insecurity over a five year period. The data comes from the National Household Sample Survey (PNAD), which asked people if they had decreased the quantity or quality of food eaten due to lack of money [1].

This reduction in food insecurity amounts to about one percent per year. How did Brazil accomplish this? One popular explanation is a conditional cash transfer program called *Bolsa Família* (Family Allowance)

### **Bolsa Família**

- Targeted at the poorest (under about US\$ 2.70/day per capita)
- Paid directly to head of household.
- School attendance mandatory.
- Preventative health programs mandatory.
- Covers over 20% of all Brazilians.
- Largest conditional cash transfer program in the world.

## Mapping Hunger



### "The Geography of Hunger"

In his classic work [2], Brazilian physician, scholar and activist Josué de Castro explores hunger's regional variation. Hunger has long been a much greater problem in the North and Northeast regions due to greater poverty and vulnerability to droughts. The map above confirms this pattern more recently. Thus, any effective anti-hunger policy needed to effectively target these regions.

### 3084 Calories

Brazil's daily per capita food production in 2004 [3].

## Theory & Hypothesis

### Theory

Sen [4] argues that hunger is best understood as a problem of "entitlement failure." Every society has rules about ownership and exchange governing who is entitled to what (this use of "entitlement" is distinct from the common use to mean "government welfare programs," which are but one source of entitlement in Sen's framework). Hunger results when these rules leave an individual unable to exchange what she has for the food she needs. Hunger is not simply the result of insufficient aggregate food production, though production levels are one important factor.

### Hypothesis

Since Brazil's food production is more than sufficient to meet everyone's needs, a program to transfer money to the poorest should improve their ability to buy food. Thus, the expansion of *Bolsa Família's* coverage should correspond to the reduction of food insecurity.

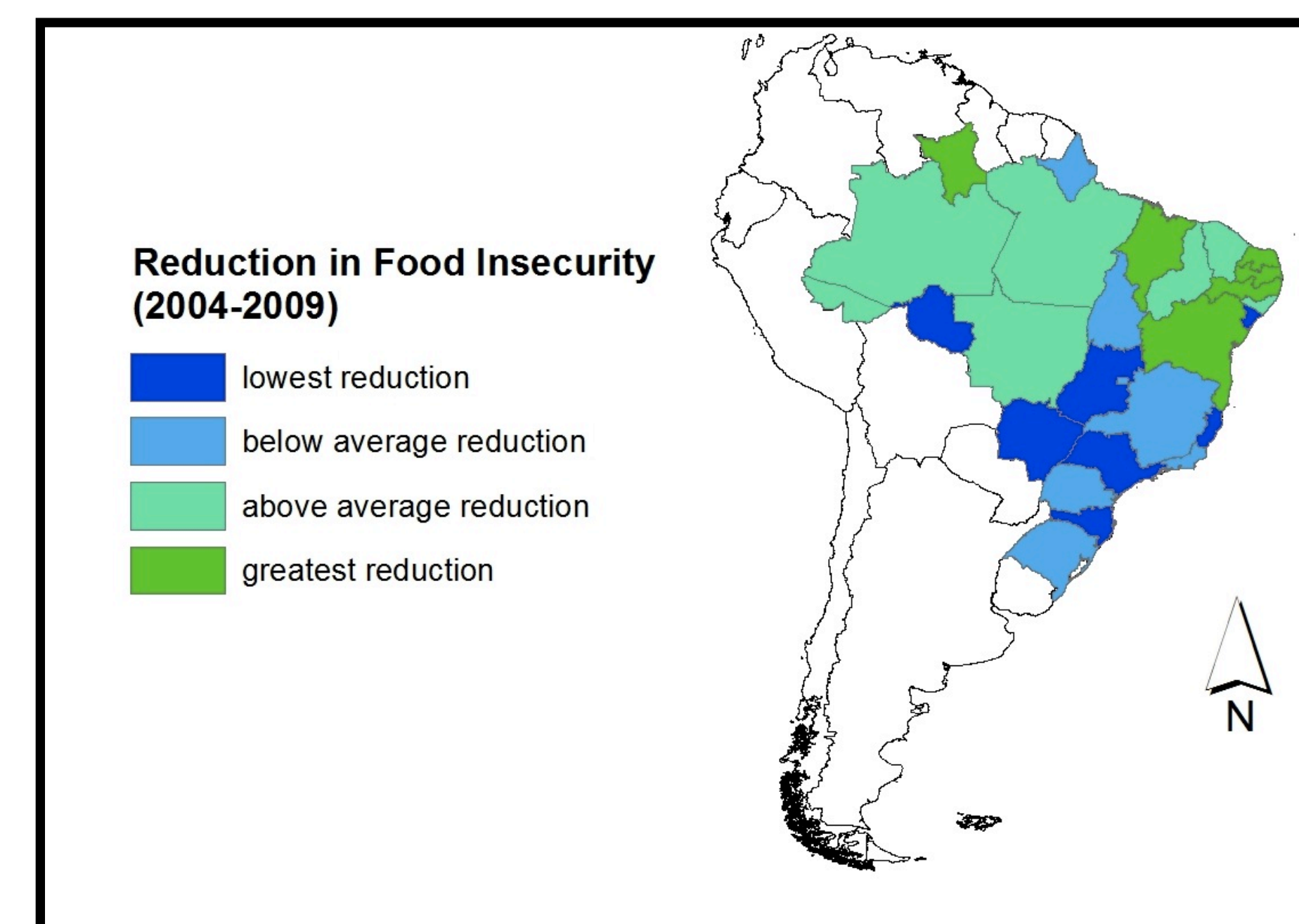
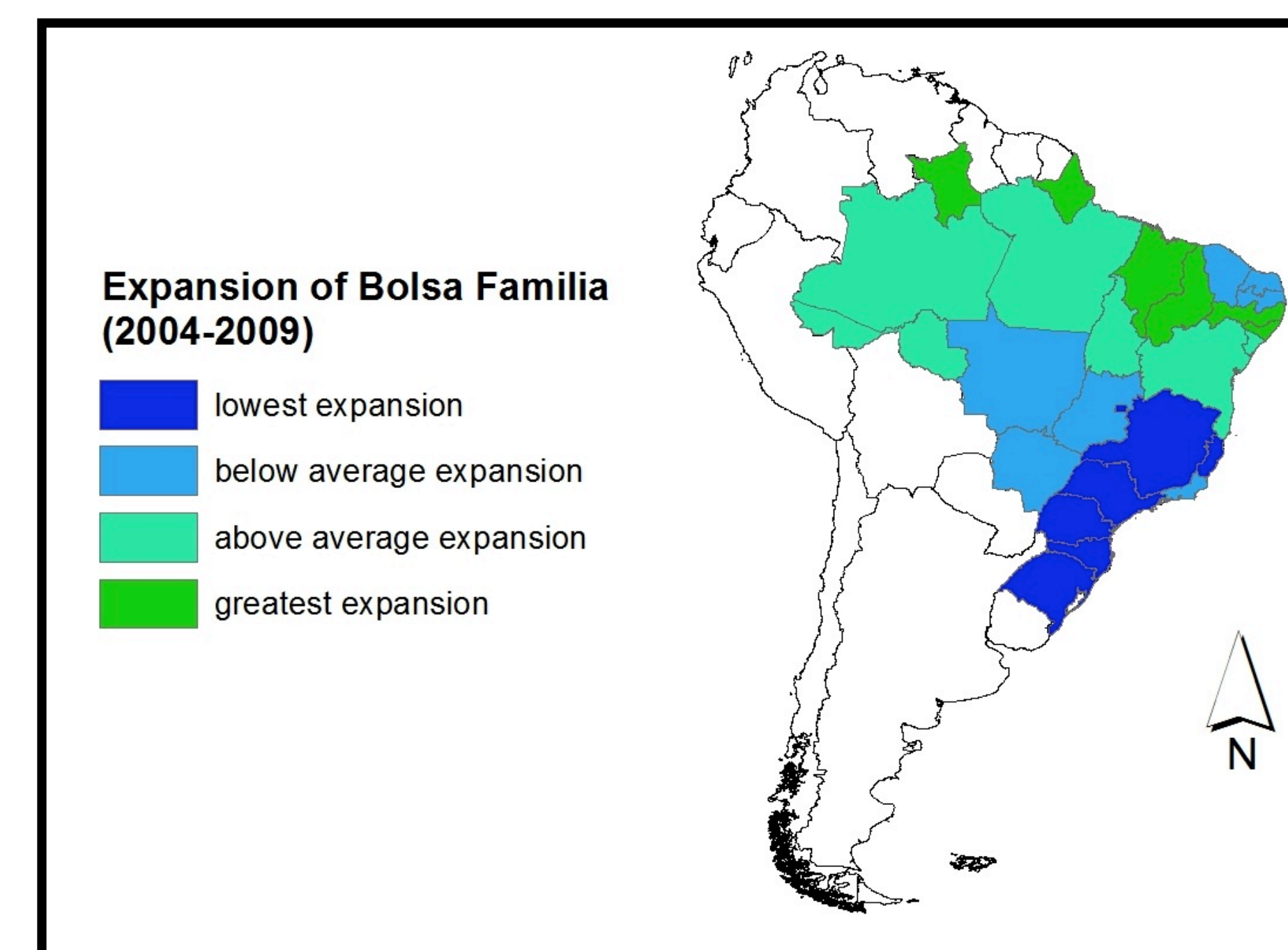
## Method

### ArcGIS

Using the software ArcGIS, I construct two maps. The first divides Brazil's 26 states and the Federal District into quartiles based on the percentage of the population added to *Bolsa Família* between 2004 and 2009 [5]. The second does the same for the change in food security, classifying as insecure households reporting severe or moderate insecurity [1]. Comparing the maps allow us to see the degree to which the two changes correspond.

## Results

The maps below make clear that, overall, the states with the greatest expansion of *Bolsa Família* were also the states with the greatest reduction in food insecurity, with the North and Northeast seeing greater levels of both. This is consistent with my hypothesis and with the entitlement framework for understanding hunger.



### Dedication

For Roberto and Claudia, who make Brazil and the world a better place simply by who they are.

## Discussion

### Not A One Size Fits All Approach

The effectiveness of *Bolsa Família* in combatting food insecurity in Brazil supports understanding hunger in terms of entitlement failure and not simply a problem of aggregate food supply. This research does *not* imply that conditional cash transfers are always the appropriate policy. Brazil:

- successfully defeated hyper-inflation during the 1990's, helping to maintain the purchasing power of transfers.
- has an economy that effectively gets food to people with enough money to buy it.
- established basic health and education services before implementing cash transfers [6].

### Additional Research

This comparison of maps does not address competing (or complementary) explanations for the decline in food insecurity. Other common explanations include rapid economic growth in the North and Northeast and increased formal sector employment. In spite of the small sample size (n = 27), statistical analysis (multivariable regression) allows for effective simultaneous consideration of these factors (and a much less interesting poster). I pursue this approach in the dissertation chapter upon which this poster draws.

### Works Cited

- [1] IBGE. 2009. "Segurança Alimentar 2004-2009." <http://www.ibge.gov.br>
- [2] Castro, Josué de. 2010 [1946] *Geografia da Fome*. 10th ed. Rio de Janeiro: Civilização Brasileira.
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- [6] Drèze, Jean. "The cash mantra." *The Indian Express*. May 11, 2011. <http://www.indianexpress.com>

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