

**Essays on Shocks, Welfare, and Poverty Dynamics:  
Microeconometric Evidence from Ethiopia**

**av**

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**AKADEMISK AVHANDLING**

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## **Abstract**

Five self-contained papers constitute this thesis.

### **Paper 1: Does fertilizer use respond to rainfall variability? Panel data evidence from urban Ethiopia**

In this article, we use farmers' actual experiences with changes in rainfall levels and their responses to these changes to assess whether patterns of fertilizer use are responsive to changes in rainfall patterns. Using panel data from the Central Highlands of Ethiopia matched with corresponding village-level rainfall data, the results show that the intensity of current year's fertilizer use is positively associated with higher rainfall levels experienced in the previous year. Rainfall variability, on the other hand, impacts fertilizer use decisions negatively, implying that variability raises the risks and uncertainty associated with fertilizer use. Abundant rainfall in the previous year could depict relaxed liquidity constraints and increased affordability of fertilizer, which makes rainfall availability critical in severely credit-constrained environments. In light of similar existing literature, the major contribution of the study is that it uses panel data to explicitly examine farmers' responses to actual weather changes and variability.

### **Paper 2: Household-level consumption in urban Ethiopia: The effects of a large food price shock**

We use survey data to investigate how urban households in Ethiopia coped with the food price shock in 2008. Qualitative data indicate that the high food price inflation was by far the most adverse economic shock between 2004 and 2008, and that a significant proportion of households had to adjust food consumption in response. Regression results indicate that households with low asset levels, and casual workers, were particularly adversely affected by high food prices. We interpret the results as pointing to the importance of growth in the formal sector so as to generate more well-paid and stable jobs.

### **Paper 3: The impact of food price inflation on consumer welfare in urban Ethiopia: A quadratic almost ideal demand system approach**

This paper investigates the impact of food price inflation on consumer welfare in urban Ethiopia 2004-2009. A quadratic almost ideal demand system (QUAIDS) is estimated using data from 2000 to 2009. Statistical tests suggest the QUAIDS is preferred over the conventionally used AIDS model. Compensating variation calculated using estimated price elasticities shows that from 2004 to 2009, households in urban Ethiopia lost an equivalent of 15 percent of their food budget annually due to the unprecedented food price inflation. Poor households, who spend a higher proportion of their budget on food, were affected more adversely than non-poor households. Moreover, with a more or less uniform increase in the price of major food items, households in urban Ethiopia appear to have limited options for substitution. These findings can provide important information to policy makers and can help aid organizations design and implement better social assistance schemes in the future.

### **Paper 4: What do policy makers know about the factors influencing citizens' subjective well-being?**

In light of the increased interest in using subjective well-being as an outcome variable beyond GDP, as for example argued by the Stiglitz Commission, there is an interest in analyzing policymakers' knowledge on what variables influence citizens' subjective well-being. We elicit what policymakers guess influence citizens' subjective well-being with a focus on environmental variables. Our study, conducted on policymakers in Addis Ababa, Ethiopia, shows large heterogeneity in their guesses. Overall, we find that the factors that correlate with citizens' subjective well-being in Addis Ababa are similar to those found in rich Western countries. Moreover, there is a low correlation between what policymakers guess affects citizens' subjective well-being and our empirical findings on the matter. As an alternative check for the similarities between citizens' and policymakers' preferences, we also undertook a ranking exercise of setting priority areas. Compared to the citizens, policymakers put more weight on longer-term projects. By and large, our study indicates that policymakers have a heterogeneous, and hence a non-negligible proportion of them have a fairly poor understanding of what correlates with citizens' subjective well-being.

## **Paper 5: Poverty dynamics and intra-household heterogeneity in occupations: Evidence from urban Ethiopia**

Using five rounds of panel data spanning 15 years, this paper investigates the dynamics and persistence of poverty in urban Ethiopia with a particular focus on the role of intra-household heterogeneity in occupations. Urban poverty measured by the head count index declined from 52 to 34 percent from 1994 to 2009. Regression results from dynamic probit models provide strong evidence of state dependence and show that education, labor market status of household heads, international remittances, and household demographic characteristics are important determinants of poverty. The paper also finds strong evidence of the role of labor market status of non-head household members. Regression results from discrete-time proportional hazard models of poverty spells also confirm the importance of labor market status of household members and remittances in determining poverty exit and re-entry rates of households. In addition to investigating the trends, dynamics and persistence of poverty in urban Ethiopia, the paper discusses important policy implications that can be useful for designing effective policies for poverty reduction and targeting.

**JEL Classification:** D12, D61, D80, I32, O12, O18, O33, Q12, Q16, Q19, Q54, Q58, R2, R20

**Keywords:** urban Ethiopia, poverty dynamics, dynamic probit, hazard rate, labor market status, subjective well-being, policymakers, life satisfaction, environment, Ethiopia, food price, consumer demand, fertilizer use, rainfall, highlands of Ethiopia, panel data, consumption, welfare, food price shock, Africa

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