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Development Economics  
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2004(Oral) Development Economics and International Economics  
2003(Written) Macroeconomics, 2004(Written) Microeconomics

**Dissertation Title:**

*“Effects of Financial Development on Consumption, Asset Accumulation and Human Capital Accumulation”*

**Committee:**

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Professor Mark Rosenzweig  
Professor Paul Schultz  
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**Expected Completion Date:** May 2008

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M.Phil, Economics, Yale University, December 2005  
M.A., Economics, Yale University, December 2004  
B.A., Economics, *summa cum laude*, Morehouse College, May 2002  
B.S., Physics and Geography & Natural Resources, University of Ghana-Legon, June 1998

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Yale University Dissertation Fellowship, Fall 2006  
Yale University Summer Fellowship 2003, 2004 & 2006  
Ryoichi Sasakawa Young Scholars Fellowship, 2005-2006  
Yale University Doctoral Fellowship 2002-2006  
Salutatorian, Morehouse College 2002  
Phi Beta Kappa, 2002  
Oprah Winfrey Merit Award, Morehouse College 2000  
Goldman Sachs's Award for Excellence, Morehouse College 2001

**Teaching Experience:**

*Adjunct Professor:*

Principles of Microeconomics, Southern Connecticut State University, 2005-2006

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Financial Markets (undergraduate), Yale University, Spring 2007 & 2008  
International Monetary Policy (undergraduate), Yale University, Spring 2005  
Introductory Macroeconomics (undergraduate), Yale University, Fall 2004

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*Microfinance Programs Analyst:*

Africare Inc., Washington D.C., 2005-2006

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Andrew Young Center for International Affairs, Morehouse College, 1999-2002

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“Effects of Financial Development on Consumption, Asset Accumulation and Human Capital Accumulation: Evidence from Rural India”, November 2007

“Determinants of Loan Default in Microfinance Institutions: Evidence from the Philippines”  
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“Households’ Savings and Investment Choices: Empirical Evidence from Ghana”  
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## **Dissertation Abstract**

Rural households in developing countries have limited access to basic financial services. While microfinance institutions have helped these households meet some of their basic financial needs in recent years, they lack the resources to perform efficiently the functions of financial intermediaries. Would government-led bank branch opening in underserved rural communities alleviate these financial constraints, increase investment in productive assets and increase consumption in the long term?

My dissertation provides empirical evidence of the long term effects of bank branch opening on consumption, asset accumulation and human-capital accumulation in underserved communities in rural India. Economists generally assume that financial development improves economic outcomes. However, my dissertation shows that while these calculations focus on present-day production and consumption, they fail to account for dynamic changes in incentives for investing in human capital.

From 1977 to 1989, the Indian government adopted a policy that led to a significant increase in the number of bank branches opened in rural communities. I develop a model where households make decisions regarding consumption, asset accumulation and human capital accumulation under imperfect credit market conditions. The model suggests that increased access to credit markets can alter the trade-offs between asset accumulation and human-capital accumulation, which consequently affects consumption. I exploit variations in individual and household exposure to banking services in examining the policy effect in three chapters.

## **Chapter I: “Financial Development and Human Capital Accumulation: Evidence from Rural India”**

Previous literature has shown that limited access to basic financial services is one of the main factors that cause households to under-invest in human capital (Jacoby & Skoufias, 1997; Dehejia & Gatti, 2003; Ljungqvist, 1993). Some households are financially constrained and they cannot borrow in order to finance human capital accumulation. In addition, if households cannot borrow to smooth consumption and investment against income shocks, they tend to invest less in human capital (Jensen, 2000). Recent empirical evidence (Jacoby, 1994; Wydick, 1999) shows that increasing households’ access to credit increases school participation but fails to investigate whether access to basic financial services affects school completion.

Using evidence from rural India this chapter examines the impact of opening bank branches during subjects’ childhood years on their adult levels of educational attainment, formal employment participation, wages, and consumption.

The prediction of the theoretical model is that if newly opened bank branches in underserved rural communities increase household accumulation of farm assets, and if farm assets and child labor are complements, then households may increase demand for child labor, substituting away from schooling.

Using district-level panel data on bank branch openings in underserved rural communities combined with household data on school completion, formal employment participation, wages and consumption, I am able to test empirically the model’s predictions. The

key source of identifying variation is that individuals face different degrees of exposure to credit markets depending on when and where they were born.

The main results of the econometric specification show that increasing the number of bank branches by one per 100,000 people in underserved rural communities during an individual's childhood decreased years of schooling by 0.57 years. The results also show that the decline in years of schooling completed for males was 0.27 years greater than for females. In addition, looking at the effect by educational level, secondary school completion experienced the biggest decline. The decline in middle school completion was also larger than the decline in primary school completion. The results also show that increasing the number of bank branches per capita in underserved rural communities during individual's childhood: (i) increased the likelihood of working in agriculture; (ii) decreased daily wages, consumption and the likelihood of formal employment participation.

The results confirm the model's prediction that opening bank branches in underserved rural communities may have increased farm asset accumulation and the marginal product of child labor, thereby explaining the decrease in years of schooling completed.

## **Chapter II: "Financial Development and Asset Accumulation: Evidence from Rural India"**

Rosenzweig & Wolpin (1993) showed that credit-constrained households in rural India tend to under-invest in productive farm assets. Would interventions in the rural financial markets that alleviate the financial constraints faced by households have any impact on asset accumulation? This chapter uses state-level panel data on bank branch opening combined with household data on debt and investment to examine the impact of bank branch openings on farm and non-farm asset accumulation in rural India.

To estimate the relationship between access to banks in underserved rural communities and households' asset accumulation, I exploit the differences in households' exposure to banking services which depends on state and year of birth of the household head since he/she was 20 years old.

The main findings of the econometric specification show that opening bank branches in underserved rural communities increased household total assets. The increase in farm asset accumulation was greater than the increase in non-farm assets. In addition, the increase in physical assets was greater than the increase in financial assets.

The results indicate that rural households tend to invest more in assets that are directly related to production needs

## **Chapter III: "Financial Development and Household Consumption: Evidence from Rural India"**

It has been well documented in the development economics literature that credit-constrained households cannot borrow to smooth consumption, and thus they are more susceptible to adverse income shocks.

In the presence of credit constraints, negative fluctuations in agricultural income lead to a decrease in consumption. Usually, when there are fluctuations in agricultural income and households are unable to borrow, they tend to consume less. It is possible that providing access to banking services in order to ease credit constraints may increase household consumption.

This chapter examines the effect of opening bank branches in underserved rural locations on household consumption.

The key finding is that increasing bank branches in rural underserved locations increased household consumption. The increase in consumption of non-durable goods was greater than the increase in consumption of durable goods.

These results demonstrate that interventions in rural financial markets which increase access to financial services could help reduce extreme poverty in developing countries, particularly in rural areas.