

Effects of Rural to Urban Migration in Migrant-Sending Communities: Evidence from Rural China

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Rural to Urban Migration and Economic Development

- Migration and the Long-Term Structural Transformation of Economy
- Two Sector Models in Early Development Economics (Arthur Lewis; Ranis and Fei)
 - The rural sector as a source of labor for a “modern” urban sector.
- Harris-Todaro Model of Migration
 - Emphasizes that individuals move when returns (broadly conceived) are sufficiently high.
 - Returns may be high “in expectation” even when urban unemployment is quite high.

“New Economics of Migration” (Stark and others)

- Emphasis on networks connecting migrants to home communities
- Migration is often temporary and has cyclical patterns.
 - Migration can be important for risk-coping
 - Migration and migrant remittances may ease credit constraints and facilitate rural investment

Rural to Urban Migration in China

- Research using panel data from the late 1980s China found evidence of geographic poverty traps. (e.g., Jalan and Ravallion, 2002).
- Rural-urban and rural-coastal migration is one of the Big Stories in China's economy over the last 20 years
 - “Registration status” and definition of migrant.
 - Census : Stock of migrants increased fourfold between 1990 and 2000 to 80 million
 - 2010 Census: Nearly 245 million rural registered residents in China's cities.

Today

- Review Results from Three Studies
 - What is the effect of migration on well-being in migrant sending communities?
 - What is the effect of the ability to migrate on educational investment decisions? (Highlight the effect of labor market signals on educational investment.)
 - Does out-migration affect the rural elderly in adverse ways?
- The “Identification Problem” and Why it Might Matter.

Data: Annual RCRE Household and Village Surveys and 2004 Supplemental Survey

- Primary Data Source: Ministry of Agriculture, Research Center on the Rural Economy (RCRE). Household and Village Surveys from 1986 to 2003.
 - We use data from Anhui, Jilin, Jiangsu, Henan, Hunan, Shanxi, Sichuan, Zhejiang
 - 88 villages in sample, visited annually since 1986
 - 6300 households per year (on average)
 - 70 households per village (on average)

RCRE Household and Village Surveys

- Most Variables Constructed From Annual Surveys
 - Household consumption, migrant share of village population, other village and household level variables
- Supplemental Household Survey (2004)
 - Individual level education information for all current and former household members; Current residence locations of children of head and spouse
- Village Governance Survey (2004).

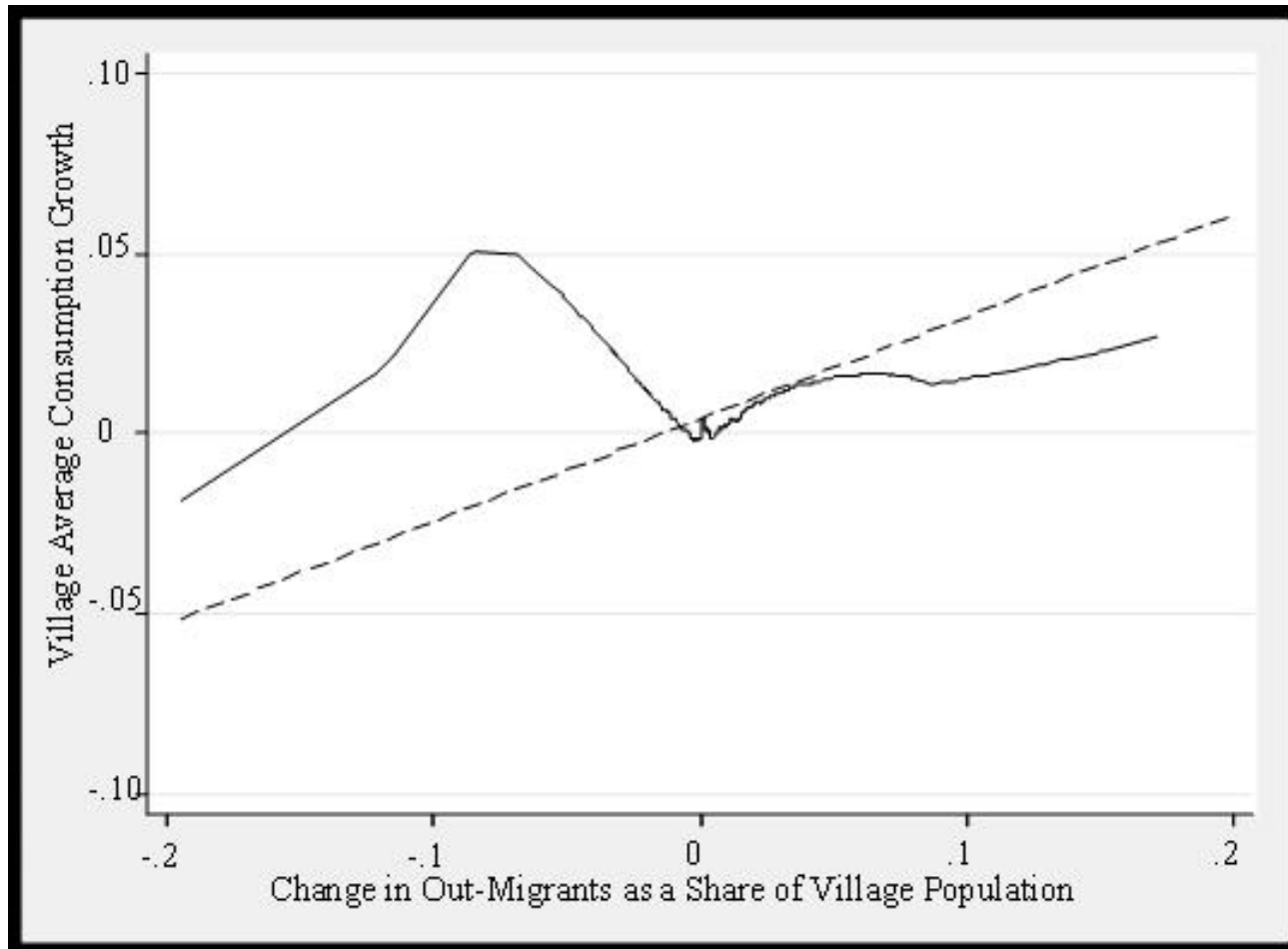
Causal Effects of Migration?

- We often want to know the effect of migration on an outcome, e.g.

$$Outcome_{it} = \beta_0 + \beta_1 M_{it} + \mathbf{X}'_{it} \boldsymbol{\beta}_4 + v_i + e_{it}$$

- Issues:
 - Migration is a choice
 - Migration may be driven by shocks to the local economy
 - Selection and simultaneity biases

Village Consumption Growth and Change in Share of Village Working as Migrants



Measuring Effects of Migration at the Village

- In two papers, we estimate models roughly of the form:

$$Y_{it} = \beta_0 + \beta_1 M_{jt} + \mathbf{Z}'_{jt} \boldsymbol{\beta}_3 + \mathbf{X}'_{ht} \boldsymbol{\beta}_4 + \mathbf{u}_j + \mathbf{y}_{p \times t} + v_i + e_{ihjt}$$

- We must still try to “identify” M
 - Two policy changes
 - National ID card introduced in 1984
 - 1988 Reform of residential registration system
 - Residents of different counties received IDs at different times
 - Farmers could not simply move to get ID cards

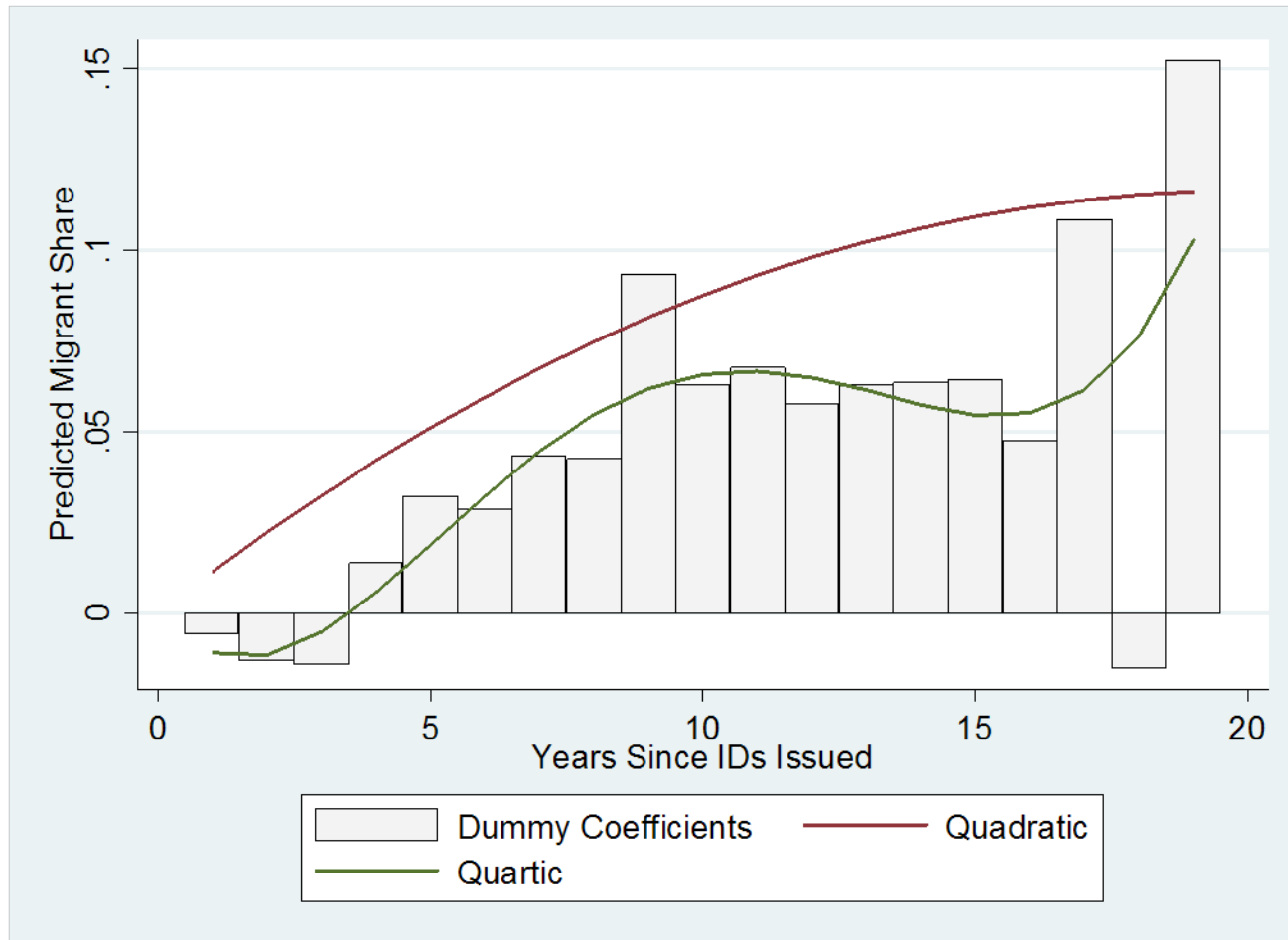
Identification Strategy

- *We argue that...*
 - Differences in timing of ID availability affects network quality.
 - “Cost” of migrating falls as legal long-term migrants are capable of providing referrals.
 - Networks time to build up.
 - Non-linear function of years since IDs were issued used to identify the migrant network.

Potential Problems with the Instrument

- Timing of ID Card distribution is not random
 - Differences in unobservable village characteristics could affect migration network and outcome variables
 - Demand for migration could have driven ID distribution
 - Timing of ID distribution could be systematically related with trends in investment, related to policy changes or local economic shocks.
- In two papers, we spend considerable time evaluating the suitability of the instrument and defending the identification strategy

Estimates of Migrant Share Against Years Since IDs Issued, using Dummy Variable, Quadratic, and Quartic Specifications



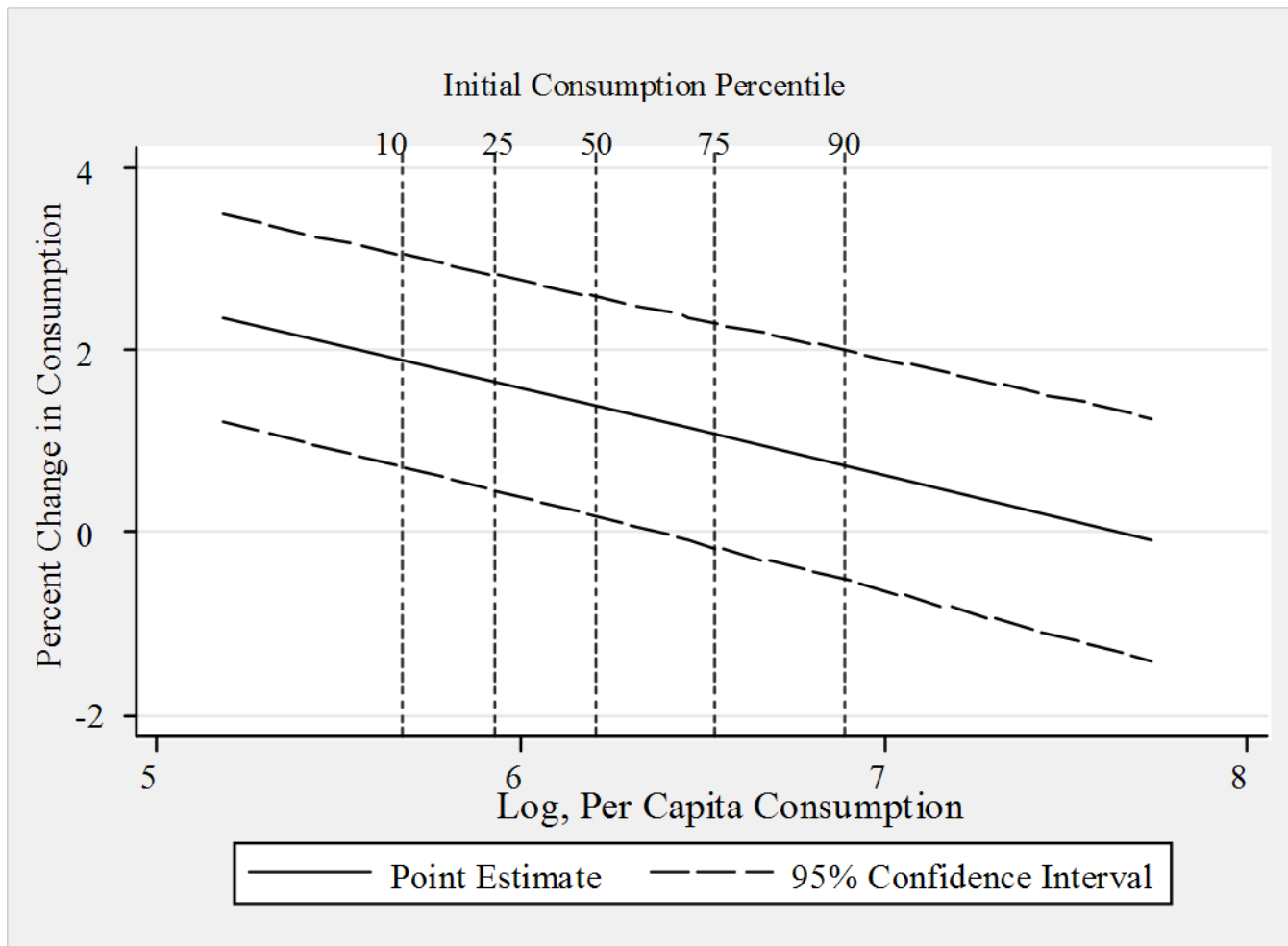
1. Effects of Migration on “Well-Being”

- How does migration from the village affect per capita consumption and income levels?
- How does migration affect within village inequality?
- What is the impact of migration on factor allocation and investment?

1. Effects of Migration on “Well-Being”

- How does migration from the village affect per capita consumption and income levels?
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- What is the impact of migration on factor allocation and investment?
- Dynamic version of model outlined above, with timing of ID distribution used to identify migration.
- Show predicted effects across the distribution of consumption and income

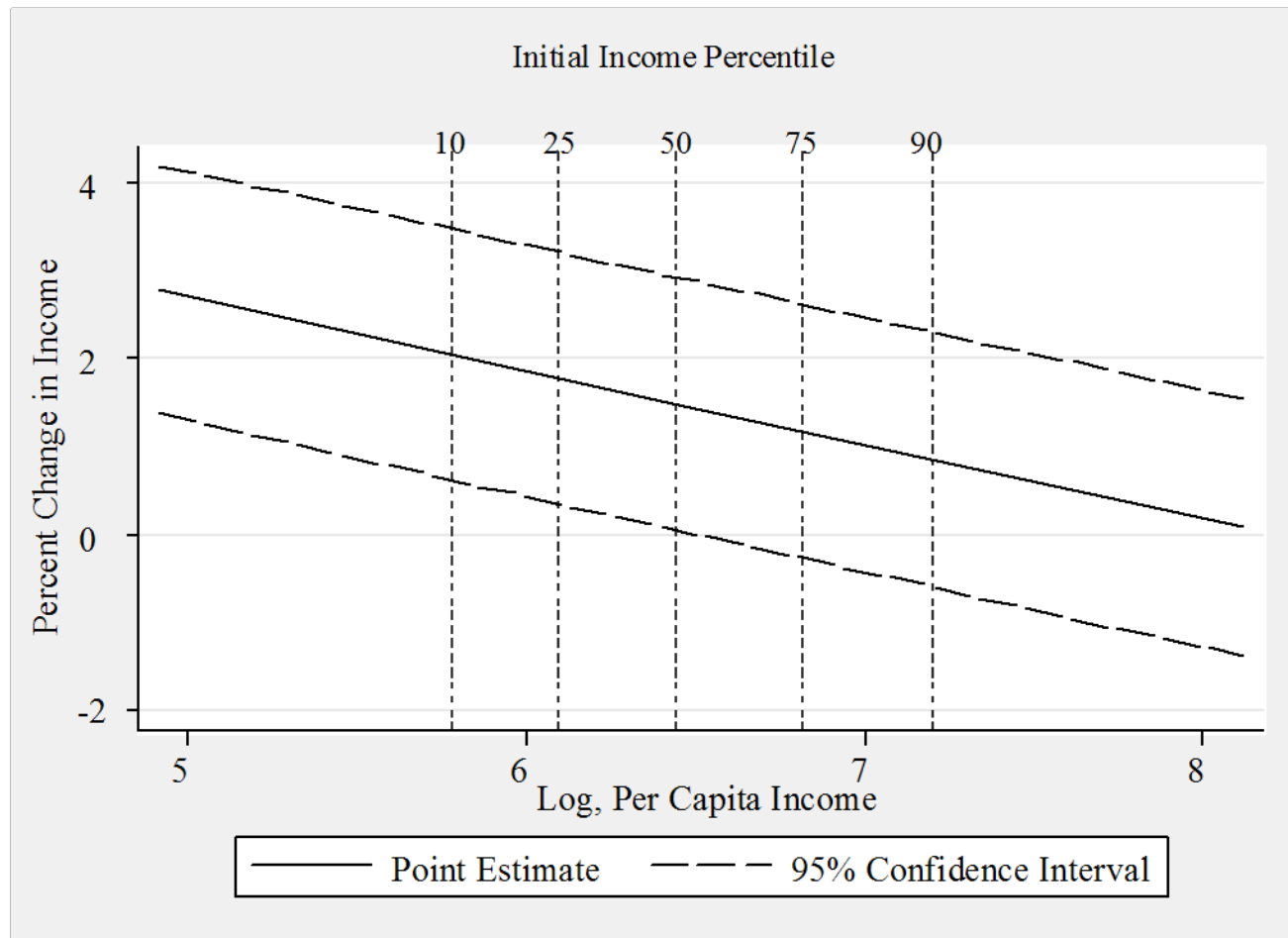
Effects on Consumption Per Capita of a 10 Percent Increase in Village Migrant Share (Long Run)



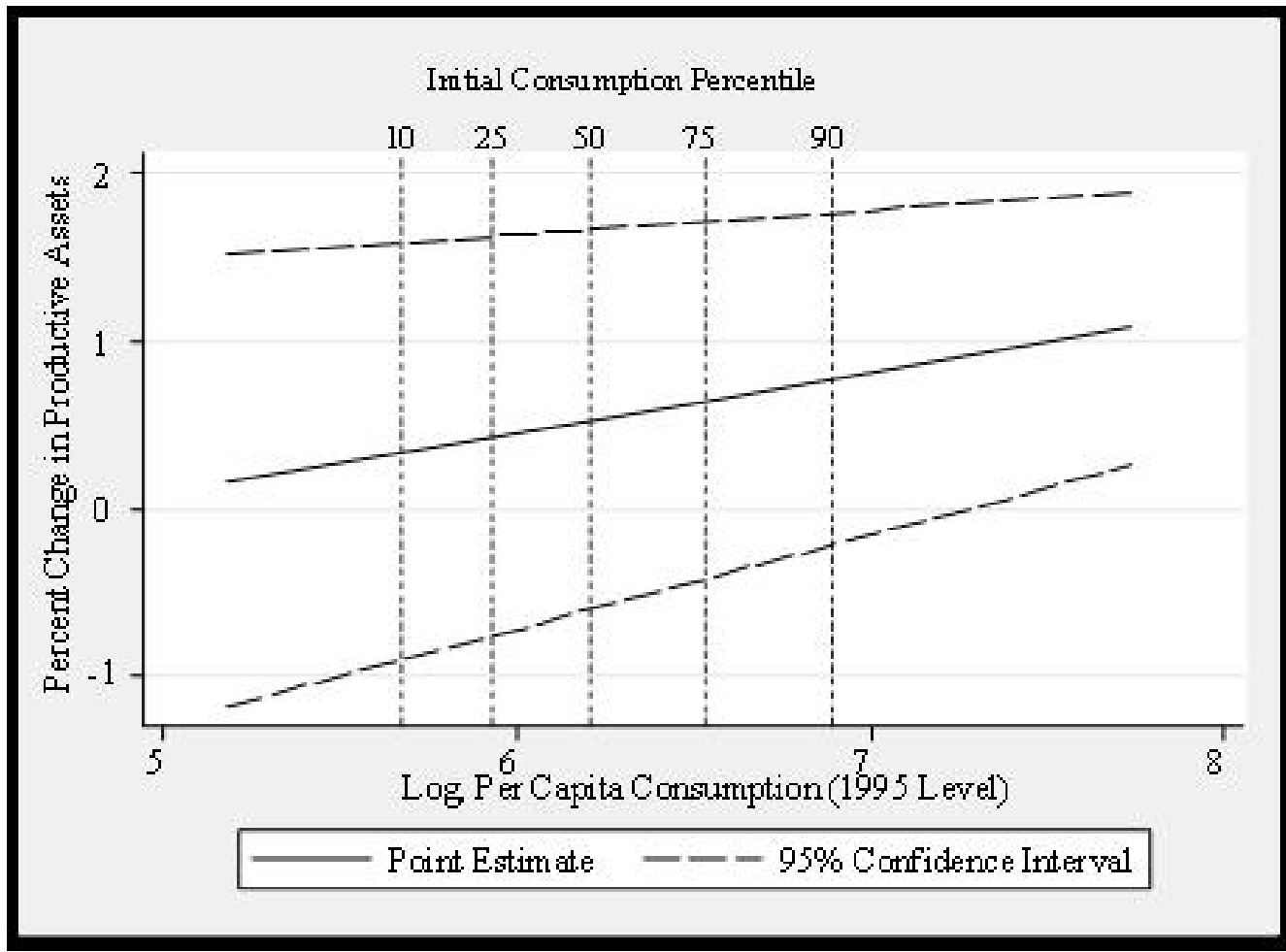
What About Income?

- Oded Stark's Comment: We are simply picking up a higher marginal propensity to consume of poorer households.
- Alternatively, the ability to find migrant employment subsequent to a shock may lead to less precautionary saving among the poor. (e.g., Giles and Yoo, 2007)

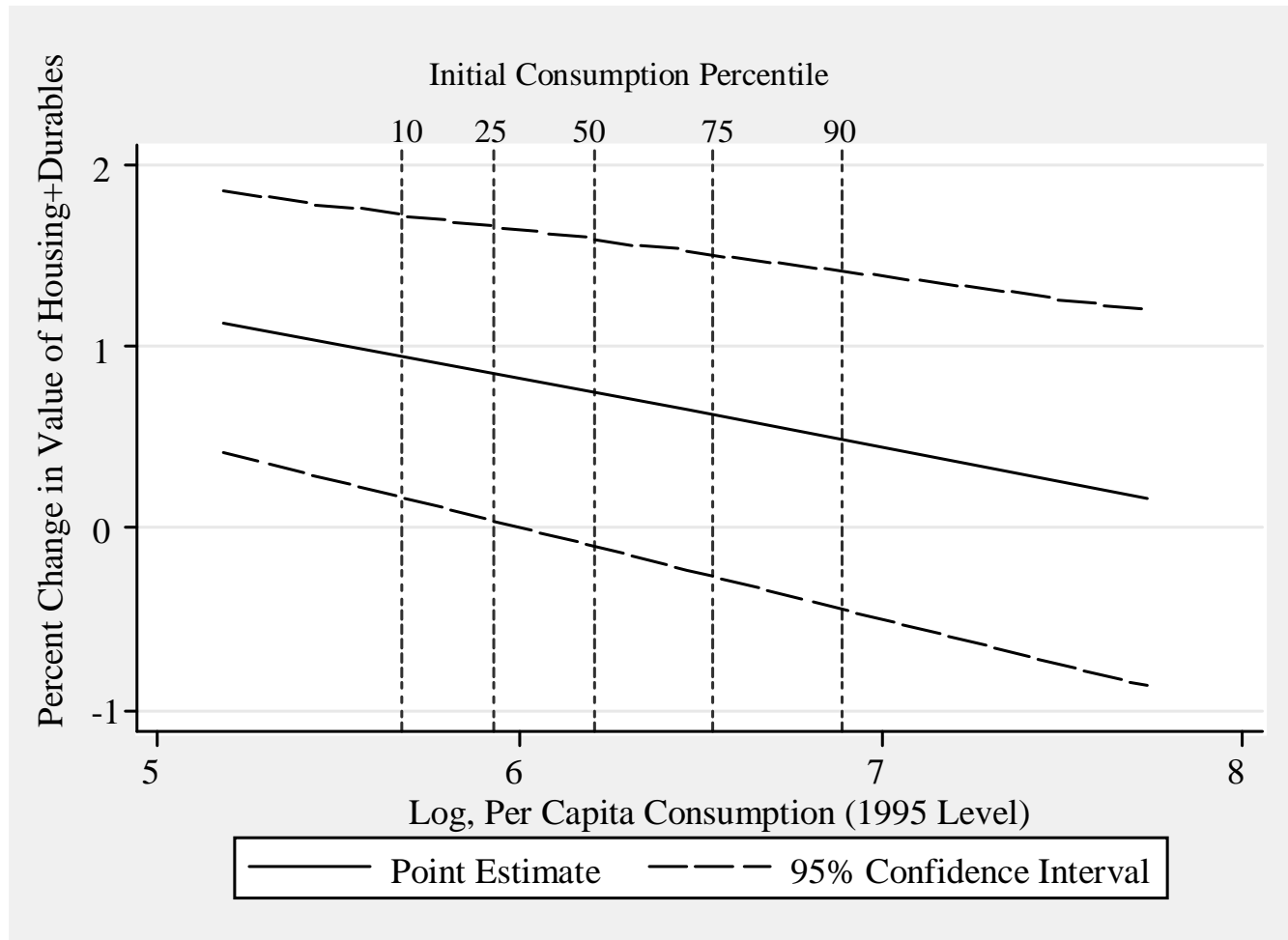
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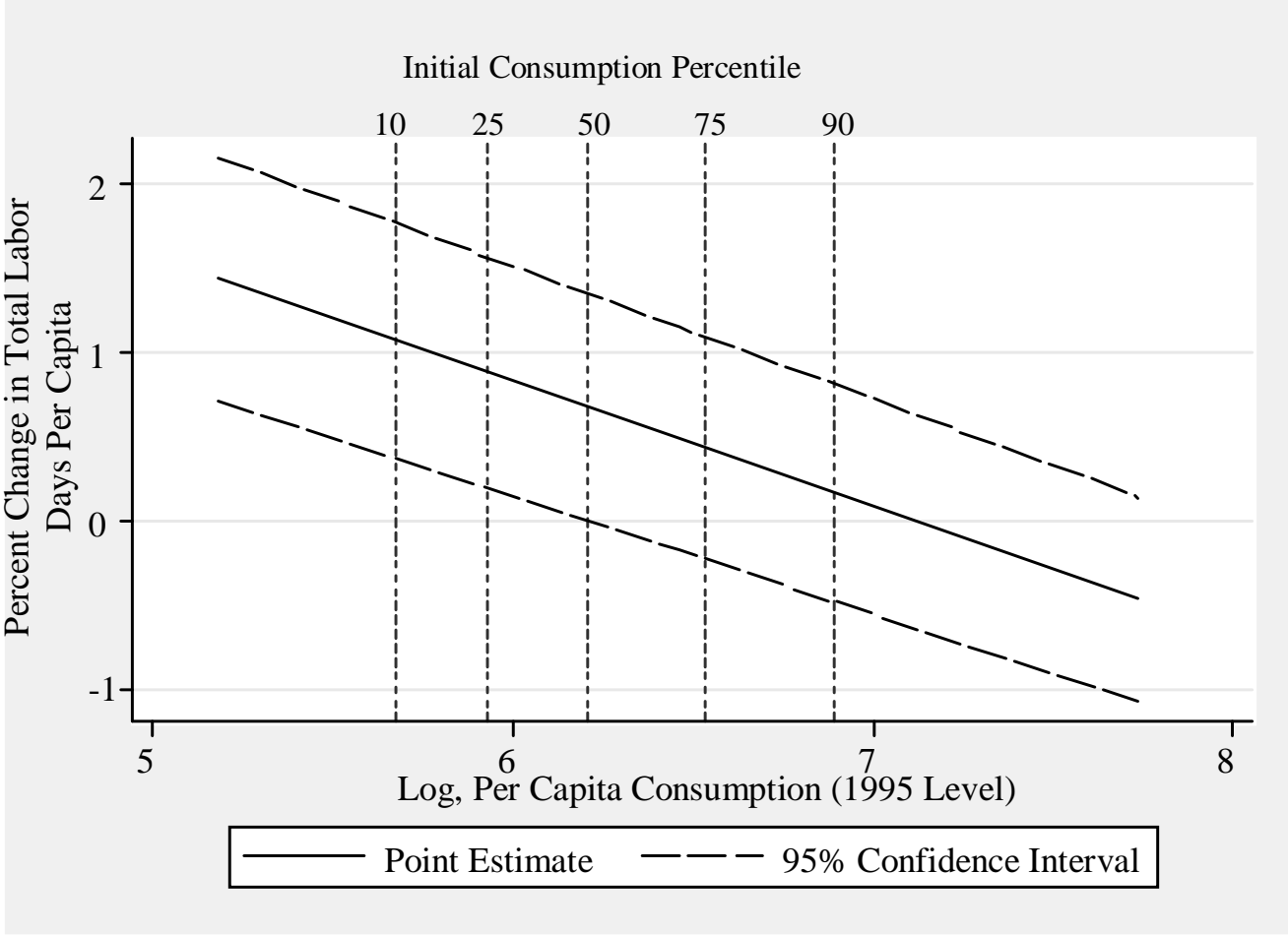
Effect of 10 Percent Increase in Village Migrant Share On Productive Asset Investment Across the 1995 Consumption Distribution



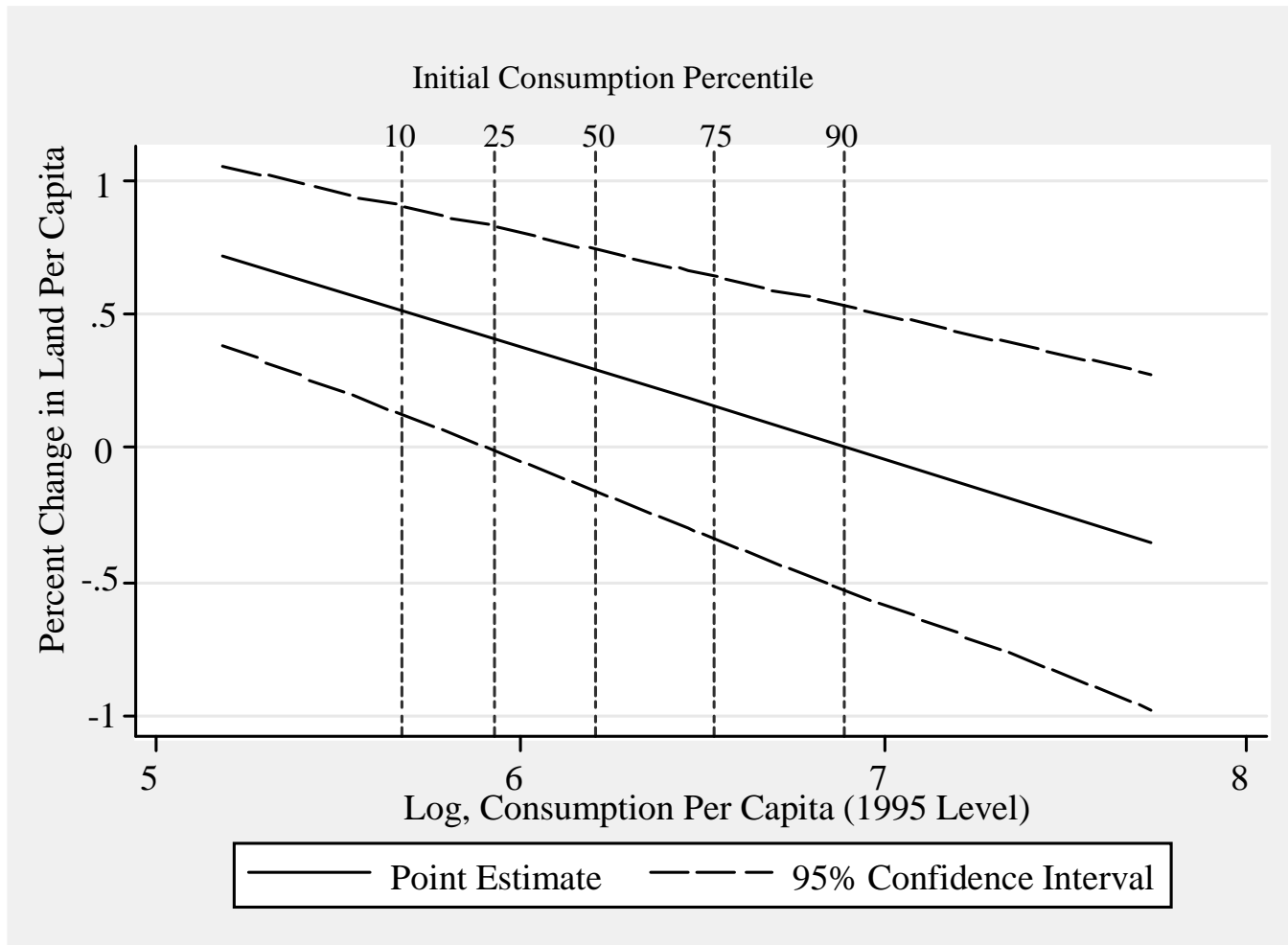
Effect of 10 Percent Increase in Village Migrant Share on Housing and Durables Investment Across the 1995 Consumption Distribution



Effect of 10 Percent Increase in Village Migrant Share On Total Household Labor Supply Across the 1995 Consumption Distribution



Effect of 10 Percent Increase in Village Migrant Share On Total Area of Household Managed Land Across the 1995 Consumption Distribution



Effects of Migration on Consumption, Incomes and Factor Allocation

- Increases in out-migration lead to higher consumption, but this is associated with increased labor supply and increased income.
- Poorer households within villages gain more from increased out-migration.
- No evidence of increased investment in productive activities in the village. (Policy Implication: Migration alone not a substitute for rural development policy)
- Poorer households supply more labor, and control more land after migration becomes easier.
- Stronger impact of migration on poorer households is consistent with descriptive information suggesting that migrant income is inequality reducing (Benjamin, Brandt and Giles 2005).

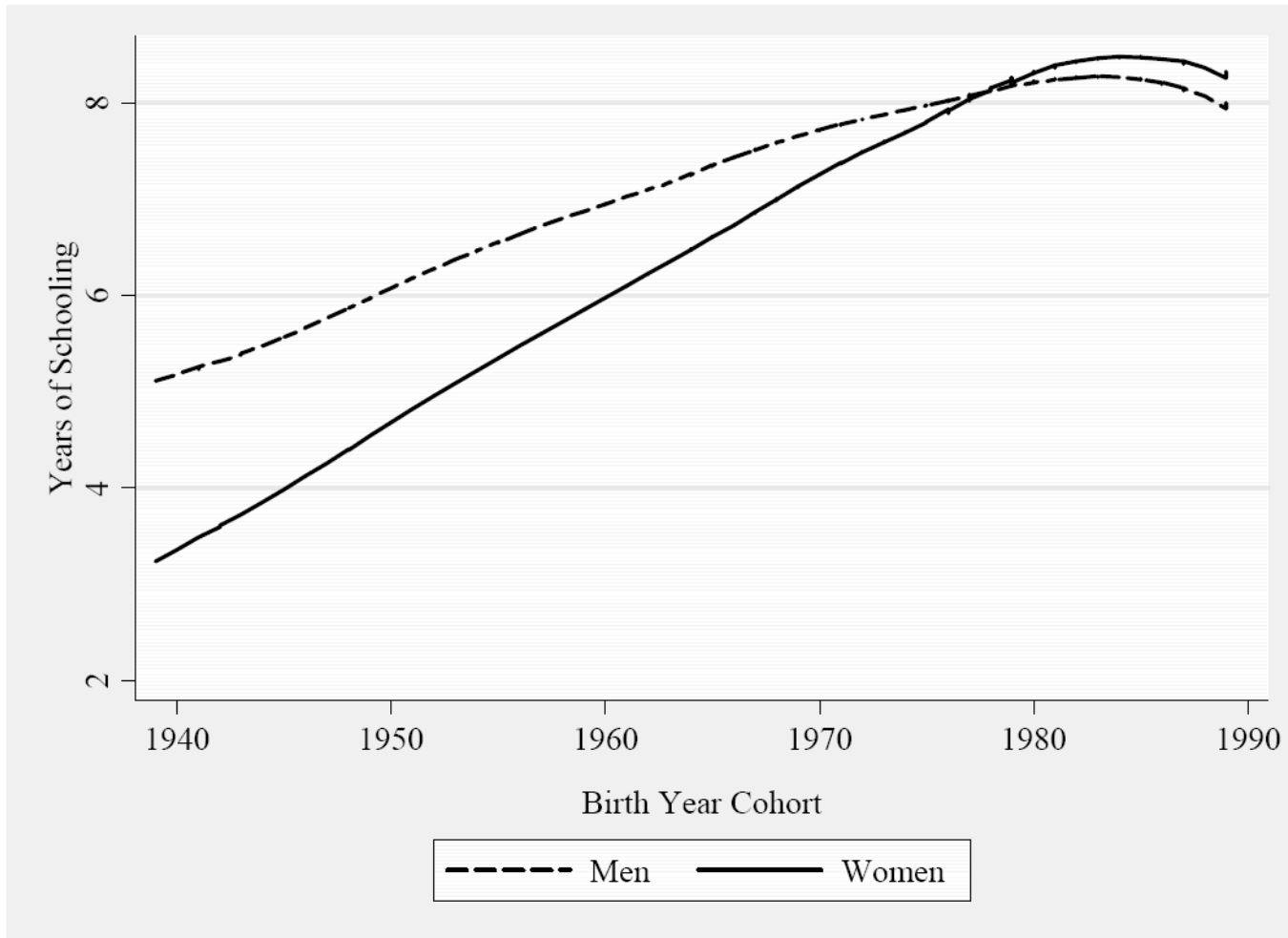
Question 2: How Does the Opportunity to Migrate Affect Educational Investment Decisions?

- Do economic growth and reduction of barriers to labor mobility lead to more human capital investment?
 - Trade-off: continue in school or look for work
 - Studied in other developing countries
 - Vietnam: Glewwe and Jacoby (1998, 2004); Edmonds (2004).
 - India: Kochar (2004).

Human Capital of Rural-Urban Migrants in Urban Areas

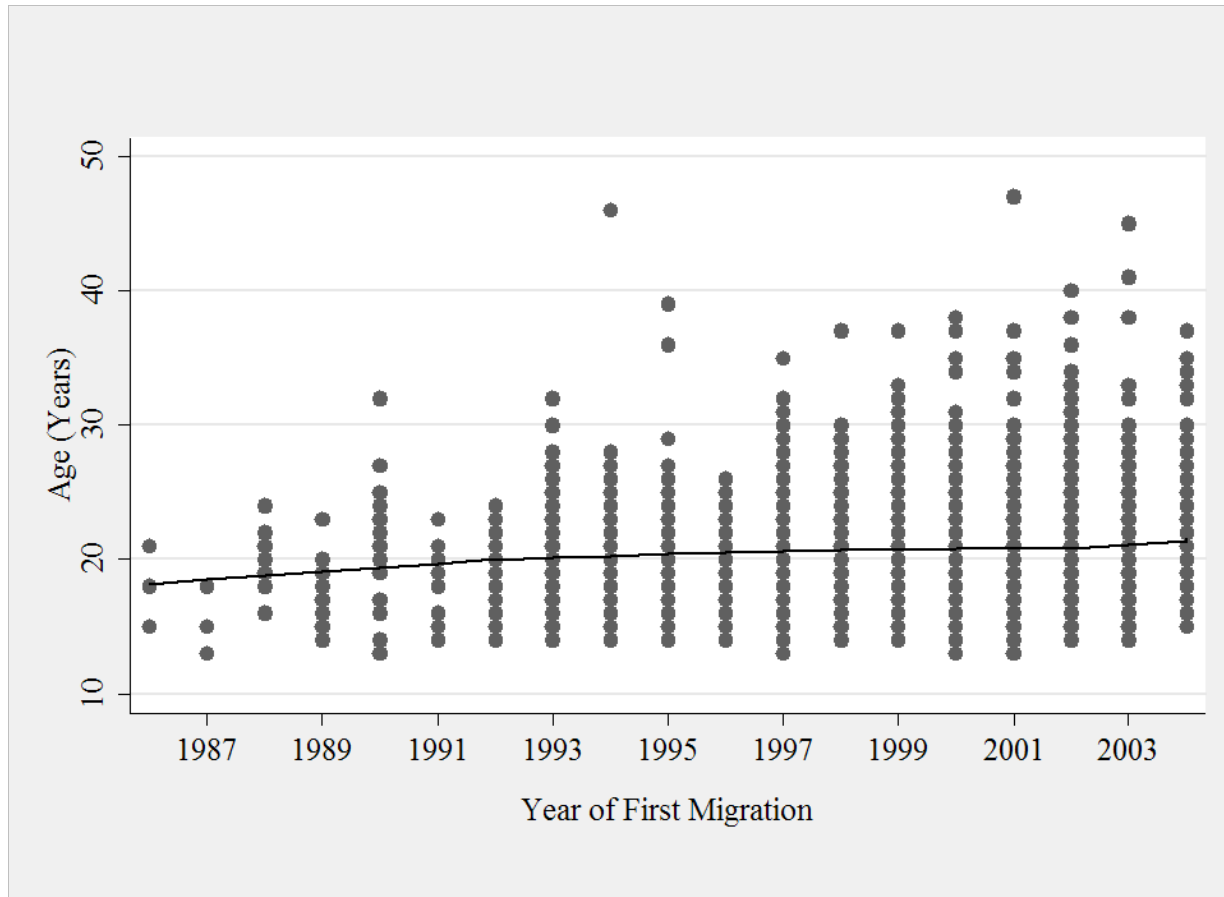
- Education
 - 86 % have middle school educational attainment or less (67 % complete middle school).
 - 14 % have completed high school.
- Rural Residents Not Engaged in Farming
 - 21 % have completed high school.
- Migrants Tend to be Young
 - 20 % left village before 18th birthday
 - 77 % before 40th birthday

Cohort Average Educational Attainment

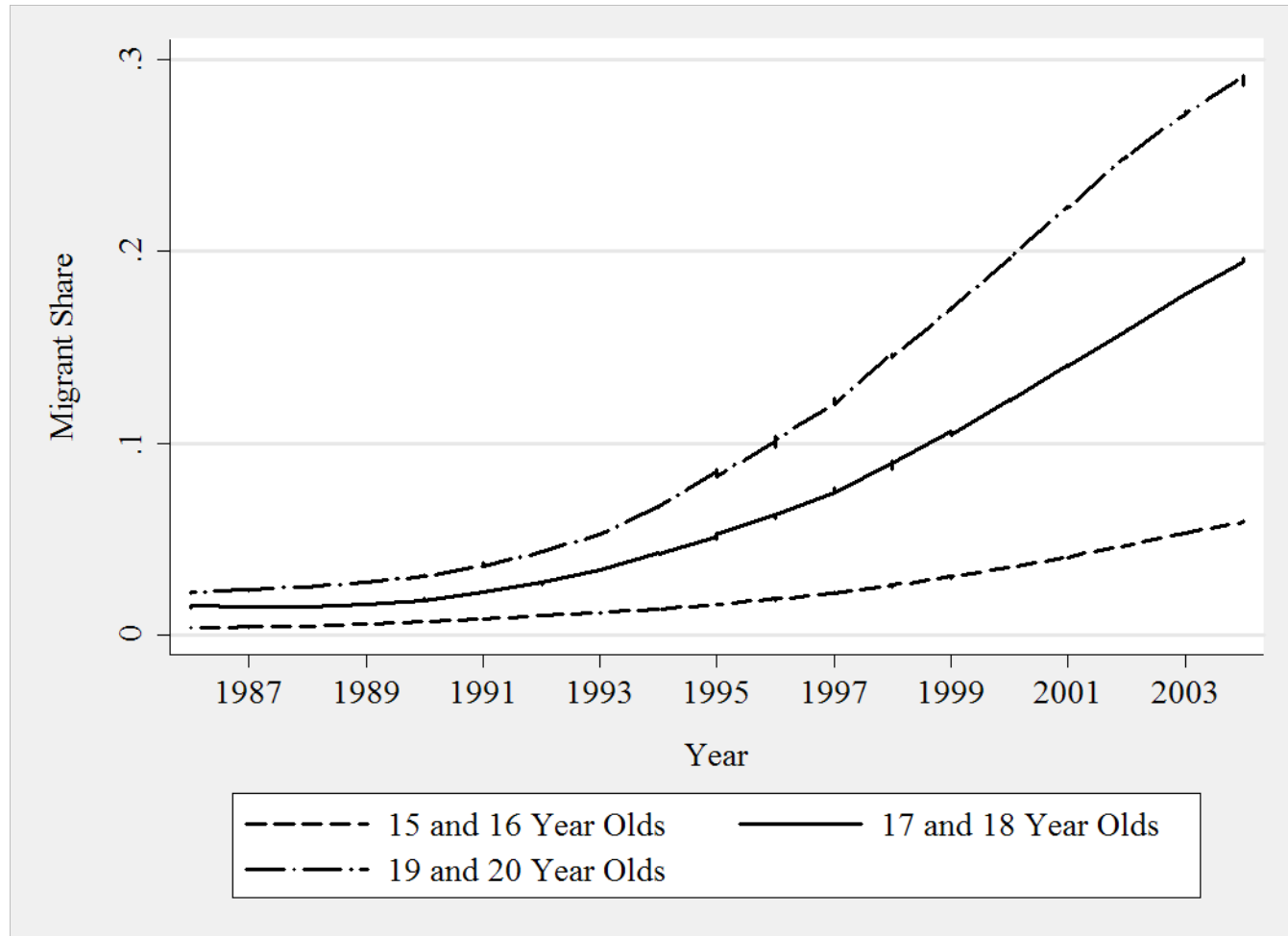


Source: RCRE Supplemental Survey (2004).

Age at Time of First Migration



Share of Age Group with Temporary or Long-Term Migrant Employment



Outline of Theory

- Parents are concerned with current and future consumption and the expected future wage of children.
- Choice over whether to send a child to high school is influenced by:
 - Wealth
 - Credit Markets
 - Current returns to middle school completion
 - Expected future benefits from high school graduation
 - Preferences

Theory (Continued)

- Parents enroll children in high school if expected benefits outweigh costs.
- Positive effect could be explained by increasing wealth, relaxing credit constraints, or expected returns to education in urban areas.
- Negative effect if returns to education are low for migrants or potential migrants.

Our Findings...

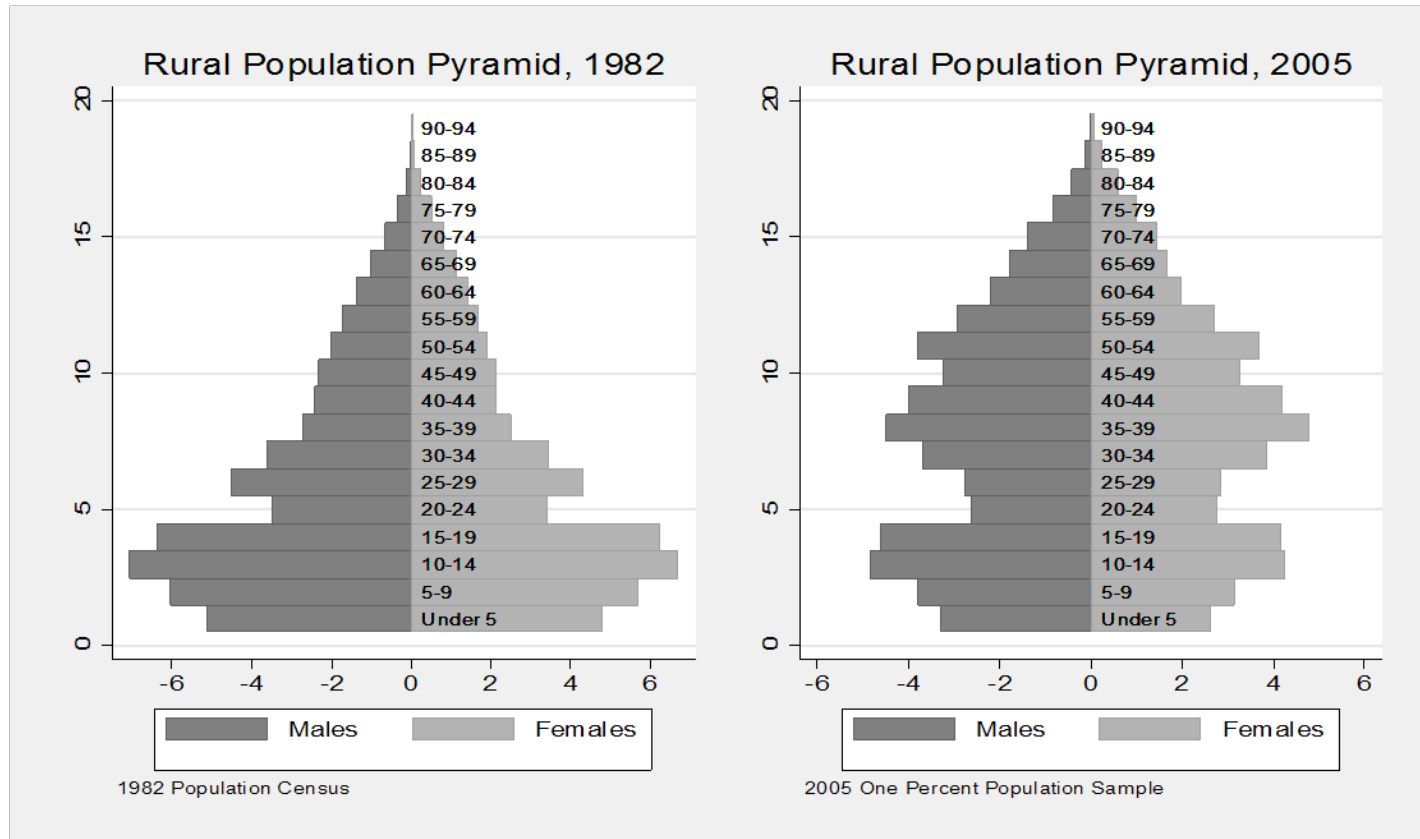
- Migrant opportunity has a fairly significant, negative effect on decision to enroll in high school in rural China
 - Elasticity at mean share of migrant network: -0.191
- Robust to several extensions of the model
 - Inclusion of time-varying variables at village level potentially related to unobservables
 - Inclusion of a range of family characteristics

Discussion

- Why? Occupational segregation in cities.
 - Migrants not employed in jobs that require HS/College education
- Likely reinforced by general equilibrium effects and higher wages locally subsequent to depletion of the labor force
- Irreversibility of the high school enrollment decision
- Implications for long-term inequality within urban areas.
- Policy Responses:
 - Subsidize high school education
 - Expand vocational technical high schools and migrant training

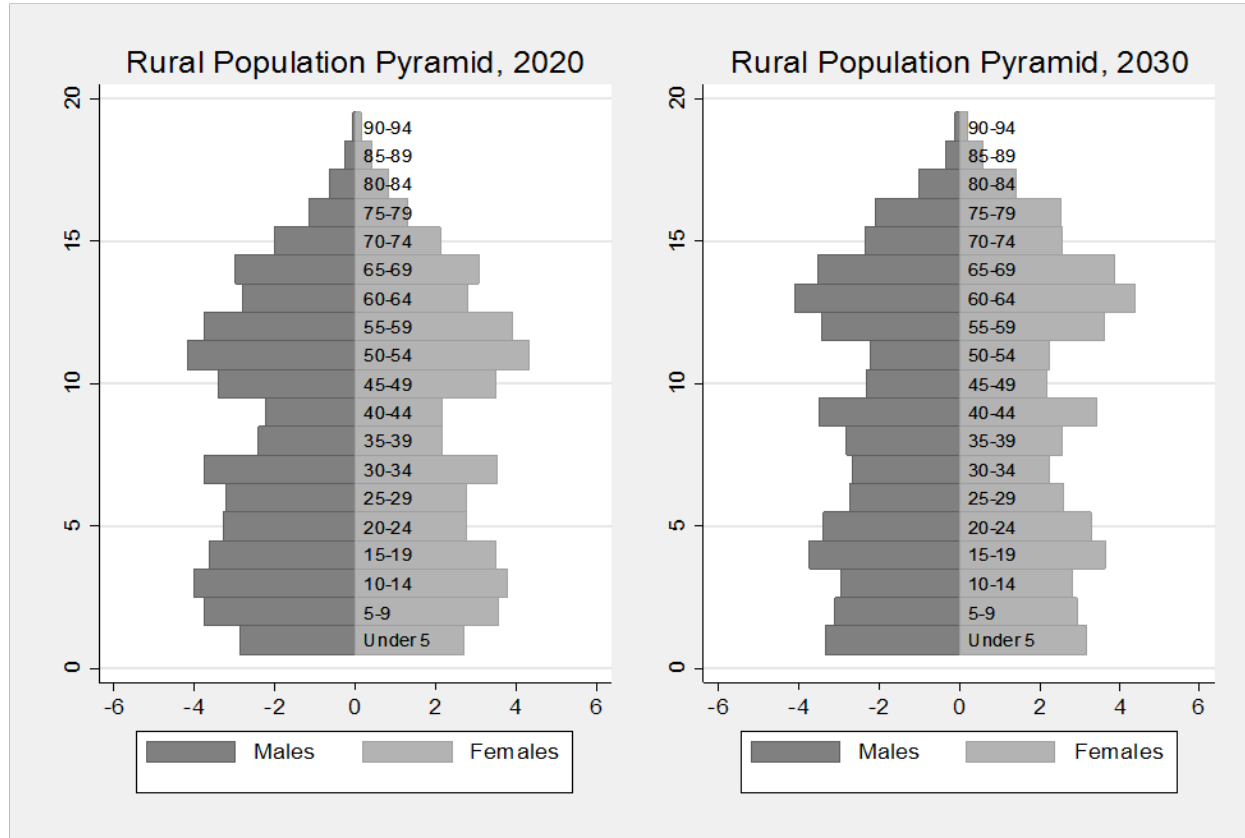
Question 3: What is the Effect of Rural to Urban Migration on the Well-Being of the Rural Elderly?

Fertility is Higher in Rural Areas, but Young Adults Migrate Out



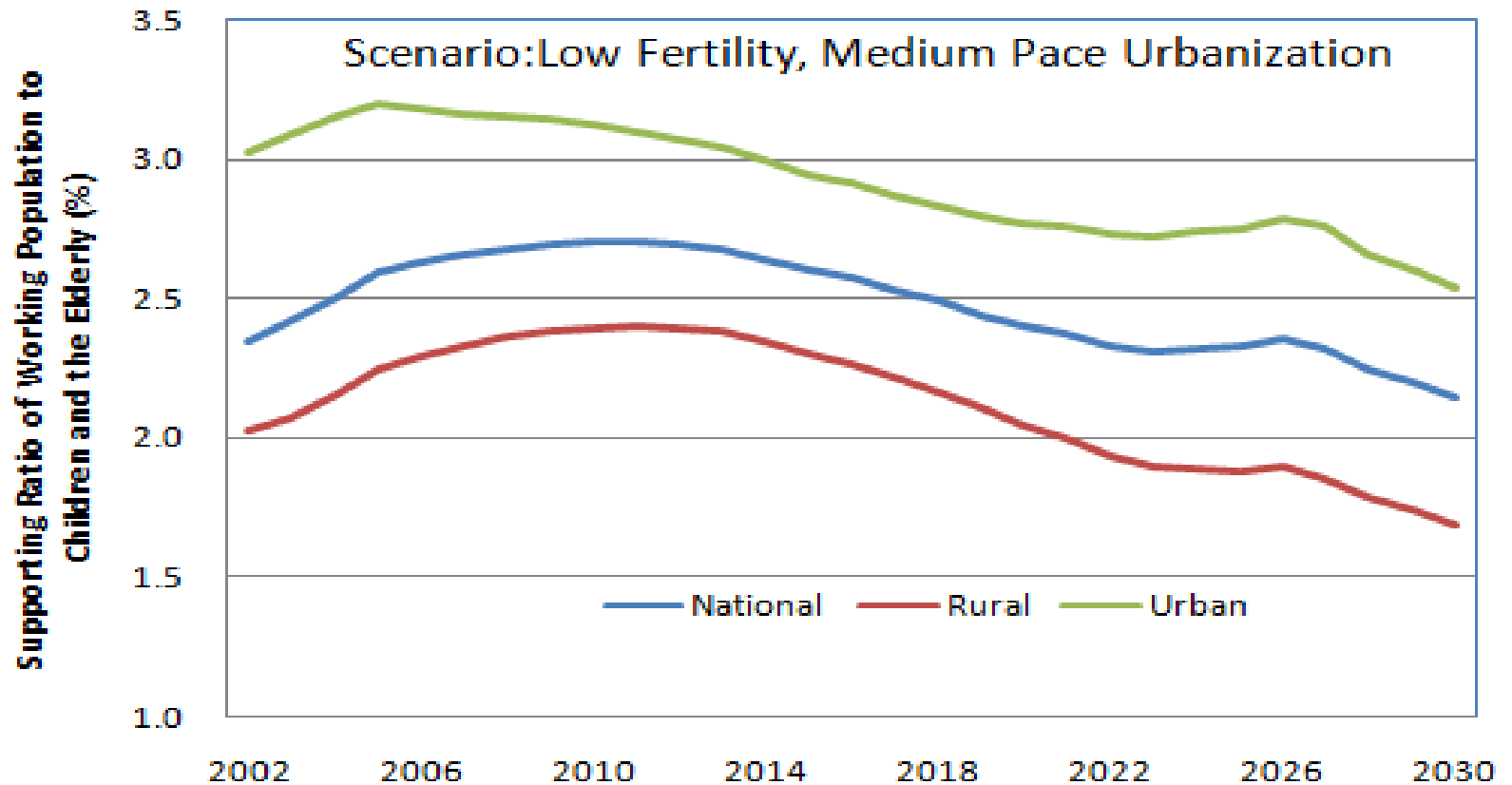
Source: National Bureau of Statistics, 1982 Population Census, 2005 One Percent Population Sample Survey Data, China Statistics Press.

Projected Future Rural Population Structure Raises Concerns Even More

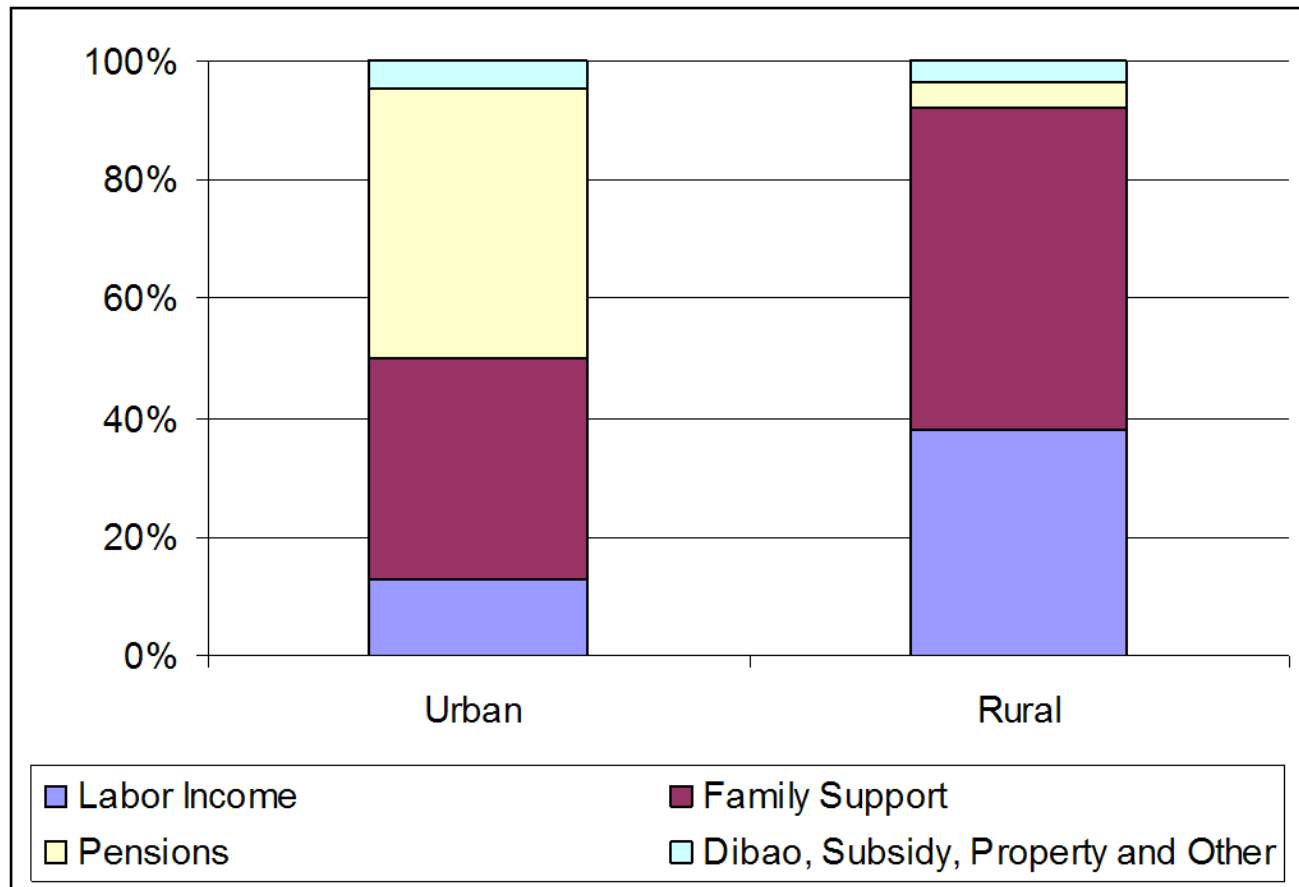


Source: Cai, Giles and Wang (2009)

Faster Population Aging in Rural Areas Will Lead to a Declining Support Ratio After 2011



Sources of Financial Support for the Urban and Rural Elderly, 2005



The Well-Being of the Rural Elderly

- Demographers Studying Developing Countries Have Used Co-Residence Patterns to Assess Viability of Traditional Support Mechanisms
 - A Proxy for Provision of Instrumental Care which is Often Unobserved.
 - Significant Financial Transfers Occur Within Households
 - Decline in Co-Residence has Sparked Concerns About How Well These Mechanisms are Functioning

Descriptive Evidence Informing Two Policy-Relevant Questions

- How Responsive are Private Transfers to Low Levels of Pre-Transfer Income? Does descriptive evidence suggest that a public transfer could crowd out private transfers?
- Are Private Transfers Sufficient to Keep Elderly Out of Poverty?
- Evidence Should be Interpreted as Descriptive as we do not Establish a Causal Relationship between Migration Net-Transfers

Concluding Thoughts on Transfers

- Evidence of Crowding Out at Low Levels of Pre-Transfer Income during the 1990s, but Only Partial Crowding Out After 2000
- Expected Value of Transfers is Not Significantly Lower for Households Without Migrant Children
- Evidence of Greater Risk Associated with Transfers to Households who Have Migrant Adult Children
- New Rural Pension Schemes Aims to Exploit Altruistic Motives to Encourage Participation of Working Age Adults (“Family Binding”)