Financial Inclusion:
Concepts, Issues and Policies for India

Nirvikar Singh

University of California, Santa Cruz

IGC-Ideas For India-ISI

India Development Policy Conference

New Delhi, July 13, 2017

Introduction

Financial Development

- Includes
  - Depth
  - Access/Inclusion
  - Efficiency
  - Stability
- Important for growth
- Inclusion directly important for equity

Financial Inclusion

- World Bank (2014)
  - “the proportion of individuals and firms that use financial services”
- Current
  - “Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way.”
  - http://www.worldbank.org/en/topic/financialinclusion/overview#1

Potential Benefits

- “Access to a transaction account is a first step toward broader financial inclusion since it allows people to store money, and send and receive payments.”
  - Gateway to other financial services, e.g., credit and insurance
  - Lower transaction costs for daily economic activities
  - Ability to plan for longer-term needs
  - Opportunity to create buffers for unexpected emergencies.

Additional Benefits

- Improve efficiency and targeting of government welfare programs
  - Transfers made directly to citizen bank accounts can bypass corrupt or inefficient intermediaries
- Wider instrument of reducing corruption and terrorism
  - Enabling better monitoring and regulation of financial transactions
- Digital technology a key enabler

Three Survey Articles (1)

- Karlan and Morduch (2009)
  - “Access to Finance”
  - New credit mechanisms and devices that help households manage cash flows, save, and cope with risk
  - Issues of contract design, product innovation, regulatory policy, and bottom-line economic and social impacts
  - Importance of attention to detail in finding workable solutions to lack of financial access

Three Survey Articles (2)

- Aggarwal and Klapper (2013)
  - Organized around barriers to financial inclusion and policies to overcome these barriers
  - Barriers include time and financial costs of opening and maintaining bank accounts, and cost of meeting documentation requirements
  - Ways of reducing costs include regulatory policy changes, acceleration of adoption of digital technology-based mechanisms, and institutional innovations

Three Survey Articles (3)

- Karlan et al. (2016)
  - Emphasize challenges of market imperfections and deviations from fully rational behavior in efforts to increase financial access
  - Optimistic conclusions from empirical studies about the potential of digital technologies and of savings products to provide measurable benefits
  - View areas like microcredit and insurance as presenting greater difficulties for successful innovation

Overview of Research

General Analyses (1)

- Demirgüç-Kunt and Klapper (2013)
  - Public data set that measures the financial behavior of adults in 148 countries
  - Document the most important barriers to bank use
    - E.g., cost of opening account, and need for documentation of identity and residence
- Sarma and Pais (2011)
  - Cross section data from several dozen countries
  - Lower income inequality, higher literacy levels, and better physical and communication infrastructure are all associated with greater financial inclusion

General Analyses (2)

- Cull et al. (2012)
  - Several chapters provide overviews of the state of global knowledge of financial inclusion
  - Estimate the number of adults in different countries and regions who are “unbanked”: Poverty by itself not a barrier
  - FinScope surveys: detailed product-level information about the use of financial services
- Karmarkar et al. (2011) (on India)
  - Identify institutional and resource constraints
  - Comprehensive account of numerous past and current policy initiatives

Banking (1)

- Burgess and Pande (2005), Burgess, Wong and Pande (2005)
  - National state-level study for India
  - Positive impacts of bank branch expansion on poor and disadvantaged
- Kochar (2011)
  - Uttar Pradesh in India, district level
  - Mixed evidence
- Young (2015)
  - Positive impacts of expanding bank access in India on economic activity

Banking (2)

- Somville and Vandewalle (2015)
  - Field experiment for rural India
  - Bank accounts increased savings
- Prina (2015)
  - Field experiment in Nepal
  - More mixed results with no-fee bank account access
- Dupas et al. (2016)
  - Field experiments in Uganda, Malawi and Chile
  - Weak effects of bank access
- Anson et al. (2013)
  - Positive impacts of post office savings (cross-country study)

Microcredit/Microfinance (1)

- Ahlin, Lin and Maio (2011)
  - Meta-analysis of 373 MFIs
  - Complementarity between MFI performance and that of broader economy
- Van Rooyen, Stewart and De Wet (2012)
  - Sub-Saharan Africa
  - Microfinance has mixed impacts on the livelihoods of the poor
- Banerjee, Karlan and Zinman (2015)
  - Review for six randomized evaluations of microcredit
  - There is a “consistent pattern of modestly positive, but not transformative, effects.”

Microcredit/Microfinance (2)

- Cull et al. (2016)
  – Financial sustainability of the microfinance business model: subsidies may not always be necessary.
- D’Espallier et al. (2013)
  – MFIs that do not depend on subsidies are still successful as social ventures
- Fafchamps et al. (2014)
  – In urban Ghana, find that capital coming directly into the business sticks there, but not cash
- Roodman and Morduch (2009)
  – Results for an earlier study for Bangladesh not robust

Small Firm Finance (1)

- De Mel et al. (2011)
  - RCT in Sri Lanka
  - Better information on loan products not enough by itself to efficiently improve access
- Dupas and Robinson (2013)
  - RCT in Kenya: bank accounts for self-employed
  - Female market vendors did better, not male bicycle taxi drivers
- Karlan et al. (2015)
  - Experimented with providing consulting and financial capital to microenterprise tailors in Ghana
  - No significant long run impacts

Small Firm Finance (2)

- Cross-country studies
  - Beck (2007), Beck and Demirguc-Kunt (2006), Love and Pería (2015)
  - Bank competition improves access, access to formal finance has positive impacts
- Single country studies
  - Banerjee and Duflo (2008) and De and Singh (2014), both for India, and Ayyagiri et al. (2010) for China, find that small firms are credit rationed or do better when less constrained

Agricultural Credit

- Can be a political tool (e.g., Cole, 2009)
- Oboh and Ekpebu, 2011
  - Farmers in Nigeria: delays in disbursing bank loans as well as diversion of loans to non-farm purposes
- Rahman (2011)
  - Farm credit in Bangladesh may be inefficiently and insufficiently allocated
- Studies for India (e.g., Sharma and Kumawat, 2014) and Pakistan (e.g., Mehmood et al., 2012) also document similar situations

Farmers' Insurance (1)

- Nair (2010)
  - Micro data from Agriculture Insurance Company of India
  - Weather insurance is market-based and financially sustainable, more so than yield-based insurance
- Cole et al. (2014)
  - Rainfall insurance purchases in Gujarat
  - Demand highly sensitive to payouts
- Gine (2009)
  - Need for rapid payouts given farmer liquidity constraints

Farmers' Insurance (2)

- Takahashi et al. (2016)
  - Livestock insurance in Ethiopia
  - Price sensitive demand
- Karlan et al. (2011)
  - RCT in Ghana
  - Little interaction between insurance and credit
- Karlan et al. (2014)
  - RCTs in Ghana
  - Demand for agricultural insurance was strong, and led to significantly larger agricultural investment as well as riskier production choices

Health Insurance (1)

- Jutting (2003)
  - Senegal: community-based (mutual) health insurance may work for the poor
- Wang et al. (2005)
  - China: benefits may be skewed toward richer participants
- Studies for India
  - Palacios et al. (2011), Nandi et al. (2013), Selvaraj and Karan (2012), Ravi and Bergkvist (2015), Sood et al., 2013; Karan et al. (2015), Rao et al. (2014)
  - Mixed evidence, varies by time, location and implementation

Health Insurance (2)

- Banerjee et al. (2014)
  - RCT in India with largest MFI
  - Bundling microcredit with health insurance did not seem to work
- Islam and Maitra (2012)
  - Panel data from Bangladesh
  - Microcredit provided cushion against health shocks (reducing need to sell livestock)

Payments Technologies (1)

- M-PESA scheme in Kenya
  - Enables more money transfers and consumption smoothing (Jack, Ray and Suri, 2013; Jack and Suri, 2014)
  - Lack of competition may reduce access (Kendall et al., 2011)
  - More competition and access in Tanzania (Bourreau and Valletti, 2015)
- Many other digital payments schemes in other countries
  - Details of infrastructure, regulation and design matter

Payments Technologies (2)

- India
  - Digital payments conceptualized as one component of a three-part strategy for financial inclusion using digital technologies: JAM, i.e., Jan Dhan (banking), Aadhaar (identity) and Mobile (transactions)
  - Biometric identity cards reduced corruption (Banerjee et al., 2016; Muralidharan et al., 2016; Imbert and Papp (2015)
  - Question of whether JAM is the best framework for financial inclusion via digital innovation (Ravi and Gakhar, 2015)

Financial Literacy (1)

- Challenging even in industrialized countries (Lusardi and Mitchell, 2014)
- Overcoming information asymmetries not easy (Gine et al., 2014, for Mexico; Alan et al., 2015, for Turkey)
- Financial education programs often don't work (Miller et al., 2014), though rule-of-thumb guidelines may (Drexler et al., 2014)

Financial Literacy (2)

- Cole et al. (2011)
  - Field surveys in India and Indonesia and RCTs in Indonesia
  - financial training not effective for promoting the use of bank accounts
- De Mel et al. (2014)
  - RCT in urban Sri Lanka
  - Business training had limited impact
- Karlan and Valdivia (2011)
  - RCT in Peru
  - Limited positive impacts

Behavioral Factors

- Difficulties of commitment in savings
  - Commitment devices can work (Ashraf et al., 2006, 2010, for Philippines; Dupas and Robinson, 2013, for Kenya; Karlan and Linden, 2016, for Uganda)
- Myopia/procrastination by farmers in Kenya
  - Overcome with limited-time discounts: Duflo et al., 2011
- Inefficiencies in business decisions
  - Beaman et al. (2014), Dupas and Robinson (2014), and Kremer et al. (2015), for Kenya

Recent Studies for India (Mostly IGC)

General Financial Inclusion

- A recent IPF study (Badarinza et al., 2017) uses a major household survey to provide a cross-sectional picture of both the asset and liability sides of household balance sheets in India
- Campbell et al. (2012) examine India's mortgage market
  - As indicated from the household survey, Indians' use of mortgages for housing is quite limited
  - Administrative data on over 1M loans
  - Regulatory changes to increase lending to small borrowers worked, but with some cost in default rates
  - Policies designed for financial inclusion require attention to market structure, incentives of market participants, and learning and adjustment through ongoing analysis of market data

Banking (1)

- Cole et al. (2015) examine bank lending through an experiment with commercial bank loan officers
  - High-powered incentives did lead to greater screening effort, separating “good” from “bad” borrowers, and to more profitable lending decisions
  - Deferred compensation and limited liability toned down the incentive effects
  - Career concerns and some personality traits (but not others) affected loan officer behavior
  - Organizational structure matters

Banking (2)

- Field et al. (2016) use data on the expansion of the SEWA Bank to examine the impact of access to microfinance on women's labor force participation
  - Access to such loans helped integrate women into the labor force over a period of several years
  - Effect was driven by greater participation of women in household business activity
  - Possible effect on fertility as well
  - Financial inclusion can trigger broader changes

Microcredit/Microfinance (1)

- Field et al. (2013) conducted an RCT to compare a standard microcredit contract, requiring repayment to begin immediately after the disbursement of the loan, to an alternative that included a two-month grace period
  - Grace period increased short-run business investment as well as long-run profits but doing so also raised default rates
  - Net welfare effects might be positive

Microcredit/Microfinance (2)

- Barboni (2016) focuses on contractual design and repayment flexibility
  - More entrepreneurial borrowers were more likely to take-up the flexible contract
  - More risk-averse borrowers, on the other hand, were more likely to choose the rigid contract when it was less costly than the flexible contract
  - Barboni and Agarwal (2017) currently extending this analysis to include more detailed data on microenterprise investment decisions and performance
  - Details matter

Small Firm Finance

- Empirical literature suggests SMEs in India get squeezed
- Raj and Sen (2013) provide a comprehensive empirical analysis of very small family firms in India
  - Strong evidence that finance constraints play an important role in firm transition from family-labor-only firms to small firms that use hired labor, but even more so for the growth of the latter beyond six workers
  - Infrastructure, resources and amenities matter
  - Current government policies do not seem to help

Agricultural Credit (1)

- Maitra et al. (2014)
  - Field experiment with an innovative variant of microcredit, trader-agent intermediated lending (TRAIL)
  - TRAIL loans did much better than conventional group-based loans (GBL) in increasing production of the leading cash crop and farm incomes
  - borrowers selected by TRAIL agents were more able farmers than those who self-selected into the GBL scheme
  - Details of market institutions and incentives matter

Agricultural Credit (2)

- Mitra et al. (2012)
  - Detailed analysis of how potato farmers in West Bengal sell their crop to local traders
  - Providing farmers with access to market price information to reduce their informational asymmetry vis-à-vis traders did not have a significant average impact on farmgate prices
  - Easing credit constraints for small farmers, so that they have to rely less on trade credit from intermediaries, could improve their bargaining power and increase the value of price information for farmers
  - Interlinking of markets matters

UC SANTA CRUZ

Farmers' Insurance (1)

- Gaurav et al. (2011)
  - RCT involving different methods of marketing rainfall insurance to small-scale farmers in Gujarat
  - a customized financial literacy and insurance education module had a positive effect on rainfall insurance adoption
  - Only one marketing intervention, a money-back guarantee, had a consistent and large effect on farmers' purchase decisions
  - Building trust in concrete ways matters

Farmers' Insurance (2)

- Mobarak and Rosenzweig (2013)
  - Examine the interaction between informal risk sharing, index insurance and risk-taking using a large scale RCT
  - Informal group-level risk sharing potentially made up for weaknesses in weather index insurance, and increased the demand for such insurance
  - Index insurance had the potential to do better than informal indemnification in incentivizing farmers to invest in riskier technologies with higher average returns
  - Offering insurance contracts to cultivators could lead to increased risk-taking, and to increased risk exposure of agricultural laborers, making the latter more likely to purchase weather insurance themselves when aware of this possible effect

Health Insurance

- Health care is a credence good, making trust important
- Two projects examine social network impacts on health insurance
  - Berg et al. (2012): how incentive pay and social distance interact in the process of disseminating information about India's RSBY public health insurance program
    - Incentivized agents overcame social distance
  - Debnath and Jain (2015) examined role of caste networks in increasing utilization of Aarogyasri, Andhra Pradesh's state-level publicly financed health insurance program

Financial Literacy

- Halan and Sane (2017) evaluate the effectiveness of disclosures in the context of the insurance market in India, focusing on a specific life insurance product
  - Presented product advertisements to customers with four different sets of disclosures
  - Results suggest that consumers may lose focus with “too much” information, and that information is more likely to be valuable if understandable in the context of prior financial literacy
  - Financial education is difficult but achievable

Behavioral Factors

- These can arise from social considerations, in addition to individualistic anomalies
- Can matter for the diffusion and adoption of new financial services
- Gangadharan et al. (2014) analyze the Bihar Rural Livelihoods Project (JEEViKA)
  - Dishonesty, trust and gender interact in complex ways
  - Results can be compared with those for SEWA Bank or farmers' insurance to better understand how to create efficient and durable programs for financial inclusion

Lessons and Conclusions

Summary

- Financial inclusion is a complex and multidimensional concept
- Focus here on decomposing financial inclusion into the provision of more specific financial services, and examining the empirical evidence for each
- Evidence for different countries and programs is variable and mixed
- Recent work on India indicates that well-designed and implemented research studies can provide clear answers for Indian contexts, for a range of aspects of financial inclusion, and guide policy design
- **Still areas where our knowledge is limited or uncertain, and further empirical research can be directly beneficial for policy design**

Previous Conclusions

- Karlan and Morduch (2009)
  - "The lessons [of concrete trials] are thus not hypothetical but are based on actual products delivered by actual institutions."
- Aggarwal and Klepper (2013)
  - "For financial inclusion efforts to be successful, policy-design must be tailored to the systemic failure in each setting."
- Karlan et al. (2016)
  - Digital technology opens up new possibilities for reducing transaction costs, information asymmetries and market distortions
  - Challenges of scaling up, integrating different services, and dealing with societal contexts

More Lessons for India (1)

- Cole et al. (2015) and Field et al. (2016) both, in very different contexts, highlight the importance of organizational innovations that improve incentives within the banking sector
- Field et al. (2013), Raj and Sen (2013) and Barboni (2016) imply that there is much to learn in India about the specifics of relaxing financing constraints for microenterprises up to more substantial small and medium firms, including contract design, monitoring and enforcement, and training

More Lessons for India (2)

- Gaurav et al. (2011) and Mobarak and Rosenzweig (2013) provide newer evidence for India on how to design agricultural insurance
- Pay attention to integration with access to agricultural credit and market access (Mitra et al., 2012 and Maitra et al., 2014)
- Berg et al. (2012) and Debnath and Jain (2015) shed light on the processes that drive acceptance and adoption of innovations like health insurance
- Many other aspects of financial markets and inclusion need more study, including mortgages (Campbell et al., 2012) and life insurance (Halan and Sane, 2017), in the context of financial education and achieving greater financial literacy

Thank you!