



## Development of Financial Inclusion Index: Recent Empirical Research Review

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### Abstract:

A growing corpus of scholarly research indicates that individuals, particularly women and individuals with low incomes, derive significant advantages from accessing appropriate financial services. This study provides an overview of financial inclusion on a worldwide scale, while also examining the existing empirical data on the advantages of utilizing financial products, such as loans, savings accounts, insurance, and payment services, in relation to inclusive growth and economic development. In addition to engaging in a discourse on prospective areas of research, this study also endeavors to tackle some impediments that hinder the advancement of financial inclusion.

**Keywords:** financial inclusion, economic development, inclusive growth

### Introduction

When individuals are financially included, it indicates that they can access and utilize a variety of suitable financial services. These services need to be rendered in a well-regulated setting, ethically, safely, and sustainably for the provider as well as the customer. Having a deposit or transaction account at a bank, other financial institution, or through a mobile money service provider, which can be used to send and receive money transfers as well as store or save money, is the first step toward financial inclusion. Nevertheless, according to Demirguc-Kunt et al. (2015), 2 billion individuals, or 38%, stated they did not have an account as of 2014. Along with the usage of official insurance products that help individuals better manage financial risks, financial inclusion also



includes adults' access to loans from legitimate financial institutions, which they may utilize to invest in business and educational possibilities.

In addition to discussing the advantages of financial inclusion and how it might support equitable growth and economic development, this article gives a brief global overview of financial inclusion and summarizes relevant empirical research.

In the conclusion, some of the obstacles to achieving the advantages of financial inclusion are outlined, along with suggestions for further research.

Through assisting people with risk management, consumption smoothing, and future investment, financial inclusion can help lower poverty and inequality. A wide range of financial services are used by adults worldwide and across all socioeconomic classes. But a lot of adult low-income people rely on unofficial financial services (Collins et al., 2009). By enabling them to invest in businesses and education, access to formal financial services helps the impoverished escape poverty by facilitating more effective and safe financial transactions. Additionally, financial inclusion helps keep individuals out of poverty by offering strategies for coping with economic shocks such as job loss or divorce. This is particularly important for the poorest households.

According to certain evidence, financial depth, which is related to but distinct from financial inclusion, has the potential to facilitate shared economic growth and development. The amount of financial development is often assessed using macroeconomic indicators, such as a country's credit-to-GDP ratio or the market value of its stock market. On the other hand, financial inclusion is commonly measured by the proportion of persons who have access to financial accounts. The level of financial inclusion and development in a country is determined by a range of factors, including per capita income, governance effectiveness, institutional quality, information accessibility, and regulatory framework (Allen et al., 2016; Rojas-Suarez, 2010; Karlan et al., 2014; Park and Mercado, 2015). Previous studies have shown empirical evidence linking measures of financial depth to reduced levels of income inequality and accelerated economic development (King and Levine, 1993; Beck et al., 2000; Clark et al., 2006; Beck et al., 2007; Demirguc-Kunt and Levine, 2009).



In order to support their claim that increased access to financial services increases income for low-income individuals by allowing owners of informal businesses to continue operating and creating an overall increase in employment, Bruhn and Love (2014) used a natural experiment in their study of Mexican towns where bank branches opened quickly. Burgess and Pande (2005) found a correlation between the expansion of bank branches in rural areas and a decline in rural poverty in India; however, other researchers have contested these findings (Panagariya 2006 and Kochar 2011). Within the limitations of country-level statistics, the IMF has connected financial inclusion to a number of macroeconomic outcomes, including economic progress, stability, and equality, according to Sahay et al. (2015). Their research suggests that there could be a positive relationship between financial inclusion and these results, but it's possible that other factors like living standards or the robustness of the legal system would have an impact. The paper proceeds as follows: Section 2 provides a global overview of account ownership. Section 3, which is organized around the four primary types of formal financial products—credit, insurance, savings, and payments—covers the statistics demonstrating the benefits of financial inclusion.

In Section 4, a few of the challenges to achieving greater financial inclusion are discussed along with ideas for more study.

### **Financial Inclusion: Benefits and Risks Proven by Data**

#### **Payment Gateway**

According to data conducted by Niger's social transfer program, the use of mobile transfer for disbursing transfers has resulted in a significant reduction in both travel and wait time. Specifically, the time required to receive manual cash payments has been reduced to one-fourth of its original duration.

Overall, the time efficiency associated with digital transfers resulted in a monetary value sufficient to provide sustenance for a family of five for a single day, as determined by agricultural wage standards (Aker et al., 2013).

Based on a study carried out in Mexico, it has been approximated that the implementation of digital payment systems by the government, which commenced in 1997, led to an annual decrease of around 3.3 percent in expenditures related to wages, pensions, and social assistance. According



to Babatz (2013), the decrease in question totals around \$1.3 billion. In the specific context of Kenya, it is worth mentioning that a considerable portion of individuals, specifically two-thirds, have expressed their inclination towards utilizing the mobile money service called M-Pesa as the most efficient and convenient approach to receive financial transfers from their relatives residing in different geographical areas (GSMA, 2014). Similarly, in times of severe exigency, there may be instances where accelerated payouts of insurance claims or governmental financial relief are offered. To provide an example, the government of Liberia shown effectiveness in compensating many Ebola workers, who were often deployed in isolated areas, through the implementation of bank accounts for healthcare staff and the facilitation of digital transactions for remuneration (BTCA, 2015). In the mid-1990s, the United States embarked on a process of transitioning from paper checks to electronic debit cards as a method of distributing social benefits, therefore obviating the need for physical check cashing. According to Wright et al. (2014), the introduction of this transition resulted in a subsequent reduction of around 10 percent in the overall crime rate during the next two decades.

According to a study conducted by Muralidharan et al. (2014), the utilization of smart cards for disbursing social security pension benefits in India resulted in a notable reduction of 47 percent, equivalent to a decrease of 1.8 percentage points, in the solicitation of bribes by government officials. The simultaneous conversion of cash payments to accounts may be beneficial for governments and businesses as it helps in mitigating the occurrence of fraudulent receivers sometimes referred to as "ghost" beneficiaries. The use of stricter identification verification protocols during the process of depositing funds into accounts serves to enhance the challenge faced by potential phantom beneficiaries in evading discovery. According to Muralidharan et al. (2014), the introduction of smart card-based digital social security pension payments in India led to a decrease of 1.1 percentage points in the prevalence of fraudulent beneficiaries. colleagues, 2012). The individuals who were positively impacted by this initiative encompassed the elderly population, young individuals, members of minority communities, and individuals with little financial resources (Turner et al., 2012; Turner and colleagues, 2012).



As stated by Varghese (2012). In addition, individuals are provided with the option to request modest, temporary loans via M-Shwari, a savings and loan service available in Kenya. This service is jointly offered by CBA, a financial institution, and Safaricom, the mobile money provider responsible for M-Pesa (Cook and McKay, 2015). Eligibility is contingent upon prior payments and transactions conducted with both entities.

### Saving Products

Individuals allocate funds for the purpose of retirement planning, significant acquisitions, investments in entrepreneurial ventures or educational pursuits, as well as unforeseen emergencies. In a global context, it was reported in 2014 that 56% of the participants indicated their engagement in investment or savings activities over the preceding year. Notably, 54% of these individuals resided in developing countries. Moreover, empirical evidence exists to support the notion that savings accounts can contribute to the achievement of certain development goals (see to Karlan et al., 2014a for a comprehensive review). An empirical investigation carried out in Kenya revealed that individuals engaged in market vending, predominantly women, exhibited significantly higher levels of savings when provided with access to savings accounts. Consequently, the investment of their business had a significant growth of 60%, but their personal spending witnessed a notable increase of 38% when compared to the control group (Dupas and Robinson, 2013a). However, the research findings did not indicate a comparable benefit for male bicycle taxi drivers. Based on the statistical data provided by Brune et al. (2016) in Malawi, it can be inferred that the utilization of accounts has the potential to provide enhanced financial savings among farmers. Consequently, this increased savings may subsequently be allocated towards augmenting family expenditures and bolstering agricultural production. There is a body of research, as demonstrated by studies conducted by Brune et al. (2015), Dupas and Robinson (2013b), and Karlan et al. (2014a), that suggests the potential efficacy of savings account commitment features. These characteristics impose restrictions on accessing funds until a predetermined date or goal is achieved, hence serving as a potential mechanism.



Burgess and Pande(2005), using a natural experiment of bank growth in India, have shown that for every percentage point rise in theIn 2005, Burgess and Pande carried out research using an inherently occurring experiment concerning the expansion of banks in India. According to their data, there is a 2.22 percent decrease in rural poverty for every percentage point increase in the amount of savings kept in bank accounts. However, Panagariya (2006) and Kochar (2011) have questioned the veracity of these conclusions. Percentage of savings in bank accounts, notwithstanding disagreements with the results from Kochar (2011) and Panagariya (2006).

### Acclaim

A significant portion of the population engages in occasional borrowing of funds. Individuals have the option to invest in real estate properties, such as residential houses, or engage in commercial or educational ventures, or perhaps pursue a combination of both. Moreover, a significant number of individuals resort to borrowing funds in order to cover unforeseen expenses of an urgent nature. A global survey revealed that a minority of individuals, namely 42%, acknowledged engaging in borrowing activities over the last year, excluding credit card transactions.

The utilization of financial institutions for borrowing purposes, when considered appropriate, has certain advantages in contrast to borrowing from friends, family, or informal lenders. When individuals are restricted to obtaining loans only from their own social network, which consists of family and friends residing inside their community, their ability to access financial resources becomes confined to the boundaries of that specific community. The constraint can be alleviated by acquiring a loan from a reputable financial institution. This might be of particular importance for households characterized by low income, since they may face constraints in terms of financial resources that limit their ability to spend funds towards investments in education or entrepreneurial opportunities. Moreover, consumers who secure loans from reputable financial institutions may have more advantageous credit terms in contrast to those offered by informal lenders.

However, the extant literature on microfinance reveals ambiguous evidence about the impact of loan accessibility on development results. The original enthusiasm surrounding microcredit in the 1990s and early 2000s mostly stemmed from anecdotal evidence and descriptive statistics that



emphasized the notable economic and social benefits (Morduch, 1999; Banerjee, 2013; Banerjee et al., 2015b). In recent times, there has been a discernible escalation in the stringency of impact studies, leading to a greater inclination towards cautious and measured assessments.

Pitt and Khandker (1998) undertook an extensive investigation to evaluate the impact of microcredit, with a special emphasis on the endeavors carried out by Grameen Bank, a notable microcredit institution, along with two other microfinance institutions in Bangladesh. This research constitutes one of the first efforts to comprehensively examine the ramifications of microcredit. Upon analyzing the outcomes of individuals who met the criteria for microcredit eligibility and those who did not, within villages where microcredit institutions had recently been established, it was observed that the provision of microcredit had a favorable influence on various aspects, including household consumption expenditures, assets, labor supply, and children's school attendance. The impact was notably significant when the provision of microcredit was expanded to encompass women. Morduch (1998) presents reservations regarding the empirical methodology utilized in the study, a critique that Pitt (1999) refutes as unsubstantiated in a subsequent rejoinder. Subsequently, the aforementioned discourse has elicited a succession of further reactions from advocates and adversaries of the initial contention. The numeral 7 represents a numerical quantity.

There are prevailing issues around the identification methodology utilized by Pitt and Khandker, since it remains unclear if the selection of microcredit institutions in villages was carried out through a random process. Subsequent studies utilizing randomized controlled trials to evaluate the impacts of microcredit have shown more cautious results. This study presents a comprehensive examination and assessment of six notable randomized assessments undertaken in various global locations, specifically Bosnia and Herzegovina, Ethiopia, India, Mexico, Mongolia, and Morocco. The assessments, which have been jointly published in the American Economic Journal: Applied Economics, analyze the effects of microcredit across different models and modalities. The results of these assessments, as synthesized by Banerjee et al. (2015b), indicate that microcredit has limited yet favorable impacts as a means of promoting development, but does not achieve transformative outcomes. While enterprises may get benefits from these loans, it



remains questionable if these gains immediately translate into developmental outcomes, such as increased salaries or broader welfare benefits for individuals.

Moreover, empirical evidence exists about the impact of microcredit on the expansion of credit, as demonstrated by natural experiments. Previous studies have demonstrated, via the use of the natural experiment of bank development in India, that there exists a negative correlation between the increase in the proportion of credit provided and the level of rural poverty. Specifically, it has been found that for each percentage point rise in the share of credit issued, there is a corresponding decrease of 1.52 percent in rural poverty (Burgess and Pande, 2005). However, it is important to note that these findings have been subject to disagreement and criticism from other scholars, such as Panagariya (2006) and Kochar (2011). An alternative study examines the impacts of microcredit through the utilization of Thailand's Million Baht Village Fund Program, as explored by Kaboski and Townsend in their works published in 2011 and 2012. As part of a comprehensive initiative aimed at establishing a village bank system that facilitates access to loans for local residents, a monetary allocation of 1 million Baht (equivalent to about \$24,000) was disbursed to each hamlet in Thailand. The analysis revealed a decline in assets initially, followed by a subsequent return to the expected trajectory over the course of many years. This was accompanied by an increase in income and consumption, as well as an expansion in credit accessibility across villages. Notably, the uniform distribution of funds, irrespective of village population size, contributed to this phenomenon. The study's findings were surprising, since they indicated a minimal impact on the creation of new firms despite the early surge in income and consumption.

#### **Insurance coverage**

Insurance products play a crucial role in managing financial risks that arise from significant and unexpected expenses, such as sudden illness, crop failures, natural disasters, or the loss of income due to the death of a wage earner (Karlan and Morduch, 2010).

Individuals may opt for low-risk, low-return technologies due to the potential for significant fluctuations in income and the absence of insurance coverage (Rosenzweig and Binswanger, 1993; Dercon et al., 2011). According to a study, the implementation of formal agricultural insurance has





been found to enhance individuals' inclination to use high-risk, high-return technologies in the agricultural sector. Nevertheless, it is common for research studies to overlook the welfare implications associated with improved technology solutions that yield greater returns. According to a randomized controlled trial conducted in India, it was shown that the implementation of index-based rainfall insurance within the context of informal risk sharing led to a notable enhancement in the cultivation of high-risk rice varieties (Mobarak and Rosenzweig, 2012). Randomized controlled trials have been conducted in India (Cole et al., 2013) and Ghana (Karlán et al., 2014b) to examine the efficacy of weather-based index insurance. The aforementioned research provide evidence that insurance schemes serve as incentives for farmers to transition from cultivating low-return, low-risk crops to engaging in the cultivation of high-return, high-risk crops. In the context of India, it was observed that farmers who were provided with complimentary rainfall insurance had a notable increase in the cultivation of high-income crops. While these crops have the potential for increased profitability, they also exhibit heightened vulnerability to fluctuations in rainfall patterns. The provision of complimentary insurance to farmers in Ghana was found to have a positive correlation with increased investment in agricultural activities. Moreover, these agricultural practitioners have a preference for selecting crops with higher susceptibility to variations in precipitation. Farmers that were insured had higher incomes and possessed greater amounts of liquid assets after the harvest period. Based on the analysis of welfare outcomes, it was shown that households of insured farmers had a reduction of 8 percentage points in the occurrence of missed meals. There was no observed statistically significant impact on costs in the other category. According to a study conducted by Cai et al. (2015) in China, field research indicates that the implementation of sow insurance leads to an increase in sow investment. According to Cai (2016), the use of weather insurance as a means to mitigate crop losses has been found to have a positive impact on tobacco output.

### Conclusion

Quantitative research on financial inclusion has grown rapidly in recent years. Still, much remains unknown about how financial inclusion affects economic development. Payments, savings, and insurance studies are few, and more are needed to increase knowledge.



Randomized control trials, or experimental field studies, are ambiguous about generalizing positive outcomes to other countries and people. A savings product for Kenyan market women—would a Brazilian farmer benefit? Replicating good interventions in different contexts and explaining how financial inclusion improves livelihoods would address these and other issues. Similarly, further research is needed to discover why financial inclusion is beneficial in some contexts but not others. Current evidence suggests that pricing and product design may significantly affect demand and financial inclusion development.

Thus, to fully benefit from financial inclusion, financial products must be created with people's needs in mind to be relevant and influential on their finances.

Consumer protection and education are needed to build and maintain financial system confidence. Financial inclusion requires a solid legislative framework that fosters innovation, sufficient financial infrastructure, the capacity to execute small-scale financial transactions economically, and a safe, stable, and reliable financial system. Technology has expanded financial services delivery and will likely continue to do so. The link between financial services and economic development may change. In addition to extending research on financial inclusion's effects on household income and vulnerability, linking micro-level evidence of its advantages to macro-level goals like economic development and inequality reduction is vital.

## References

- Aker, J., R. Boumnijel, A. McClelland, and N. Tierney, 2013. "How Do Electronic Transfers Compare? Evidence from a Mobile Money Cash Transfer Experiment in Niger." Tufts University Working Paper.
- Allen, F., A. Demirguc-Kunt, L. Klapper, M.S. Martinez-Peria, 2016. "The Foundations of Financial Inclusion." *Journal of Financial Intermediation*, forthcoming.
- Angelucci, M., D. Karlan, and J. Zinman. 2015. "Microcredit Impacts: Evidence from a Randomized Microcredit Program Placement Experiment by Compartamos Banco," *American Economic Journal: Applied Economics*, 7(1): 151-82.
- Ashraf, N., D. Karlan, and W. Yin, 2010. "Female Empowerment: Further Evidence from a Commitment Savings Product in the Philippines." *World Development* 28(3): 333-44.



- Attanasio, O., B. Augsburg, R. de Haas, E. Fitzsimons, and H. Harmgart. 2015. "The Impacts of Microfinance: Evidence from Joint-Liability Lending in Mongolia." *American Economic Journal: Applied Economics*, 7(1): 90-122.
- Augsburg, B., R. de Haas, H. Harmgart, and C. Meghir. 2015. "The Impacts of Microcredit: Evidence from Bosnia and Herzegovina." *American Economic Journal: Applied Economics*, 7(1): 183-203.
- Babatz, G., 2013. "Sustained Effort, Saving Billions: Lessons from the Mexican Government's Shift to Electronic Payments." Better Than Cash Alliance Evidence Paper: Mexico Study.
- Banerjee, A., E. Duflo, R. Glennerster and C. Kinnan. 2015a. "The Miracle of Microfinance? Evidence from a Randomized Evaluation." *American Economic Journal: Applied Economics*, 7(1): 22-53.
- Banerjee, A. D. Karlan, and J. Zinman. 2015b. "Six Randomized Evaluations of Microcredit: Introduction and Further Steps." *American Economic Journal: Applied Economics*, 7(1):1-21.
- Beck, T. 2015. "Microfinance – A Critical Literature Survey." IEG Working Paper 2015/4.
- Beck, T., A. Demirguc-Kunt, and R. Levine. 2007. "Finance, Inequality, and the Poor." *Journal of Economic Growth* 12 (1): 27–49.
- Beck, T., R. Levine, and N. Loayza. 2000. "Finance and the Sources of Growth." *Journal of Financial Economics* 58 (1): 261–300.
- Bruhn, M. and I. Love, 2014. "The Real Impact of Improved Access to Finance: Evidence from Mexico." *Journal of Finance*, 69:3, 1347-1376.
- Brune, L., X. Gine, J. Goldberg, and D. Yang, 2016. "Facilitating Savings for Agriculture: Field Experimental Evidence from Malawi." *Economic Development and Cultural Change*, 64:2, 187 - 220.
- Burgess, R. and R. Pande. 2005. "Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment." *American Economic Review*, 95, 780–95.
- Cai, H., Y. Chen, H. Fang, and L. Zhou. 2015. "The effect of microinsurance on economic activities: Evidence from a randomized natural field experiment." *Review of Economics and Statistics*, 97, 287-300.



- Cai, J. 2016. "The Impact of Insurance Provision on Household Production and Financial Decisions." *American Economic Journal: Economic Policy*, 8:2, 44–88.
- BTCA, 2015. "Thousands of Ebola workers paid in Liberia". Mimeo.
- Clarke, G., C. Xu, and H. Zou. 2006. "Finance and Inequality: What Do the Data Tell Us?" *Southern Economic Journal* 72 (3): 578–96.
- CGAP (Consultative Group to Assist the Poor), 2011. "CGAP G2P Research Project: South Africa Report." Washington, DC.
- Cole, S., X. Gine, and J. Vickery, 2013. "How does risk management influence production decisions? Evidence from a field experiment." World Bank Policy Research Working Paper Series 6546.
- Collins, D., J. Morduch, S. Rutherford, and O. Ruthven. 2009. *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton University Press.
- Cook, T. and C. McKay, 2015. "How M-Shwari Works: The Story So Far." Consultative Group to Assist the Poor (CGAP) and Financial Sector Deepening (FSD) Kenya: Washington, DC.
- Crépon, Bruno, Florencia Devoto, Esther Duflo, and William Parienté. 2015. "Estimating the Impact of Microcredit on Those Who Take It Up: Evidence from a Randomized Experiment in Morocco." *American Economic Journal: Applied Economics*, 7(1): 123- 50.
- Cull, R., T. Ehrbeck, and N. Holle, 2014. "Financial Inclusion and Development: Recent Impact Evidence." CGAP (Consultative Group to Assist the Poor) Focus Note 9/2014.
- Demirguc-Kunt, A., L. Klapper, D. Singer and P. Van Oudheusden. 2015. *The Global Findex Database 2014: Measuring Financial Inclusion Around the World*. World Bank Group Policy Research Working Paper 7255.
- Demirguc-Kunt, A., L. Klapper, P. Van Oudheusden, and L. Zingales. 2014. "Trust in Banks." Mimeo.
- Demirguc-Kunt, A., and R. Levine. 2009. "Finance and Inequality: Theory and Evidence." *Annual Review of Financial Economics* 1: 287–318.
- Dercon, S. and L. Christiaensen, 2011. "Consumption risk, technology adoption and poverty traps: Evidence from Ethiopia." *Journal of Development Economics*, 96:2, 159-173.



- Duflo, E., 2012. “Women Empowerment and Economic Development.” *Journal of Economic Literature* 50(4), pp. 1051–1079.
- Dupas, P., D. Karlan, J. Robinson, and D. Ubfal, 2016. “Banking the Unbanked? Evidence from Three Countries”. NBER Working Paper No. 22463.
- Dupas, P., and J. Robinson, 2013a. “Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya.” *American Economic Journal: Applied Economics*, 5, 163–92.
- Dupas, P., and J. Robinson, 2013b. “Why Don’t the Poor Save More? Evidence from Health Savings Experiments.” *American Economic Review*, 103, 1138–71
- Duryea, S. and E. Schargrotsky, 2008. “Financial Services for the Poor: Savings, Consumption, and Welfare.” Mimeo.
- Global Findex, 2014. <http://www.worldbank.org/globalfindex>.
- GSMA, 2014. <http://www.gsma.org>.
- King, R. G., and R. Levine. 1993. “Finance and Growth: Schumpeter Might Be Right.” *Quarterly Journal of Economics* 108 (3): 717–37.
- Kaboski, J. P. and R. M. Townsend. 2011. “A structural evaluation of a large-scale quasiexperimental microfinance initiative.” *Econometrica*, 79, 1357–406.
- Kaboski, J. P. and R. M. Townsend. 2012. “The impact of credit on village economies.” *American Economic Journal: Applied Economics*, 4(2), 98–133.
- Karlan, D. and J. Morduch, 2010. “Access to Finance,” in *Handbook of Development Economics*, Volume 5, Elsevier.
- Karlan, D., and J. Zinman, 2010. “Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts.” *Review of Financial Studies*, 23: 433–64.
- Karlan, D., A.L. Ratan, and J. Zinman, 2014a. “Savings By and For the Poor: A Research Review and Agenda.” *Review of Income and Wealth* 60:1, 36–78.
- Karlan, D., R. Osei, I. Osei-Akoto, and C. Udry, 2014b. “Agricultural Decisions after Relaxing Credit and Risk Constraints.” *The Quarterly Journal of Economics*, Vol. 129, No. 2, 597– 652.
- Klapper, L., M. El-Zoghbi, and J. Hess. 2016. “Achieving the Sustainable Development Goals:



The Role of Financial Inclusion.” CGAP.

Kochar, A., 2011. “The Distributive Consequences of Social Banking: A Microempirical Analysis of the Indian Experience.” *Economic Development and Cultural Change*, 59:2, 251-280.

Mobarak, A.M., and M. Rosenzweig. 2012. Selling formal insurance to the informally insured. Working Paper, Yale University.

Morawczynski, O. and M. Pickens, 2009. “Poor people using mobile financial services: Observations on Customer Usage and Impact from M-Pesa.” World Bank: Washington, DC.

Morduch, J. 1998. “Does microfinance really help the poor? Evidence from flagship programs in Bangladesh.” Working Paper, Stanford University.

Morduch, J. 1999. “The Microfinance Promise.” *Journal of Economic Literature*, XXXVII: 1569-1614.

Muralidharan, K., P. Niehaus, and S. Sukhtankar, 2014. “Payments Infrastructure and the Performance of Public Programs: Evidence from Biometric Smartcards in India.” National Bureau of Economic Research. NBER Working Paper 1999.

Panagariya, A., 2006. “Bank branch expansion and poverty reduction: A comment.” Working Paper, Columbia University.

Park, C.-Y., and R. V. Mercado. 2015. “Financial Inclusion, Poverty, Income Inequality in Developing Asia.” Asian Development Bank Economics Working Paper 426.

Pitt, M. M. 1999. “Reply to Jonathan Morduch’s “Does microfinance really help the poor? New evidence from flagship programs in Bangladesh.”” Mimeo, Brown University.

Pitt, M. M. 2014. Response to ‘The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence.’ *Journal of Development Studies*, 50:4, 605-610.

Pitt, M. M. and S. R. Khandker. 1998. “The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter?” *Journal of Political Economy*, 106:9, 58–96.

Pitt, M. M. and S. R. Khandker. 2012. “Replicating replication: Due diligence in Roodman and Morduch’s replication of Pitt and Khandker (1998).” Working Paper 6273, World Bank: Washington, DC.



- Prina, S., 2015. "Banking the poor via savings accounts: Evidence from a field experiment." *Journal of Development Economics*, 115, 16-31.
- Rojas-Suarez, L., and V. Gonzales. 2010. "Access to Financial Services in Emerging Powers: Facts, Obstacles and Policy Implications." OECD Development Center, Background Paper.
- Rosenzweig, M., Binswanger, H., 1993. "Wealth, weather risk and the composition and profitability of agricultural investments." *Economic Journal*, 103:416, 56-78.
- Roodman, D. and J. Morduch. 2011. "Comment on Pitt's responses to Roodman and Morduch." Center for Global Development: Washington, DC.
- Roodman, D. and J. Morduch. 2014. "The Impact of Microcredit on the Poor in Bangladesh: Revisiting the Evidence" *Journal of Development Studies*, 50:4, 583-604.
- Sahay, R., M. Cihak, P. N'Diaye, A. Barajas, S. Mitra, A. Kyobe, Y. Nian Mooi, and S. Reza Yousefi. 2015. "Financial Inclusion: Can It Meet Multiple Macroeconomic Goals?" IMF Staff Discussion Note 15/ 17, September.
- Tarozzi, A., J. Desai and K. Johnson. 2015. "The Impacts of Microcredit: Evidence from Ethiopia." *American Economic Journal: Applied Economics*, 7:1, 54-89.
- Turner, M. P. Walker, C. Sukanya, and R. Varghese, 2012. "A New Pathway to Financial Inclusion: Alternative Data, Credit Building, and Responsible Lending in the Wake of the Great Recession." PERC Press.
- Turner, M. and R. Varghese, 2010. "The Economic Consequences of Consumer Credit Information Sharing: Efficiency, Inclusion, and Privacy." PERC Press.
- World Bank, 2014. *Global Financial Development Report 2014: Financial Inclusion*. Washington, DC.
- Wright, R., E. Tekin, V. Topalli, C. McClellan, T. Dickinson, and R. Rosenfeld, 2014. "Less Cash, Less Crime: Evidence from the Electronic Benefit Transfer Program." National Bureau of Economic Research. NBER Working Paper 19996