May 2023

Agri-SME financing literature review

Evidence Review for Agricultural SME Finance

International Growth Centre

Rocco Macchiavello, Christian Teschemacher, Rania Nasir

IGC

Foreword

Market interventions and policy reforms to mobilise agricultural finance can be most effective when based upon evidence, including data, practitioner insights, and third-party evaluation. Such evidence is limited when it comes to the agricultural SME finance sector. Through the **Evidence Review for Agricultural SME Finance**, IGC and CSAF are working together to expand the knowledge base of what does and does not work for mobilising additional capital into the agricultural finance sector and how to steer that capital for greatest impact.

The International Growth Centre (IGC) is a global research centre that works with policymakers in developing countries to promote inclusive and sustainable growth through pathbreaking research. IGC is based at the London School of Economics (LSE) and majority funded by FCDO.

The Council on Smallholder Agricultural Finance (CSAF) is a leading network of 20 social impact investors that come together to share learning, promote an inclusive finance market, and develop best practices for lending to agricultural SMEs in developing economies.

This initial **Evidence Review for Agricultural SME Finance report** (view executive summary) was commissioned by CSAF with co-funding from the Smallholder and Agri-SME Finance and Investment Network (SAFIN). As part of this evidence review, IGC conducted an **analysis of CSAF members' lending data**, which is presented in the following pages. While IGC can highlight certain relationships between variables of interest, this report does not consider itself an exhaustive analysis of the participating lenders or of impact investors in the agri-SME financing space but, rather, should be considered a foundation upon which future research can build.

Executive summary: Literature review

General

- There is a **lack of rigorous evidence** at the **intersection of agriculture, small- and medium-enterprises (SMEs) and finance** in **developing economies**.
- **Building evidence** along the impact chain will **enable better policies** and **inform improved market interventions.**
- Given the gap in the literature, we drew upon the most **relevant studies and findings** from **related fields.**

Practitioners

- **Practitioner findings are encouraging** regarding the impact of social impact investors serving agri-SMEs.
- At the same time, as reports are not designed as rigorous impact evaluations, practitioners may **presume the magnitude of their impact.**

Academic

- The academic literature illustrates that **credit constraints** are affected by the **underlying risk & size** of a firm.
- Targeted **programmes** that **attempt to improve access to finance for SMEs** in developing economies **can be successful** in their attempts to increase firm investment and performance.
- Along with capital constraints, **risk exposure** can be a major **factor in underinvestment.**
- The SME and microfinance literature provides evidence for the **importance of access to finance for poverty** alleviation.
- As borrowers receiving access to finance offer more competitive prices and services, their **gains may come partly at the expense** of potential borrowers that are **unable to access credit**.

IGC

Roadmap

Practitioner learnings

- What do practitioners find?
- How rigorous is the evidence?
- Where does evidence exist?

Academic literature

Credit constraints and capital additionality

- Theoretical foundations of capital additionality & credit constraints.
- Academic literature on credit constraints.

Access to finance and growth

- Academic literature on how access to finance relates to business growth.

Access to finance and livelihoods

- Academic literature on how access to finance relates to employment and livelihoods.

Moving forward

- What are feasible next steps?
- How to ask relevant questions?

Practitioner evidence base

- What do practitioners find?
- A set of rigorous practitioner findings
- Location and quality of evidence

IGC

Takeaways from practitioner evidence base

- Practitioners report that credit provided to the agricultural sector is often used to expand operations, enhance community welfare, and integrate farmers into formal value chains.

- Reports submitted by lenders put great emphasis on food crops in Africa, while most of the lenders' activities target the coffee sector in Latin America.

- Practitioners produce more findings on their indirect effects on farmers and employees than on their direct effects on SMEs, prioritising understanding of the impact on the target beneficiaries.

- It is challenging to establish large sample sizes and appropriate counterfactuals to measure the impact on agri-SMEs. As such, practitioner reports often only provide anecdotal evidence, qualitative descriptions, descriptive statistics, or pre- and post-comparisons. Rigorous studies by independent researchers are needed to complement existing reports and test impact hypotheses using control groups and other recognised methods.

What do practitioners find?

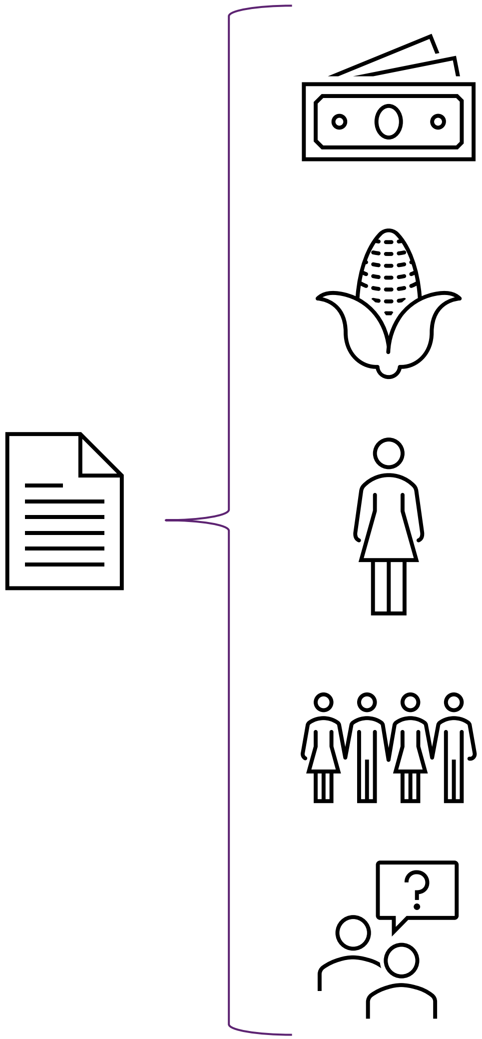
Key messages

- IGC was provided with approximately 200 reports, case studies, papers and other documents used and predominantly produced by practitioners, assessing their impact across a variety of dimensions.

- Credit was often used to scale up operations, with practitioners reporting:
    - Increased enterprise **income**
    - Improved farm **yields**, product **quality**, and farmer **income**
    - Increased provision of income to **women** (through employment, purchase of crops, etc.)

- Practitioners furthermore cite **increased** incorporation of farmers in **formal value chains** through facilitating access to more profitable **export markets** as well as improved **community welfare** in terms of food security and education.

- It is reported that **Technical Assistance (TA)** was often paired with the credit offering, but there is limited evidence specifically on the impact of the TA.



A set of rigorous practitioner findings

Evaluating How Root Capital's Client Businesses Impact Smallholder Livelihoods: Cocoa Cooperatives in Peru

Paper

Naeve & DoCampo
(2020)
Root Capital

Content

- This study assesses the impact of Root Capital-financed businesses in the Peruvian cocoa sector in two areas: farmer livelihoods and gender inclusion.
- Exploring components of income, production and price, the study investigates whether cocoa farmers affiliated with Root Capital businesses earn higher income from cocoa production, and higher overall income relative to comparable farmers who are not cooperative members.
- They use a Quasi-experimental study design; matching Root Capital client members to non-members on retrospective data using a statistical matching algorithm.

Findings

- They find that farmers affiliated with Root Capital clients earned 29% more income from cocoa production in 2018, relative to comparable, unaffiliated farmers in the region, while it is unclear to what extend increases in cocoa income comes at the cost of alternative income streams.
- Furthermore they find that members have more cocoa land, more trees, higher production, and higher sales than non-members.
- Members are significantly more likely to hold any type of certification and to receive TA.
- They find no differences in the probability of taking out a loan in the past year.

Importance

- This study brings forward evidence suggesting that famers affiliated with Root Capital experience improvements across a variety of dimensions, most notably cocoa income.
- It goes beyond simple pre post comparisons by exploiting a quasi experimental matching technique.
- It should be noted that matching techniques rely on the assumption that observed characteristics are sufficient in capturing all relevant differences between observations. As such the study implicitly assumes no relevant unobservable differences.

The Impact of Commodity Development Projects on Smallholders' Market Access in Developing Countries

Paper	Content	Findings	Importance
Amrouk et al. (2020) FAO & CFC	• This report examines the impact of commodity development projects on the market access of smallholder farmers in developing countries. • The report uses a qualitative research approach, based on case studies of several projects implemented by the Food and Agriculture Organization (FAO) and the Common Fund for Commodities (CFC) for different countries. • The report draws on project documents, interviews, focus group discussions, and household surveys.	• The projects implemented tend to focus on farmers who are better off, have relatively good access to productive assets, and operate in suitable agri-ecological conditions. • This preference for better-endowed smallholders helps to generate the most significant economic returns for projects, while this also implies that the poorest rural populations are likely to be excluded as beneficiaries of these projects. • Commodity development projects have the potential to improve smallholder farmers' market access, increasing their productivity and income, while providing opportunities for accessing new markets.	• The report emphasises the need for a holistic approach to improving smallholders' market access. • For better-off smallholders, the focus should be on the improvements around dimensions of standards, quality, and export markets. • For poorer smallholders, more needs to be done concerning the improvement of private productive assets, access to financial services, and the preservation of natural capital.

MSME Finance GAP

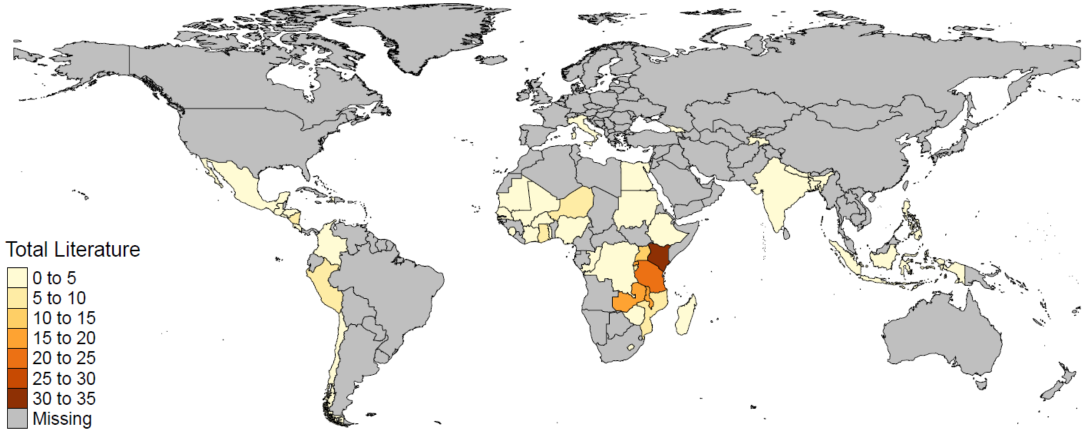
Paper	Content	Findings	Importance
IFC (2017)	• This study estimates the size of the MSME financing gap across emerging economies by comparing the potential demand to the current supply of financing. • The study benchmarks typical MSME borrowing under ideal condition and applies these measures to MSMEs operating in emerging economies, attempting to estimate the potential demand for credit. • This demand is then compared to the existing supply in order to quantify the MSME finance gap.	• According to the report, developing economies face a financing gap of $5.2 trillion, which is equivalent to approximately 19% of their GDP. • The authors estimate that there exists an estimated $718.8 billion finance gap for microenterprises and a $4.5 trillion finance gap for SMEs. • They also stress the importance of demand for informal credit which is estimated to be $2.9 trillion. • The authors bring forward suggestions on how to bridge this gap (promoting digital channels, expanding impact investment, policy and regulatory reforms).	• The report sheds light on the financing gap which exists in the MSME space in emerging markets. • It provides a set of drivers contributing to this financing gap as well as providing a set of potential solutions. • Lastly, it helps academics and practitioners to understand the magnitude of this problem.

Location and quality of evidence

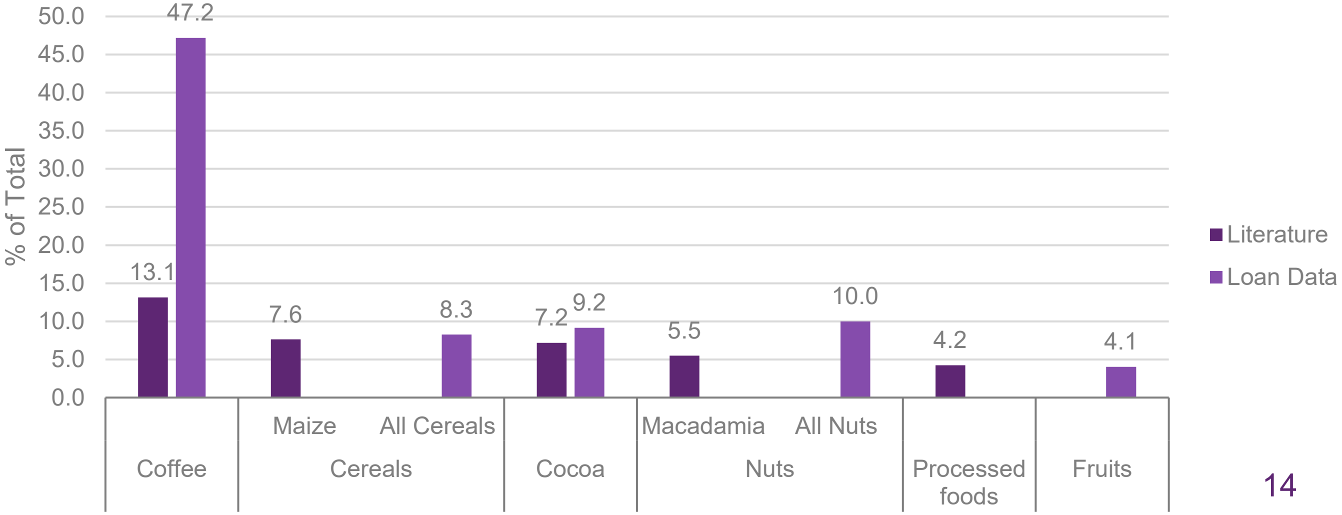
Where does the evidence lie?

Practitioner reports and loan data reveal a discrepancy between report focuses and lending patterns

- We find a discrepancy between where the practitioner reports and case studies point and where lenders give out loans.
- Most practitioner reports centre around East Africa, while the loan data indicates that the majority of loans are issued in Latin America.
- Overlaying the loan data and the findings from practitioner reports, we find that while nearly 50% of the loans in the portfolio data are in coffee, 13% of the reports discuss evidence on coffee value chains.
- Lenders might try to highlight reports and case studies across a variety of value chains and regions, regardless of portfolio concentration.



(Figure 1) Geographic distribution of practitioner reports. As most practitioners do not produce literature, these results are driven by two lenders which provided around half of total documents.

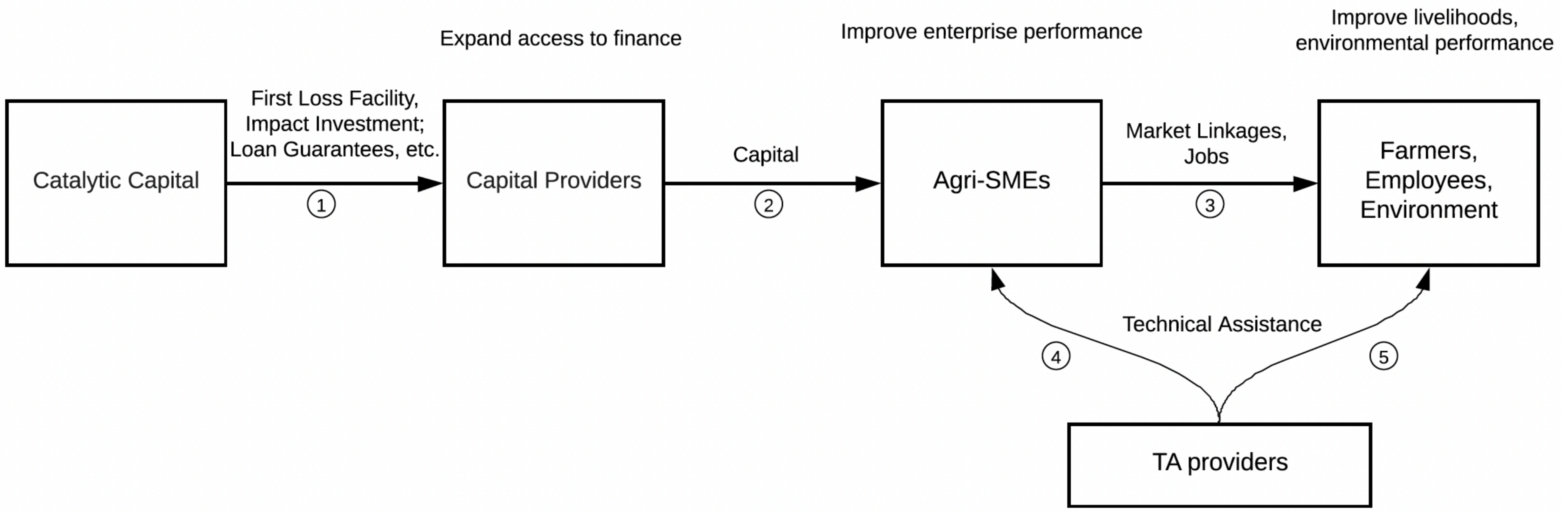


(Figure 2) Distribution of credit and practitioner reports by crop.

The impact chain

The impact chain illustrates the interaction points between various actors in the agri-SME space

- The impact chain illustrates all the interaction points that need to be evaluated to thoroughly understand the impact of social impact investors in the agri-SME financing space.
- As such, these interaction points represent the null hypotheses that need assessing.
- We want to understand how access to catalytic capital can incentivise lending, how increased access to capital can promote enterprise growth, how enterprise growth affects stakeholders, and how technical assistance can benefit agri-SMEs, farmers, employees and the environment.

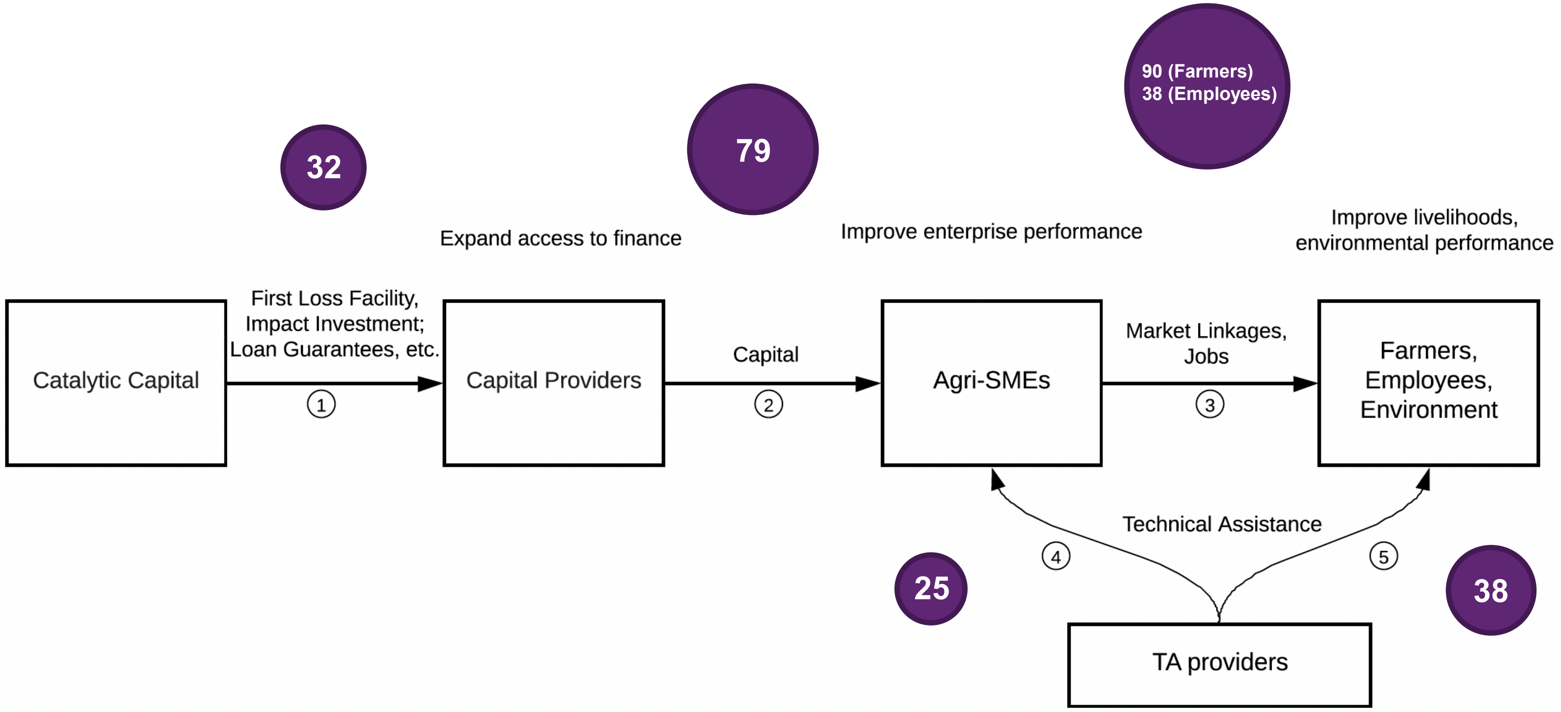


(Figure 3) The impact chain illustrates the interaction points between various actors in the agri-SME space.

Report distribution along the impact chain

Practitioner reports primarily focus on indirect effects of access to finance on farmers and employees

- Most practitioner reports focus on the link between agri-SMEs and Famers / Employees.
- A significant number also look at the link between lenders and agri-SMEs.
- It is interesting to note that while practitioners are lenders themselves, they produce more findings on their indirect effects on farmers and employees than on their direct effects on SMEs.
- This indicates the priority of social lenders is to understand the impact on the target beneficiaries.

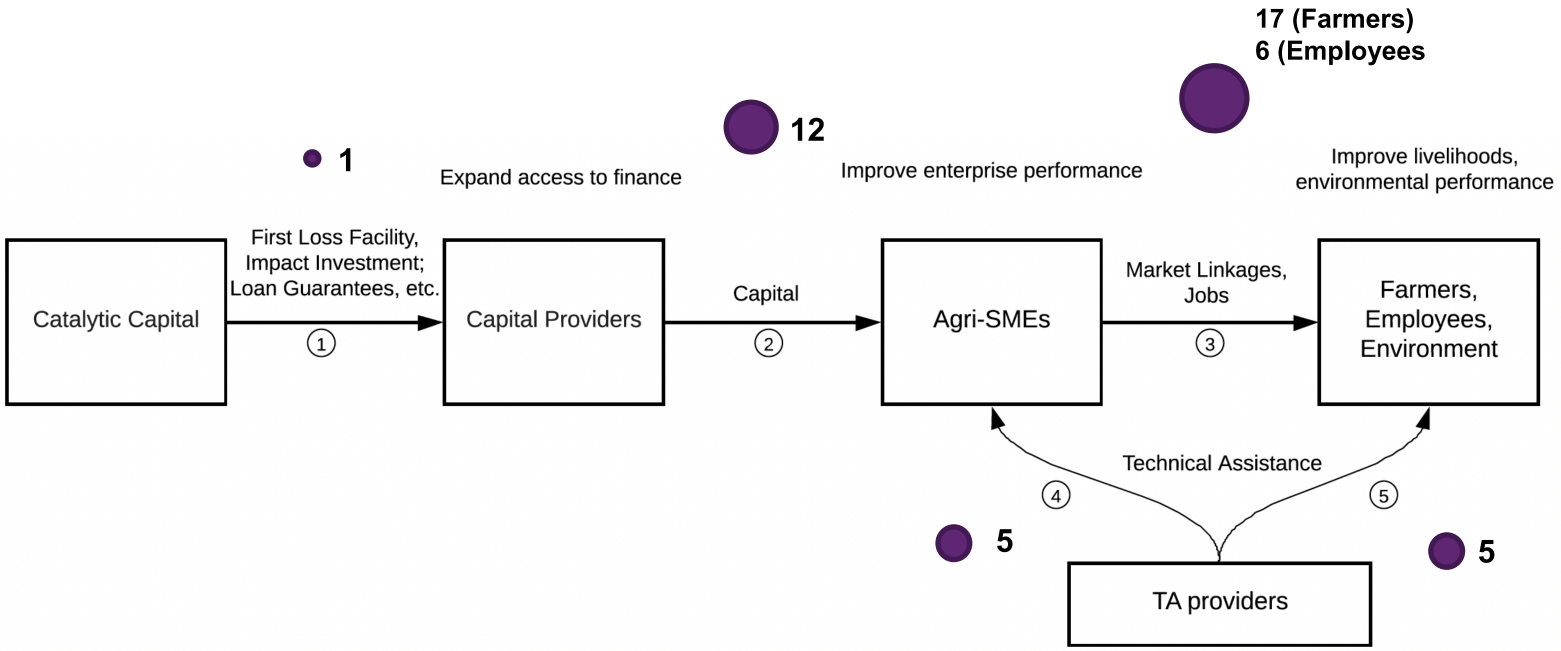


(Figure 3) The impact chain illustrates the interaction points between various actors in the agri-SME space.

Report distribution: Counterfactuals

Removing documents without counterfactuals significantly reduces the evidence base

- After filtering documents that do not use counterfactuals, we find that the evidence base thins out.
- Counterfactuals are important for causal interpretation as they represent a non-affected group to which one can compare outcomes for groups that received credit products and services.
- It must be noted that practitioners are social lenders and not research institutions and hence cannot be expected to produce rigorous research. As such, this analysis is highlighting gaps in the current evidence base to inform where to target future efforts.

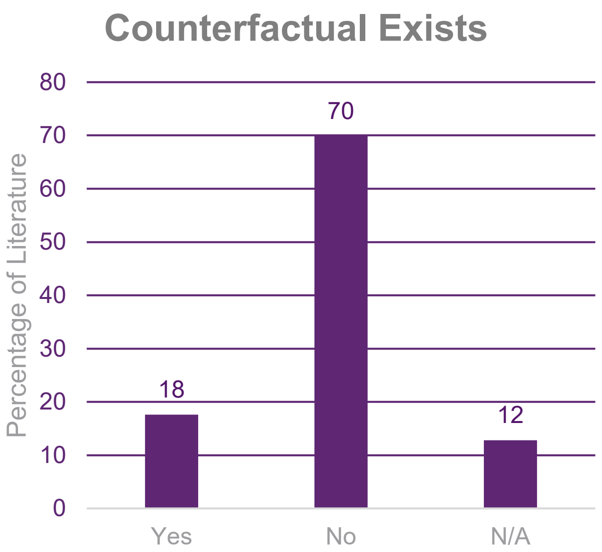


(Figure 3) The impact chain illustrates the interaction points between various actors in the agri-SME space. Please note that this restriction does not require rigorous counterfactuals, just that a counterfactual was considered.

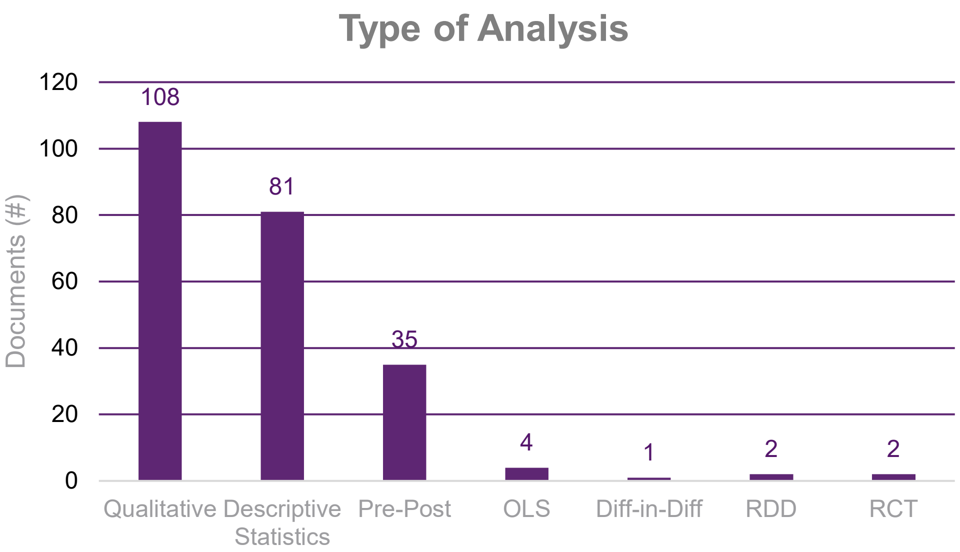
IGC

Data Quality

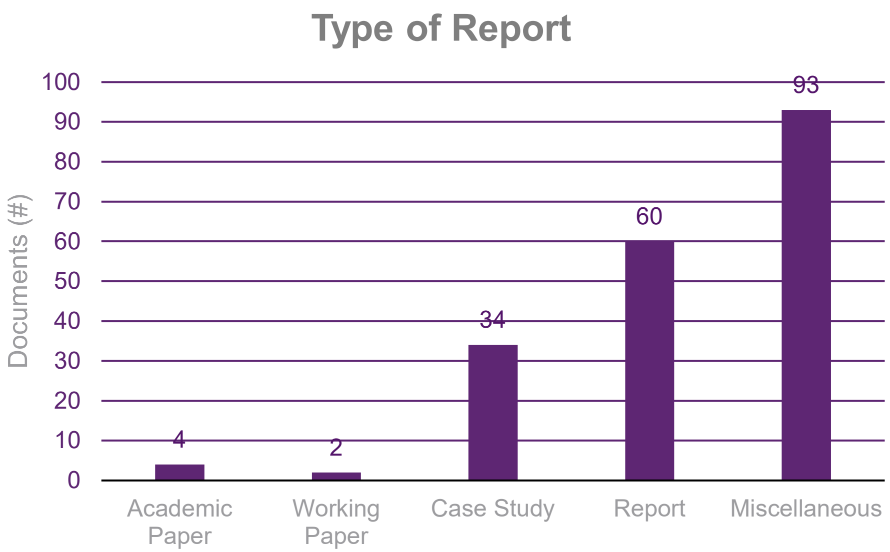
Documents submitted primarily consist of qualitative reports and case studies without counterfactuals



(Figure 4) Percentage of practitioner reports using Counterfactuals.



(Figure 5) Number of practitioner reports by type of analysis.



(Figure 6) Number of practitioner reports by type of report.

- **18%** of the practitioner documents **use counterfactuals.**
- **Six pieces** consist of **academic** papers or working papers, where the vast majority consist of case studies, reports, and other sources.
- The vast **majority** of analysis consists of **qualitative descriptions**, descriptive statistics, and pre and post-comparisons.

OLS = Ordinary Least Square, Diff-in-Diff = Difference in Differences, RDD = Regression Discontinuity Design, RCT = Randomised Controlled Trial

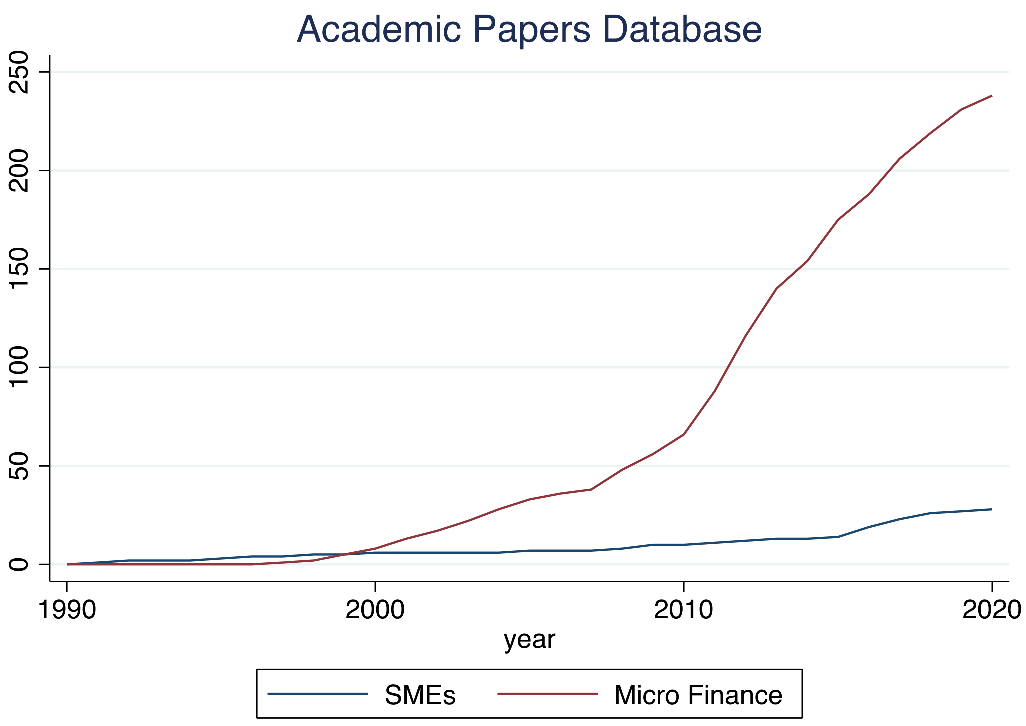
Academic literature

- Information on the literature
- Credit constraints and capital additionality
- Access to finance and business growth
- Access to finance and livelihoods

Information on the literature (1): SME vs microcredit

There exists a significant disparity in our understanding of microcredit and agri-SME finance

- We collected a database of 34,000 publications from the top journals in economics and development economics.
- The graph to right plots the cumulative functions of academic articles writing about SMEs and microfinance.
- We find that the gap between what we have learnt from microfinance compared to SMEs is massive.
- What this illustrates is a lack of of evidence concerning SMEs in general and SME financing in particular.
- Given the small number of publications on SMEs and SME finance, it is no surprise that there is minimal research at the intersection of SME, finance, and agriculture.
- As the sector grows, it is imperative to establish an evidence base around agri-SME finance.



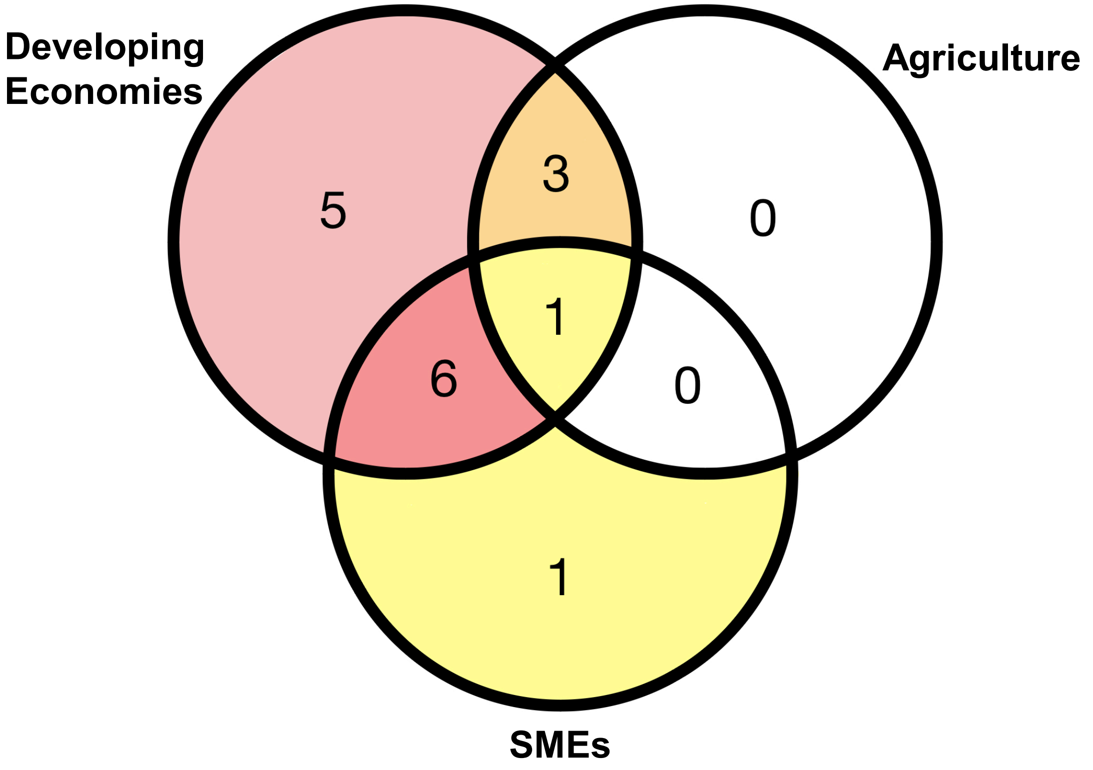
(Figure 7) Evolution of academic literature on SMEs and microfinancing.

Information on the literature (2): Papers included

There is a lack of rigorous academic work at the intersection of agriculture, SMEs, and developing economies

- In total we present 16 academic papers published in 9 different journals.
- When looking at the finance literature, we find a lack of rigorous evidence at the intersection of Agriculture, SMEs & developing economies.
- Most evidence we present is at the intersection of SMEs and developing economies as well as a set of rigorous micro credit papers.
- **Only 4 papers present evidence on agriculture finance, only one of which focuses on agricultural SME finance in developing economies.**
- Nevertheless, we believe that the papers presented provide relevant and rigorous insights into credit constraints, access to finance and enterprise growth, as well as access to finance and livelihoods.

Relevance Diagram

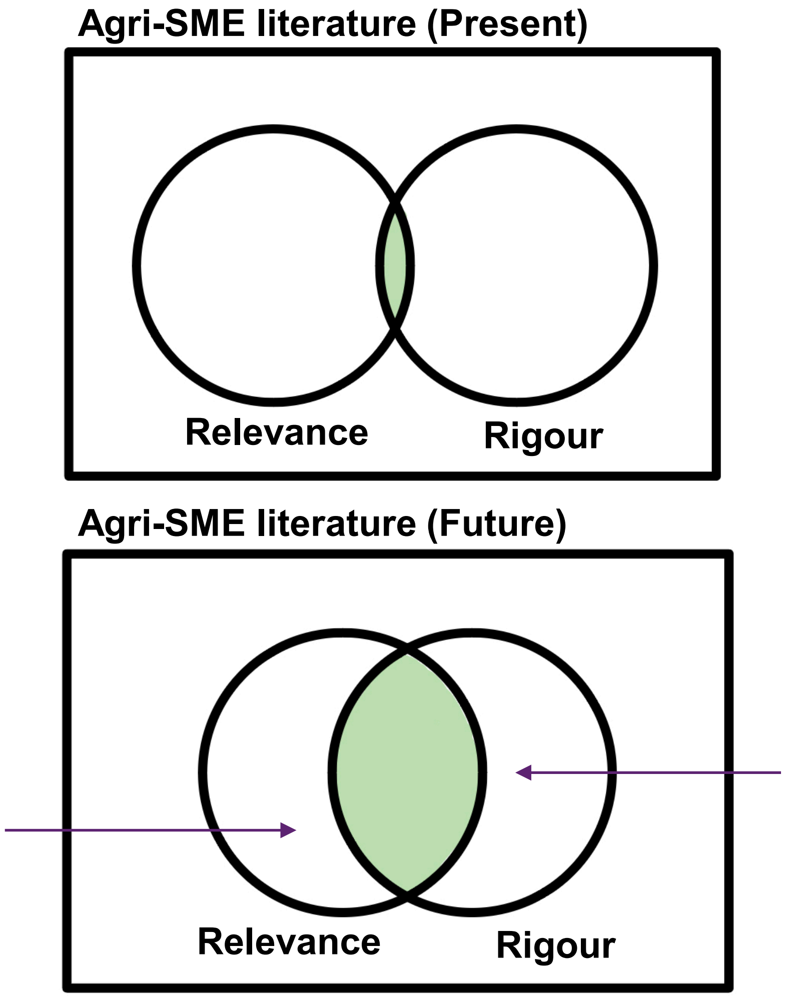


(Figure 8) Distribution of academic articles included in the literature review by topic.

Information on the literature (3): Relevance vs rigour

The current state of knowledge in the agri-SME finance space lacks a balance between relevance and rigour

- The challenge in the current literature on agri-SME financing is the shortage of papers that strike a balance between academic rigor and practical relevance.
- Practitioner reports tend to be highly relevant to the industry but are typically not designed to use academic rigor.
- Conversely, many academic papers have a high level of rigor but overlook the agri-SME finance space.
- The aim of the agri-SME finance evidence review is to bridge this gap and establish robust and practical research in the field of agri-SME financing.

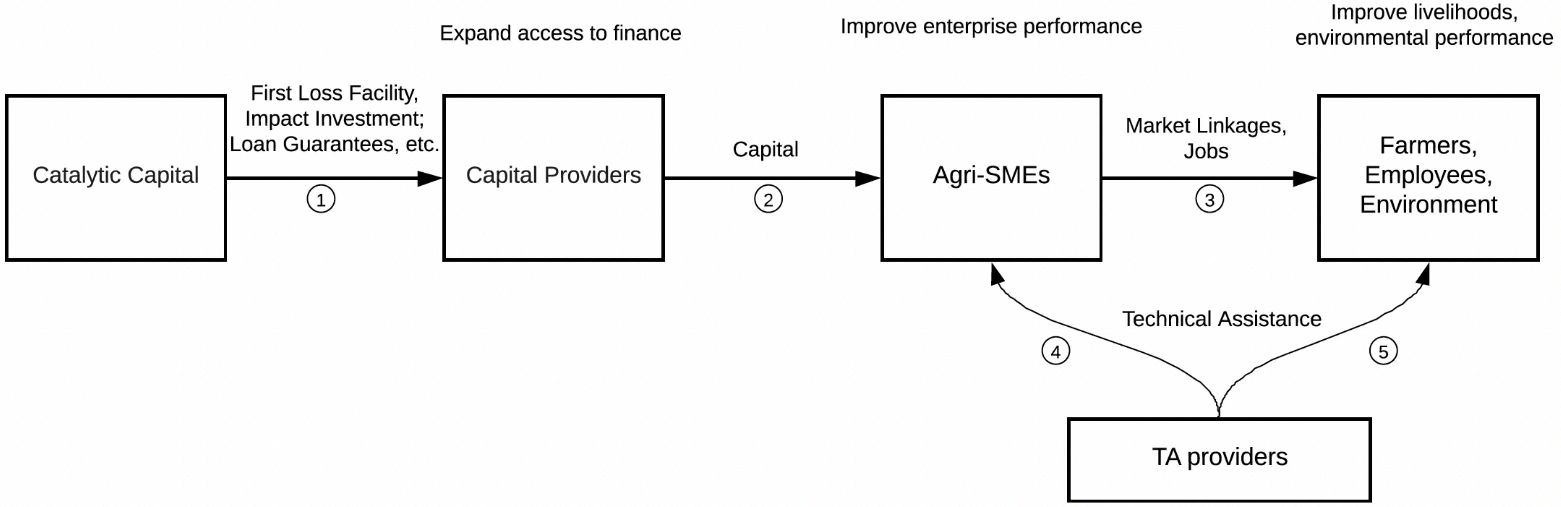


(Figure 9) Current and future overlap between academic rigour and practitioner relevance in the agri-SME financing literature.

Information on the literature (4): Structure

- The academic literature review consists of 3 parts:

1. To what extent is capital issued by social lenders additional? *(Link 2)*
2. Do firms improve performance when receiving access to capital? *(Link 2)*
3. How does access to finance affect livelihoods? *(Link 3)*

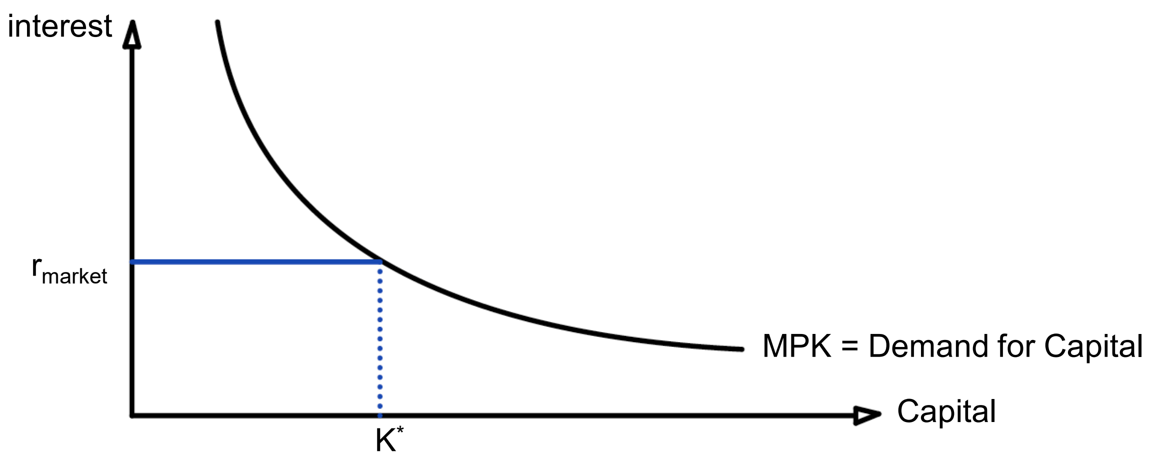


(Figure 3) The Impact Chain illustrates the interaction points between various actors in agri-SME space.

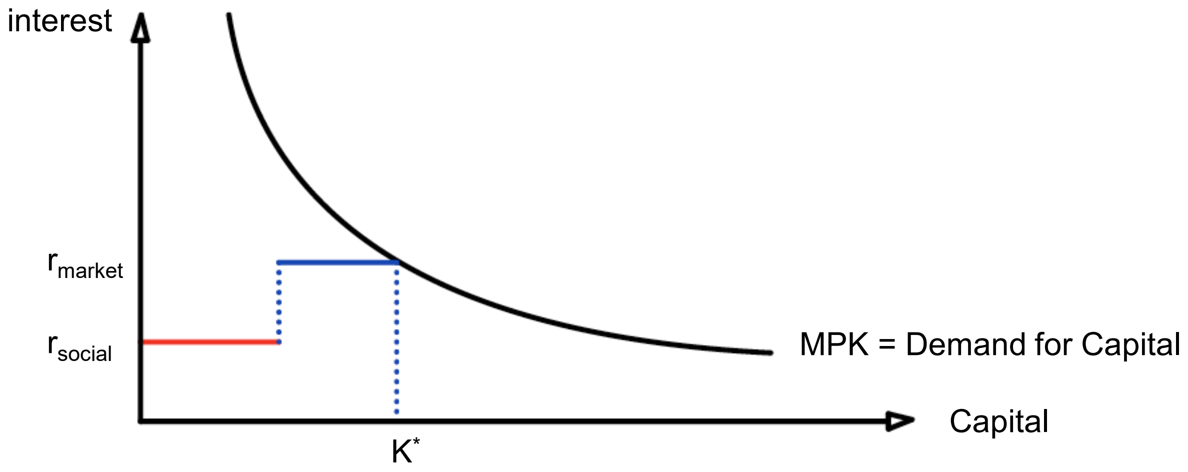
Credit constraints and capital additionality

Theoretical foundation (1): No capital additionality

- In the credit market, lenders can provide credit to constrained and unconstrained firms.
- The diagrams depict two theoretical scenarios (i. in the absence of social lenders and ii. in the presence of social lenders) in a world in which lenders provide no **additional** capital.
- In the absence of social lenders, firms borrow the efficient amount and pay the market rate.
- In the presence of social lenders, lenders would only be able to issue credit by providing better loan terms. Consequently, borrowers would partially substitute away from more expensive or less desirable credit but in equilibrium do not change their capital input.



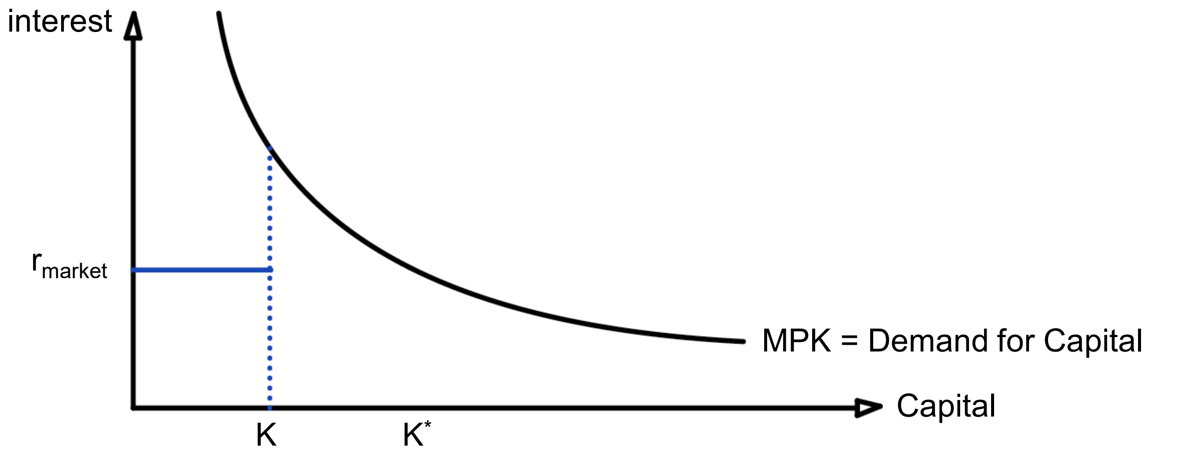
(Figure 10) Market with no capital additionality in absence of social lenders.



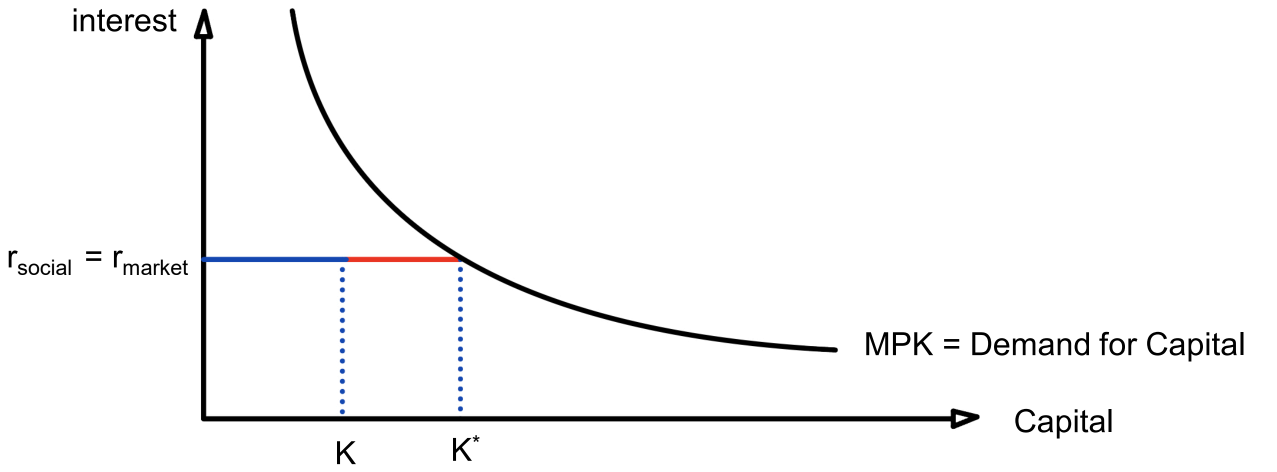
(Figure 11) Market with no capital additionality in presence of social lenders.

Theoretical foundation (2): Capital additionality

- The diagrams depict two theoretical scenarios (i. in the absence of social lenders and ii. in the presence of social lenders) in a world in which lenders provide **additional** capital.
- In the absence of social lenders, the constrained firm underinvests whereas in the presence of social lenders, it increases its lending to the efficient amount.
- As such, lenders in this market would provide capital additionality.
- The question around capital additionality of social lenders thus depends on whether lenders are serving financially constrained or unconstrained firms.



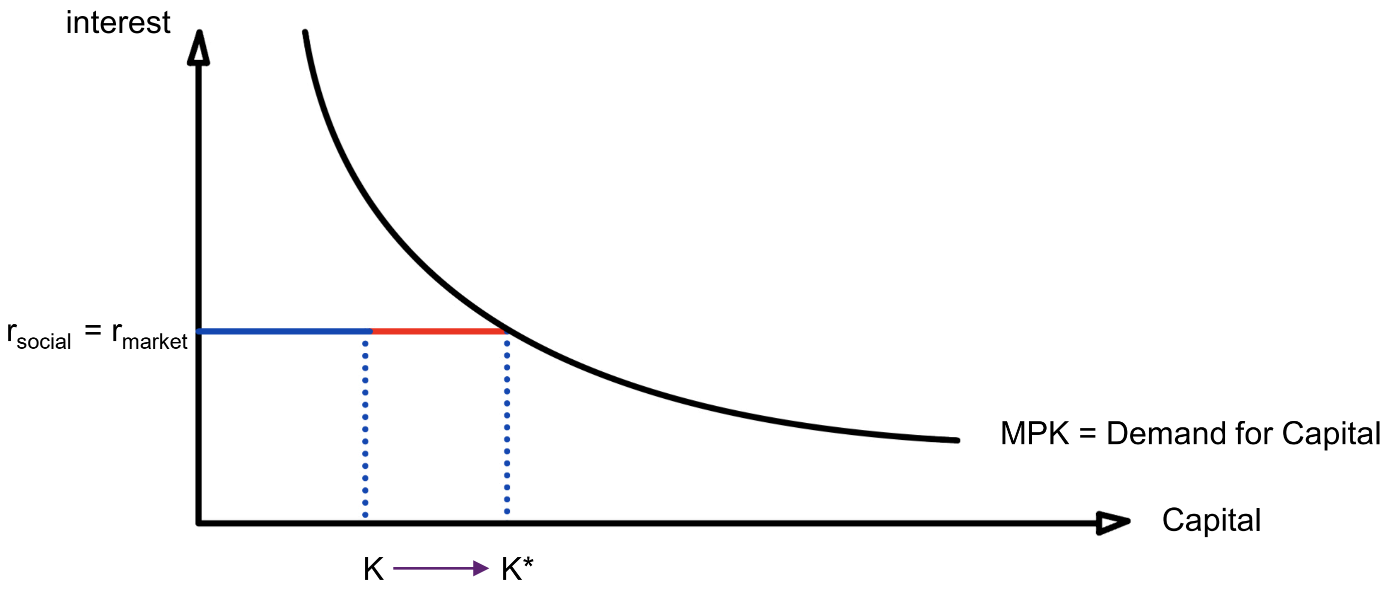
(Figure 12) Market with capital additionality in absence of social lenders.



(Figure 13) Market with capital additionality in presence of social lenders.

Theoretical foundation (3): Implications

- Financially constrained firms **increase total borrowing** when given **access to additional credit.**
- Financially unconstrained firms **do not change total credit** when given **access to additional capital**, substituting away from other sources of credit only when provided with better financing terms.
- Financially constrained firms exhibit rates **of marginal product of capital** far **above** prevailing market **interest** rates.
- The academic literature exploits these relationships when determining credit constraints faced by borrowers.
- Social lenders want to provide capital that otherwise would not have been issued to allow constrained firms to use their optimal level of capital, hence creating biggest impact for borrowers.



(Figure 13) Market with capital additionality in presence of social lenders.

Takeaways from the academic literature: Credit constraints and capital additionality

- Social lenders make loans with varying degrees of capital additionality (*i.e.,* they do not exclusively provide capital which, in their absence, would not have been provided).

- Credit constraints seem to vary in firm size, where larger SMEs seem to be less prone to credit constraints in contrast to smaller SMEs.

- SMEs in India expanded their borrowing from banks when granted credit access, providing strong evidence for credit constraints faced by Indian SMEs.

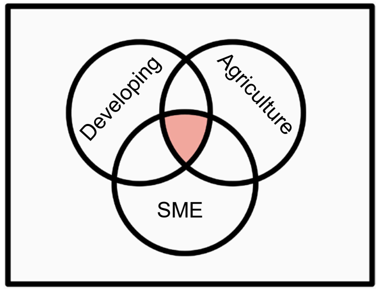
- There exist heterogeneities in returns to capital for smallholder farmers, where households with higher returns to capital self-select into taking out loans.

IGC

Strategic Default in the International Coffee Market (1)

Paper

Blouin & Macchiavello (2019)
The Quarterly Journal of Economics



Relevance Diagram

Content

- While the paper primarily looks at strategic default, it also tests for credit constraints faced by coffee enterprises. The authors use a Regression Discontinuity Design exploiting arbitrary cut off points in credit ratings.
- The study uses data of a social lender specialized in working capital loans.
- The RDD looks at loan amounts given out to enterprises, where some received just above an A credit score and some received just below an A credit score. While these firms can be considered very similar, comparing the loan amounts received can tell us something about whether enterprises are indeed credit constrained.

Findings

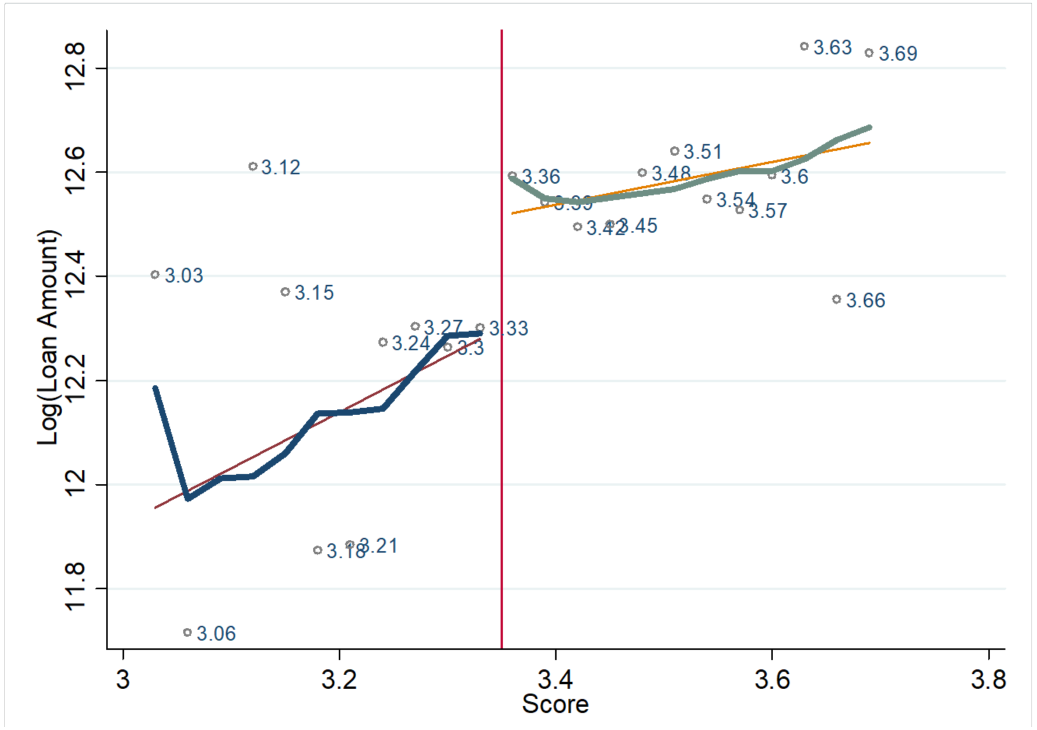
- Enterprises that received just above an A credit score borrow more than those just below, indicating that at least some enterprises are credit constrained.
- Enterprises that received an AA score (higher than A) decreased their lending from other sources while those which just received an A score did not.
- Lastly, additional credit made available to enterprises that received just above an AA score was not used to expand operations while additional credit made available for enterprises that received just above an A translated into equivalent increases in the purchase of coffee.

Importance

- Risky agricultural-SMEs are predominantly credit constrained while less risky enterprises substitute away from more costly loans when provided with better loan terms.
- This illustrates that social lenders do not exclusively provide capital which, in their absence, would not have been provided.

Strategic Default in the International Coffee Market (2)

- To illustrate the statistical approach, we present a figure from the paper.
- As the diagram to the right illustrates, enterprises that received just above an A credit score (those to the right of the red line) borrow significantly more then those which received a credit score just below A (those to the left of the red line).
- While firms on both sides of the line can be considered more or less identical, the only explanation for the difference in loan amount received is their credit score.
- Hence we can assume that coffee enterprises to the left of the red line would like to borrow more but are not able to, hence being credit constrained.

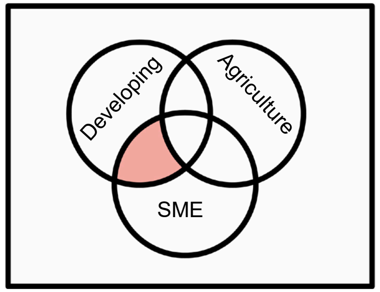


(Figure 14) RDD graph illustrating the difference in loan amounts issued to borrowers receiving a credit score just above an A compared to those receiving a credit score just below an A.

Export Incentives, Financial Constraints, and the (Mis)allocation of Credit: Micro-level Evidence from Subsidized Export Loans

Paper

Zia
(2008)
Journal of Financial Economics



Relevance Diagram

Content

- In this paper, the author investigates credit constraints and the effect of access to capital on export and borrowing in the yarn industry in Pakistan.
- The author exploits a policy change in a government lead scheme providing working capital loans to exporters at subsidised interest rates.
- The author uses a difference in difference approach looking at how the removal of subsidised loans affected loan amounts and export value of yarn exporters.

Findings

- When the subsidised loans were removed, debt for yarn firms declined by 22% and export declined by 33% relative to non-yarn firms.
- The author finds that debt and exports remain relatively unchanged for publicly listed yarn exporters while they decreased significantly for privately owned yarn exporters.
- This indicates that publicly listed firms used subsidised loans to substitute away from more expensive sources.
- When publicly traded firms could no longer access subsidised loans, they experienced decreases in profits only because of higher interest rates charges.

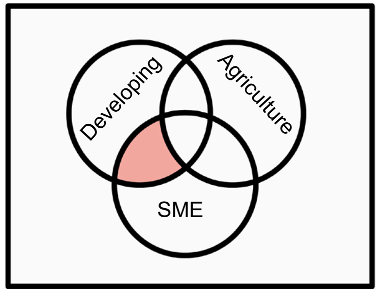
Importance

- This illustrates the importance of working capital loans to allow SMEs to operate efficiently.
- Credit constraints seem to vary in firm size, where larger SMEs seem to be less prone to credit constraints in contrast to smaller SMEs.

Do Firms Want to Borrow More? Testing Credit Constraints Using a Directed Lending Program

Paper

Banerjee & Duflo (2013)
Review of Economic Studies



Relevance Diagram

Content

- The authors use changes in access to a lending programme to illustrate credit constraints faced by relatively large firms in India.
- They use a triple difference approach, looking at changes in outcomes for firms included in the lending programme compared to those firms who were already part of it.

Findings

- It can be shown that when firms become eligible for the programme, they expand their borrowing from banks and increase their sales, costs and profits.
- Furthermore, they estimate the marginal return to capital for the average firm in their sample to be 105%. Given the fact that the prevailing market rate of interest is between 30-60%, firms should want to borrow more.

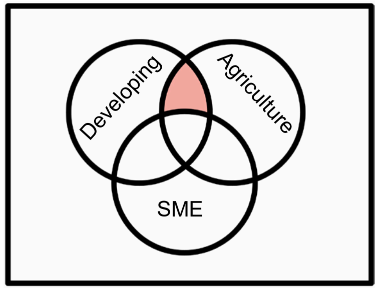
Importance

- The publication provides sound evidence of credit constraints faced by SMEs in India, demonstrating that firms increase borrowing and their operations when granted access to credit.

Selection Into Credit Markets: Evidence from Agriculture in Mali

Paper

Beaman et al.
(2021)
NBER Working Paper



Relevance Diagram

Content

- In this paper, the authors investigate heterogeneity in the returns to capital for borrower and non-borrower smallholder women farmers in Mali.
- The authors randomly select 88 villages in which women are offered loans and 110 villages in which they are not. The researchers then randomly allocated grants to women who decided not to take up loans in the loan-villages. In the non-loan villages, researchers allocated grants to randomly selected women.

Findings

- The authors find that grant recipients in non-loan villages exhibit higher levels of land cultivation, input expenditures, fertilizer usage, and gross profits compared to non-recipients.
- In contrast, grant receiving non-borrowing farmers in loan-villages did not exhibit increases in gross profits as a result of receiving cash grants.
- Borrowing households in loan-villages significantly increased farm output and gross profits in contrast to non-borrowing non-grant receiving households.
- A follow up survey 7 years after the issue showed that effects of grants did not persist over time.

Importance

- There are heterogeneities in returns to capital of farmers, where farmers with higher returns to capital self-select into loans.
- If returns to capital are indeed heterogenous and farmers do self-select, stronger roll out of credit programmes could result in less profitable farmers receiving access to credit.

Access to finance and business growth

Takeaways from the academic literature: Access to finance and business growth (1)

- Targeted programmes to improve access to finance for SMEs in developing economies can be successful in increasing firm investment and performance, especially for smaller SMEs.
- There is no evidence suggesting that the relative size of a country’s SME sector affects a country’s economic growth rates or poverty alleviation.
- Capital constraints are not the only barrier to investment for rural farmers; uninsured risk can be considered a major driver of underinvestment.
- The literature finds modest effects around access to microcredit on borrowers’ and prospective borrowers’ size, profitability, and investment.

Takeaways from the academic literature: Access to finance and business growth (2)

Credit expansions in micro lending - allowing marginal borrowers to access credit - can be profitable for both potential borrowers and lenders.

When access to finance is not allocated to everyone, borrowers' improvements in operations can result in a competitive advantage at the cost of firms that are unable to access finance.

When access to finance leads to increased efficiency, the benefits can be passed on to the final consumers. Furthermore, this can also result in a redistribution of wealth from firms without access to finance to those with access.

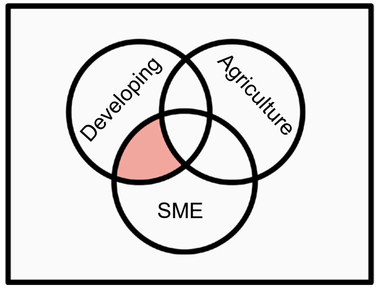
Access to finance improved female entrepreneurship in India, while also triggering a shift in economic activity away from agriculture towards non-agricultural activities.

IGC

Small Firms, Large Impact? A Systematic Review of the SME Finance Literature

Paper

Kersten et al.
(2017)
World Development



Relevance Diagram

Content

- In this paper, the authors review the existing evidence of the SME Finance literature.
- Their focus lies on the evaluation of programmes that provide finance to SMEs and the effects on access to credit, investment, firm performance, employment, productivity, and wages.
- The authors restrict the analysis to evaluations in low- and middle-income countries as well as studies that used an experimental or quasi-experimental design.
- The authors proceeded by performing a multivariate meta-analysis of the existing literature.

Findings

- The authors find positive and statistically significant effects on access to finance and investment, firm performance, and employment but not on productivity and wages.
- The paper also highlights the lack of evidence of spill over effects that could be either positive or negative – hence, results cannot be extrapolated on the entire economy but only at the firm level.

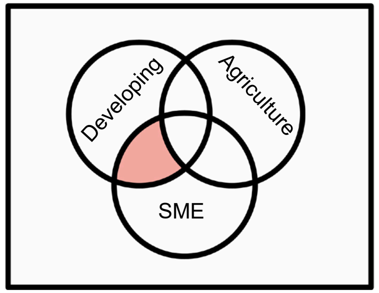
Importance

- programmes that attempt to improve access to finance seem to be successful in their attempts to increase firm investment and performance.

Short-term Finance, Long-term Effects: Evidence From a Loan Guarantee Program in Morocco

Paper

Benhima et al. (2022)
Working Paper



Relevance Diagram

Content

- The paper studies the short- and long-term effects of short-term finance on firm growth for SMEs in Morocco.
- The authors use a matching technique to create a control sample that does not receive short-term financing through a loan guarantee programme.
- They then use a difference in difference framework evaluating the effect of access of short-term credit on sales, total assets, cost of employees, fixed assets, current liabilities, and cash holdings for up to 3 years after the loan.

Findings

- The authors find that sales, total assets, cost of employees, fixed assets, and current liabilities increased while cash holdings decreased.
- These growth effects are more significant for smaller and younger firms.
- The authors also find that the growth effects span over 2 years, whereafter neither a positive nor a negative effect can be found (absence of relative deceleration).

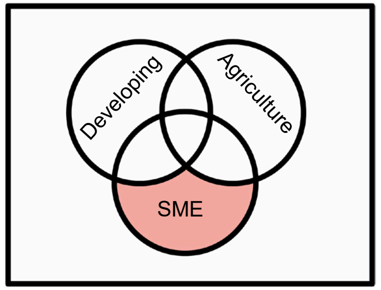
Importance

- The paper finds evidence for increases in firm investment and firm size as a result of increased access to capital, where these growth effects are more significant for smaller firms.

SMEs, Growth, and Poverty: Cross-Country Evidence

Paper

Beck et al.
(2005)
Journal of Economic
Growth



Relevance Diagram

Content

- In this paper, the authors explore the relationship between economic growth, poverty, and the relative size of a country's SME sector using a cross-country data set.
- The authors run both a standard OLS regression model as well as instrumenting the SME sector size variable using an indicator of ethnic diversity.

Findings

- While the authors find a positive and significant relationship between the size of a country's SME sector and economic growth, when only using random variation in the size of a country's SME sector, the authors do not find a statistically significant relationship.
- The same holds for the relationship between the size of a country's SME sector and poverty.
- It should be noted that the paper does not seek to establish causal relationships but rather fails to reject the hypothesis that SMEs do not have a causal impact on firm growth and poverty alleviation.

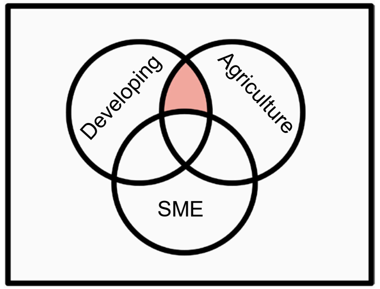
Importance

- The paper provides no evidence suggesting that the relative size of a country's SME sector impacts economic growth rates or poverty.

Agricultural Decisions After Relaxing Credit and Risk Constraints

Paper

Karlan et al.
(2014)
The Quarterly Journal of
Economics



Relevance Diagram

Content

- In this paper, the authors look at how outcome variables for small-scale farmers change with the provision of cash grants, rain insurance, and both taken together.
- They randomise these provisions over 502 households in northern Ghana.

Findings

- The authors find large increases in investment in response to the provision of rainfall insurance, but rather small increases in response to the provisions of cash grants. Hence, farmers can find resources to increase expenditure when given insurance on catastrophic risk.
- The authors also find that total farm revenues increased with insurance where no such effect could be detected concerning the provision of cash grants.

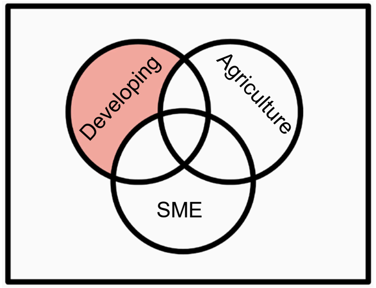
Importance

- Capital constraints are not the only barrier to investment; uninsured risk can be considered a major driver of underinvestment by rural farmers.

Six Randomized Evaluations of Microcredit: Introduction and Further Steps

Paper

Banerjee et al. (2015)
American Economic Journal: Applied Economics



Relevance Diagram

Content

- In this paper, the authors compare six evaluations of the impact of microfinance on intended users.
- The papers look at randomised studies conducted in Bosnia, Ethiopia, India, Mexico, Morocco, and Mongolia, evaluating the impact of expansions of microfinance institutions.

Findings

- Taken together, the paper finds modest effects of microcredit, where the estimated sign depends on the dimension looked at.
- The studies show modest positive effects in regards to demand for credit, business starts, investment, business size, profits, revenues, and expenses.
- The studies show inconclusive effects on changes in income, durable stocks, and female decision power.
- The studies find no effects on consumption and schooling.
- The studies show negative effects on discretionary spending.

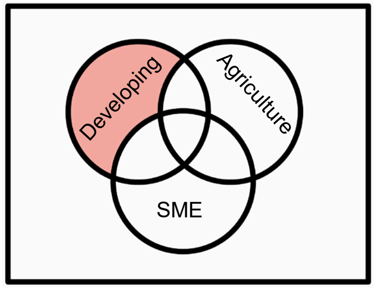
Importance

- There exists little evidence of transformative effects of microfinance.

Microcredit Impacts: Evidence from a Randomized Microcredit Program Placement Experiment by Compartamos Banco

Paper

Angelucci et al.
(2015)
American Economic
Journal



Relevance Diagram

Content

- In this paper, the authors investigate how access to credit through microfinance institutions impacts a set of outcome variables, including access to credit, income, labour supply, expenditures, and subjective well being.
- The authors partnered with Compartamos Banco, the largest microlender in Mexico, to randomly roll out their credit programme to different areas in Sonora, Mexico – an area they had previously not served.

Findings

- The authors find that the increase in access to credit and borrowing resulted in an increase in the size of existing businesses but did not affect profits, household incomes, nor labour supply. They find some positive effects on subjective well-being.

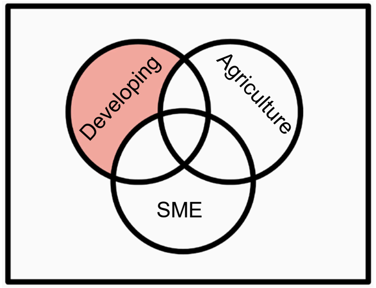
Importance

- The findings suggest modest effects of increased access to microcredit on borrowers' and prospective borrowers' well-being.

The Miracle of Microfinance? Evidence From a Randomized Evaluation

Paper

Duflo et al.
(2013)
American Economic Journal



Relevance Diagram

Content

- In this paper, the authors investigate how access to microfinance in Indian slums affects entrepreneurial activities, consumption and welfare of individuals.
- The authors randomised into which slums a microfinance institution (Spandana) entered, running baseline and endline surveys before and after the entrance.

Findings

- Individuals in treated areas were more likely to take up credit.
- The authors find positive effects on the consumption of durable goods and the probability of opening multiple businesses.
- The authors find no effects on (i) the probability of starting a business (ii) overall consumption (iii) profits (iv) health outcomes (vi) education and (vii) women's empowerment.

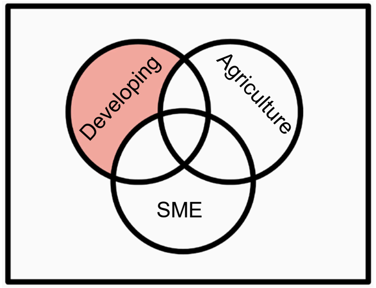
Importance

- Again, the findings suggest modest effects of increased access to microcredit on borrowers' and prospective borrowers' well-being.

Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts

Paper

Karlan & Zinman (2010)
The Review of Financial Studies



Relevance Diagram

Content

- In this paper the authors randomly allow for the issuance of marginal consumer loans (loans which were close to be given but rejected initially) looking at the net benefits created for borrowers and the profitability of marginal loans for a South African micro lender.
- The intervention randomly selected marginal applications (those which were marginally uncreditworthy) and provided them with credit.
- Outcomes of marginal applicants not provided with credit were used as a control group.

Findings

- The authors find that randomly selected marginal borrowers borrowed more than the control group, indicating binding credit constraints.
- The authors furthermore find that employment, income, food consumption, and measures of subjective wellbeing were higher for treated applicants.
- While less profitable than loans which certainly would have been issued, marginal loans were still profitable for the lender.

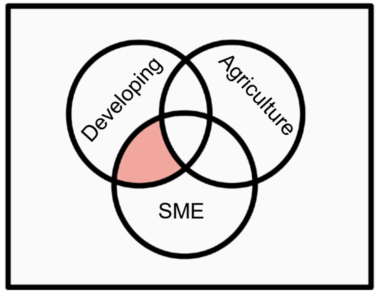
Importance

- Credit expansions - allowing marginal borrowers to access credit - can be profitable for both potential borrowers and lenders.

Indirect Effects of Access to Finance

Paper

Cai & Szeidl
(2022)
Working Paper



Relevance Diagram

Content

- In this paper, the authors use experimental variation in the access to an SME loan product to investigate the effect of access to credit on firm performance in local markets in South-eastern China.
- The authors vary the number of firms to which a new SME loan product is marketed within randomly selected local markets, hence generating variation in treatment as well as amount of treatment.
- They evaluate the effect of access to the loan product on revenues, profits, and business practices.

Findings

- The authors estimate that sales for firms having received financing significantly increased, while sales of firms having received no financing decreased, offsetting most of the gains in total surplus. They find similar effects on number of employees and wages.
- Furthermore, the authors estimate large positive direct effects on business practices for firms receiving financing and large negative indirect effects on those firms who do not.
- The authors show that firms receiving financing charged lower prices and improved their service quality, shopping environment, value for money, and overall customer satisfaction.

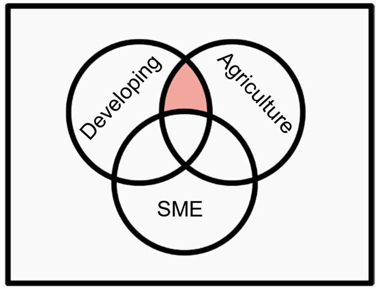
Importance

- Access to finance can result in a competitive advantage (through reduction in prices and improved business practices) at the cost of firms refused access to finance.
- Spill over effects need to be considered when evaluating how access to finance affects firm outcomes.
- Welfare gains resulting from the SME loan product were captured by consumers.

Financial Access and Entrepreneurship by Gender: Evidence from Rural India

Paper

Garg et al. (2023)
Working Paper



Relevance Diagram

Content

- The authors employ a difference-in-differences approach to measure the effect of a bank branch expansion on entrepreneurship in India.
- Furthermore, the authors separate the analysis for men and women as well as for agricultural and non-agricultural activities.
- The treatment group consists of villages who, as a result of the bank branch expansion, have a branch within a 5km proximity. The control group consists of villages which don't.

Findings

- The paper finds that the number of female-owned enterprises in the non-agricultural sector increased while those in the agricultural sector stayed the same.
- For men, the number of enterprises owned in the non-agricultural sector increased while the number of enterprises in the agricultural sector decreased by a similar margin.
- Lastly, the authors show that the mechanism through which entrepreneurship improves is through an increase in reported institutional credit.

Importance

- Access to finance improved entrepreneurship in India, especially for women.
- Moreover, access to finance also triggered a shift in economic activity, away from agriculture towards non-agricultural activities.

Access to finance and livelihoods

Takeaways from the academic literature: Access to finance and livelihoods

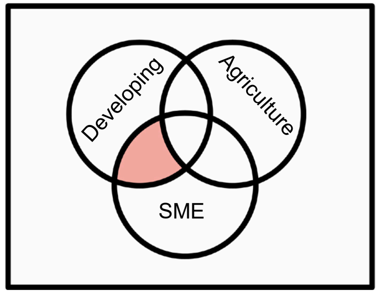
- Access to Finance seems to play a role in poverty alleviation.
- Effects on poverty alleviation can be heterogenous across sectors, where a study finds no significant effects on agricultural output as a result of a branch expansion in India.
- Targeted access to finance can increase the proportion of informal businesses and average income levels while documenting a decrease in the proportion of not employed individuals, especially for the poorest people in society.

IGC

Do Rural Banks Matter? Evidence From the Indian Social Banking Experiment

Paper

Burgess & Pande (2005)
American Economic Review



Relevance Diagram

Content

- In this paper, the authors evaluate the effect of a bank branch expansion scheme on rural poverty in India.
- The policy mandated that banks had to open 4 rural branches in unbanked areas for every new branch opened in a banked area.
- The authors instrument rural branch expansion with the imposition and the removal of the policy.

Findings

- The authors show that financially less-developed states experienced higher growth in unbanked rural areas while they experienced a reduction in rural poverty mediated through increased savings mobilisation and credit disbursement.
- Furthermore, they find that wages for agricultural workers increased as a result of a tightening labour market, where non-agricultural employment drove up agricultural wages.
- Repeating this analysis in an earlier paper, the authors find that the bank expansion increased non-agricultural output of predominantly small-scale manufacturing firms, but not agricultural output.

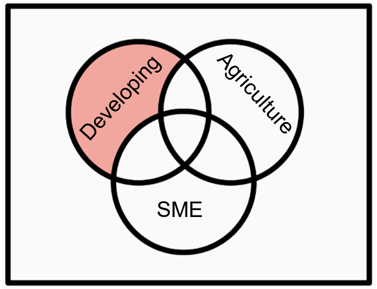
Importance

- The paper illustrates the importance of financial access for growth and poverty alleviation.
- Effects on poverty are heterogenous and can vary from industry to industry.

The Real Impact of Improved Access to Finance: Evidence From Mexico

Paper

Bruhn and Love
(2014)
The Journal of Finance



Relevance Diagram

Content

- In this paper, the authors provide evidence on the impact of finance on poverty and the channels through which access to finance affects poverty.
- The authors use the uniquely large and simultaneous opening of 800 bank branches by the Banco Azteca in Mexico to study the impact of access to finance on low-income individuals, looking at entrepreneurial activity, employment, and income.
- The loans by these banks were targeted to low-income households and averaged around 250 US dollars. While they were tied to merchandise, they could be used for business purposes.

Findings

- The authors find a significant increase in the proportion of informal businesses and average income levels while documenting a decrease in unemployment.
- By performing a sample split, they find that these results are stronger for the low-income population and larger in municipalities that were relatively underserved by the formal banking sector before the bank branch openings.

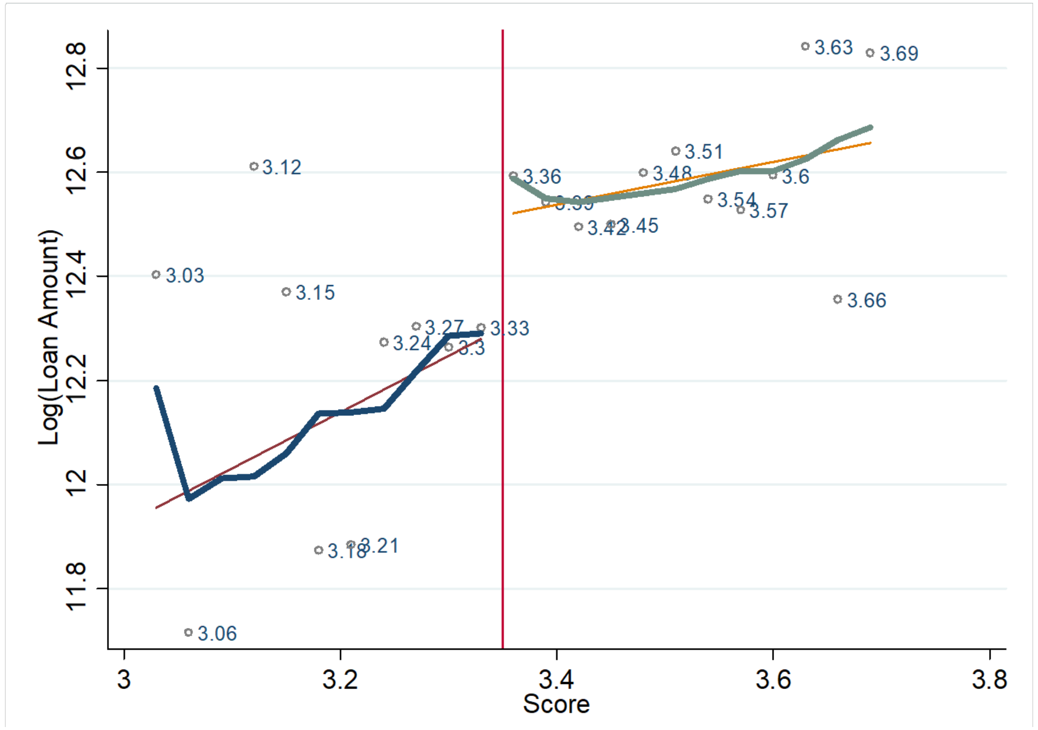
Importance

- Access to finance can be used as an instrument to improve the economic situation of the poorest people within society.

Moving forward (1)

Replicating the RDD with larger datasets and more sophisticated data can solidify our understanding of capital additionality

- While the literature provides evidence on credit constraints and the relationship between access to finance and growth, there is a lack of rigorous studies looking specifically at Agri-SME financing.
- There seems to be a lack of evidence on how capital provided by social lenders can have spill over effects, both social and environmental.
- Moving forward, one could replicate the RDD study looking at credit constraints faced by coffee enterprises using a richer data set, allowing for the estimation of heterogenous effects across multiple dimensions such as technical assistance.
- The literature also stresses the importance of risk as a determinant of underinvestment, hence it could be important to look at how access to capital allows borrowers to hedge risks they are exposed to.



(Figure 14) RDD graph illustrating the difference in loan amounts issued to borrowers receiving a credit score just above an A compared to those receiving a credit score just below an A.

IGC

Moving forward (2)

The impact chain frames relevant questions for researchers and practitioners

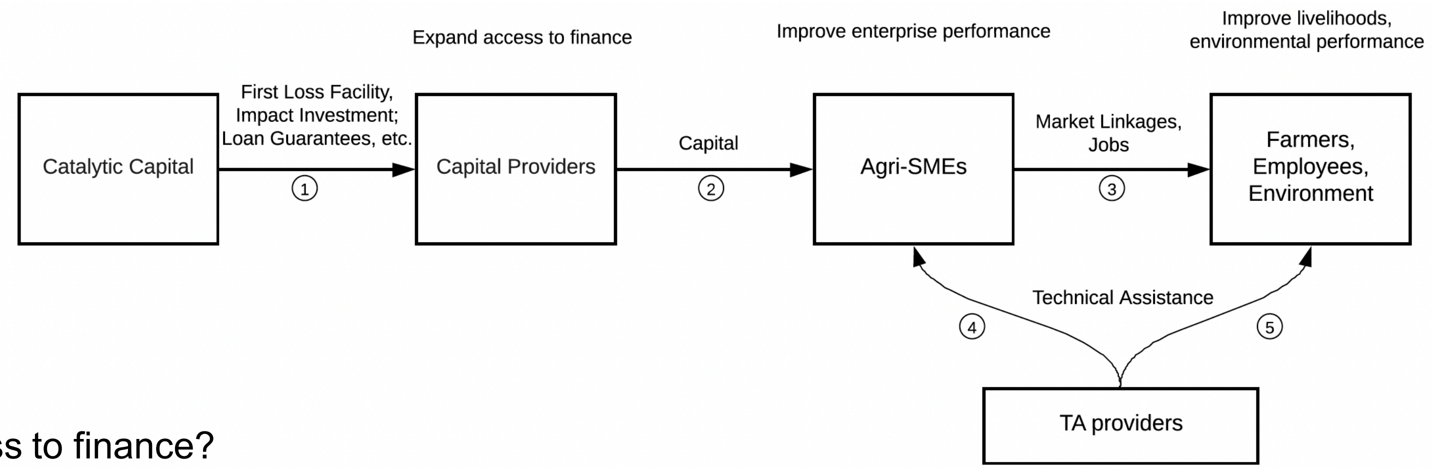
- More generally, it is useful to use the impact chain as a starting point when looking for open questions around impact evaluation in the agri-SME financing space.

- The **big** questions are:

  - How does concessional capital affect access to finance?
  - How does access to finance affect enterprise performance?
  - How does enterprise performance affect livelihoods?

- While the impact chain helps identify the high level questions, we can also use it to find questions to further explore these answers. For example:

  - Do origination incentives boost lending to agri-SMEs?
  - What are the key risks contributing to loan default?
  - Do agri-SMEs pay price premiums to farmers when improving business performance?



(Figure 3) The Impact Chain illustrates the interaction points between various actors in the agri-SME space.

References

- Academic References
- Practitioner References

References (1)

Academic

1. Blouin, A. and Macchiavello, R., 2019. Strategic default in the international coffee market. *The Quarterly Journal of Economics*, *134*(2), pp.895-951. https://academic.oup.com/qje/article/134/2/895/5298906?login=true

2. Zia, B.H., 2008. Export incentives, financial constraints, and the (mis) allocation of credit: Micro-level evidence from subsidized export loans. *Journal of financial economics*, *87*(2), pp.498-527. https://www.sciencedirect.com/science/article/pii/S0304405X07002127

3. Banerjee, A.V. and Duflo, E., 2014. Do firms want to borrow more? Testing credit constraints using a directed lending program. *Review of Economic Studies*, *81*(2), pp.572-607. https://academic.oup.com/restud/article/81/2/572/1524432?login=true

4. Beaman, L., Karlan, D., Thuysbaert, B. and Udry, C., 2014. *Selection into credit markets: Evidence from agriculture in Mali*(No. w20387). National Bureau of Economic Research. https://www.nber.org/papers/w20387

5. Kersten, R., Harms, J., Liket, K. and Maas, K., 2017. Small Firms, large Impact? A systematic review of the SME Finance Literature. *World development*, *97*, pp.330-348. https://www.sciencedirect.com/science/article/pii/S0305750X17301298

6. Kersten, R., Harms, J., Liket, K. and Maas, K., 2017. Small Firms, large Impact? A systematic review of the SME Finance Literature. *World development*, *97*, pp.330-348. https://www.sciencedirect.com/science/article/pii/S0305750X17301298

7. Benhima, K., Chafik, O., Fang, M. and Tang, W., 2022. Short-term Finance, Long-term Effects: Evidence from a Loan Guarantee Program in Morocco. http://congress-files.s3.amazonaws.com/2022-07/BCFT_Short-term%2520Finance%252C%2520Long-term%2520Effects.pdf

8. Beck, T., Demirguc-Kunt, A. and Levine, R., 2005. SMEs, growth, and poverty: Cross-country evidence. *Journal of economic growth*, *10*, pp.199-229. https://link.springer.com/article/10.1007/s10887-005-3533-5

9. Karlan, D., Osei, R., Osei-Akoto, I. and Udry, C., 2014. Agricultural decisions after relaxing credit and risk constraints. *The Quarterly Journal of Economics*, *129*(2), pp.597-652. https://academic.oup.com/qje/article/129/2/597/1867065?login=true

10. Banerjee, A., Karlan, D. and Zinman, J., 2015. Six randomized evaluations of microcredit: Introduction and further steps. *American Economic Journal: Applied Economics*, *7*(1), pp.1-21. https://www.aeaweb.org/articles?id=10.1257/app.20140287

References (2)

11. Angelucci, M., Karlan, D. and Zinman, J., 2015. Microcredit impacts: Evidence from a randomized microcredit program placement experiment by Compartamos Banco. *American Economic Journal: Applied Economics*, *7*(1), pp.151-182. https://www.aeaweb.org/articles?id=10.1257/app.20130537

12. Banerjee, A., Duflo, E., Glennerster, R. and Kinnan, C., 2015. The miracle of microfinance? Evidence from a randomized evaluation. *American economic journal: Applied economics*, *7*(1), pp.22-53. https://pubs.aeaweb.org/doi/pdfplus/10.1257/app.20130533

13. Karlan, D. and Zinman, J., 2010. Expanding credit access: Using randomized supply decisions to estimate the impacts. *The Review of Financial Studies*, *23*(1), pp.433-464. https://academic.oup.com/rfs/article/23/1/433/1579262?login=true

14. Cai, J. and Szeidl, A., 2022. *Indirect effects of access to finance* (No. w29813). National Bureau of Economic Research. https://www.nber.org/papers/w29813

15. Garg, S., Gupta, S. and Mallick, S., 2023. Financial Access and Entrepreneurship by Gender: Evidence from Rural India. Structural Transformation and Economic Growth. https://steg.cepr.org/sites/default/files/2023-04/WP062%20GargGuptaMallick%20FinancialAccessAndEntrepreneurshipByGender.pdf

16. Burgess, R. and Pande, R., 2005. Do rural banks matter? Evidence from the Indian social banking experiment. *American Economic Review*, *95*(3), pp.780-795. https://pubs.aeaweb.org/doi/pdf/10.1257/0002828054201242

17. Bruhn, M. and Love, I., 2014. The real impact of improved access to finance: Evidence from Mexico. *The Journal of Finance*, *69*(3), pp.1347-1376. https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12091

Practitioner

18. Naeve, K. and DoCampo, I., 2020. Evaluating How Root Capital's Client Business Impact Smallholder Livelihoods: Cocoa Cooperatives in Peru. Root Capital. https://rootcapital.org/resources/evaluating-how-root-capitals-client-businesses-impact-smallholder-livelihoods-cocoa-cooperatives-in-peru/

19. El Mamoun Amrouk, N.P., Mudungwe, N. and Muzvondiwa, E., 2013. The Impact of Commodity Development Projects on Smallholders' Market Access in Developing Countries. FAO. https://www.fao.org/3/aq290e/aq290e.pdf

20. International Finance Corporation, 2017. MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small, and Medium Enterprises in Emerging Markets. World Bank. https://www.ifc.org/wps/wcm/connect/03522e90-a13d-4a02-87cd-9ee9a297b311/121264-WP-PUBLIC-MSMEReportFINAL.pdf?MOD=AJPERES&CVID=m5SwAQ

Contacts

To find out more about this project or explore further engagements, please contact Rania Nasir at r.nasir1@lse.ac.uk

International Growth Centre
London School of Economics
and Political Science

Houghton Street
London WC2 2AE

www.theigc.org

DIRECTED BY

FUNDED BY