

# Digital technologies and agriculture finance

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Increasing access and reducing barriers



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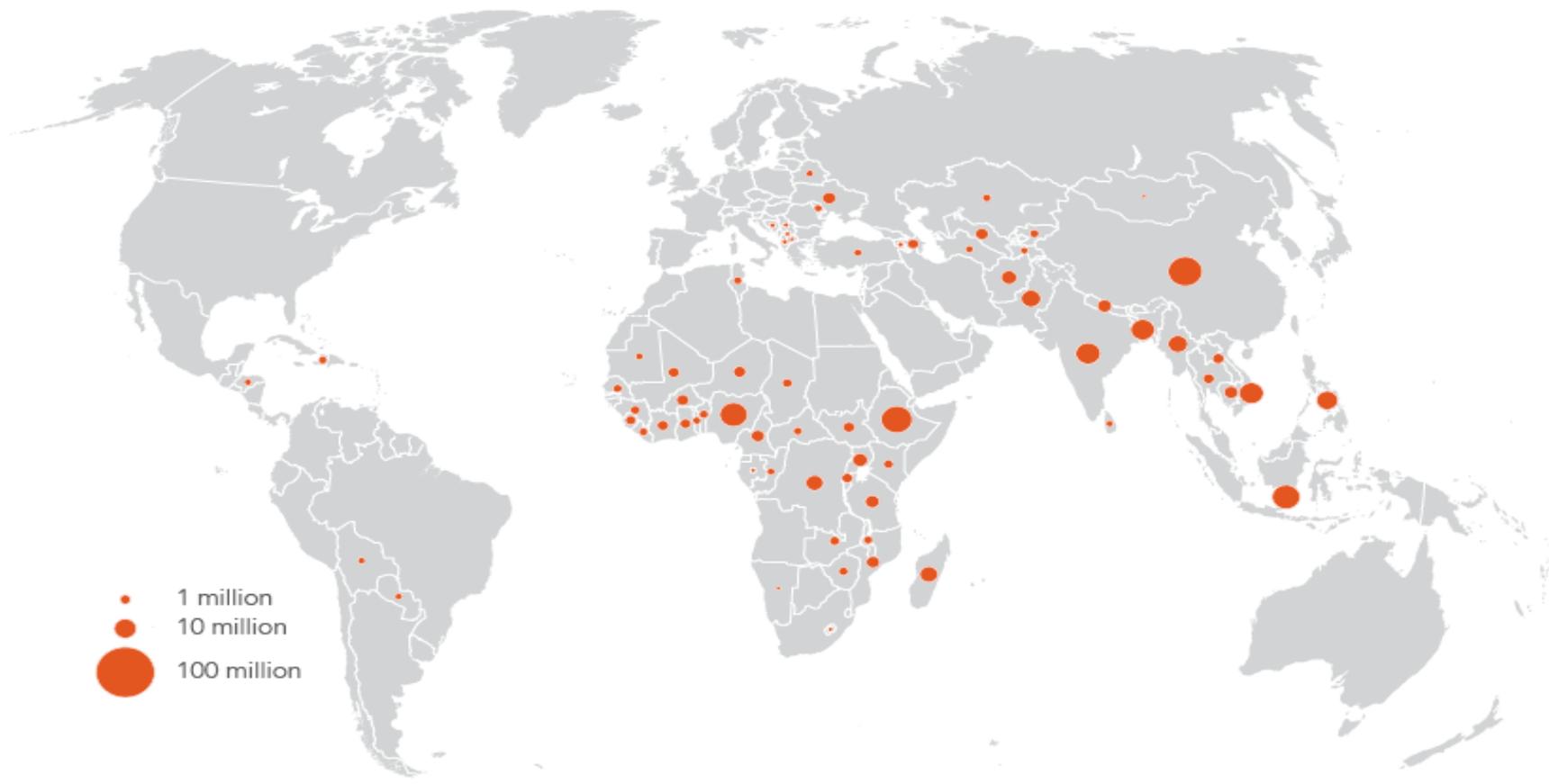
# Overview

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1. Access to agriculture finance is still strained with pervasive barriers
2. Digital technologies can address these barriers
3. ... by enabling market extension and financial inclusion
4. ... and increasing connectivity and livelihoods for farmers ...
5. ... which requires a more nimble, agile and responsive approach

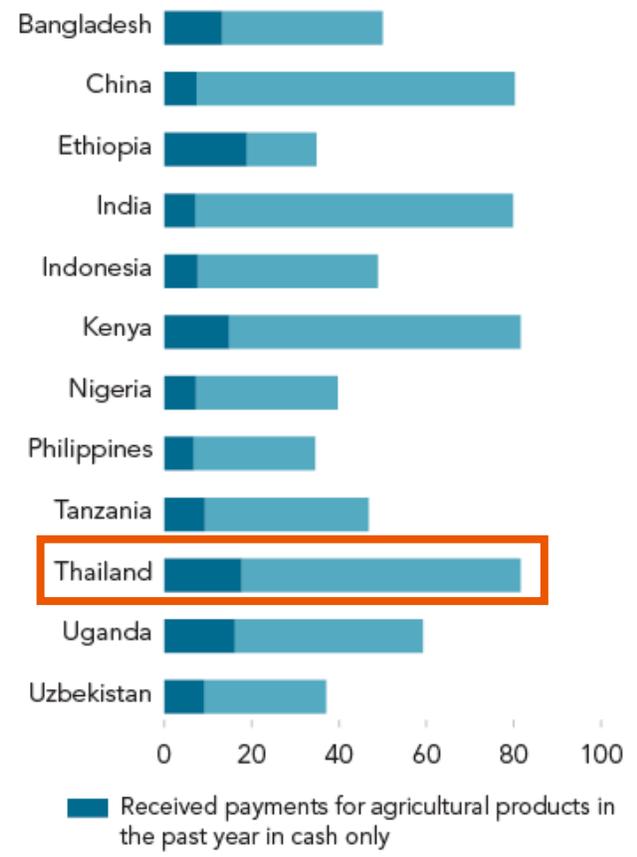
# Access to finance is still strained for unbanked and underbanked farmers

**About 235 million unbanked adults receive agricultural payments in cash**  
 Adults without an account receiving payments for agricultural products in the past year in cash only, 2017



Source: Global Findex database.  
 Note: Data are not displayed for economies where the share of adults without an account is 5 percent or less or where the share receiving payments for agricultural products is 10 percent or less.

**Millions of account owners receive payments for the sale of agricultural products in cash**  
 Adults with an account (%), 2017



Source: Global Findex database.

# Agriculture finance: Barriers are pervasive



**Economies of scale  
and scope  
misunderstood**



**Credit rating often  
not applicable  
to farmers**



**Capex / opex  
wrongly positioned**



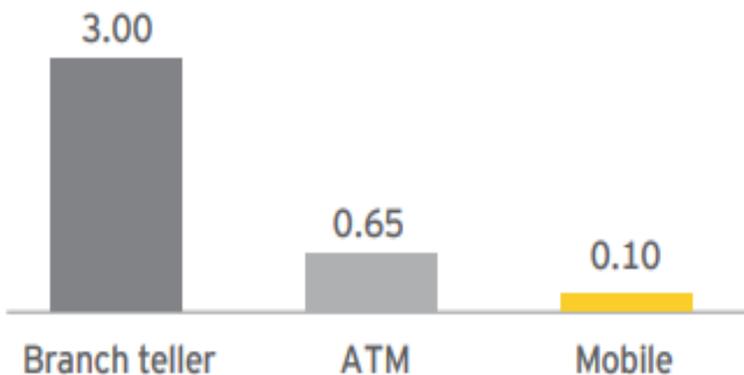
**Outdated funding /  
credit models**

# Market extension enablement and financial inclusion for unbanked and underbanked

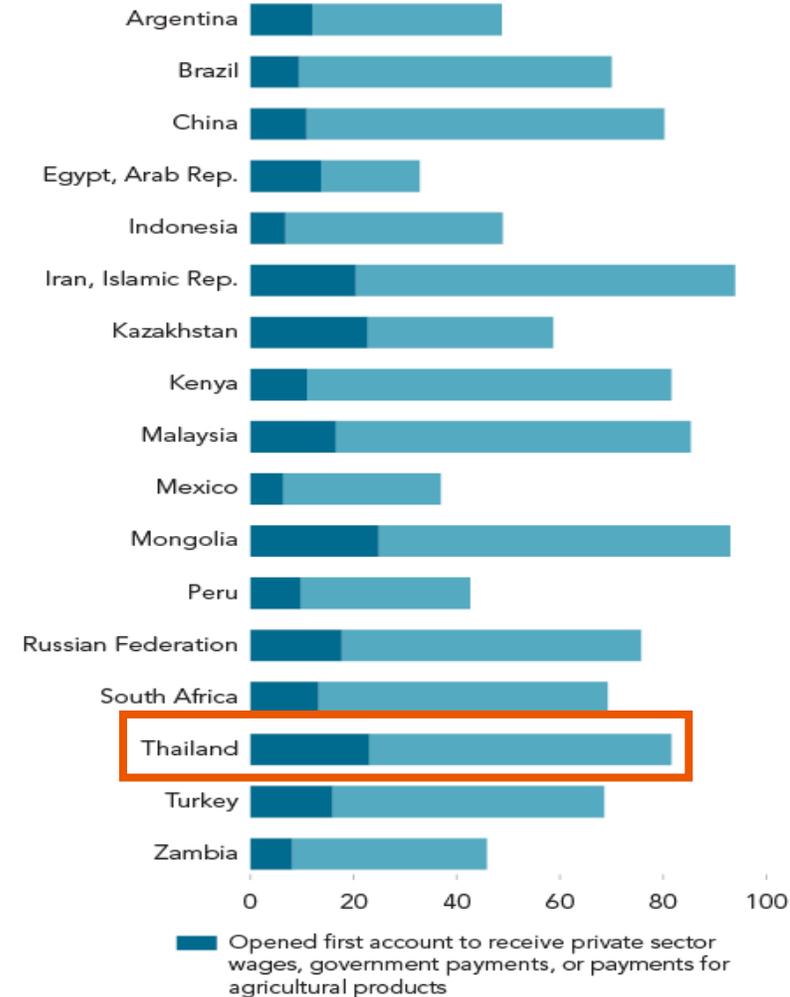
## Financially excluded



## Cost to serve customers through different bank channels (USD)



Millions of adults opened their first account to receive digital payments  
Adults with an account (%), 2017



Digital technologies enable market extension and financial inclusion, by lowering costs, providing new services, and growth opportunities

# Digital technologies enable connectivity and improve livelihoods in agriculture

Growth in knowledge-intensive agriculture offers opportunities for new technologies and new financial mechanisms



CI-Agriculture analyzes data from drones and crop sensors to provide farmers' advice on when to plant, use fertilizers and pest control. Farmers have experienced:

- 80% productivity increase
- 60% crop yield increase
- 50% reduction in farming inputs
- 25% reduced crop failure.



Farmbeats is an IoT platform that collates sensor, drone and camera data for automated decisions. It utilizes TV White Spaces for connectivity – which enables remote access for farmers. Weather smart IoT reduced sensor downtime to 0% (from 30%) and data analytics reduced waste by 35%.



Tanihub partnered with DOKU, Indonesia's largest online payment providers, to deliver e-payment options to Indonesian farmers. However, Tanihub noted that 98% of payments are still done by cash or bank transfer – with farmers often needing to see the cash in their hands first.

# Recommended approach: nimble, agile, responsive



## Conducive regulatory environment that promotes enabling and flexible finance models

- Moving from risk management models to new credit rating systems
- Provide *better* agricultural information to finance markets to better establish risk profile
- Banks incentivized to extend partial credit guarantees and utilize “smart” subsidies to enable sustainable financing for farmers



## Prioritise and enable wireless access

- Rollout and connectivity programs need to recognize that mobile is the agent of change
- Outlying or marginalized individuals and communities should be proactively targeted for mobile connectivity
- Applications and online services need to be designed and made natively for mobile platforms



## Technology literacy and capacity building on new technologies

- Leverage advancements in technology in terms of agricultural processes (agritech) and payment platforms to enhance access and reduce costs
- Sharing of success stories and case studies
- Pooling of costs for investments; amortizing of base platforms (cloud infra, etc)



# Questions?

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## About TRPC:

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