

# Mapping Pathways for Financial Product Innovation: A Conceptual Framework for Reaching Unbanked Populations

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**Abstract:** *At a national levels Savings banks still face severe problems supplying financial services to unbanked people at remote and marginalized areas, due to the actual costs of operating traditional structures of branches and the manual process for the opening of accounts. This article develops an integrated approach which can systematically identify potential pathways for delivering low-cost microloans, savings products and micro insurance to disadvantaged groups. Through integration of a delivery analysis framework, product adaptation theory and mechanism of policy diffusion, the model demonstrates that harmonized account structures, cross-platform digital delivery, modularized products, and agent partnerships together can reduce the cost of delivery and expand access. Based on a thorough review of best practices and policy recommendations, the model assesses suitability, affordability and access by type of financial product in various conditions. It makes explicit to stakeholders the trade-offs that necessarily arise between the effectiveness of outreach and the investment of resources, and thus has the potential to offer decision support for banks to assist practitioners in thinking through feasibility across banking systems. The key novelty is a generic framework that is configurable and enables financial service providers, government and NGOs to be able to plan, assess and implement strategies that might accelerate financial inclusion and ensure the realization of affordable service access for the under-served.*

**Keywords:** Financial Inclusion, Conceptual Framework, Microfinance Product Design, Outreach Strategies

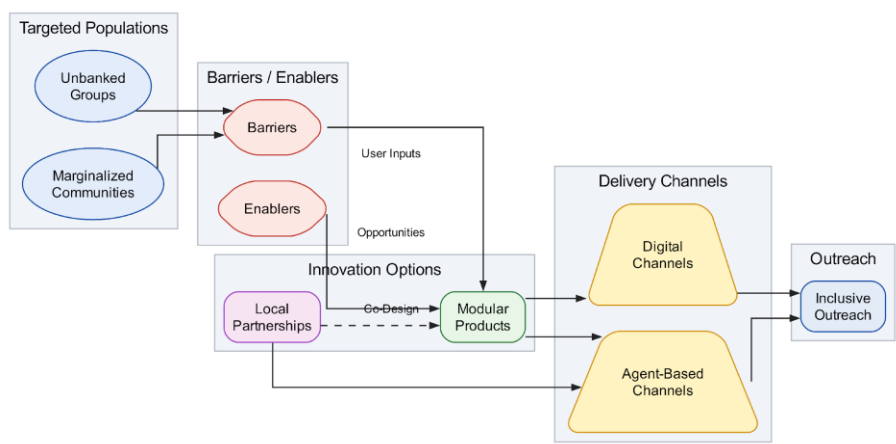
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Introduction

Due to barriers such as un-affordable infrastructure and complex onboarding, millions in remote and underserved areas still do not have access to formal financial services. National savings banks’ inability to design and offer easy-to-use financial products (like microfinance loans, savings and insurance) keeps people from achieving economic prosperity and contributes to the cycle of poverty. Overcoming this challenge require an integrated design approach that combines: simplified account design, mechanism for a thorough distribution through digital channels, flexibility on product offerings, and leveraging local agents trust (Giang et al., 2024; Ge et al., 2022). The paper outlines an approach to developing tools and frameworks to systematically track the dynamics of the interdependent pathways to innovative banking solutions, which are needed by such populations, and determines a range of options for aligning BANKs so that they can penetrate the market for affordable banking solutions to previously unbanked segments.



**Figure 1.** Conceptual framework mapping pathways for financial product innovation targeted at unbanked populations.

This figure (1) provides a synthesized illustration of the main components and interactions underlying the conceptual pathways for financial product innovation detailed in the paper.

Context and Rationale

Savings and credit banks which can reach underserved customers are abdominal in saving schemes of financial excluded (unbanked) population especially in geographically isolated placed. The absence of cheap physical infrastructure; together with complicated traditional enrolment processes, often lead to the exclusion of a significant number of prospective customers from the formal financial sector (Houghton et al., 2023). Tackling such exclusion requires products that are low-cost and are part of outreach campaigns that resonate with the low-income population. Recent developments such as minimal account structures, technology-light digital channels and modular approaches for low-income consumers have come to be increasingly identified as indispensable for financial inclusion (Ge et al., 2022; Okuzu et al., 2022): The pivotal role of NGOs, financial cooperatives and social finance organizations, including, but not limited to, digital financial service providers (DFS), in enabling financial inclusion is also becoming more fully understood (AF. By promoting a conceptual framework that holistically combines these factors in a structured manner, this research adds to the strategic planning and policy dialogue about microfinance and other like initiatives designed to drive scalable and sustainable access to financial services among underserved populations.

**Table 1.** Key Barriers to Financial Inclusion and Innovation Pathways

<i>Barrier</i>	<i>Traditional Challenge</i>	<i>Innovative Pathway</i>
Physical infrastructure costs	High branch setup and maintenance	Digital and agent-based models
Manual onboarding	Complex paperwork and KYC	Simplified, digital onboarding
Product irrelevance	Mismatched product features	Modular, community-tailored products
Limited outreach	Urban-centric operations	Local agent partnerships, mobile channels
Regulatory rigidity	Stringent compliance requirements	Flexible, proportional regulatory frameworks

This table (1) enumerates the main barriers faced by national savings banks and corresponding innovation pathways for inclusion.

Research Objectives and Questions

**Table 2.** Research Objectives and Corresponding Questions

<i>Objective</i>	<i>Research Question</i>
Map pathways for inclusive financial product delivery	How can national savings banks systematically identify and implement strategies to extend financial services to unbanked populations in remote or marginalized regions?
Classify product adaptation and delivery mechanisms	What are the key types of channels, product adaptations, and partnership models that effectively address the unique needs of low-income communities?
Assess regulatory and organizational enablers	How do regulations, technology, and institutional strategies interact to facilitate or hinder scalable financial inclusion?
Inform decision-making for product and outreach design	What decision criteria best guide banks and stakeholders in selecting context-appropriate, affordable, and user-centered products for unbanked populations?

This table (2) presents the main research objectives of the study alongside their corresponding research questions to clarify the focus and analytical scope of the framework development.

The first objective in this paper is to draw a knowledge map for a development summary that addresses the conceptual depth towards achieving the adoption of the unbanked in poverty-stricken and isolated areas, through an appropriate design of products, channels and cooperation with relevant partners of the financial institution. More specifically, the study will aim to identify actionable pathways to inclusivity in financial service provision, delineating relevant product and channel typologies, examining the interplay of regulatory and organisational enablers and deriving decision-relevant insights that are relevant to the cost-effective supply of microloans, savings accounts, and of microinsurance products (De Foo et al., 2023; McQueen et al., 2024).

## Literature Review

Recent studies underscore the importance of financial inclusion in bridging the service deficit among the unbanked through the design of context-specific products and outreach approaches (Okuzu et al., 2022; Ge et al., 2022). Research has revealed enduring challenges in infrastructure, regulation hinderance, and product divergence from the users. Crucially, innovations including digital transformation and public-private-partnerships have opened up new avenues for outreach, with a digital insurance management system and an agent-based model in particular showing promise for enhancing uptake, especially among the underserved (Okuzu et al., 2022). Long-term stakeholder engagement, regulatory agility, and use of technology to scale inclusive offers are also highlighted (Ge et al., 2022).

**Table 3.** Comparative Analysis of Outreach and Innovation Strategies

<i>Strategy</i>	<i>Key Features</i>	<i>Primary Enablers</i>	<i>Limitations</i>
Agent-based distribution	Local agents deliver services	Trusted intermediaries, reduced operational costs	Quality control, dependence on agent network scale
Digital onboarding	Mobile or web-based account opening	Reduced paperwork, enhanced accessibility	Requires digital literacy, technology infrastructure
Public-private-partnerships	Collaboration for product delivery	Shared risk, co-investment, policy support	Complex coordination, trust establishment
Modular product design	Customizable, community-tailored offerings	Localized relevance, better uptake	Higher product development cost
Digital management systems	Automated administration, fraud prevention	Data security, efficiency, transparency	Barriers to implementation in low-resource environments

This table (3) compares more than three existing outreach and product innovation strategies, highlighting key features, enabling factors, and primary limitations based on current literature.

*Typologies of Financial Product Innovation*

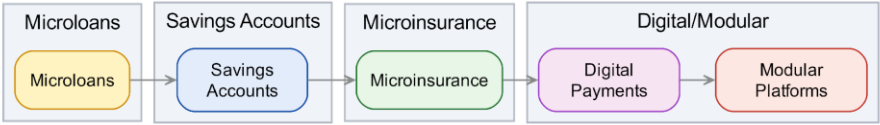
Types of financial product innovations for the unbanked can be organized systematically in several categories based on different needs in terms of availability, affordability, risk coverage, and usage. Key typologies include microloans that help households and entrepreneurs borrow small amounts to achieve economic independence, savings accounts that allow for safe, gradual asset building, and microinsurance products that mitigate weather-related, health-related or life-related risks facing poor households. Other developments include digital payment services to facilitate fast and low-cost cash transfer and remittance (Okuzu et al., 2022) and modularized, customizable financial services platforms for community-specific adaptations (Sun et al., 2024). Each variant features distinctive opportunities and constraints determined by the regulatory, technological, and socio-economic environment.

**Table 4.** Comparison of Major Financial Product Innovation Types for Unbanked Populations

<i>Product Type</i>	<i>Primary Function</i>	<i>Key Features</i>	<i>Target Barriers</i>	<i>Constraints</i>
Microloans	Small-scale credit provision	Flexible repayment, limited collateral needs	Credit inaccessibility	Repayment risk, limited scale
Savings Accounts	Asset accumulation	Low/no minimum deposit, mobile-linked	Security, savings discipline	Digital literacy, fee structures
Microinsurance	Risk protection	Crop, health, or life cover, affordable premiums	Risk mitigation	Low awareness, claim processing complexity
Digital Payment Systems	Transaction facilitation	Mobile platforms, instant transfer	Remittance, cashless access	Device access, transaction costs

Modular Platforms	Customizable financial services	Bundles (credit, savings, insurance), integrable features	Multiple service needs	Implementation cost, interoperability
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This table (4) provides a comparative overview of principal types of financial product innovation targeting the unbanked, highlighting their functions, features, addressed barriers, and key constraints.



**Figure 2.** A schematic overview classifying major types of financial product innovation relevant to unbanked populations, including microloans, savings accounts, and microinsurance.

This figure (2) synthesizes leading innovation typologies identified in the literature and visually differentiates microloans, savings accounts, microinsurance, and related products relevant to financial inclusion initiatives for unbanked populations.

Barriers to Financial Inclusion

**Table 5.** Structural Barriers Limiting Financial Inclusion for the Unbanked

Barrier Category	Description	Impact
Physical Access	Geographical remoteness and lack of branch infrastructure	Limits service reach to rural and marginalized populations
Regulatory Complexity	Stringent compliance, KYC, or licensing requirements	Hinders onboarding and delays product delivery
Digital Divide	Low digital literacy, poor network coverage, limited device access	Excludes populations from digital financial innovations
Product-Client Mismatch	Inflexible product design, cultural misalignment	Reduces uptake in diverse communities

Trust and Information Gaps	Low financial literacy, distrust in formal institutions	Discourages engagement with financial services
Cost Constraints	High transaction or maintenance fees	Disincentivizes sustained account use among low-income groups

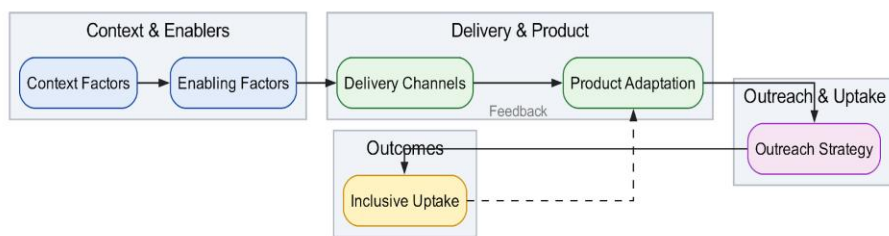
This table (5) summarizes the main structural barriers that obstruct financial inclusion among unbanked populations, organized by type, description, and primary impacts.

There are many obstacles at the institutional and community level that hinder efforts to bring unbanked or underbanked citizens of remote or blighted areas into the financial mainstream. Structural barriers can manifest as physical access restrictions, bureaucratic red tape, persistent digital divides, product–client mismatches, trust or information gaps and cost-related obstacles that impede the scalability and reach of outreach models (Okuzu et al., 2022; Ge et al., 2022). Effective innovation in the design of financial products necessitates understanding of the multiple-dimensions of the phenomenon to facilitate the design of locally and user-inspired solutions (Wu et al, 2024).

**Conceptual Framework Development**

The theory frame work combines delivery point, Product Adaptation Theory (PAT) and outreach strategies to systematically overcome barriers to financial inclusion in the deprived areas. It is based on an iterative model, which focuses on the design and delivery of microloans, savings accounts, and microinsurance products that are specific to the needs of the poor. Central framework elements include streamlined account structures, digital access that’s platform agnostic, modular bundles of products, and strong agent relationships. By merging best practices from literature and relevant policies, the framework helps institutions identify context-relevant alternatives, assess outreach and cost ramifications, and provide a roadmap for strategic interventions aimed at promoting financial inclusion (Giang et al., 2024; Ge et al., 2022).





**Figure 3.** Overview of the conceptual framework mapping the pathways for financial product innovation aimed at reaching unbanked populations.

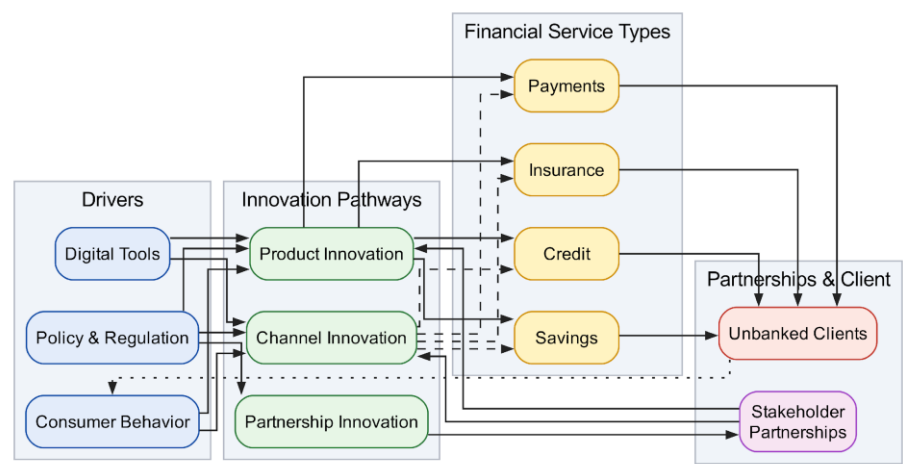
This figure (3) visually presents the integration of delivery channels, product adaptation, outreach strategies, and enabling factors central to the framework described in this section.

### *Integrative Modelling Approach*

The integrative modelling methodology synthesizes experience on conceptual framework design with best practice from the empirics and literature to chart routes of innovation in product delivery for the unbanked. The approach draws on the use of stakeholder analysis, service design and ecosystem mapping to ensure a complete view of the product, partnership and channel innovation options. Crucial factors include the definition of model boundaries, the choice for relevant variables, the embedding of cross-sectoral drivers such as policy, digital tools, consumer behaviour and the iterative validation of the concept using interdisciplinary evidence (Giang et al., 2024; Opabola & Galasso, 2024; Potthoff et al., 2023).

### **Pathways for Reaching Unbanked Populations**

Strategies to promote inclusive finance among the unbanked require a combination of product design innovation, targeted outreach, and adaptive service delivery. Building off conceptual framework development and integrative modelling techniques, examples of critical pathways include tailoring financial products to local tastes, utilizing digital delivery channels to address locational challenges, and building public-private partnerships to share resources and knowledge. Such a multifaceted strategy facilitates the structured discovery of outreach modalities that can mitigate infrastructural, social, and regulatory barriers by fostering scalable responses that are sensitive to specific issues within marginalized communities (Ge et al., 2022; De Foo et al., 2023).



**Figure 4.** Conceptual framework diagram mapping primary pathways

This figure (4) presents an integrated conceptual model outlining the principal pathways by which financial institutions can extend services to unbanked populations, emphasizing the interplay of product adaptation, digital channels, and collaborative partnerships.

*Product Adaptation Strategies*

**Table 6.** Product Adaptation Approaches Relevant to Financial Inclusion

<i>Approach</i>	<i>Core Mechanism</i>	<i>Target Population</i>	<i>Key Innovation</i>	<i>Operational Challenge</i>
Modular product design	Customizable savings, loans, insurance features	Rural smallholders, informal workers	Mix-and-match service bundles	Complexity in delivery
Digital microfinance interfaces	Mobile apps and USSD platforms	Unbanked youth, labour migrants	Paperless onboarding, instant access	Digital literacy requirements
Community-centric products	Co-developed with local groups	Women-led households, marginalized castes	Culturally aligned incentives	Scaling community engagement

Adaptive credit scoring	Alternative data analytics	Low-income or thin-file clients	Non-traditional credit assessment	Data availability, privacy concerns
Flexible repayment structures	Seasonal or event-based schedules	Subsistence farmers, microentrepreneurs	Cash flow-adapted payments	Risk of default, monitoring needs

This table (6) outlines primary product adaptation strategies, their mechanisms, targeted unbanked segments, innovations, and implementation challenges.

A rise of product adaptation strategies is a catalyst for able to improve financial inclusion for unbanked and underserved populations by tailoring financial services to local need, risk profiles and usage. "Such potential adaptation strategies include: modular product design, the use of digital microfinance interfaces, community-oriented co-design, adaptive credit scoring methods that involve the use of alternative data sources, and flexible repayment schedules." Such methods are attempts to address challenges such as cultural incongruence, lack of access, and cost limitations, while simultaneously promoting product delivery and outreach innovation (Ge et al., 2022; Wang et al., 2023). Effective operationalisation necessitates a balance between new ideas and what is operationally possible and contextually relevant.

*Digital and Partnership Channels*

**Table 7.** Key Digital and Partnership Channels for Financial Inclusion

<i>Channel/Model</i>	<i>Core Features</i>	<i>Target Population</i>	<i>Primary Benefits</i>	<i>Challenges</i>
Mobile banking platforms	Mobile app or SMS interface for transactions and savings	Unbanked rural adults, youth, microentrepreneurs	Low-cost access, paperless onboarding	Technology adoption, network coverage
Agent banking networks	Local agents providing services in underserved areas	Rural communities, informal sector workers	Geographical reach, trusted intermediaries	Training, cash management risks

Public-private collaborations	Joint ventures for digital product rollout	Marginalized populations in hard-to-reach areas	Resource pooling, policy support	Alignment of objectives, governance complexity
Fintech partnerships	Innovative digital financial solutions via third-party platforms	Urban and semi-urban unbanked	Rapid product innovation, scalability	Regulatory compliance, data security
Community-based digital groups	Digital savings and credit groups leveraging local social capital	Women, informal or migrant workers	Cultural alignment, collective trust	Consistency, financial literacy gaps

This table (7) summarizes principal digital and partnership channels supporting financial inclusion, with key features, targeted groups, benefits, and main implementation challenges.

Digital and partnership-driven channels are a prerequisite in enhancing the financial access of the unbanked, offering cost-effective and convenient financial services, thanks to technology-led interventions and shared value propositions. If you are a user of this, other critical digital channels are mobile banking platforms, usually fintech partners, which run at a fraction of the cost, in reaching credit, saving or payment services to other users in other forms. The mechanisms of (for instance) agent networks, modes of public private partnerships, among others, contribute in extending physical and digital reach due to local knowledge and trust and serve to overcome existing barriers to access with public-private coordination being seen to be a win-win situation. Community-led digital interventions also promote cultural congruence and long-term engagement, even though enablers are digital acceptance and infrastructure development and regulation harmonization (Ge et al., 2022; Okuzu et al., 2022).

Evaluation and Applicability

This section demonstrates aims of which are to empirically validate the proposed framework based on established measuring instruments on the following dimensions: the comprehensiveness of the framework, hiding of the product innovation pathways,

enforceability in banking institutions, potential for cost saving, and by practitioners. The chosen indicators are selected because they are used in other studies as frameworks in evaluating inclusive finance and innovation (Fenta et al., 2023; Merner et al., 2023; Guillaume et al., 2024). A tough review is that to the theoretical coverage, and the degree in which the model can actually influence decision-making of banks and other intermediaries. More specifically, the appropriateness of the framework installation, usefulness for basic tasks, and performance for different operational scenarios should be tested to frame the framework suitability for stakeholders who are looking to serve the unbanked. As such, validation of these criteria of the framework is vital to understand the extent to which it has supported product innovation, in-situ strategies, as well as cost sensitive outreach modalities.

**Table 8.** Framework Evaluation Across Key Performance Metrics and Scenarios

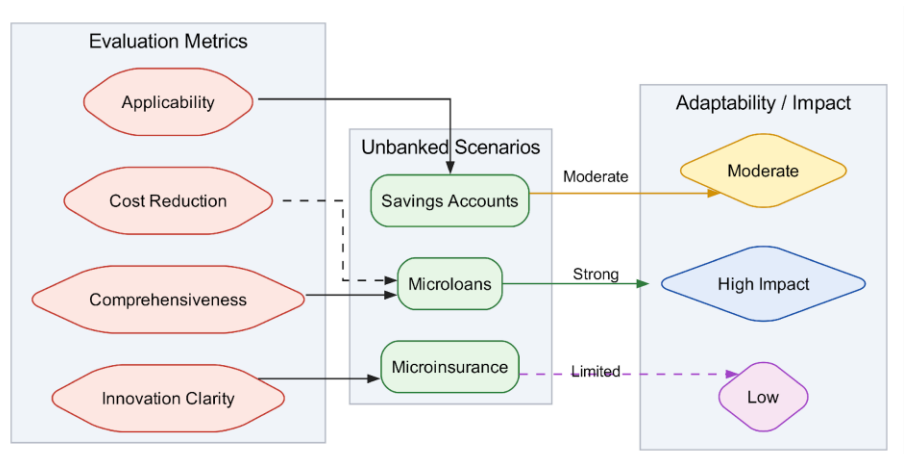
<i>Metric</i>	<i>Definition</i>	<i>National Savings Banks</i>	<i>Community-Based Institutions</i>	<i>Digital-First Entrants</i>
Framework comprehensiveness	Degree to which core innovation, outreach, and adaptation dimensions are covered	High: Broadly addresses diverse innovation and operational facets	Moderate: Requires tailoring for localized context	High: Well-aligned with digital delivery and modular products
Applicability across banking scenarios	Extent to which framework suits various organizational forms and operational realities	High: Encompasses urban, rural, and hybrid models	High: Supports grassroots and partnership settings	High: Enables technology-centric deployment
Clarity of product innovation pathways	Transparency and reproducibility of product adaptation logic	High: Explicit pathways for product configuration and delivery	Moderate: Needs contextual examples for clarity	High: Methodical guidance on digital and partnership innovations
Potential for cost reduction	Impact on lowering operational and	High: Emphasizes modularity and digital channels	Moderate: Dependent on local agent or	High: Favors automation, streamlined processes

	outreach expenses		cooperative structures	
Feasibility assessments by practitioners	Ease of use and perceived utility by implementation stakeholders	High: Readily integrated in institutional planning	Moderate: Adoption contingent on training and localization	High: Direct relevance for digitally skilled teams

This table (8) assesses the framework’s performance across fundamental evaluative metrics and contrasts its applicability and strengths for different banking provider archetypes serving unbanked populations.

$$Comprehensiveness\ Index = \frac{\sum_{i=1}^n w_i \cdot m_i}{\sum_{i=1}^n w_i} \#(1)$$

Equation (1) provides a weighted index to quantify the overall comprehensiveness of the framework across multiple innovation and outreach dimensions, with weights reflecting scenario relevance.



**Figure 5.** Applicability map of the conceptual framework:

This figure (5) visually depicts the intersection of key evaluation metrics with the framework’s scope, highlighting areas where the model exhibits robust adaptability and practical impact across unbanked banking scenarios.

## **Policy and Practical Implications**

The framework that we have constructed in this study presents a structured process with which national savings banks and related parties can use to successfully provide cost-effective and pertinent financial products to unbanked communities by providing policy and operational insight. Organizations would therefore need to focus more on regulatory relaxation, digital on-boarding procedures, and the implementation of human-centered design principles if they want to speed up the process of financial inclusion (Giang et al., 2024; De Foo et al., 2023; Opabola & Galasso, 2024). To translation practitioners, harmonizing outreach strategies with contextual agent formations and modular product designs will become necessary in scalable and context-sensitive systems. It is the role of policy makers and NGOs to create incentives for flexible compliance, inter-organizational collaboration, and technology investment, in order to lower access barriers and target marginalized populations (Wearn & Shepherd, 2024). This flexibility in the framework allows the systematic application and testing of a variety of dissemination and adaptation strategies in a range of regional context to build the necessary evidence base for both strategic planning and implementation in practice.

## **Limitations and Future Directions**

There are several limitations of this study to be acknowledged with regards to its conceptual framework approach: lack of empirical testing, limitations to transferring pathways to highly diversified or quickly changing situations and exclusion of direct end-user views. Though the framework integrates knowledge and best practices to guide strategy, there may be emergent issues surfaced with implementation, or the need to further localize for various communities. Further research addressing empirical validation of the model in different geographic locations, involving end-users in product design (participatory approach), and assessing the longer-term effects of particular adaptations of the product or channel may be warranted (Giang et al., 2024; Houghton et al., 2023).

## **Conclusion**

Based on case study findings, this paper developed an explicit conceptual framework helping national savings banks to systematically deploy cost-effective and demand-driven financial products to rural savers in remote and under-served areas. Through a combination of delivery channel modelling, product adaptation theory, and outreach strategy classification, the framework responds to key issues of cost, regulatory environment, and context-specific product design. Findings: Key

insights to consider include the value of easy on-boarding, digital channels irrespective of the platform, product modularity and partnering with local agents for scalable financial inclusion. The framework provides pragmatic guidance for strategy and policy that can help make interventions locally fit for purpose and user-centred (Ge et al., 2022; Houghton et al., 2023).

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