

Mapping Distribution Channel Taxonomies for Financial Inclusion: A Framework for Government-Backed Savings Programs in Remote Communities

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Abstract: *Provision of formal financial services to geographically distant and irregular-income populations is a major challenge, especially to government-led savings programs in marginalized locations like remote fishing communities. This paper elaborates a formalized classification of delivery and distribution channels such as agent-based banking, mobile financial systems, partnership with local retailers, and community-based mechanisms and customized to meet contextual constraints and incentives. The proposed framework offers a systematic trade off analysis of these channels, by integrating a concept innovativeness perspective, according to their coverage capacity, cost efficiency, customer outreach, and contextual adaptability. The results indicate that hybrid designs involving the combination of mobile technologies and agent networks are better in terms of balancing outreach and operation costs. Also, collaborations with local organizations and civic groups increase the level of trust, which positively contributes to a higher adoption rate, in particular, in those areas where the level of digital infrastructure is low, but the level of social cohesion is high.*

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The taxonomy provides a wide and flexible framework leading to the context-sensitive decision-making. It offers practical information to the policymakers and practitioners to manoeuvre well through the operational, socio-economic and political factors. Finally, the study provides a versatile and methodical way of maximizing channel strategy that can help re-incorporate underserved populations into formal savings channels.

Keywords: Financial Inclusion, Distribution Channel Taxonomy, Government Savings Programs, Remote and Underserved Communities, Agent and Mobile Banking, Hybrid Financial Delivery Models

Introduction

Delivery of formal financial services to geographically spread and socially disadvantaged population has been acute issue particularly in case of government backed savings programs targeting the household where there are irregular but diffused income distributions. Such access gaps should be addressed to achieve the inclusive development results and enhance the financial stability of underserved and excluded populations. It is noteworthy that the business model as well as the delivery mechanisms must be adjusted to the specifics of the population at the bottom of the economic pyramid, this is why the structured and context-specific approach is emphasized in the study. It constructs a complete taxonomy of distribution channels which consists of agent banking system, mobile financial platform, collaboration with local retail network and community-based approaches. The framework is a systematic assessment of these channels in regard to the efficiency of operations, accessibility, scalability and suitability in the context. The combination of conceptual frameworks and analytical modelling methods enables the study to have a versatile and viable basis on informed decision-making in the selection of channels and policy making. It ultimately contributes to the development of more effective, reliable, and convenient financial services provision systems to the group of people who are currently characterized by high entry barrier to formal financial inclusion.

Table 1. Comparative Analysis of Distribution Channel Models for Financial Inclusion in Remote Communities

<i>Channel Type</i>	<i>Key Characteristics</i>	<i>Strengths</i>	<i>Limitations</i>
Agent-Assisted Banking Systems	Financial transactions conducted through locally appointed intermediaries	Builds customer confidence, offers face-to-face assistance	Dependent on agent availability, possible liquidity constraints

Mobile-Based Financial Services	Banking and payment services delivered through mobile technologies	Extensive coverage, low operational expenses	Requires network access and mobile device availability
Local Retail Collaboration Models	Financial services provided via neighbourhood retail establishments	Utilizes familiar locations, enhances accessibility	Potential conflicts of interest, need for staff training
Community-Led Financial Models	Services managed by community representatives or organized groups	Strong social trust, culturally appropriate	Limited expansion potential, operational inefficiencies

Table 1 makes a comparison of financial inclusion channels which emphasizes features, advantages, and limitations. The agent and community models are based on trust, mobile and retail tactics on reach, yet the infrastructure, scaling and coordination issues are limitation factors.

Problem Statement and Research Gaps

The ongoing challenge of expanding formal financial services to less privileged and socially marginalized groups, in particular, with the help of government-funded savings programs targeting remote, low-income communities is a burning issue. The traditional methods of delivery are not always effective since geographical remoteness, weak income dynamics, and a low level of institutionalization inhibit the long-term access and engagement (Houghton et al., 2023; Valdez et al., 2023). To overcome these obstacles, there should be a methodical analysis and categorization of other delivery systems such as agent-based banking, mobiles financial systems, retail alliances, and community-based models. Nonetheless, a significant lack of an intrinsic model that can evaluate the appropriateness, effectiveness, and complementarities of alternative channel structures, in particular, in spatially and socially remote situations, is observable. Interconnection between the costs of implementation, the possible outreach, and the community trust are also not well studied in the literature that is essential to successful planning and implementation by policymakers and service providers (Ahmad and Satrovic, 2023; Bernays et al., 2023). To overcome these deficiencies, the given paper presents a universal taxonomy and an analytical model supporting informed choices in channel selection and integration, which will eventually lead to the provision of inclusive access to financial services in a problematic and underserved setting.

Study Objectives and Scope

This paper builds upon a systematic model by creating an elaborate taxonomy of distribution and delivery channels to government-sponsored savings programs to broaden

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financial access among underserved and discriminated groups. It provides an in-depth comparative information on agent banking networks, mobile financial systems, partnerships with local retailers, and community-based systems, based on integrative conceptual frames (Ge H. et al., 2022; Louis et al., 2021). The major contextual considerations, including income instability, travel limitations, presence of domestic intermediaries, social capital within the community and investment level requirements are explicitly included. These components contribute to the informed choice of channels and policy, as it is cost-effective, efficient in its operations, and sustainable over time in the expansion of financial services (Holland et al., 2016; Skowron et al., 2016).

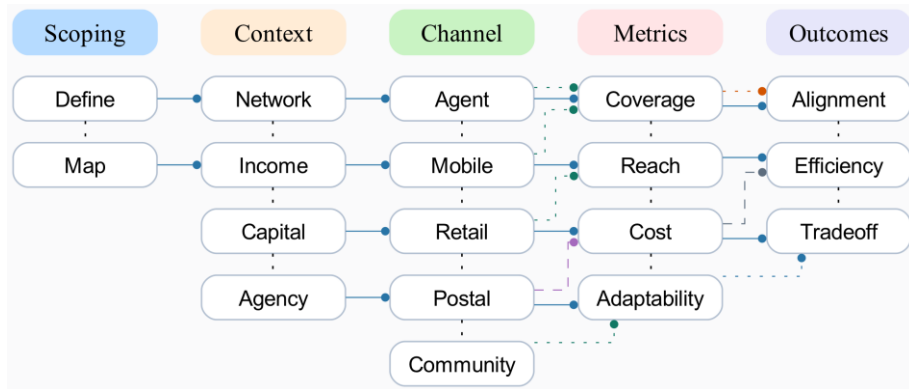


Figure 1. Integrated Framework for Mapping Distribution Channels in Financial Inclusion

Figure 1 presents a hierarchical model connecting scoping, contextual variables, types of channels, performance indicators and outcomes, which allows to systematically analyze the strategies of providing financial services to remote and underserved populations.

Review of Literature

Table 2. Structured Classification of Distribution Channels for Financial Inclusion

Channel Type	Core Mechanism	Accessibility in Remote Regions	Implementation Challenges	Scalability Potential
Agent-Based Banking Models	Transactions handled through locally designated representatives	High, provided sufficient agent presence exists	Monitoring agents, managing liquidity and operations	Medium
Mobile Financial Platforms	Service delivery via mobile	Varies based on connectivity	Limited network access, low digital literacy	High

	applications and digital interfaces	and device penetration		
Retail Network Integration	Financial services offered through local retail outlets	Moderate, depending on distribution of retail stores	Staff training, aligning business incentives	Medium
Community-Oriented Models	Services facilitated by local groups or cooperative structures	High due to social trust and cultural familiarity	Long-term sustainability, limited operational capacity	Low to Medium

Table 2 shows a tabular categorization of financial inclusion distribution channels, their mode of operation, accessibility, and scalability. In remote regions where there is sufficient presence of agents, agent-based models have good outreach, but they need good monitoring and liquidity management. Mobile platforms are very scalable and cost efficient yet require support of digital infrastructure and end-user literacy. The integration of the retail network takes advantage of the local stores that are already present to increase the convenience but has its challenges in terms of training and aligning incentives. Community-based models have high cultural acceptance and trust, which is the reason why they can be used with the underserved populations, but their scalability and sustainability in the long term are lower than with technology-based models.

Conceptual Foundations of Financial Inclusion

The literature on financial inclusion is founded on a series of various theoretical approaches that concentrate on different aspects of influence, including institutional structures, technology, and community dynamics that predetermine the presence of government-sponsored savings programs in remote locations (Rossi et al., 2024; Ge et al., 2022). Systems oriented perspective is concerned with the economic, social and technological interrelationships. The agent-based model of distribution focuses on the application of local agents and relationship networks based on trust. The digital platform diffusion model pays attention to availability of infrastructure and limitations in the user literacy to adoption. Meanwhile, the participatory model of the community is geared towards the cultural fit and the active involvement of the stakeholders. All these perceptions in totality offer valuable data on how to conduct research and create efficient distribution channel taxonomies in environments where informal patterns of income and unavailability of services are present (Ge et al., 2022; Rossi et al., 2024; Ahmad and Satrovic, 2023).

Table 3. Evaluation of Financial Inclusion Frameworks in Underserved Regions

<i>Framework</i>	<i>Core Concept</i>	<i>Primary Emphasis</i>	<i>Relevance to Distribution Channels</i>	<i>Key Limitations</i>
Integrated Systems Perspective	Combines economic, social, and technological dimensions	Comprehensive ecosystem understanding	Enables assessment of multiple delivery channel options	High complexity may limit practical policy implementation
Agent-Centric Distribution Model	Focuses on local intermediaries and relational networks	Trust-building and geographic proximity	Highlights importance of agents and community facilitators	Constrained by agent availability and skill requirements
Digital Adoption and Diffusion Model	Analysis’s role of digital infrastructure and user capabilities	Access to technology and usage behaviour	Supports evaluation of mobile and online service channels	Relies heavily on connectivity and digital literacy levels
Community Participation Framework	Encourages involvement of local stakeholders and cultural alignment	Community engagement and ownership	Tailors’ delivery channels to local socio-cultural contexts	Challenges in scaling and maintaining uniform service standards

Table 3 is a comparison of financial inclusion frameworks, which include system integration, agent networks, digital access, and community participation. They both have different channel designs optimizing trust, technology and scalability, but there are complexities, infrastructure dependency and low operational consistency.

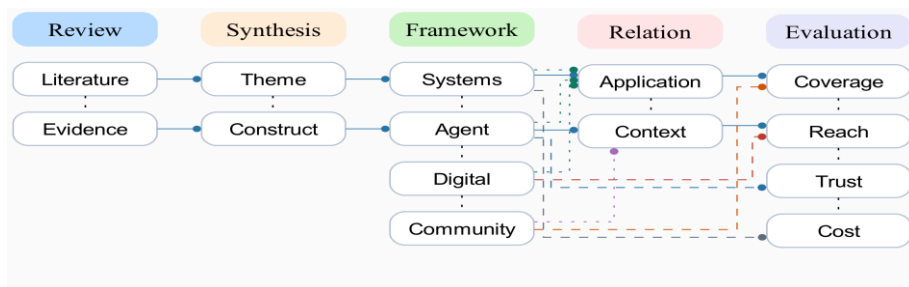


Figure 2. Conceptual Integration Framework Linking Literature, Channels, and Evaluation Metrics

Figure 2 shows how literature review, conceptual synthesis, channel structures, contextual relationships, and evaluation metrics have been integrated, making it possible to evaluate coverage, reach, trust, and cost in financial inclusion strategies in a systematic way.

Established Channel Taxonomy Frameworks

In modern categorizations of channels of financial inclusion, special focus is given to the relative positions of agent-based banking, mobile financial services, retail partnerships, and community-based strategies, especially in terms of government-sponsored savings programs in remote and underserved areas. These frameworks examine the channels of deliveries on the basis of the principles of basic design such as the degree of technological integration, the presence of intermediaries, and the correspondence of the service models to the current conditions of infrastructure. The contextual factors that have a powerful impact on the overall effectiveness of these channels are geographic isolation, digital literacy rates, and the level of trust in formal institutions. The growing scholarly interest is on integrative theoretical viewpoints that explain the connectivity of ecosystems, the involvement of communities, and the spread of technology in a variety of settings. These strategies acknowledge the fact that access alone is not a determinant of financial inclusion but flexibility to local socio-economic realities as well. In addition, they highlight the operational limitations and structural difficulties of the transactional systems, which comprise, the limitation of the infrastructure, behavioural barriers, and the lack of the institutional trust. All of these insights help create a more intricate picture of how the various channel strategies can be streamlined in order to reach and include marginalized populations (Ge et al., 2022; Houghton et al., 2023; Slattery et al., 2024).

Methodology

The current study will use an integrative conceptual Modelling approach to come up with a taxonomy to systematically plot the distribution of government-sponsored savings programs in remote communities. The way of doing it is multi-staged. First, it gives a detailed description of pertinent distribution channels by means of organized data mining. Second, it uses an iterative process of taxonomy development through which channel characteristics are constantly categorised and narrowed down according to their functional purpose, and relevance to their themes. This involves the mapping of channel properties with contexts of usage by the use of thematic synthesis. Third, the taxonomy is incorporated in an analysis model that aligns the emerging channel configurations with the actual socio-economic and contextual conditions. The important phases are checked with the help of multi-source triangulation and scenario-based assessments based on the latest research on sustainability and resource allocation (Ven et al., 2023; Tanga et al., 2024; Salgado et al., 2024; Darya et al.).

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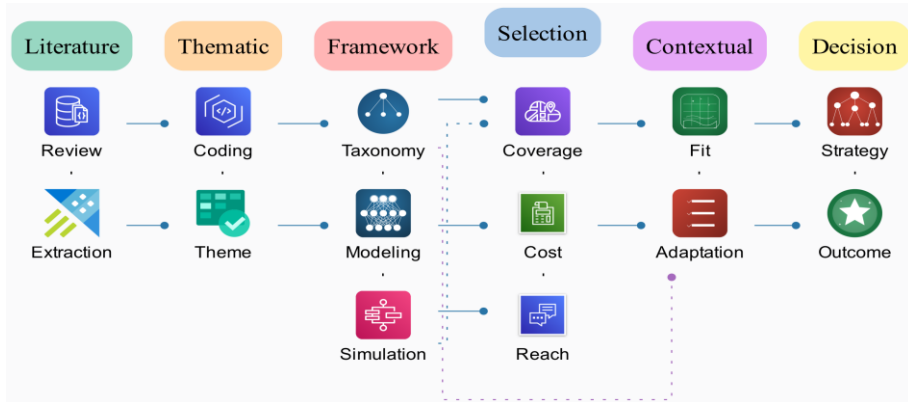


Figure 3. Thematic Graph of the Intended Integrative Modelling Framework in developing and implementing Distribution Channel Taxonomy in Government-Sponsored Savings Programs to Remote Communities. This number shows the methodological development of the formulation of taxonomy to the choice of channels and the evaluation of the context.

Figure 3 presents a systematic literature review and thematic coding to taxonomy Modelling, followed by channel selection, contextual adaptation and final decision-making, to guarantee effective strategy formulation of the financial inclusion delivery systems.

Classification Model Development Approach

To overcome the complexity of distribution channel systems, a systematic integrative Modelling approach is necessary to incorporate the main structural characteristics of the systems, especially in government-supported savings programs in remote communities. The framework presented here is a simplistic but well thought out abstraction of such systems. It starts by performing a comprehensive review of literature to integrate the underlying theories and classify channel mechanisms and outreach strategies. The consultations of experts are then carried out to determine important classification dimensions. A conceptual framework is developed and developed further based on stakeholder interviews and case studies in different geographical settings. The resulting taxonomy is constantly tested against the current theories to make sure that it is complete, scalable, and relevant to the context (Ge et al., 2022; Papari et al., 2024; Valdez et al., 2023).

System-Based Integrative Approach

Using a combination of conceptual Modelling process, this paper systematically determines and systematizes ideas of distribution channels to government-sponsored savings schemes in remote areas. The integrative Modelling approach is an analysis method that synthesizes multiple theoretical insights with empirical evidence into a single framework of analysis to have an in-depth analysis of the multifaceted and context-specific interrelationships between financial inclusion and income variability among underserved populations (Giang et al., 2024; Peskett et al., 2023). The approach focuses on the definition and harmonization of the crucial dimensions between the frameworks available, and a cyclic matching mechanism that connects channel features to particular accessibility and sustainability demands. The end result is a developed taxonomy of the various channel models, created to aid in the practical application, capture the priorities of stakeholders and to help in the effectiveness of the policy in the practical context.

Distribution Network Mapping Model

The channel (DC) mapping model provides a systemic and systematic methodology of categorizing and systematizing different delivery mechanisms, such as agent banking, mobile services, retail partnerships, and community-based models, to enable the government-supported savings programs in remote and underserved areas. The framework is based on the development of taxonomy and integrative Modelling and focuses on the interaction between the types of channels and the contextual variables, which include the local infrastructure, social trust, digital literacy, and scalability requirements. It is a method that will allow policymakers and practitioners to better find appropriate delivery strategies based on the conditions of a particular community. Consequently, it improves decision-making and the quality of financial services outreach among the marginalized groups (Ge H. et al., 2022; Naci et al., 2024; Peskett et al., 2023).

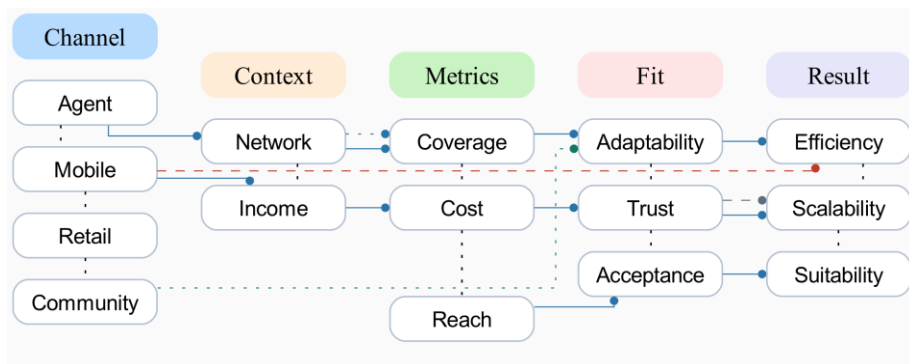


Figure 4. Distribution Channel Mapping Framework Linking Context, Metrics, and Outcomes

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Figure 4 shows the connection between the type of channel, contextual factors, performance measures, and dimensions of fit, showing the effects of adaptability, trust, and acceptance on efficiency, scalability, and general suitability of financial inclusion strategies.

Distribution Channel Types

The perfect division of the major key channels distribution channels to promote financial inclusion in the remote regions comprises agent banking, mobile banking, retail partnership, and community-based strategy. Both channels are based on a specific theoretical approach, including agency theory as the determinant of agent banking and the diffusion of innovation as the determinant of mobile based services. Their outreach strategies vary widely as well as their structures of operation. The intermediaries involved in agent banking rely on the local intermediaries and social networks based on trust to conduct transactions. Mobile banking depends on digital infrastructure and literacy of the users to be used effectively. Retail partnerships involve the use of known commercial channels to increase accessibility whereas community-based models capitalize on local leadership and participatory governance to create a stronger level of engagement. Even though they have their benefits, each channel has some limitations, such as scalability, dependence on technological infrastructure or access to devices, and the necessity of long-term local capacity. Consequently, the efficiency and appropriateness of the channels are related to the certain community factors and strategic goals of government-based financial inclusion initiatives (Papari et al., 2024; Ge et al., 2022; Ahmad and Satrovic, 2023).

Table 4. Outreach Approaches, Theoretical Bases, and Contextual Applications of Distribution Channels

<i>Channel Type</i>	<i>Theoretical Basis</i>	<i>Main Outreach Approach</i>	<i>Common Application Context</i>	<i>Key Constraint</i>
Agent-Based Banking	Agency and trust-oriented theories	Direct interaction, relationship-driven engagement	Dispersed rural regions with minimal digital access	Reliant on agent availability and cash handling systems
Mobile Financial Services	Innovation diffusion and digital access models	SMS alerts, mobile applications, remote assistance	Areas with mobile connectivity, semi-urban environments	Needs digital literacy and stable network infrastructure
Retail-Linked Models	Relational contracting	In-store campaigns, integrated	Locations with active retail networks or	Training requirements and alignment

	and resource utilization	payment systems	periodic markets	of business incentives
Community-Oriented Approaches	Participatory governance and social capital	Group meetings, peer influence, local facilitators	Highly remote or culturally distinct communities	Limited scalability and high resource dependency

Table 4 summarizes channel approach, theory, and practical application, demonstrating the differences in outreach approaches in different settings, and identifying constraints in remote financial inclusion initiatives as being scalable, reliant on infrastructure, and complex to operate.

Metrics for Channel Selection

The evaluation process must be conducted in a systematic and transparent manner to evaluate distribution channels with the aim of financial inclusion of remote regions. The most important dimensions of assessment are coverage capacity, cost-efficiency, estimated reach, contextual compatibility, and general adaptability. These standards allow making comparative analysis of the channels in terms of geographic scope, effective resource utilization, reachability, consistency with the accepted theoretical frameworks, and adaptability to local circumstances. This is a way of facilitating a holistic analysis of channel performance on a number of dimensions. It equally supports the creation of strong taxonomies and evidence-based plans to expand the financial services by government-sponsored savings schemes. With the help of these evaluation parameters, policy makers and practitioners can make quality decisions to help increase accessibility, efficiency, and sustainability in underserved settings (Ge et al., 2022; Ahmad and Satrovic, 2023; Gottlieb et al., 2024).

Table 5. Key Assessment Parameters for Financial Inclusion Delivery Channels

<i>Metric</i>	<i>Description</i>	<i>Purpose in Assessment</i>	<i>Primary Challenge</i>
Channel Reach Capacity	Share of the target region that the channel can effectively access	Evaluates geographical coverage	Limited availability of accurate data in remote locations
Cost Efficiency Measure	Cost incurred per user served through the channel	Determines economic sustainability	Accounting for indirect and fixed operational costs
Projected User Reach	Estimated number of beneficiaries the channel can serve	Assesses outreach capability	Difficulty in forecasting demand in low-

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			density populations
Framework Alignment Level	Extent to which the channel conforms to multidimensional models	Measures theoretical consistency and robustness	Maintaining balance between complexity and practical use
Contextual Compatibility Index	Degree of fit with local socio-economic and infrastructural conditions	Ensures relevance to specific environments	Adapting to varying and evolving local conditions

Table 5 presents key assessment parameters, their definitions, functions, and difficulties involved and offers an organization framework on which to evaluate distribution channels of government-led financial inclusion initiatives working in varied and remote settings.

Results

To explain, a comparative evaluation of major types of distribution channels used in the government-promulgated savings programs is carried out on five evaluation dimensions that point to inherent trade-offs that have been upheld by qualitative evidence. Results show that both agent based and mobile banking channels have potentials of coverage that are much higher than the retailer based and community-based strategies. Mobile banking shows a better performance in terms of cost-effectiveness since it decreases the cost per user served in comparison with the community-based models which are likely to be more expensive because of localized management and operation needs. The reach of the users projected is intimately linked to both the geographic access and the availability of the technology and the scalability benefit of the mobile platforms as compared to the traditional models that require a restricted physical resource base. Moreover, the analysis of the completeness of the framework and its alignment with the context demonstrates that there is a balance between theory and practice. Participatory community structures and agent banking are highly adaptable to local conditions and, however, they need significant resources to be successful in diverse socio-economic contexts (Valdez et al., 2023; Singh et al., 2024; Papari et al., 2024).

Table 6. Comparative Performance Assessment of Distribution Channels Across Key Evaluation Metrics

<i>Channel Type</i>	<i>Coverage Capacity</i>	<i>Cost Efficiency Level</i>	<i>Estimated User Reach</i>	<i>Conceptual Strength</i>	<i>Contextual Suitability</i>
Agent-Based Banking	High	Medium	Medium to High	Strong	High

Mobile Financial Services	Very High	High	Very High	Moderate	Moderate
Retail-Integrated Models	Medium	Medium	Medium	Moderate	Moderate
Community-Oriented Approaches	Variable	Low	Low to Medium	Very Strong	Very High
Hybrid Delivery Models	High	Medium to High	High	Strong	High

Table 6 shows a synthesised comparison of distribution channels to key performance indicators, which makes it possible to evaluate the efficiency, reach, flexibility, and contextual relevance of financial inclusion initiatives in remote locations.

$$Cost - Efficiency Ratio = \frac{Total\ Operational\ Cost}{Number\ of\ Customers\ Reached} \quad (1)$$

The cost-efficiency ratio is determined as the total amount spent on operations divided by the number of beneficiaries served and is also expressed as expressed in equation (1). This will allow a quantitative analysis of different service delivery models.

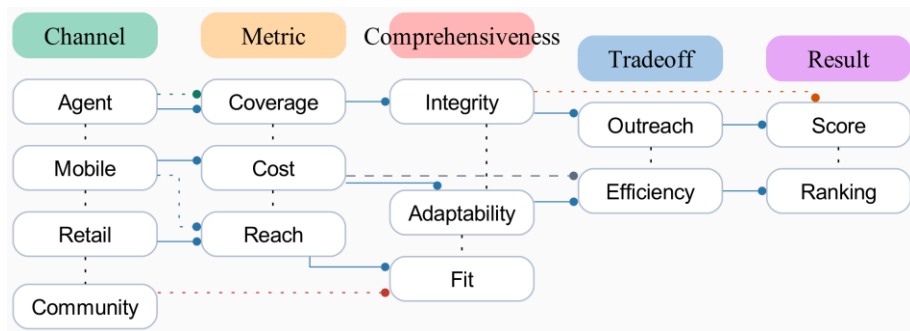


Figure 5. Comparison of framework comprehensiveness and key performance metrics across distribution channel types for government-backed savings programs in remote communities.

Figure 5 is a visual comparison of the types of distribution channels as per their framework comprehensiveness, outreach capability, cost-efficiency, and contextual appropriateness in government-sponsored savings programmes to remote communities. It is a combination of several performance dimensions to point out the relative strengths and constraints between channel models.

Channel Trade-offs and Context Suitability

Practically, it is trade-offs between coverage, cost, eligibility, customer acquisition and the efficacy of localized targeting that are undertaken in the design of savings programs. Channels that are more broadly covered are prone to be compromised in terms of contextual fit or cultural acceptability, whereas those with high local fit are prone to have a lower level of scalability or increased operational costs. The trade-off between anticipated outreach, cost of implementation and acceptance by the community is thus of paramount importance. Structural compatibility and situational appropriateness can be used to enhance long-term adoption because interventions that fail to match local infrastructure or cultural standards tend to have low adoption. This means that these interdependent aspects must be contextually evaluated in order to select the best channels (Wearn and Shepherd, 2024; Schwartz et al., 2024; Muir et al., 2023).

Table 7. Trade-off Analysis of Key Metrics in Distribution Channel Selection

<i>Metric</i>	<i>Operational Advantage</i>	<i>Key Constraint</i>	<i>Suitable Contexts for Application</i>
Coverage Capacity	Expands geographic reach	May compromise local relevance	Regions with established infrastructure or agent networks
Cost Efficiency Measure	Reduces cost per user served	May lead to standardized, less tailored services	Areas supporting large-scale, efficient operations
Projected User Reach	Enables high participation levels	Risk of uneven or concentrated distribution	Densely populated or demographically aligned communities
Framework Alignment Strength	Supports consistency with inclusion theories	Complex to operationalize effectively	Environments with coordinated governance and multiple actors
Contextual Compatibility Index	Enhances cultural and infrastructural suitability	Limits expansion across diverse regions	Areas with unique cultural settings or limited infrastructure

Table 7 shows the trade-off between the main measures of evaluation, the benefits of their operations, the limitations, and the most effective use, which will help select the most suitable channels to use in financial inclusion projects.

$$Context\ Fit\ Index = \frac{\sum_{i=1}^n w_i \cdot s_i}{\sum_{i=1}^n w_i} \quad (2)$$

The context fit index can be described as a weighted sum of the channel suitability scores

of the critical local factors, as demonstrated by equation (2), which allows the context-specific and flexible assessment based on the needs of the various communities.

Discussion

The results indicate that there is no best distribution channel that can be suggested to be utilized in the board and to the remote or underserved individuals in the provision of formal financial services. Instead, contextual variables, such as the local infrastructure, income variability, and community social capital, and the presence of the intermediaries, influence the success of any channel (Ge et al., 2022; Jennings et al., 2024; Valladares-Castellanos et al., 2024). The relative analysis of the channels based on such dimensions as the coverage potential, cost-efficiency, the number of users that the projection targets, and the contextual adaptability are likely to show that both hybrid and mixed strategies are common instances where they are the most efficient. The integration of channels will allow achieving both the scalability and local relevance in the goal of enhancing the overall impact. In terms of policymaking, the findings are that it is essential to have flexible regulatory frameworks, flexible operations strategies by service providers and regular and evidence-based review and monitoring of channel performance over a time.

Conclusion

The research contributes to the literature on how governments and service providers can expand the reach of formal financial services to rural and marginalized groups by offering a systematic division of distribution channels and delivery methods, such as agent banking, mobile-based, retailing and community-based. The results show that the success of these channels strongly depends on context-specific aspects including income stability, geographic limitation, availability of local intermediaries, and rates of community social capital. The given analytical framework will help the decision-makers develop the strategies to secure more outreach, lower the costs of the services, and increase the level of trust within the users due to the systematic channel mapping. Another implication of the study is that innovative and adaptive models should be further empirically validated in a wider range of settings, and there is still research that needs to be optimized to achieve financial inclusion within the difficult environment.

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