Organizing innovation to deliver financial services to the Base of the Pyramid

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Abstract: Over the past twenty years, the number of mobile phone subscriptions has risen from 12 million to more than six billion. 75% of the world has access to a mobile phone and the developing world is now more mobile than the developed world. However, the growth of non-voice services on these mobiles for the Base of the Pyramid users is still at the start of its growth curve. Drawing from a study of 50 case studies in financial services, this paper examines how the innovation for financial services was organized using a framework of six elements. It shows the importance of government support (both as regulator and as (launching) customer), the need for trust delivered by expansion of existing strong brands, embeddedness by using local agents and capacity building of these agents and the customers.

Keywords: mobile financial services, Base of the Pyramid, innovation process.

1. Introduction

Over the past twenty years, the number of mobile phone subscriptions has risen from 12.4 million to more than six billion worldwide [1]. The majority of these (equalling 3.8 billion) are in developing countries, where the mobile telecommunications industry has expanded most rapidly [2]. Mobile phones are especially important for the poorest living in developing countries, the so called Base of the Pyramid users. The Base of the Pyramid (BoP) refers to the 2.6 billion people that have less than $2 per day to spend [3]. The expansion of mobile phone subscriptions has been an important step forward for the BoP, as it has created connectivity to previously remote areas. This connectivity has enabled the growth of market based data services in the area of education, health, agriculture and finance. This paper focuses on how the innovation is organized for financial services and investigates what are the key success factors. Financial services for the BoP include (a) money transfers, remittances, payments, (b) savings, (c) loans and (d) insurance. We focus on services for individuals rather than for SMEs or micro-enterprises. Microfinance institutions were among the first to deliver financial services to the BoP, by creating small branches without having a fully fledged banking licence. Yet in 2008 they only served 100 million borrowers, still leaving an estimated 2.5 billion adults primarily in Latin America, Asia, Africa and the Middle East without access to financial services [4]. Mobile financial services showed high adoption rates in developing countries such as in Kenya, Tanzania, Ghana and the Philippines [5] but the adoption rate in other developing countries is still much lower. Micro-insurance and pensions are still very much in its infancy, where most success is reached when it is combined with other services such as agricultural ones (insurance for harvest combined with advisory services). The very moderate reach of financial services into the BoP is not so strange as many companies, particularly new to the continent, have little idea how to translate the still hugely untapped opportunity at the BoP into action [6]. There is little research available with respect to the different context of the BoP market in comparison to the Western market. The difference between BoP context and traditional western markets, is nicely captured by London and Hart [7] in the phrase: "Needs, needs, needs, but no market". In both contexts there are consumer needs but whereas these needs are served in the western context through a functional 'market', such a market is non-existent in the BoP; the poor's unmet needs can be regarded as untapped market opportunities. Research indicates that innovation strategies that are effective in serving or entering existing consumer markets are ineffective in creating new consumer markets [7].

2. Objectives

This paper provides insights into the elements of an innovation strategy that require specific attention when developing financial services for the BoP. TNO, a Dutch research and technology organisation, defined in a previous study [1] six elements that are 'special' for projects in a BoP context—elements that require 'extra' attention during the organization and management of the innovation process. 'Extra' as they might be different from how they are dealt with in regular innovation processes. Though our previous study provided general insights with respect to these six elements, no attention was given to the interpretation of these elements within a specific sector. Therefore, in this article we provide an analysis of the six elements specifically for organizing innovation to set-up financial services in the BoP. We do this by analysing how the innovation process for three successful financial services for the BoP was set-up and organized. This leads to recommendations that can be used in organizing the innovation process, when launching or expanding financial services for the BoP.

3. Methodology

The theoretical basis for these elements was developed through a study done by TNO named 'Organizing Innovation in Base-of-the-Pyramid Projects' [1]. According to this study BoP projects are 'normal' innovation projects in that they have goals, deliverables, budgets and timelines. However, BoP projects are 'special' in that they combine commercial entrepreneurship and goals with social and local entrepreneurship and goals. In other words, a BoP innovation project needs to be organized and managed as any 'normal' innovation project and in addition to this it requires 'extra' attention for six specific elements that are related to this combination of commercial and social perspectives. The six elements are described in paragraph 4.

In order to obtain specific insights with respect to these elements for the financial sector, we performed a case study research by studying successful financial innovations at the BoP. The case study research is based on the study 'Leveraging ICT for the BoP', executed by Hystra, Ashoka and TNO [9]. This study aimed to learn from "what works" in the field of ICT for development. Therefore, more than 280 ICT-enabled initiatives were surveyed across the world, looking for innovative business models with concrete proof of concept on the ground, to understand what made them successful and what the obstacles to scaling were. Out of the 280 ICT4D projects reviewed for this study, we first took out the projects which were either fully grant-based with no market-based component, were still in the feasibility study stage, or were 'dead pilots', for example finished pilot projects with no follow-up after two years. We were left with less than half of the initial pool of projects. In the course of this research we looked closely at 57 financial service projects, 48 of which were still running and market based (see figure 1). Out of the 48 projects, three were selected for in-depth study – using the six elements described in section 4 – as representative of the most interesting market-based innovations using ICT for the financial services sector. These three projects reflect market-based solutions already at scale (for example with more than 10,000 clients to date). Although the projects highlighted here are strong projects, it is not meant to put forward certain enterprises over others. The goal is to display representative examples of the various types of successful and viable approaches that emerged of our initial project screening, rather than to rank these initiatives.

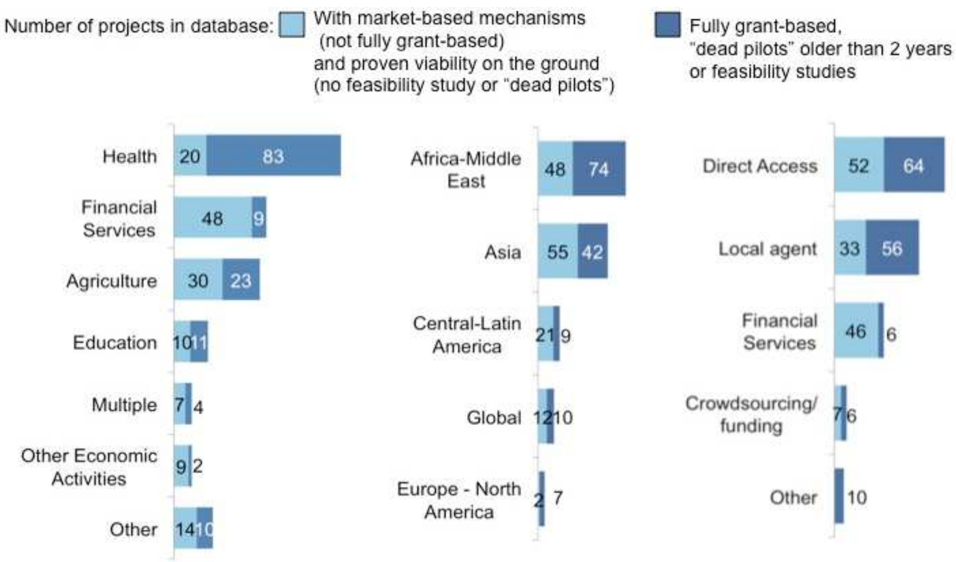

Figure 1: Studied ICT4D Projects

4. Technology Description

Below, we shortly describe the six elements that require extra attention during the organisation and management of the innovation process and provide additional sources to further explain or support the elements.

<u>1. Collaboration building and cooperation</u>

When setting up an innovation project, the leading organisation may not have all resources available to organise the entire value chain. Therefore, collaboration building and cooperation are essential for developing an end-to-end organisation. This is especially important in BoP innovation projects, as they combine different 'knowledge bases', often involving commercial businesses and not-for-profit organizations and combining commercial and social logic. Also other sources, such as [10], [11], [12] and [13] state the importance of partnerships in setting up innovation projects at the BoP.

<u>2. Co-creation, active participation and social embeddedness</u>

Secondly, co-creation and active participation of potential users and other relevant stakeholders as well as 'social embeddedness' are critical for BoP innovation projects. The rationale behind this is that a functional ‘market’ as known in the Western context, is non-existent in the BoP. This makes it difficult to develop products and services truly meeting people needs and to integrate them into the community (see also [7]). Co-creating with potential consumers and embedding BoP projects in local communities can help to create innovative and systemic solutions. In order for co-creation, participation and social embeddedness to take place, it is important to have local presence. A local champion, for example, has the ability to influence others’ attitudes and to disseminate information thereby enhancing the diffusion of an innovation [14].

3. Business models and financing

Thirdly, the development of business models and financial solutions is different in BoP projects. As the report states, “BoP innovation projects typically combine commercial and social goals, and therefore require a multidisciplinary approach, involving technology, business, policy and other perspectives”. It is especially critical to develop viable and feasible business models, by involving local businesses and fostering local entrepreneurship. Furthermore, BoP innovation projects require innovative financial approaches, such as long-term financing models and microfinancing [11][15][16].

4. Scaling-up innovation

Fourthly, scaling-up the results of an innovation project into full commercial deployment and, for example, into new regions or sectors is especially challenging for BoP projects. Therefore, it is important to have the entrepreneur or (industrial) partner that will actually implement and deploy the innovation on board at an early stage. Furthermore, it is important that a BoP-centric management team constantly balances the social impulse (that is, the will to serve the poor) with the more traditional business skills needed to build a successful business [7].

5. Institutes, policies and strategic alignment

The scaling-up of BoP innovation projects typically requires well-functioning institutions and institutional structures. Therefore it is critical to understand national or local policies and often even to work at influencing or modifying policies, for example if they directly affect success or failure of the innovation. Overall, sufficient institutional capacity and sufficient infrastructure are critical for scaling-up innovations.

6. Capabilities and evaluation

Lastly, it is critical for BoP innovation projects to focus on increasing people’s capabilities, while organizing and managing the project. This Capability Approach [17][18] involves a focus on people’s development and freedom—instead of a focus on ‘merely’ supplying hardware or equipment (‘too little’), or ‘overdoing’ it by prescribing specific behaviour (‘too much’).

5. Developments

In order to illustrate the six elements of the innovation process for the BoP, we have looked into how the projects that led to three ‘successful’ financial services for the BoP were set-up, organized and managed. In the following sections, each project is briefly described, following the six elements that were identified in section 4.

5.1 Bradesco

Organisation	Bradesco is the largest private bank in Brazil. It has created a joint

	venture with Brazilian postal offices to create Banco Postal. In parallel, it has created Bradesco Expresso.
Project	Bradesco operates two branchless banking networks, one via Banco Postal based on its extended postal office network, and the other through its Bradesco Expresso brand, based on individually recruited retail outlets, all using computers to register financial transactions.
Starting year	2002
# Customers	In total, it had 24.2k agents (10/2009) serving over five million customers. 27% of its customers were previously unbanked.

Collaboration building and cooperation

Bradesco initially partnered with the Brazilian postal office and jointly created Banco Postal. By means of this partnership Bradesco was able to establish a rural agent network through a large number of small post offices. Other partners with respect to its distribution network included lottery outlets or simple retailers.

Co-creation, participation and social embeddedness

To make agents visible to its customers, Bradesco makes use of merchandising material with its slogan "The bank that gets where no one else gets". The merchandising material is however, not specifically adapted to different customer segments. According to Bradesco trust is the one key necessary asset to provide financial services. Customers' trust is built thanks to human relationships of local agents, which are well known in their community. An additional factor creating trust was that the government used Bradesco to provide social payments to the poorest.

Business models and financing

Bradesco is not profitable as a standalone service (according to observers' estimate, since 2010 revenues and profit were not disclosed), but there are huge cost savings compared to expanding a traditional banking network. Hence, there is a clear economic rationale for banks. The existence of government to people (G2P) transfers (salaries, welfare payments) creates a true need for network expansion.

Scaling-up innovation

The solution is reaching nearly all Brazilians who now have banking services close to their home, often avoiding hours of traveling to bank branches. Though the system is simple (using existing infrastructure and technology) which has allowed it to scale rapidly, there are challenges to replicate it in other countries, such as regulation, availability of adequate agent networks and existing internet connectivity. There is an opportunity to offer higher value services beyond payments, such as credit, savings and insurance, to make the service more economically attractive for agents and thus recruit additional ones.

Institutes, policies and strategic alignment

The government was a key player by modifying regulation in 1999 to enable branchless banking. Allowing for non-banking actors to offer a broad range of banking services is absolutely key to favour emergence of this solution.

Focus on capabilities and evaluation:

Technology integrators train new branchless bank agents on communication tools. Bradesco offers software and online support to the agent and trains them at the nearest local Bradesco branch.

5.2 FINO

Organisation	Financial Inclusion Network & Operations Ltd. is a private financial services company offering technology and services to promote payment solutions for the unbanked and under-banked sector.
Project	FINO offers access to pension and government scheme benefits, savings accounts, loans, remittance capacity, and health and disability insurance by using biometric smart cards and wireless technology.
Starting year	2006
# Customers	In February 2011 FINO was serving 28 million customers.

<u>Collaboration building and cooperation</u>

FINO partners with various Public and Private Financial Institutions who promote and have invested in the company, including ICICI Bank (19%), Intel Capital and IFC (15% each), Life Insurance Corporation (8%), a few Indian public sector banks (22% together), Avendus Capital and Blackstone Group (minority stakes). Furthermore, FINO partners with the World Bank, International Finance Corporation (IFC), NABARD and UNDP to offer Financial Literacy Programs.

<u>Co-creation, participation and social embeddedness</u>

FINO did not have any network when it started. Therefore, it recruited members of good standing within target communities and whenever possible people who already had a small shop or an activity with frequent contacts with their community. As these members already had a local network they could help to integrate the FINO service into the community. FINO focused a lot on frequent interaction with customers by setting up door-to-door marketing campaigns and by reaching out to local village councils and banking institutions. Furthermore, trust in FINO was created by the government as most of its current clients (20 out of 28 million) needed to register to receive their government payments or to enrol in the Indian national health insurance scheme. This first user experience convinced them of the integrity of the system and encouraged them to use FINO for other financial services such as remittances.

<u>Business models and financing</u>

FINO reached break-even early 2011, so in five years. Revenues are generated by consumer payments for the products offered, for example savings account (free registration, deposits and withdrawals), remittances (0.5$ per transaction of 200$), loan (at 24% interest rate), life and disability insurance (at premiums of about 1$ per year) and client payments. Financial institutions pay a one-time fee per customer acquisition; the government pays a premium per year per health insurance and pays transaction fees for social security payments in relation to the National Rural Employment Guarantee Act.

<u>Scaling-up innovation</u>

FINO systems are highly flexible, customizable, scalable, ready for deployment, and are effectively bringing banking services to previously unbanked people (around 28 million since its inception). The growth rate of 30,000 customers per day in the last 4 years demonstrates FINO’s ability to reach and retain BoP customers, while being fully profitable. The next decisive step for FINO is to expand into the international market. In this expansion process it is important, according to FINO’s CFO Rishi Gupta, that a country has a sufficient density and a large enough population to make it profitable, as margins per transaction are smaller than for traditional banking.

<u>Institutes, policies and strategic alignment</u>

Manish Khera, the current CEO of FINO, came up with a model for non-bank owned channels to interact with bank customers. Official authorization to conduct financial transactions for non-bank entities was ratified by the government in January 2006 (Reserve Bank of India guidelines), allowing FINO to start offering its services. The government of India today is the source of more than 50% of FINO revenues (for government scheme payments) which shows the importance of alignment with government programs. In 2011, FINO obtained accreditation from the NABARD (National Bank for Agriculture and Rural Development) acknowledging the credibility of the organisation.

Focus on capabilities and evaluation

FINO trains financial literacy to its business correspondents and they in turn train customers. FINO created a ‘financial education program’ to increase financial literacy within its target population, sponsored for example by the MasterCard Foundation.

5.3 M-PESA

Organisation	Safaricom is the leading provider of converged communication solutions in Kenya.
Project	M-PESA is an innovative mobile transfer solution that enables customers to transfer money, without needing a bank account, to other M-PESA or non-M-PESA users via a simple interface.
Starting year	2007
# Customers	15 million (in 2012)

Collaboration building and cooperation

M-PESA was developed by Vodafone and launched commercially by affiliate Safaricom, who has a large net

work of airtime resellers in Kenya, initially for the repayment of microfinance loans.

Co-creation, participation and social embeddedness

In order to integrate M-PESA into local communities the existing distribution network of Safaricom was used under supervision of master agents. The slogan “send money home”, based on the Kenyan phenomenon of split families and local diaspora, helped to embed the service in people’s daily lives.

Business models and financing

In its initial stage, M-PESA obtained funding for an early market exploration survey and a first Vodafone experiment from the Financial Deepening Challenge Fund of the Department for International Development (DFID). The current business model of M-PESA is based on a flat rate with regard to customer-initiated transactions (pay-as-go pricing model) and a fee for balance inquiries and PIN changes. There are no charges for registration and deposits and no minimum balance is required. Furthermore, the SMSs that deliver the service are for free. Interest earned on deposited balances is put on a not-for-profit trust and not appropriated by Safaricom or passed on to the customer. Agents selling the service earn a commission which is paid for by the user. In the fiscal year 2010, M-PESA generated $94 million in revenue for Safaricom, amounting to 9% of total revenues for the company.

Scaling-up innovation

M-PESA is a flagship example of a mobile service used at large scale. It has been used by 38% of the Kenya population and reaches indirectly 75% of the population. Its success comes from a simple to use application -from an end-user perspective-, strong branding, high market penetration (80% market share) and large pre-existing reach (network of 23,000 agents of Safaricom). While it solves an urgent social problem and seems to be financially sustainable, very specific conditions made the Kenyan introduction a success. The Mobile Financial Services Development Report 2011 [5] has listed seven pillars as measures of mobile financial services development within countries. The report indicates that Kenya has a competitive advantage on three of these pillars (market catalysts, the distribution and agent network and adoption and availability) and a neutral score on all others. The Philippines has a competitive advantage on only two pillars (neutral on other pillars). Tanzania and Ghana only have competitive disadvantages amongst their scores. These differences among countries in amount of mobile financial services development indicate that the success of M-Pesa in Kenya is a result of various factors.

Institutes, policies and strategic alignment
M-PESA is closely monitored and regulated by the Central Bank of Kenya. The Kenyan banking regulator and legal authorities were very supportive to enable a mobile operator to manipulate money.

Focus on capabilities and evaluation
Sufficient literacy of end users was required to use M-PESA. Training of the end-users was done by the availability of call centers and the local agents. In turn also the local agents were regularly monitored and re-trained. The constant stream of feedback towards the call centers was used to continuously improve the ease of use. M-PESA has improved people’s capabilities as is demonstrated by increased productivity in agricultural or remote areas due to just-in-time payments, enhanced personal security as it reduces the need to carry physical cash and more financial independence for women in Kenya using M-PESA.

6. Results

1. Collaboration building and cooperation

All three cases showed that collaboration was required to fill in ‘missing stakeholders’, especially immediate access to a large customer base. M-PESA partnered with affiliate Safaricom to get access to its airtime reseller network; Bradesco partnered with the Brazilian postal office to set up a rural agent network and FINO collaborated with the Indian government to get a direct client base through the registration of customers for government payments and the national health insurance scheme. By integrating established agents as service providers, these projects reduced their cost of scaling up while at the same time building their brand by associating it with trusted persons in the community. Thereby, the type of agent (mobile service provider, postal office, government) appears to be less relevant than the trust element of these parties.

2. Co-creation, participation and social embeddedness

Though little information is available with regard to the joint creation of services, all cases do show the importance of social embeddedness in the form of trust creation and integrating financial services in people’s lives. FINO and Bradesco, for example, especially focused on the recruitment of members of good standing within target communities and frequent interaction with customers to integrate the service into the community. Furthermore, trust in

FINO and Bradesco was created by integrating government services into its service package. Lastly, all three companies made active use of appealing marketing campaigns that helped to embed the service in people's daily lives.

3. Business models and financing

In all three cases, large players (bank, operators, postal company) were involved from the start. The cases showed that it is important to have a driver within the company to initiate the new and less profitable –in comparison to the existing services for the middle and upper class- service offering. In order to lower the cost of accessing services, ICT financial services models rely on mixed revenue streams. Mixed revenue streams are comprised of end-user fees, financial institutions and government payments, and fees from telecommunication or other private companies gaining clients from this service. Widespread support for financial inclusion positions governments as good sources of revenue for ICT financial services projects, while banks are ready to pay for ICT financial services that extend their reach and reduce their costs. FINO and Bradesco are both used by the governments of their respective countries to channel state payments for pensions and other state programs. In partnering with FINO, banks and financial institutions pay a one-time fee per new client (and commissions on deposits and withdrawals in the case of banks). In cases where projects use telecommunication platforms and mobile coverage for service delivery, it makes economic sense for telecommunication providers to subsidize the financial services as this new offer can allow them to gain new clients and reduce churn.

4. Scaling-up innovation

In all three cases a large industrial or financial party was on board from the start. This made it possible to combine their existing robust and secure nationwide technology (such as the GSM technology of Safaricom or the IT backbone of Bradesco) with the locally required technology to reach out to the BoP (such as financial transaction software for the local retailer in the case of FINO). Hence, from a technology point of view, the combination of a large industrial partner with many local entrepreneurs is relatively easy to scale (although there are challenges regarding security and cash management). Scaling up actual usage of the service by already registered customers, the customer base as such (including attracting customers from illiterate populations) and the agent network was more challenging in all three cases. Users and agents have to scale concurrently, since high density is key in ICT-enabled financial services that still necessitate human interactions, to ensure the number and frequency of transactions required to break-even, even when agents offer additional services on top of banking. Actually, most of the agents of Bradesco, M-PESA and FINO have other activities apart from banking (such as a local retail shop). Essential for replication in another country is a conductive policy environment, as will be explained in the next paragraph.

5. Institutes, policies and strategic alignment

A key challenge to scalability and replicability in ICT financial services is the need for a conductive policy environment. For many financial institutes, margins are smaller in the BoP market and therefore they require an initial push from the government to promote ICT based financial services. Demonstrated government willingness to use such solutions to channel social payments increased the conviction of local bankers and other partners to invest in the market, as exemplified by Bradesco in Brazil and FINO in India. In the case of Bradesco, government support in the form of a modified banking regulation in 1999 allowed for the launch of its branchless banking program. Indian local government was one of the first clients of FINO, using this service to distribute Rural Employment payments and pension payments. Another example of government support is that of the Kenyan Central bank regarding M-PESA. The government has seen the huge impact of this scheme and is closely monitoring it with the objective to learn and formalize regulation (notably regarding anti-money laundering regulation and Know Your Customer norms to ensure data protection) in support of the corresponding spread of financial inclusion. This open-minded approach is rather the exception than the rule for other central banks. Overly bureaucratic systems present significant obstacles to scaling up. M-PESA has expanded into for example Tanzania and South Africa, but penetration in South Africa was hampered by more strict banking regulations. Obtaining favourable insurance regulation that allows mobile providers to participate in insurance schemes, for example, has proved difficult. Although progress is made; M-PESA offers for example a crop insurance via UAP Insurance. Also government-imposed delivery fees for its payments and its mandate to route them through traditional banks can limit flexibility, for example in the case of FINO. But overall in the cases investigated, the government had a very positive impact.

6. Focus on capabilities and evaluation

In general, the financial services in all three cases improved people’s capabilities due to the greater convenience, speed and lower costs of transferring or receiving money. However, since most of the services described are transactional services, they form just a very first step towards true financial inclusion. Poor people need a wide variety of different financial services, more than just easier transactions. However, in all cases those additional different financial services were added all along the further roll-out and development of the service. These more advanced financial services can lead to for example greater productivity or more financial independency. FINO, Bradesco and M-PESA are still struggling with how to attract customers from financially illiterate populations in a cost-effective way, especially in the remote rural areas. FINO created ‘financial education’ programs to increase financial literacy within its target population, but they attracted outside funding for this, such as via the MasterCard Foundation. Additionally, low financial literacy means that customers often require assistance. This generates a lot of airtime traffic for helplines or balance enquiry services that projects struggle to manage. M-PESA reacted by making balance inquiry a paying service, while several financial services have set up dedicated call centers. It seems that there is room for more innovative ways of increasing financial literacy, as exemplified for example by the financial education programs aimed at children of the NGO Child and Youth Finance International.

7. Business Benefits

In financial services, ICT has proved truly transformative, bringing entirely new possibilities to unbanked and underbanked population. Not only does it save them time and money immediately compared to previous alternatives, but it also reduces people’s vulnerability to theft and adverse economic events in the long term, by securing their savings and offering them 24/7 safe money transfers and insurance. Developing countries of all continents have seen successful models reach more than five million customers and expand quickly. Yet not all services are successful, as experimented by the many tentative replications of mobile money services that fail to pass the one million user landmark. There are still 2.5 billion adults who do not have access to financial services and the economic opportunities that they can bring. This paper provides lessons from three ‘success stories’ in the financial services sector with more than 10,000 clients to date which can help organisations to develop innovation strategies for the introduction of financial products or services for the BoP.

8. Conclusions

In this paper, we evaluated three cases of financial services using the six elements for organizing innovation. Due to the low financial literacy, local agents are required to sell the service (at least initially). They must create trust in the technology and leverage existing trusted networks such as airtime resellers or post office agents. This means that from the start large players with strong brands need to collaborate, as was shown in all three cases. In terms of co-creation, participation and social embeddedness, strong marketing campaigns (door-to-door by the agents, many advertising with expressive slogans) were used to reach out. There was no mention of a truly bottom-up approach with for example co-creation sessions with the potential customers to define the requirements for the service. However, once the service was piloted and rolled out, feedback was continuously gathered and used to improve the service. Regarding the business models and financing, it was clear that the business case for the short term and as a standalone service was not very strong. The business models seen tapped into various (and generally multiple) sources of revenues. Governments played a large role in promoting such services through explicit policy support or by using the services for their social transfers (and in this way providing directly a source of revenues). To ensure trust in the service and potential for scalability, a large trusted brand has to be part of the collaboration from the start. Companies launching these initiatives should be aware that they will need to invest both in increasing financial literacy to sell complex services such as insurance, as in sustaining customer relationships to maintain users active. Moving forward, existing initiatives that use agents will need to densify and better secure their agent network to make their offer easily accessible to all. This implies often first to piggyback on existing networks, then to create new ones for a second step of expansion.

In order to expand financial services into more developing countries and in order to introduce also more and more new practices for unbanked populations (for example micro insurances and pensions, or 'meso-loans' for social entrepreneurs), this study has highlighted which ingredients in the innovation process are most important. Key is collaboration from the start with the government and the large corporate players such as mobile operator, national bank and/or postal company. NGOs can possibly play a role to kickstart such a process, but they should avoid to pilot first and then seek collaboration.

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