

Full Length Research Paper

Technology entrepreneurship-potential for social innovation? The case of Kenyan mobile industry companies

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Abstract

In this exploratory study, we analyze the potential of technology entrepreneurship as an engine for social transformation in the mobile service sector in Kenya. With our research, we aim to significantly advance the empirical analysis of sustainable business solutions for the bottom of the pyramid (BOP). We conducted thirteen open-end interviews from November 2010 to January 2011 with experts of the mobile phone sector, operating in Kenya and beyond. In our preliminary findings, we look at i) market opportunities and challenges serving the BOP and ii) innovating solutions for the BOP. We conclude that Kenya has developed a vibrant community of established players and young tech entrepreneurs focusing on overcoming the challenges at the BOP using mobile technologies. Nevertheless, the main challenge is that mobile services for BOP are still lacking financially sustainable business model.

Keywords: Social Innovation, Mobile Applications, Technology Entrepreneurship

JEL Classification: L26, O32

1.0 Introduction

Over the past decade the information and telecommunications (ICT) sector has been among the major drivers of economic growth for Sub-Saharan Africa. Hence, it is expected that the ICT sector will be the driving force of fundamental economic change within the continent. (eg. World Bank, 2010b; Hellström, 2010; Muturi, 2010.) There is, however, still huge untapped market opportunities besides the fast growth of mobile subscription figures (McKinsey, 2010). The ICT sector is not only growing in the amount of subscribers but more importantly new kind of ICT knowledge and business are arising. For example the AfriLabs, having several tech incubator members from various countries, aim to promote technology as a platform for entrepreneurship on the continent. In fact, the local developers are increasingly encouraged to think about accessing global markets, for instance by using the “windows of opportunity” offered by the multinational telecom companies. In addition, the international donor community, NGOs and government agencies are increasingly interested in participation in the telecommunication boom and are constantly developing new mobile phone-based information services for the poor (Lehr, 2008). For instance, the World Bank hold Applications for Development challenge- competition “to create innovative software applications that move us a step closer toward solving some of the world's most pressing

problems” using (World Bank, 2010a). There is a widespread belief that the potential to scale and replicate development efforts via the mobile phone is enormous, although to date, most of the initiatives remain in the proof of concept or pilot phase.

Most previous research on mobile service business models has concentrated on developed markets (e.g. Hedman and Kalling, 2003; Leem et al., 2004; Pateli and Giaglis, 2004). However, a growing number of scholars targets the challenges and opportunities in the ICT sector in emerging countries in their research (Anderson, 2006; Crabbe et al., 2009; Donner, 2008; Ivatury and Pickens, 2006). It is emphasized that it cannot be assumed that high-technology businesses will follow the same patterns as firms in developed economies (Siqueira and Bruton, 2010). Relating to the studies on entrepreneurship is that yet to date, little is known about entrepreneurship in emerging economies (Bruton et al., 2008; Naude, 2008) and most of the research conducted to date in the Base of the Pyramid (BOP) domain focus on the market opportunity perspective (Hammond and Prahalad, 2004; Hammond et al., 2007) Therefore, in our research the purpose is to study the “local players” views on the potential market opportunities at BOP.

In this study, we concentrate the mobile service sector in Kenya. The ICT sector is the fastest-growing economic activity in the country which is providing economic opportunities transcending geographical borders (World Bank, 2010a). The ICT boom has created new jobs, knowledge and business opportunities. Nevertheless, it is worthwhile to consider how much of technical solutions developed are targeted to the poorest of the poor and improving the livelihoods. According to some previous studies, it has been recognized that most local firms (in emergin countries) focus on serving only the top of their domestic economic pyramids (London, 2008). Hence, in this paper we focus on the market potential at the Bottom of the Pyramid and the possibilities for (market-based) ICT solutions improving the social constraints.

With our research we address the limited empirical evidence on social innovation and its impact in emerging countries, in particular on the poor and marginalized. There is much discussion on the potential of ICTs for development but little is known on how to create and implement sustainable business models targeting the poor making the main findings of this literature stream rather suggestive than practical for strategy formulation (Ramani et al., 2010). For that reason, we explore the following research question: Are the local companies entrepreneurs/enterprises interested in serving the BOP and what kind of methods they are using for innovating ICT solutions for BOP and social change.

This is paper is structured in following way. First, we provide a brief overview of the literature on the elements of our theoretical framework, and then we move on presenting the methodological choices and the cases, after that we present our main findings. In the last section we conclude with some general remarks on the potential of technology entrepreneurship as an engine for social innovation.

2.0 Literature Review – Social Innovations for BOP

2.1 BOP as Source of Innovations

The BOP is seen as offering huge untapped market opportunities and sources for innovating. In fact, there has been much debate since the seminal article by Prahalad and Hammond (2002) on the “bottom of the pyramid” (BOP): an estimated four billion people that live in poverty in developing countries. Even more shockingly, well over a billion people live with less than 1\$ per capita a day (Bartlett et al., 2002). The magnitude of the problem should be an imperative for a call for more sustainable innovation to bring prosperity to the poor and eradicate poverty. Prahalad and Hammond (2002) call for a paradigm shift arguing that the large mass of poor in the world in fact represents a huge untouched economic potential. They claim that a number of false assumptions about developing countries dominate the debate such as the frequent (and on first sight logical) but erroneous belief that the poor have no money and do not buy luxury goods. For companies seeking to serve BOP markets, enormous populations and social needs are the foundation from which an entrepreneurial idea with the potential for value creation may surface (Brugmann and Prahalad, 2007). Nevertheless, BOP is a challenging business environment. Numerous multinational enterprises (MNE) have retreated from BOP markets because they were unable to mesh a business model with local norms, values, and beliefs (Hanson and Powell, 2006).

Local companies have also started to recognize the potential value of BOP markets. Despite being “native” to their country, these local firms often have very little knowledge concerning how to operate efficiently and effectively in their country’s BOP markets (London, 2008). Previous research on innovating for BOP emphasize that BOP markets require companies and designers to reconfigure their business assumptions, models and product innovation approaches and products designs (Boyer, 2003). Further, a strong understanding of user needs (social, cultural, economic) should be the starting point for successful product/service innovation (Diehl and Christiaans, 2007; Rodrigues et al., 2007). It might be even that new methods for research on subsistence consumers are necessary; to learn how to tap the market of the poor, it is needed to increase the understanding of consumer behavior in the informal sector. For instance, the participatory research methods are recommended as they help researchers empathize with the poor and help the poor to be part of their own solutions (McKenzie and Attaran, 2007).

In this study we are especially interested in innovations for social change created by the local Kenyan entrepreneurs. Entrepreneurial initiatives often result in innovations which in turn may alter existing industries (Schumpeter, 1934) especially in the emerging market context; entrepreneurs may play a significant role of innovative solutions for social change and improving the living conditions even for the poorest. Hence, entrepreneurs are a crucial link in designing products and services to meet the needs of the BOP. They are the motors of economic growth and poverty reduction. (Kandachar et al., 2009.) Successful innovation is primarily a question of social adaption (Cavalli, 2007; Kramer et al., 2007) which, arguably, represents the more important element of the innovation process (Pot and Vaas 2008). Today, social innovation is confronted with the “dialectic between the local forces of a national culture and the global forces of a dominant economic logic” (Molz and Ratiu, 2008: 783). Past failures in the area of poverty alleviation and environmental protection indicate that it is of critical importance to take into account the complex interweaving of social fabric, governance structures, and economic and technological constraints for the application of knowledge for the greater good.

2.2 Innovating ICT Solutions for Social Change

Technological developments in information and communication technologies act as drivers and enablers of many service innovations (Bouwman et al., 2008). Poverty has an important informational dimension as poor people are often lacking access to information that is vital to their lives and livelihoods which adds to the vulnerability of the people concerned (UNCTAD, 2010). For the innovation perspective, the poverty context means, that ICT innovations result from a mix between technical solutions and social understanding (Srinivas and Sutz, 2007). For-profit oriented companies innovating for social changes can be a challenge in an economical term; how –and whether – it is possible to remain profitable despite serving low-income customers (Srinivas and Sutz, 2007). Karnaki (2007; Garrette and Karnaki, 2010) is critical about the BOP business opportunities. He says that BOP activities are either profitable but not socially beneficial, or socially virtuous but not profitable. According to Karnaki there are very few examples of profitable businesses that

market socially useful goods in low-income markets and operate in large scale.

Previous studies on BOP business models emphasize that products and services need to be foremost affordable (eg. Anderson and Markidsen, 2006; Chandra and Neelankavil, 2008; Prahalad, 2005; Simanis, 2006) Low-income users have different preferences usage patterns and cash-flow restrictions. In the mobile industry this implies to accept lower margins but to be able to reach the mass market. In addition, different pricing strategies for each customer segment, e.g. by creating extra value-adding services may allow increasing the income streams. A particular challenge though that has to be met at the BOP is the predominance of prepaid services which makes it more challenging to maintain brand loyalty.

Besides, being affordable, solutions should also offer some additional value for the poor people's life (eg. Martinez and Carbonell, 2007; Gollajota et al., 2010). Thus, it is recommended that the product development should be started with the customers' affordability and value-added point of view and then work backwards. This can be viewed as developing the innovation from bottom-up: innovations as societal-constructed learning and capacity-building processes must be driven by local needs in order to successful (eg. Boyle, 2003). Therefore, BOP practitioners are turning towards co-creation methodologies for innovating solutions to poverty problems through interactive learning in close dialogue and partnership with the poor and other stakeholders. Nevertheless, the challenge is how to achieve effective participation and deal with heterogeneity within local BOP communities.

Hence, the ultimate success of these new services is not determined by the technological possibilities but by their capability to better satisfy needs such as accessibility and access to information than existing alternatives (Bouwman et al., 2008). Recently several kind of mobile innovations have been created for the BOP which aims to provide value-added services for the customers. For instance, Donner (2009) distinguishes between the following type of mobile applications: agricultural extension, market information, virtual marketplaces, financial services such as mobile banking, direct livelihoods, mobile health, education services and civil services. Indeed, in a developing country setting, benefits of mobile services may not only include profits but also less tangible societal benefits such as the empowerment of users, improving access to and use of information, improving coordination among agents and increasing market efficiency. (eg. Aker and Mbiti, 2010; UNCTAD, 2010; Howard and Mazaheri, 2009.) The table I. presents the theoretical framework of this paper.

3.0 Methods

Kenya was chosen as a case study country due to the country's achievement and significant efforts to boost the ICT industry there. In general, East Africa is a region that has globally recognized success in building technology-based local enterprises and developing world-class innovation (World Bank, 2010a). Kenya being one of the fastest growing economies in the region has been various fora used as a case study on mobile money transfer. The success story of M-PESA, a brainchild of Safaricom, Kenya's largest service provider, allows customers to transfer money using their mobile phones

(eg. Hellström, 2010) has received global attention a lot. The service has been the source of innovation of new products connected to M-PESA platform particularly on mobile banking. Kenya was among the first countries in the world to commercially launch this service and the M-PESA application is installed on the SIM card and works on all models or mobile telephone handsets.

For our study, we applied an exploratory case study research approach, a typical approach in qualitative studies (Eisenhardt, 1989; Miles and Huberman, 1994; Yin, 1989). We conducted a total of thirteen open-end interviews with experts of the mobile phone industry in Kenya from November 2010 to January 2011, among them various business owners and founders of local companies that develop mobile applications or offer mobile phones based services. The interviews lasted between thirty minutes and one and a half hours. We recorded and transcribed the findings. To guarantee data triangulation, we used secondary data to check upon the truthfulness of the data gained from the expert interviews, as well as to round up the information provided. We also visited the sites on the ground to get an understanding for the impact of the business and to distinguish facts from fiction.

We applied three criteria for selecting suitable cases for this study: i) the firm needs to originate from, and operate in, an emerging country, ii) the firm is directly or indirectly serving the BOP with at least a part of their portfolio of product and service offers, and iii) the firm has to be located in the IT/mobile sector. For this study we selected five companies which are at different stages of firm growth, varying from the start-up companies to experienced regional players to ensure rich data and a broad view of the industry. One of the companies is very early stage start-up company which does not have any permanent employees, two companies have been in the business around ten years and have been able to grow their business significantly, one company is transforming from a non-profit into a for profit company, and one company is big stock company. In the below table II. we provide a brief summary of each case.

4.0 Preliminary Findings

In the analysis of our preliminary findings we concentrate on two themes: i) market opportunities and challenges at the BOB and ii) practices of innovating for BOP.

4.1 Market Opportunities and Challenges at the BOP

Generally it was agreed that mobile applications represent a huge market opportunity in Kenya due to the unmet needs of the BOP. Local entrepreneurs regard applications for social change as a welcome business opportunity. It is recognized that ICTs, and in particular mobile phone applications are a powerful tool to address social challenges and change the fate of poor people.

VirtualCity sees huge opportunities to creating simple solutions for social change due the increased connectivity through the widespread use of cell phones among the population which lack basic technological infrastructure. Also for Safaricom, the BOP represents a huge market segments. In fact, the initial purpose of the M- PESA mobile money platform, was to contribute to millennium development goals in part of Vodafone to offer easy access to micro-loans by unbanked market segment. (Hugnes and Lonie, 2007). Using the M-

PESA platform Safaricom has launched several products serving the BOP segments for example M-KESHO, which allows customers to access a savings account, credit, and insurance, KilimoSalama that is micro-insurance product for the rural farmers. (eg. Davidson, 2011; SyngentaFoundation, 2010). MobilePlanet has also been designing solutions for the BOP, for example the KAZI mobile application allows people to conduct some small task by their mobile phones. It seems that for the bigger players, BOP is important market segment but they are not solely concentrating on serving them. What is interesting is that smaller enterprises, like Ushahidi and M-FIRM are basically established from the beginning around the social challenges faced in developing countries. Ushahidi aims to act as tool for “social activism” and improving people’s access to information which is seen one of the constraints of poverty while M-FIRM’s purposes is to empower the rural farmers and improve their livelihoods.

Although, BOP is seen as an attractive market opportunity, the companies realized the challenges. In general, interviewees indentified the business modeling, especially finding a sustainable revenue stream, and not the idea generation and developing an appropriate technical solutions, as the biggest challenge in addressing the needs of the BOP. Several interviewees admitted that so far developing applications for social change is not yet very profitable. The case can even be that using the actual service is free for the customers, like the Ushahidi, which has been funded by donors so far, nevertheless to aim is to create some additional payable features for the service. Another option is to keep the price of the service low so that the poor really can afford it and will start to use it. This is case of the recently launched start-up M-FIRM which has been considering different options how to generate revenues from the very beginning. The team has started to create different services and expand their customer base. Hence, the aim is not only serve poor farmers, but also to develop services for other stakeholders involved in agribusiness such as co-operatives, associations and research institutes. This means naturally that the revenue stream will be broader. For instance, now the company is searching for several revenue streams to make it financially self-sustainable. Potential payable services are for example offering pricing and weather information for the farmers, mapping information based on their customers’ locations and in general collecting information and selling it to different parties interested in agribusiness. Nevertheless, currently the company is searching for methods how create some additional services that the end-users need to pay for.

For bigger the companies, the task is slightly easier as they have bigger product portfolios. This allows them to offer some less profitable services while they are some financially successful services making enough profit. For example, Safaricom admits that some of their apps for BOP are not making much profit, but allow reaching the mass-market among the low-income people and VirtualCity enjoys a steady income stream from its general business which allows its do some longer-term research and development for new products. In addition, it is worthwhile to notice that there are not always a clear distinction between ToP and BoP customers, for example Virtual City sees that their mobile services, for example, value chain services, are offering benefits for all the actors in the value chain, begin from the rural farmer who is producing the raw material.

Relating to the BOP, besides being able to innovate affordable solutions, one more challenge is that high-technology firms typically operate in an environment that is under constant change (Siqueira and Bruton, 2010) and in especially in the context of developing countries, the ICT landscape rapidly changing (UNCTAD, 2010). This requires companies in the mobile sector to frequently rethink their business model to meet new offerings from competitors. Kenya has a vibrant ICT community with a number of top-class, innovative technology firms and research and development facilities. The deregulation of the telecommunication sector, Kenya has in several ways leveled the playing field for other service providers and lead to increased competition. VirtualCity and MobilePlanet offer good examples of how to meet these challenges. Both companies have successfully been doing business for about 10 years. One key success factor is their ability to change their business offering frequently; VirtualCity changed its focus from e-commerce to mobile solutions and has concentrated on expanding their use of its solutions across industries. MobilePlanet used to program mobile application for Safaricom but is nowadays targeting end-users themselves since revue sharing model is not profitable anymore.

4.2 Idea Generation for the Social Innovation

As stated earlier, innovating for BOP, need deep understanding of the local customer needs. It has been emphasized that especially for the foreign companies gaining knowledge of the local conditions is one the main obstacle to develop successful products and services. Based on our research, although, the local innovators know the local context; they might still face major challenges to innovative useful products.

For instance, M-FARM’s business model, focusing on providing mobile solutions for rural farmers, emerged when the founders followed the media discussion on farmers complaining about the general lack of information available to rural farmers in Kenya such as information on market prices, or a weather forecast. In addition, the founders knew from their family members working in agriculture about the general problems and needs of Kenyan farmers. Nevertheless, the innovators have studied deeply the issues of agribusiness by taking courses at the university, meeting agrovets and most of all, spending constantly enormous amount of their time with the local farmers. By “job-shadowing” the innovators gain better and truthful image of farmers everyday activities and real problems and need. The innovators emphasized that interviews are not always suitable as the farmers cannot always express their needs and wishes.

Ushahidi was originally created as an ad-hoc solution to the people’s need to know what was happening during the outbreak of violence following Kenya’s general elections in December 2007. It is open source software for information collection, visualization and interactive mapping. It is improving people’s access to information. Later on, the Ushahidi software has been used for instance, to track anti-immigrant violence in South Africa and monitor elections in several countries.

VirtualCity sources many of its ideas on business models that help trigger social transformation from its exchange and long-term interaction with its larger customers. In general, VirtualCity offers IT solutions that meet business requirements,

increase business agility, help managing business risk and optimizing a firm's IT infrastructure. Knowing about their problem in their daily operations and understanding their key strategic challenges helps VirtualCity to trigger idea generation. For instance, their Mobile Distributor aims at streamlining the supply chain for distributors and retailers of fast moving consumer goods, targeting Kenyan small and medium sized companies (SMEs). More specifically, the company focuses on creating solutions to increase the efficiency in the agriculture value chain. Originally developed to meet the specific needs of single clients, the learning were later commercialized on a larger scale. In some cases, they can also translate their innovate solution to other sectors, e.g. the non-profit sector.

For different international actors, both from the non-profit and for-profit sectors it has become popular to organize different idea competition to accelerate the innovating for social change. For example several MNCs has organized contest for mobile apps development, for instance Samsung had various country specific "Developer's Contest" (Samsung, 2010a; 2010b), Nokia held a "Growth Economy Venture Challenge" (Nokia, 2010), GSMA's and Vodafone's "mWomen Base of the Pyramid App Challenge" (GSMA, 2010) but also international development agencies are seeing idea competition as a useful way of evoking interest in creating mobile solutions for social change, proof of that being the World Bank's "Apps for Development" (World Bank 2010a). The high tech entrepreneurs are eager to take part in the competitions. If they gain success, it improves the business quite well. For instance, the creation of M-Farm was a result of IPO47 organized by HumanIPO and Garage48.org during the autumn 2010. During the 48 hours that the IPO48 lasted, 18 ideas were created and two AkiraChix ladies developed the idea of M-Farm. M-Farm won a cash prize worth of Ksh. 1,000,000 (10,000EUR) which now facilitates the young entrepreneurs business development. Also Virtual City has gained benefits from these competitions; VirtualCity has taken part in the African Enterprise Challenge Fund targeting agribusiness and Nokia's Growth Economy Venture Challenge which focused on base of the pyramid. In fact the company won a US \$1Million venture capital investment by Nokia in the Nokia Innovation Challenge Award, beating companies from 54 different countries (Afrinnovator, 2010). Hence, the co-operation with Nokia will open doors for access to global markets.

It is worthwhile to recognize that innovating for BOP can also follow the very "traditional" research and development activities. For example, MobilePlanet's innovation process is internal. Once or twice a month the whole office staff takes one afternoon off and meets to discuss on ideas for new apps. In fact, the idea generation is not seen as the most challenging part; rather the execution is the challenge. Safaricom has various methods how generate ideas; they are benchmarking other markets outside Kenya to follow-up what is happening in the industry, they follow customers' feedback constantly in their contact centre and conducting focus group discussions. In addition, due to its position as the market leader, several actors are contacting it directly and proposing ideas for product development or ideas to use the M-PESA mobile money platform for new purposes. For instance, the development process of micro-insurance application, Kimilo Salama was developed by partnering with Syngenta Foundation and UAP

Insurance and together with Grundfos LIFELINK, M-PESA money transfer service is use to draw water at subsidized rates from automatic water systems.

5.0 Conclusion

The aim of this paper was to study how interested Kenyan mobile sector enterprises are serving the BOP and developing social solutions. It is not possible to make generalizations of our study, but based on our preliminary findings it seems that Kenyan companies are seeing the as an attractive market possibility. Further, it can be the companies are willing to accept smaller profit of their social oriented services just to reach more market or then, the motive can even be the pure interest to serve the poor and marginalized. Hence, there is a vibrant community of established players and young tech entrepreneurs that have started to focus on overcoming the challenges at the BOP. Addressing the needs of Kenyan's poorest will be an ongoing call for dynamic entrepreneurs to innovate and apply their knowledge gained from mainstream business models.

Another interesting observation concert the fact, that Kenyan ICT companies have good opportunities to access the global market by partnering with telecom MNCs or trying themselves scale up the business outside Kenya.

For future research, we would like to raise several interesting questions. How to measure the impact of the social innovations? Are there differences approaches to generate profitable socially oriented innovations depending on whether the ventures are established by new entrants or small or large companies?

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Appendices

Table I. Theoretical Framework

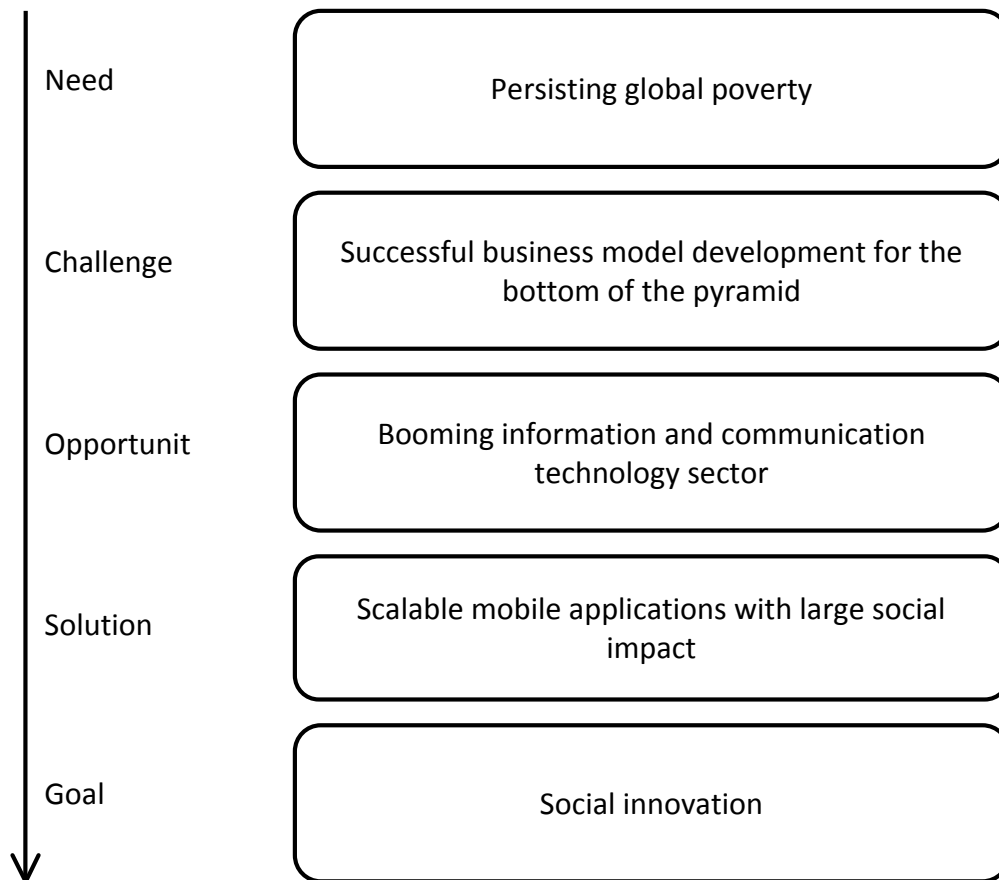


Table II. Company Profile of Selected Cases

NAME	COMPANY PROFILE	FOCUS
M-FIRM (http://twitter.com/mfarm_ke)	M-Firm is very recently launched start-up which is focusing on developing applications for farming. The creation of the company was a result of the IPO47 business plan competition organized by HumanIPO and Garage48.org during fall 2010. Their first and original application, M-Farm won a cash prize worth of Ksh. 1,000,000 (about 10,000 EUR) which now allows the young entrepreneurs to develop the business further. The founders of the company have ambitious goals to scale up their businesses all over Kenya and also outside the country. The company received seed capital by winning the competition but has concentrated from the beginning on being financially self-sustainable.	The company is focusing on developing applications relating to farming, targeting five million farmers in Kenya.
VIRTUAL CITY (http://www.virtualcity.co.ke/)	Established in 1999 by three partners with an ICT background. It began as a web service company offering e-commerce solutions and later on the founders moved on to supply chain and knowledge management for mobile solutions when the huge customer need recognized customers need. Currently, VirtualCity has around 40 employees. It customer base includes companies, public agencies, non-profit organizations. The funding of the company came from the founders and the company has been able to be profitable from the beginning.	Mobile solutions target social constraints at least in two different ways. First, it offers innovative mobile solutions for non-governmental organizations (NGOs) to manage their processes more efficiently. Second, the company focuses on solutions for improving agribusiness and agricultural value chains. However, the supply chain management solutions are enhancing the actions of all the actors in the value chain starting from the raw material producer to the final seller.
MOBILEPLANE T	Was established in 2001 by three founders. Nowadays it has around 20 employees and expects to grow slightly in	MobilePlanet has written at least two applications that addresses the needs of the BOP:

<p>(http://www.mobileplanet.co.ke/)</p>	<p>the near future. Currently it is in a stage of changing its business model due to the changes in the business environment. It used to develop mobile services for different companies, main clients being Safaricom, Cocacola and Unilever (revenue model: revenue sharing). In the near future MobilePlanet aims to offer products directly to subscribers which will force the company to change its revenue model. Recently, the company has expanded its businesses outside Kenya to the larger East African market, operating now also in Tanzania, Rwanda and Uganda. The funding of the company came from the founders and the company has been able to be profitable from the beginning.</p>	<p>(i) Biashara, a Swahili word for the market that is distributed by Safaricom. This application allows customers to check market prices at different markets and sellers to receive orders. (ii) a job information service linking job seekers to employees, called KAZI560 (www.kazi560.co.ke). In addition, MobilePlanet is working with some social networking applications.</p>
<p>USHAHIDI (http://www.usahidi.com/)</p>	<p>Ushahidi (<i>Swahili word for testimony or witness</i>) is a non-profit tech company developing free and open source software for information collection, visualization and interactive mapping. The starting point for the company was the “Ushahidi” (Swahili word for testimony) website which was initially developed to map reports of violence in Kenya after the post-election violence in 2008. In the following, Ushahidi transformed from an ad hoc group of volunteers to a more focused organization. So far the company’s operations have been funded by donor money, but currently there are developing revenue models.</p>	<p>The organization started by addressing a social need to map incidents of violence and peace efforts in Kenya. Later on, the mapping service has been used for tracking anti-immigrant violence in South-Africa, Eastern Congo, monitor elections in India and track incidents after the Haiti earthquake.</p>
<p>SAFARICOM (http://www.safaricom.co.ke/)</p>	<p>Safaricom Limited was formed in 1997 and is currently Kenya's current leading mobile telephone operator. The company employs over 1500 people. Its subscriber base is approximately 12 million.</p>	<p>The company is most likely known by its most famous product M-Pesa which provides access to financial services for the rural poor.</p>