

# Entry Modes and the Impact of Mobile Microfinance at the Base of the Pyramid: Scenarios of “My Village Phone” in Egypt

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## Abstract:

The expansion of mobile telecoms in the Egyptian market has contributed to different development paradigms. The entry mode and the way telecoms follow to access the Base of the Pyramid market in Egypt identifies which paradigm will take place in the future. Using the case of “My Village Phone” we developed a scenario analysis to explore the linkages between the entry modes and development paradigms. We found that “*Pro-poor*”, “*Para-poor*”, “*Per-poor*”, “*Per-poor exports*” and “*Networked*” are expected to take place if telecoms followed the Base of the Pyramid entry mode. However, they may fail to achieve one or more of these paradigms if they followed different entry modes such as “*Capitalists mode*”, “*Skimming mode*”, “*Social responsibility mode*”, or “*Sustainability mode*”. This study contributes toward a typology of entry modes and development scenarios for mobile telecoms market in general and for mobile microfinance in specific. At the *policy level*, we provide a *testable business model* for the candidate mobile telecom that looks for holding the fourth mobile license in Egypt. At the theoretical level, we offer a new conceptual framework the balance of power (Albin, 1997; Jaspersen et.al, 2002) that is drawn from three social science domains, systems thinkings, systemic foresight, and theories of power.

**Keywords:** Systems Thinking, Base of the Pyramid, Mobile Telecommunication, Development, Microfinance, Scenario Analysis, Systemic Foresight Model, Theories of Power.

## Introduction:

Liberalisation of human rights and political democracy became a default status, while liberalisation of commerce is still under question (Al Gore, 2013). The idea of globalisation tends to alleviate disenfranchising and reallocate the power between nations, social classes, and individuals. This foresight paper aims to set scenarios of “*how mobile technology empowers its users to escape from poverty and turn to off-poor or middle classes*”. Today’s global economy embeds real-time flow and exchange of information, investments, and intercultural communication. Such exchanges shape both production and consumption (Castells, 2011). Accordingly, we also assumed that “*different entry modes of mobile telecoms to the slum market (and production modes) results into different impacts (as consumption modes)*”. In doing so, we contribute to the rising debate of finding business solutions for poverty (Anderson, 2006; Anderson & Billou, 2007; Rangan et.al, 2007; Seelos & Mair, 2007). The dominant approaches to liberalise commerce during the last decade delaminated the economy into either an aristocratic class or a striving class, leaving no space for the average class (Cowen, 2013). The former class represents the world minority that is highly educated and invest on computerised systems to synergize and create wealth, while the latter class includes the immense majority that fight poverty and earn less than \$2 American dollars a day and live on junk and low priced goods produced by the rich class. The financial crises and the collapse

of mega financial institutions in the US and other dependent economies resulted into 60% decrease the jobs of mid-wage occupation with no party left to blame.

Using mobile technology as operant has enabled the poor Egyptians to recall some of their deserved economic power by creating social capital, improving their productivity and purchasing power parity (PPP)<sup>1</sup>. Such elements reflect the degree of empowerment (or development) that those Egyptians have in their lives. The Multinational Corporations (MNCs) and especially mobile telecoms penetrated in the Egyptian market, aiming to reach to a win-win situation. On one side, they build-up profits and extend their reputation by selling to the poor market. On the other side, this served market (counted to 32 million Egyptians) earns less than 2\$/day use the mobile telecommunication to gain stable sources of income and improve their well-being (Verme et.al, 2014). In rural villages, poverty reaches to 28% and some villages have 81% poverty rate. The Base of the Pyramid (BoP) quest raised by Prahalad sheds the lights over market opportunity in serving the poor market through collaborative ties with non-traditional partners (Mohamad et.al, 2014a). Our research, then aims to explore “*how the interactions among Vodafone, AYBSD, state officials, and low-income users — the context within which the BoP model is implemented — influence its success on the ground?*” We also tend to predict “*how could the interpretations and dilemmas of multiple actors shape the development impacts of mobile telecommunications?*”

Based on the systems thinking approach (Checkland, 1981; Jackson, 2010) and the systemic foresight model (Saritas, 2013), this chapter offers a foresight for the telecoms expected entry modes and the consequential development scenarios for each entry mode. The first part of our foresight study is based on two pillars; “*governance*” and “*nature of the market*”. The former, horizontal pillar includes “*a multinational corporation*” versus “*a state owned organization*”. The vertical pillar identifies the customer income as “*high income users*” versus “*low-income users*”. The second part of our foresight includes scenarios of how innovation takes place to alleviate poverty. Two pillars have been set; “*source of innovation*” and “*location of innovation*”. The former, refers to the top-down innovation followed by the private multinationals that access the BoP as a commodity market versus the bottom-up innovation that arises from the poor themselves. The latter, refers to where the development gets initiated (i.e. Starts). Then, our chapter, links between the BoP entry modes and its potential development paradigms. In doing so, we use the system foresight model and the theory of power to build our research contribution as shown in Figure 7.

To achieve all of the above goals we discuss an interesting case study at its maturity stage, which brings a problematic situation that needs to be resolved. The case of “My village Phone” is a replication of “Village Phone” initiative by Grameen Phone, but on the Egyptian market. This initiative is a microfinance initiative founded by Vodafone foundation in Egypt to create job opportunities for young microentrepreneurs who work as retail managers for Vodafone to expand the use of mobile telecommunication in the poor market. Accordingly, we see this case study as a complex whole with fabricated properties that emerge from the interaction between different individual units (events and actors). To define the problem situation, our team borrowed the some systems thinking principles (such as *Causality, Equifunctionality principle, Hierarchy, Excluded reductionism, Holism, and Idealism*). As a result, we could draw a detailed analysis of three layers (i.e. macro, miso, and micro) of the Egyptian context and the “My Village Phone” in the center. So, we set three layers of the problem context.

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<sup>1</sup> See Appendix 1 that presents a mind map, which collects the background and foreground of this research.

Our data analysis has been conducted using the systematic foresight model by Saritas (2006 & 2013) which includes “*internal foresight*” and “*external foresight*”. The former draws scenarios for the potential entry mode of mobile telecoms at the Egyptian BoP, whilst the later, explored the development paradigms after applying the BoP strategy among the poor Egyptians. At the end of this paper, we represent a testable business model for the candidate mobile network providers who look for holding the fourth mobile license in Egypt.

## 1. System thinking:

Ludwig von Bertalanffy initiated the need for analysing the complexity of the organism through studying the interconnectedness of its sub-components and the mechanisms of their interaction (Bertalanffy, 1929). He then introduced the “system” concept that encompasses a physical or human entity (Churchman, 1968). The word “System” is a group of interdependent components that create the whole with shared characteristics than those of the individual elements (Checkland, 1981). Each of those elements affects the properties of the others (*Causality*) and the way they communicate through ‘feed-back’ and ‘feed-forward’ loop (Hammond 2002).

Ropohl (1999) argues that the word “system” reflects a set of sub-entities that get-together to create new relations that did not exist before. Such relations shape the internal structure of a whole emerging entity (a system) that performs a particular function (*Functionality principle*). The more diverse are the relationships between these sub-entities, the more functions the system can perform (*Equifunctionality principle*). The integrations between sub-entities pass through enlarging layers inner, outer, and layers in between. Accordingly, system researchers need to study layer by layer (*Hierarchy*) and the relationship between these layers to provide a rich picture of the whole entity. In other words, the system’s layers cannot be analysed using the *ceteris paribus* principle (or *excluded reductionism*) (Ropohl, 1999).

Ropohl (1999) argues that the systems theory is an inquiry language, which we use to describe and analyse a phenomenon. This language offers a unitary interpretation rather than overspecialization interpretation of phenomena that is based on individual experience. Further, it presents a broad range of expressions including, the formal language of set theory (e.g. Qualitative and quantitative modelling), graphic representations (e.g. Figures that illustrate complexity), and verbal interpretations of those formal graphic refer to the precise rationale of the chosen solution. This language accompanied by its tools provides commonly accepted rather than diverse explanations of the situation.

The general system theory was the early version of the system theories that is grounded on two main paradigms of inquiry; *Holism* and *Idealism* (Boulding, 1956). The *Holism* principle considers the world as a single unit in general connections and broad scope, rather than isolated atoms of places, spaces, and time periods. The modern view of the Holism principle has been revived by Al-Gore’s hyper connectedness theory of the world that depends on the boom of mobile phones and other ICTs (Al-Gore, 2013). His modern view does not put an end to atomism, but supports the proper compensation for disintegrating the whole of knowledge. Al-Gore presents a unitary interpretation of the six drivers of the world a holistic system.

The above mentioned characteristics make the system self-revolutionary and continuously iterative (*Dynamic*) (Argyris and Schon, 1978). It sometimes reproduces itself in loops and

human actors learn from the iteration or the systematic mutation comes through temporal progression and future events (Vickers, 1965).

The general system theory replaces *Materialism* (systems are real objects that exist only within the material world) with *Idealism* (systems are state of minds that reflect individual's ideas) (Bertalanffy, 1972). Idealism considers systems as socially constructed realities that might not correspond to the traditional objective reality. It considers systems as human-made models with depicting and user-related specifications (Ropohl, 1999). Mapping these specifications depends on the investigator's experience on how to select a purposive sample of people to study the perceived system and on his time and cost limitations. Influential scholars such as Max Weber, Emanuel Castells, Jürgen Habermas, and Albert Arnold "Al-Gore") views discussed in chapter two are constructed based on gray literature of their life experience around the world and present their perceived human-made models of the world.

The above mentioned principles (i.e. *Causality, Equifunctionality principle, Hierarchy, Excluded reductionism, Holism, and Idealism*) have merged into different levels and created three main approaches of system thinking, namely; Hard system thinking, Soft system thinking, and Radical system thinking (Jackson, 2010; Mohamad et.al, 2014b). While the hard – functionalist – approach considers empirical observations, rationality, and objectivity to understand the complexity of a system; the soft approach analysis a system through the analyst's subjective view of reality. The advocates of this latter approach define the system as an abstract conceptualisation of the analyst's viewpoint as a relevant representation of elements, interrelationships, and the overall system behaviour. However, in this study, we follow the radical system thinking, where we take a subjective view of a mobile microfinance case as a complex whole. We then consider the complexities of the socioeconomic nature of "My Village Phone" as a social system with multilayers of stakeholders who see the system radically different, with varying values, and from multiperspectives. They might face contradicting relationships and unequal degrees of power. Such approach will help us to address "*how the interaction among the stakeholders of "My Village Phone" case influences its success on the ground?"*" Such interaction will suggest alternative entry modes for mobile telecoms at the BoP in Egypt and reflects different scenarios for socioeconomic development.

In the following section we analyse the holistic nature of the case study and its antecedent conditions that led to our findings. We open windows on the BoP context, the mobile telecommunication market, and the microfinance market.

## **2. Mobile Microfinance in Egypt:**

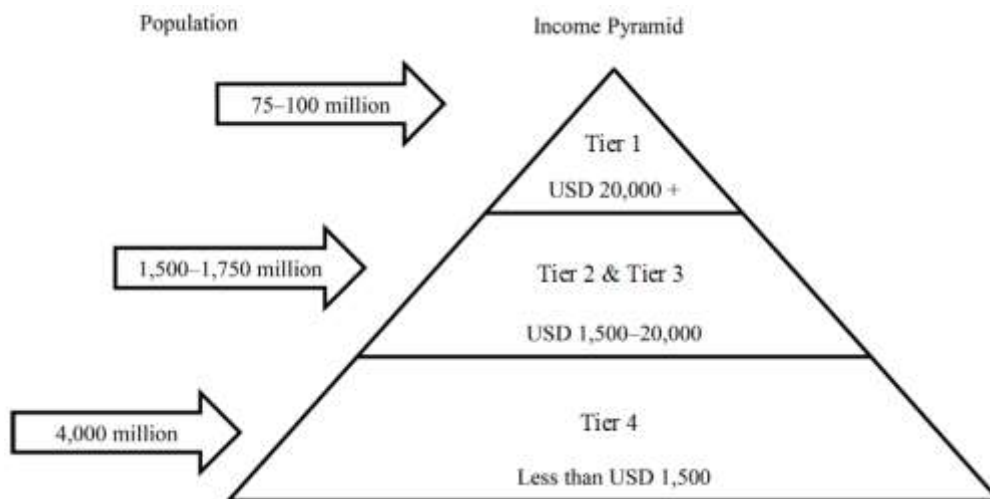
### ***2.1. Revisiting the Base of the Pyramid:***

Chambers (1994) asserts that poverty is a reaction to the capitalistic practice that disenfranchises the poor. Such practices left the poor in isolation, inferiority and vulnerability. For decades, professionals (especially top executives in banks, and fast moving consumer goods) viewed the poor as profitless market. They failed to see the poor, neither from a humanitarian perspective nor as a mass market that achieve million from small profit margins. Looking at the poor from the bottom-up, we can explore how they are creative, and strong partners in for sustainable third Generation corporations (Hart et.al, 2011).

Coimbatore Prahalad proposed a novel answer to how the private sector might deploy its capabilities to solving the problem of such human misery (Walsh et al, 2005). Prahalad and Hammond (2002a) started the venture with the anti-poverty by considering the poor as conscious customers who can contribute to their own development and to the firm’s financial value. They simply see that “customers are also responsible to co-create the business capabilities and are important joint problem-solvers” (Prahalad, 2009xvii).

The BoP approach implies a sustainable win-win situation where the poor are involved in the process of business profit generation. According to Hammond & Prahalad (2004), there is untapped purchasing power at the BoP, which presents a significant profit for firms who sell affordable products to the poor. Extending this approach, Prahalad and Hart (2002) state that access to affordable products may increase the prosperity of the poor and transforms the private-poor relationship from philanthropy to sustainable mutual dependency. In their early work Prahalad and Hart (1999) estimated the annual PPP<sup>2</sup> income of the BoP people by less than \$1500.

Figure 1: the world population pyramid



Adopted and revised from Prahalad (2009).

As shown in Figure 1 above, Tier 1 represents the richest class of the world population who controls the majority of the world resources. Tier 2 includes the middle class who occupy governmental jobs and middle and lower level jobs in the private sector. Tier 3 represents off-the-poor class who run a small business or those who cultivate their own lands. The bottom layer, Tier 4, shows this socioeconomic class of low income population. It represents those who have seasonal jobs and work on wages.

Recent surveys have provided more accurate measures of the actual size of the BoP market (Guesalaga and Marshall, 2008; Kolk et.al, 2013). The joint report of World Resource Institute (WRI) and the International Finance Corporation (IFC) is based on household income and consumption survey data on 8 important sectors (e.g. Food, health, energy, ICT etc), drawing on household surveys in 110 countries for income, and by the sheer volume of the B (roughly 4 billion people) the spending volume is huge. Together they have substantial purchasing

<sup>2</sup> Purchasing power parity is the average per capita income (see poverty measurement in chapter 2)

power: the BoP constitutes a \$5 trillion (PPP) global consumer market according to the WRI-IFC estimation. By this new estimation, the choice of a \$3000 upper limit is based upon the world mean income (Hammond, 2007).

According to Prahalad (2009), firms must consider the 4 billion poor people as a part of a system of inclusive capitalism, and accordingly they need to treat the poor not as burdens, but as resilient and value-conscious consumers. Prahalad implies that the poor must get respect, fair treatment, and self-esteem, which is the most ongoing contribution that firms can make to the process.

Hart and Milstein (2003) viewed the BoP from the point of view of firms. They thought that the BoP market might also be critical for the MNCs to survive and compete in the next decade, with upper class markets becoming increasingly saturated. The BoP could serve as an incubator for worldwide competitive enterprises, while local firms in developing countries show the way (Clayton and Craig, et al., 2001). Clayton asserts that BoP market provides new prospective for reflecting a national economic development strategy. BoP initiatives have gathered significant momentum in the theoretical and practical fields. The World Trade organization (WTO), the United Nations Development Program (UNDP), and other multilateral development agencies have adopted private-led initiatives for poverty alleviation and economic development (Munir and Ansari, et al., 2010). An example of this is the Global Compact founded by the United Nations (UN), which demonstrated the high potential of the role of MNCs in poverty elimination (Schwittay, 2008).

Sen (1976) believes that the freedom to choose needed commodities could improve the standard of living, the happiness that people can enjoy, and their long-life fulfilment. By saying so, Sen implies that the absence of interference from others may affect the way people behave. Sen's view is that freedom is valuable in itself, and is a means to other ends.

The early versions of BoP put forward by Hart and Prahalad (1999), Prahalad and Hammond (2002a), Prahalad and Hammond (2002b), Prahalad and Hart (2002), and Hammond and Prahalad, (2003) discuss *the BoP as a type of market* that has geographical and demographic characteristics. Hammond and Prahalad (2003) believe that BoP is not bound to geographical regions, but is a group of people who have some shared general features. Prahalad and Hart (2002) emphasise that the BoP communities, mostly live in rural villages, urban slums, or shanty towns, which are, however, moving towards urbanization. They also state that only 1 billion BoP consumers are found in megacities. Those people work as delivery channels for the products produced by the informal economy<sup>3</sup> in the rural areas. Prahalad and Hammond (2002a) add that poor communities are either illiterate (in particular women), or have low education levels. Prahalad and Hammond (2002b) assert that the lack of access to water, sanitation services and basic health care services are also characteristics of BoP communities. In the same paper, the authors discuss lack of access to finance as a challenge that faces BoP communities. Borrowing money from money lenders was the only option for those who had no collateral. They had to pay back their loans with a high interest rate (Prahalad and Hammond, 2002b). Prahalad (2009) mentions the poverty penalty as a significant characteristic of BoP communities as well. This means that the poor live in very high-cost economies. Poor people pay higher prices for basic products/services than do the middle and upper classes. *"People expend cash and/or efforts to obtain their basic goods and services"* (Prahalad, 2009:

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<sup>3</sup> Informal economy: Local microenterprises that are not taxed or registered by the government (See Rosser and Rosser et al., 2000: 156).

25). The next section pinpoints to the key characteristics of the BoP market in Egypt, including statistics and economic indicators.

## ***2.2. Egyptian Base of the Pyramid:***

The World Bank refers to indicators 55% poverty rate among the Egyptian population (World Bank, 2014). The Egyptian Organization for Human Rights (EOHR) declared that the poverty level is expected to increase, and varies between governorates (administrative regions). For example, poverty in Upper Egyptian cities encompasses 63% of the population, falling to 40% in governorates which are close to the main cities and so feature more commercial activities (EOHR, 2012). The World Bank report referred to political conditions in Egypt and some bad practices from Egyptian governments as the main reasons for income inequality, social stratification, and high illiteracy. Examples of these practices are price inflation, privatization, a floating exchange rate, and a large deficit in the fiscal budget, and the increase of the national debt to high levels (EOHR, 2012). The Central Agency for Public Mobilization and Statistics in Egypt (CAPMAS) reported the following indicators for year the 2012: (1) decrease of GDP by 2.3 %; (2) increase of the national debt by 3.4%; (3) price inflation of 2.4% (4) deficit in the fiscal budget of L.E. 56.4 million and increase of 2.4% on the year 2009. In March 2014, the Egyptian Cabinet reported that 47.5% of the poor are farmers who lack access to finance. The same report found strong relationships between income poverty, mortality rate, and illiteracy (the Egyptian Cabinet, 2012). Another issue which affects poverty is the average consumption of consumer goods, estimated at L.E.17000 per year (the Egyptian Cabinet, 2012).

All of the above problems increase as population increases (Bolbol and Fatheldin, et al., 2005). 4.24% of Egyptian children leave school to join the work force as a way to raise funds to cover family expenses. According to Bolbol and Fatheldin, et al. (2005) the Egyptian government succeeded in economic reform through three steps: (1) Removing trade customs (2) Introducing tax exemptions for small businesses and foreign direct investment companies (3) Expanding the infrastructure in new cities on the right bank of the river Nile. The early stages of the reform programmes started in the early 1990s. The Egyptian government has adopted new macroeconomic reforms and stabilization policies. These policies have been supported by the World Bank and the United States Agency for International Development (Osama, 2004). In the year 2000, the United Nations reported that the late 1990s was an era of liberalised commodity prices, a liberalised financial sector through the reduction of barriers to capital movement and control of the interest rate, reform of public enterprises, and the boosting of privatisation. Al-Mashat and Grigorian (1998) divided Egypt's economic reform and structural adjustment program into two phases. The first phase occurred between 1990 and 1993 and sought to decentralise the Egyptian economy through minimizing the role of the public sector and giving the private sector a larger role in a market based economy. These policies resulted in the following positive results: (1) Reducing the budget deficit of the government; (2) Liberalising the financial sector by decontrolling the interest rates and exchange rate unification; (3) Establishing the Treasury bill market in 1991; and (4) Liberalising prices, in particular energy prices, resulted in lower price distortions.

The second phase was mainly concerned with partnerships with MNCs in order to improve the performance of the financial sector, high technology industries, and microenterprises (e.g. The partnership with Shell to train micro-entrepreneurs and financially support their projects) (Shell Egypt, 2008). Concluding the above discussion, despite the Egyptian government introducing

many steps to enhance the economic reform, these efforts need more partnerships with the MNCs, the NGOs, and poor communities to achieve sustainable economic development from the bottom-up (Silmi, 2010).

### ***2.3. Mobile Telecommunications in Egypt:***

Based on our archival research, this section discusses the Egyptian mobile telecommunication market in terms of key stakeholders involved and the strategies applied. After discussing the *demographic characteristics* of the targeted mobile market, we analyse *how telecoms compete* to hold a bigger share of this market. Then we discuss the *other actors* such as the national telecommunication regulatory authority, the non-governmental organizations, and the retail agents who shape the strategies followed by those telecoms to serve the poor market. Overall, we reveal some of the *challenges* that face the mobile telecoms accessing the BoP in Egypt. This section braves the road for our scenario analysis of the potential entry modes for any candidate telecoms aim to access the Egyptian market<sup>4</sup>.

The number of low-income subscribers (including off the poor users) jumped from a million to approximately 30 million between the years 2006-2014 (Egypt state information service, 2014). Such a promising market tempted the mobile telecoms to grasp profit and differentiate a wide variety of telecommunication services including (e.g. Call, data, and payment services) (Mohamad, et.al, 2014). According to Vodafone report in 2007, North Africa and particularly Egypt and Algeria are anxious markets that allow them to utilize their massive capacity, infrastructure, and worldwide experience in far further than the traditional telecommunication services offered in saturated markets (e.g. The United Kingdom). The recent estimation of the Egypt's population is 80.72 million, which is the largest in the Middle East and North Africa (World Bank, 2014).

By the end of the second quarter of 2014, the number of mobile subscribers reached 101,930,000 million subscribers (i.e. 126% penetration rate) (National statistical offices, June 2014). Euro monitor International reported that 50% of the Egyptian population ages between 11 and 44 years old represented in the second until the fourth layer in Figure 1. The area highlighted in light green refers to 70.2% of that age group who earn less than US\$2 per day (Euro monitor International, Jan 2014). This socioeconomic class is 59% female, 41% male (i.e. Females should be considered as potential mobile users) (Euro monitor International, 2014). This class is expected to grow due to two factors: (1) the population increases by 7% and the mobile market is expected to grow by 3% (Ministry of communication and information technology, 2014<sub>a</sub>). (2) 27% of the population are under the age of 11, enlarging the base of subscribers (Kamel, 2009).

Vodafone Egypt<sup>5</sup>, Mobinil, and Etisalat are the only licensed mobile telecoms operators in Egypt. All are private for-profit corporations that operate in more than one country.

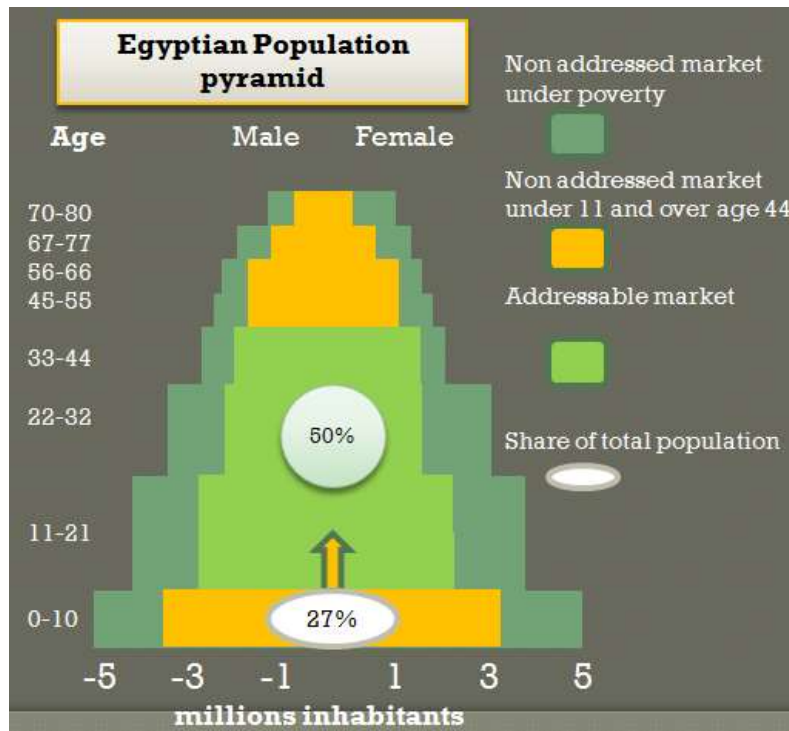
Figure 2: The targeted market of Mobile telecoms

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<sup>4</sup> This chapter complements with the other chapters' published by the author that offer a strategy for the three dominating mobile telecoms to diversify into mobile financial services such as mobile money, mobile banking, and mobile payment services.

<sup>5</sup> 75% of Vodafone Egypt is owned by Vodafone UK and 25% is owned by Orange telecoms.





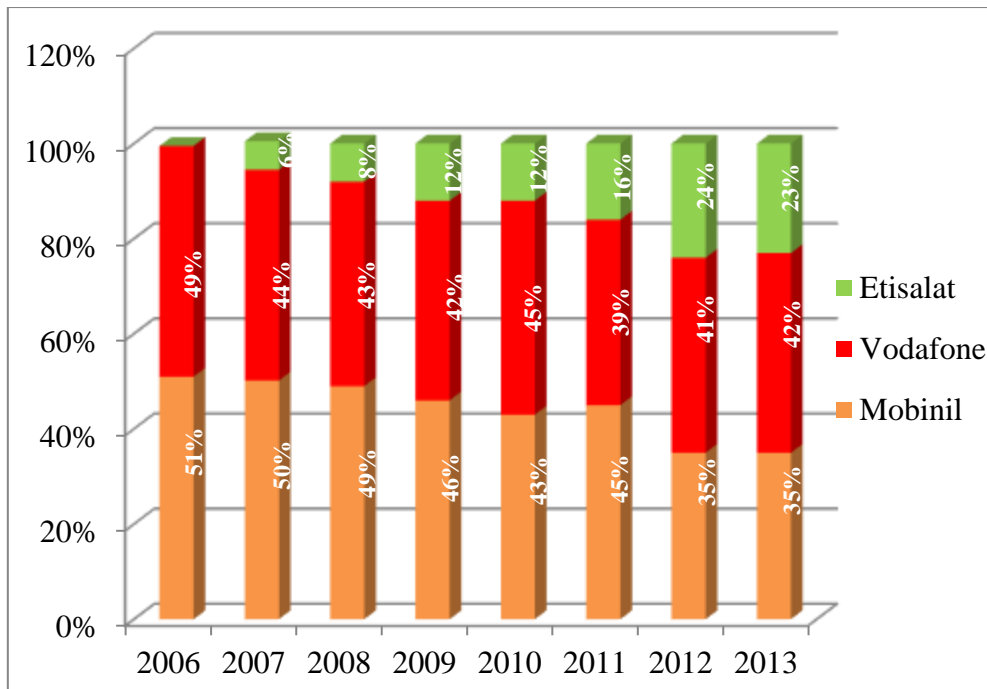
Source: The authors Archival Business analysis

Mobinil is an Egyptian mobile telecom founded in 1998. Since that time the company has strived to maintain its percentage of market share (see figure 3a&b). Despite the competition among the other telecoms, Mobinil still holds 35% of the market share in terms of number of subscribers and 40% in terms of revenues. Mobinil provides the highest quality mobile telecommunication services to the upper and middle classes (NTRA, 2013).

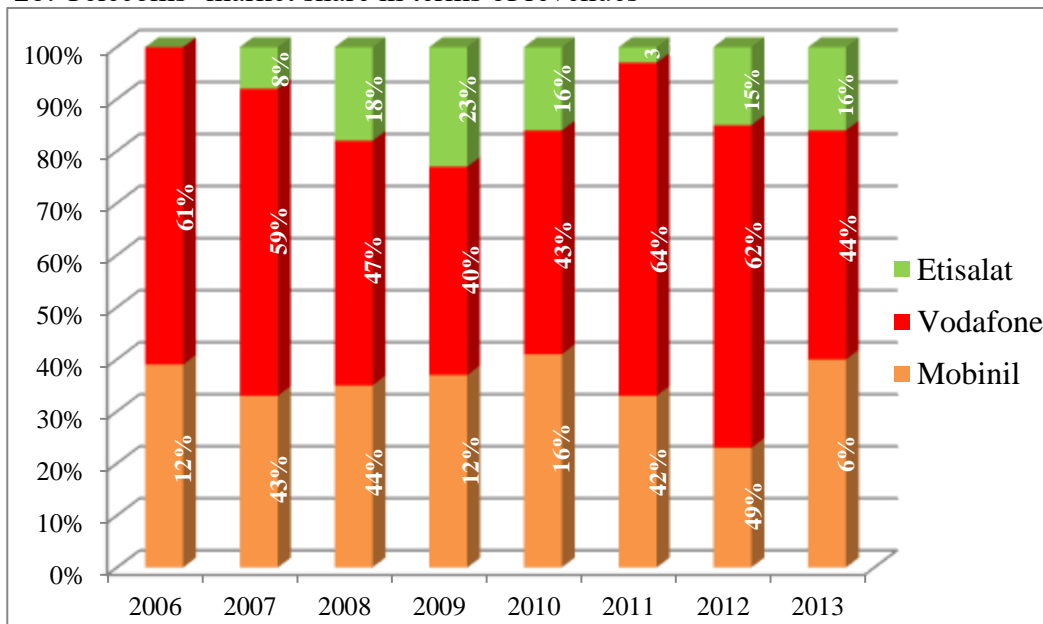
The second telecom corporation is Vodafone Egypt, founded as a subsidiary of Vodafone group in Egypt in 1998. Vodafone Egypt covers different voice and data exchange services in addition to 3&4G and ADSL internet services for all classes of the Egyptian population pyramid. The company followed distinctive marketing strategies to cover the rural areas in Egypt (ITU, 2011). Vodafone's worldwide presence allowed them to use their knowledge and innovative services portfolio to serve the poor customers. Vodafone has the largest services revenue market share 42 % subscription rate and 44% of revenues (Ministry of communication and information technology, 2014<sub>b</sub>).

In March 2014 the American chamber in Egypt reported a 60.9% increase in the number of mobile subscribers against only 39.7% in the telecoms' revenues. This effect is typical of markets where growth is achieved through low-income customers and changing the subscribers base mix (American chamber in Egypt, 2014).

Figure 3a: Telecoms' market share in terms of number of subscribers



2b: Telecoms' market share in terms of revenues



Source: The authors Archival Business analysis

On January 2007, a third mobile telecom company, Etisalat, entered the Egyptian market to target adults and children in rural areas and in Upper Egypt. Etisalat is an Emirati multinational telecom that experienced some technical problems at its early beginning in the Egyptian market that affect the quality of its services (NTRA, 2010). However, within one year of operations the company succeeded to position its brand among the other two giants. Both Vodafone and Mobinil suffered a loss of market share, due to the orientation of the two companies towards the upper and middle classes rather than the poor (Aly, 2010).

After Etisalat's entry, Vodafone has maintained its customer base and its leadership in revenues, while Mobinil has continued to acquire customers at a high pace, but has sacrificed revenues (Lynch, 2011). This is because of the wide range of services that Vodafone offers and its exclusive right to provide mobile 2.0 services such as mobile banking, mobile microfinance, Skype calls, and social networking services (Aly, 2010).

To sum up this discussion, Vodafone has the exclusive rights to provide financial services to the Egyptian people. As Vodafone's upper and middle class market became saturated, the company began to target low income users aged between 11 and 44. An important issue that needs to be considered is the oligopolistic power of these three companies over mobile users. According to Karnani (2009), this power may result in unethical marketing and exploitation of the poor. In response, the National Telecommunication Regulatory Authority (NTRA) started to control the malpractices of the mobile telecoms. Furthermore, they built a partnership with Non-governmental organizations (NGOs) and the telecoms to extend the benefits of mobile services to the poor in Egypt. The ministry of social solidarity reports 83 registered NGOs in the country, 36 of which operate in the drugs and crime domain (UNODC, 2014), others work in microfinance, women empowerment, education enhancement, healthcare, human rights, childcare, and political awareness. Examples of wide impact initiatives where NOGs collaborates with MNCs to deliver a development project are;

*"Protecting the future"* and *"for the sake of my country"*<sup>6</sup>. The former is a profitable initiative that operates in five Egyptian cities to fight canapés and cigarette smoking. This initiative is led by "life makers" institutions and "hyper one" (See: <http://lifemakers.org/7omat/>). The latter, is a not-for-profit institution that operates in education enhancement, women empowerment, and poverty alleviation. This initiative has been founded Vodafone Egypt foundation for corporate social responsibility and has a full technical and administrative support of the American university in Egypt (See <http://www.ayb-sd.org/>).

Mobile retailers play a key role on the telecoms market. Those agents operate either in a franchise right (exclusive agents) or in sole proprietorships that work independently and add mark-up to the services provided by the exclusive agents (Aly, 2010). They receive a mega quota of call minutes and data usages on a discounted price and then sell them on the market price set by Vodafone. Successful mobile agents require IT, entrepreneurship, and management skills to serve the middle and lower classes (Ling & Donner, 2013). Recently, Vodafone expands their network of retail agents by recruiting middle level educated individuals who have low income or unemployed. As said by the CEO of Vodafone Egypt "For us involving community representatives close the gap with our customers and help us see the ground of the Base of the Pyramid" (Vodafone, 2013).

Donner (2008) refers to some environmental and user's challenges in the market. Environmental challenges such as long travel times, variable population density, and lack of secure storage. Examples of the user challenges are 40% illiteracy and a 35% underemployment rate (CAPMAS, 2011). However, Aly (2010) argues that Egyptians need mobile telecommunications in their day-to-day life and this why they spend 11.2% of their disposable income on it. Further analysis of technical, organizational, and personal challenges are covered in Mohamad et.al (2013 & 2014).

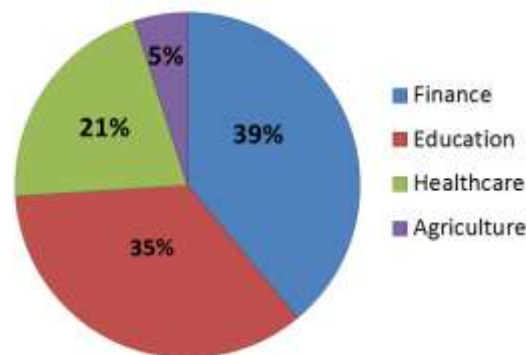
Ramdas & Chandy (2013) conducted an extensive survey to reveal the challenges pending the full potential of mobile phones in Africa. The study revealed four disciplines where mobile

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<sup>6</sup> The original Arabic name is Alashanek Ya Balady Association for Sustainable Development (AYB-SD) which is a synonym of the English expression "for the sake of my country".

phones have the most impact; Agriculture, Education, Finance, and Health (See Figure 4). Despite the wide promotion of m-health cases such as “*mHealth4CBS*” in South Africa and m-agriculture projects like “*m-spark*” in the UK, the potential impact is yet to yield the social and commercial return envisioned. The yield of m-learning and m-finance, however, found to be more significant in Africa and the Middle East. In March 2014, Guy Pfeffermann reported in financial times that the number of mobile subscribers in Africa jumped from 25m in year 2001 to 780m in year 2013. He argued that such spread empowered the innovation revolution in countries such as Kenya that started mobile financial services and the next run is in m-learning. The “*telecentre*” organization in the Middle East has a massive impact in Jordan, and North Africa to reduce the illiteracy through m-learning. However, the recognition of “*M-Pesa*” as a transformative tool of society still occupies all the world newspapers. In their survey Ramdas & Chandy (2013) called for a systemic plan to overcome the challenges of mobile applications in the four domains. Challenges such as; limited definitions of the core services, limited platforms, weak supporting infrastructure, and limited research on demand factors including commercial feasibility and long-term social return. Currently, the area of m-finance is growing and has a strong potential in Egypt.

Figure 4: Impact of mobile phones in society



Adopted from Ramadas & Chandy (2013)

In the next section we discuss the potential of mobile telecommunication services as a source of microfinance for retail agents.

#### ***1.4. Microfinance in Egypt:***

In this section we discuss the alternative sources of financing microentrepreneurs to identify the contribution of the MNCs in this sector. These sources include formal and informal financing.

The first formal source is the Microfinance Institutions (MFIs) that offers small loans and saving services to the BoP to help them set up their own microenterprises and generate sufficient income to take care of themselves and their families (Microcredit Summit, 2011). Until the year 2008, 93% of the potential demand for microfinance has not been met (Riria, 2008). MFIs represent 91% of the private sector in Egypt (Sander, 2009) that created 57% of

private employment till 2008 (Moussa, 2008). These facts demonstrate how important MFIs are in the Egyptian economy. Some of those MFIs are either self-financed or rely on costly informal sources of finance (e.g. rotating savings, credit schemes, supplier credits, and local moneylenders) with a very limited role for the state, international aid organizations or the commercial banks (Osama, 2004). Moussa (2008) found that the majority of MFIs rely on four sources of finance: The first is the *international donors* such as the World Bank, the United Nations, US Agency for International Development (USAID); the second provider is *the Social Fund for Development*, which grants government-subsidized interest rates and (sometimes) gets loans from the World Bank and the European Union to increase its loan portfolio (Mohamad & Wood-Harper, 2011 & 2013); the third source is *the commercial banks* like the National Bank for Development (NBD) and the Faisal Islamic Bank (Baydas and Graham, et al., 1997); the last is big *private social enterprises* such as “Sekem for social development” and “Lead foundation” (Lapenu and Zeller, 2001)

In cooperation with the US agency for international development, the NBD started the first microfinance project in Egypt in 1987. This project aimed to offer microloans to poor Egyptians who have microenterprises. The amounts of these microloans ranged from \$300 to \$1500, with maturity periods ranging from 3 to 11 months. Simple interest was at 16% and transportation costs were 3% (Osama, 2004: 210).

In 1997, the United Nations called for more participation from commercial banks to serve the marginalized poor in Egypt who have no access to the financial system (United Nation, 1997). The well-established branch networks that commercial banks have enable them to reach rural areas and provide the poor with tailored loan mechanisms (Baydas and Graham, et al., 1997). NBD, for example, established their first four branches with the financial support of USAID and then expanded. By 1993 the number of branches providing micro-lending had increased by 13 in the Greater Cairo region, with a total of 20 branches nationwide in seven governorates (Iqbal and Riad, 2004). In 1998, the NBD succeeded in implementing microlending programs in 38 of 66 NBD branches, serving poor people in Cairo and in Upper and Lower Egypt (Singh and Dhumale, 1999).

By 2004, NBD increased the number of branches with microcredit services to 44 in 16 governorates. 26 branches of those 44 are specialized in microcredit services. In 2009 NBD became the main provider of microcredit in Egypt, with about 22,600 outstanding loans and a loan portfolio of \$8.2 million (Iqbal, and Riad, 2004).

In addition to their capacity, commercial banks have extended financial networks with other financial intermediaries, and can provide a wide range of services. Deposits, savings, and money transfer are particularly attractive to the poor who are looking for microfinance (Iqbal and Riad, 2004). Additionally, the performance of microfinance portfolios is greater than the investment portfolios of other Egyptian banks. Osama (2004) referred to two reasons for this enhanced portfolio quality: (1) the microenterprise sector represents a significant part of the Egyptian economy; (2) high demand by microenterprises for microloans. Following Osama’s explanations, Iqbal and Riad (2004) argue that the huge demand of microenterprises borrowers

presents a strong motive for commercial banks. Iqbal and Riad also emphasise the need by commercial banks for specific requirements to succeed in any microfinance programs: (1) staff intensive system; (2) good client relationships; (3) effective management and training; and (4) accountability and control systems. They also discussed some challenges that face commercial banks that provide microcredit services, such as the high cost of reaching microfinance clients.

The above discussion shows a gap in the role of private business, MNCs in specific, as sponsors for microfinance services. Accordingly, we argue that the application of BoP strategy is still limited in Egypt, which makes our case study, “*My Village Phone*”, a unique and interesting investigation. It is an initiative my Vodafone to finance youth to microentrepreneurs to create a new business Overall, our analysis may be the road map for the potential MNCs aiming to invest as the BoP in Egypt either in the mobile telecommunication or any related mobile services such as mobile money and payment services.

### **3. Case of “My Village Phone”:**

In September 2008, Vodafone Egypt started a series of sustainable development projects. One of these projects intended to serve the poor Egyptians titles as “My Village Phone”. Vodafone lacked trust amongst poor people and needed to gain more experience of the poor market. Accordingly, the company formed a partnership with AYB SD to get access to the poor market. The first stage of this project started in October 2008 by recruiting 400 poor young people from the poorest populace<sup>7</sup>.

In between January-April 2009, a training program was held by AYB SD to improve the skills of those 400 recruits to work as sales representatives for Vodafone. The training program covered how to use mobile phones and to sell call minutes and airtime top-up for neighbor villagers. All successful trainees have got kiosks and motorcycles in a condition of paying back the full cost in instalments after they proceed.

The second stage started in May 2009 in which those 400 youth were responsible to create loan groups as a step forward to provide microloans in terms of airtime top-up. So every group member can get airtime quota, sell it to other villagers and payback after collecting his money. Each group includes 5 persons. In forming these groups, the new recruited retailers conducted field visits to the close slum areas to attract the poor to act as airtime agents. They also tended to rate the prospects’ ability to sell airtime and payback the loan on the due time. In doing so, this project could create win-win situation. On one side, the recruited microenterprises get their kiosks and secure a fixed source of income and their group of agents on the slum get profit margin as well. One the other side, Vodafone would be able to penetrate in the Egyptian BoP market to keep their market leadership and brave the road to new diversified services of mobile telecoms such as mobile banking and remittance services.

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<sup>7</sup> Those 400 youth have been recruited from 9 governorates namely; Cairo, Fayyoun, Benisuef, Minya, Qena, Sharkia, Dakahlia, Tanta and Menoufia.

Table 1: Stakeholder analysis for “My Village Phone”

	Stakeholders	Status
Macro	World Trade Organization (WTO)	Grants a huge amount of financial support and tariffs exemptions to the MNCs to invest in the developing countries especially in African and the sub-Saharan countries (Donner, 2008).
Meso	Multinational mobile telecoms (MNCs)	Only three mobile telecoms who have licenses for mobile telecommunication in the Egyptian Market, namely Vodafone, Etisalat and Mobinil. Out of them, Vodafone has Largest market share 43% (American chamber in Egypt, 2011). The structure of competition in the mobile telecoms market is oligopoly (a phase of imperfect competition) (ITU, 2011). Focuses in the top and middle classes of users in the Egyptian mobile telecommunication markets.
	Government	Both of the Ministry of communications and information technology and National telecommunication Regulatory Authority (NTRA) set rules to prevent the malpractices.
Micro	Mobile telecoms' intermediaries	This sector of mobile telecommunication is represented in small to Medium enterprises who distribute the services either via franchising agreements or via sole proprietorship that work for their own benefit (retailers). 90 % of these retails and franchises are managed and functioned by skilled employees who can deal with the middle and lower class, but not with the poor illiterate (Vodafone Egypt, 2010).
	NGOs	Out of 83 Non-governmental organizations, only two of them have sufficient spread and sources to support an effective sustainable development's project in the Egyptian society (Homat Al Mostakbal Association Government[1] and Alashanek Ya Balady[2] For Sustainable Development).
	Low income users	50 million poor see mobile as productive tool. Those millions accounts for 40% of the Egyptian society who earn less than 2\$ per day (The Egyptian Cabinet, 2012). Moreover, those poor users spend 15% of their daily income on the mobile telecommunication while spend only 11% of their daily income on health care (National statistical offices, 2011).

Source: the authors' archival analysis

However, the National Telecommunication Regulatory Authority (NTRA) interfered at the mid of the project in 2009 and set some regulatory rules to control the new initiative. A team of 15 official representatives was allocated in the 9 governorates to observe and be involved in this mobile microfinance project. The project was expected to improve the income building capacity of the recruits and their agents. Generalising this initiative would increase the GDP by 6% and 14% increase in Vodafone's revenues (Ministry of Social Solidarity, 2010). Currently, this initiative serves nine cities in northern, delta, and Upper Egypt. To get a deeper

view and design our research sample, we conducted a stakeholder analysis of “My Village Phone” initiative as shown in Table 1 above. The stakeholders were highlighted across three levels, namely; *macro, meso, and micro*. On the Macro level, we referred to the world trade organization as a mover of the telecoms’ business strategy in the developing countries. On the meso level, we pinpointed to the mobile telecom (i.e. Vodafone and the other two rivals) and the Egyptian government who set the regulations for the telecommunication privacy, security, infrastructure, and investment policies. On the micro level, we referred to mobile users and intermediaries such as AYB-SD, the retail agents, and the loan groups from the slum.

## **4. Research Methodology:**

### **4.1. Area of concern:**

Ironically, the low-income Egyptians spend a substantial share (almost 9%) of their income on mobile telecommunication with no significant increase in their purchasing power (The Egyptian Cabinet, 2014). When Etisalat entered the Egyptian market, they targeted the far and poor areas and accordingly the other two rivals started to lose a significant market share (Ministry of communication and technology, 2014). Instead of wasting more resources on less profitable markets (i.e. Middle and high-income classes), Vodafone and Mobinil reoriented their strategies to catch the rising opportunity at the Egyptian BoP. Vodafone success strategy was to create microenterprises and job chances through mobile telecommunications. Though the accelerated spending on mobile telecommunications at the BoP market, would increase the growth of the GDP from 4.7% in 2009 to 6.9% by 2014 (National statistical offices, 2012). The dominant telecoms’ strategy targets the upper and middle classes, while stay at a far distance from the BoP fail to interpret what is going on between the actors in this market.

Our research then aim to explore “*how the interactions among Vodafone, AYBSD, state officials, and low income users—the context within which the BoP model is implemented—influence its success on the ground?*” We also tend to predict “*how could the interpretations and dilemmas of multiple actors shape the development impacts of mobile telecommunications?*” Gaining trust and market position at the BoP would help telecoms and especially Vodafone to deliver other diversified telecommunication services such as mobile payment and remittance services.

### **4.2. Data collection:**

We conducted an archival research triangulated with semi-structured with different sets of stakeholders. The *archival analysis* is defined as a set of formal sources of evidence such as reports and statements, minutes of meetings (Symon & Cassell, 2012). Examples of these sources are World Bank reports, economic indicators reports by the Egyptian Cabinet, and publications of the ministry of communication and information technology. Further, we reviewed the quarterly reports by the Egypt State Information Services, the NTRA, and the



three mobile telecoms. Our business analysis of the mobile telecommunication market (See section 1.2) and the stakeholder analysis (Table 1) is the key outputs of this archival review. We also reviewed manually categorized records such as: service records, websites, organizational records reflecting the views of top officials of the ministry of communication and information technology and the ministry of social solidarity. The *Semi-structured interviews* are the second source of data where we raised fluid streams of inquiries to our interviewees. Key participants were executives from Vodafone Egypt foundation, AYBSD, the NTRA, retail agents, and loan groups. Conducting the interviews was through a snowball fashion.

### **4.3. Data analysis:**

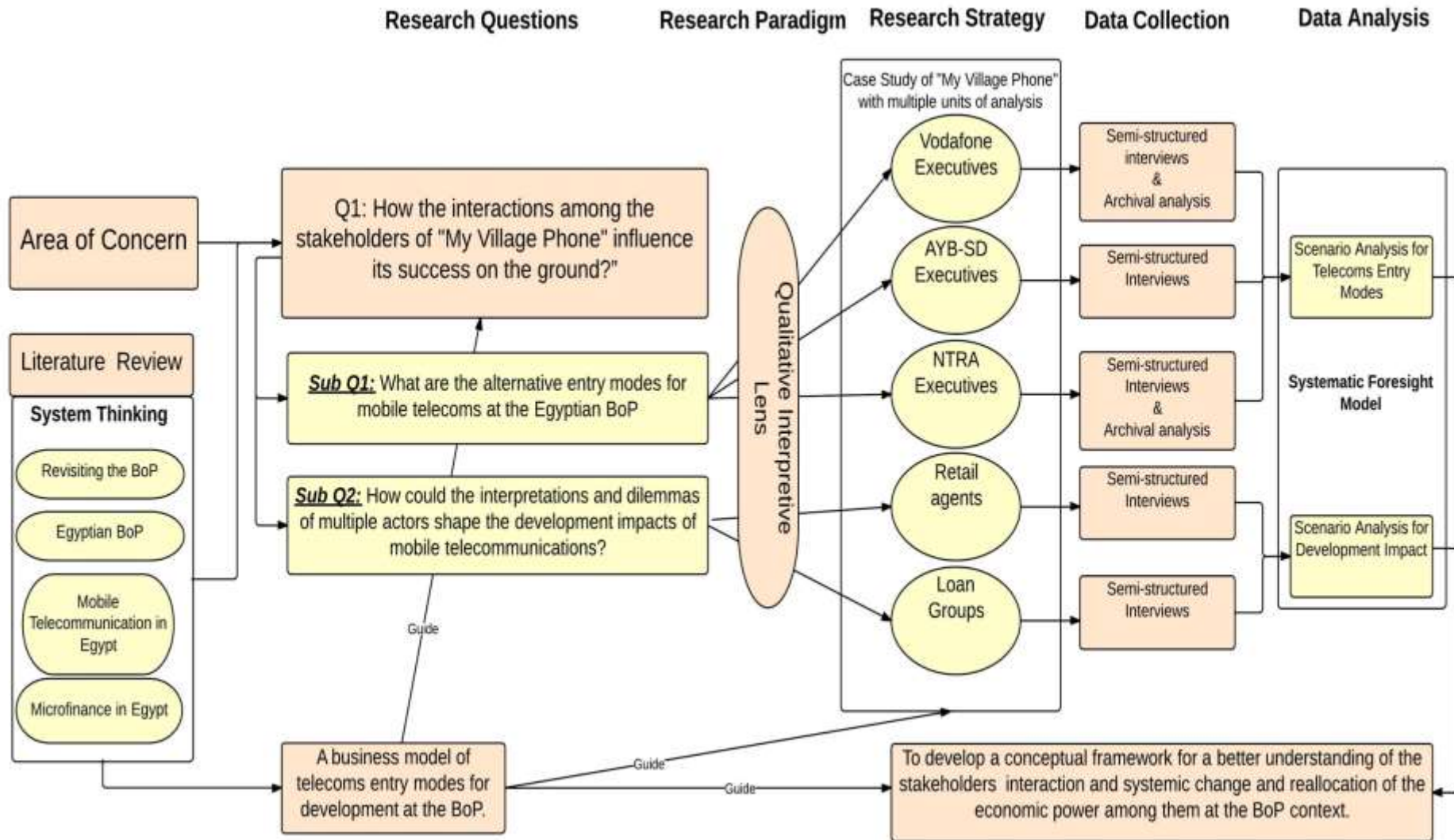
Our archival reviews turned into templates and codes highlighting the key stakeholders, process, and strategies. All interviews have been recorded and transcribed. Then the transcriptions have been sent to the relevant participants to remove any misunderstanding and to improve the data reliability. Then a template analysis has been developed based on the systems thinking principles and the Systematic Foresight Model (See the overall research process in figure 5).

#### **4.3.1. Systematic foresight model**

One of the recent, but recognizable methods of system thinking is the scenario analysis or the so called foresight analysis. The Systemic Foresight Model (SFM) in particular helps explore alternative futures and develop a vision for these futures (Saritas, 2013). In doing so, it maps the potential impacts on society and reflects the implications for policy makers and different groups of stakeholders (Saritas & Nugroho, 2012).

The SFM is grounded in the main systems thinking principles, namely; causality, holism, hierarchy, and continuity. It acknowledges the institutional and behavioral properties of the mobile telecoms (as MNCs) and the consequent behavior of the BoP community. Understanding the *causal interdependencies* is essential for the definition of the mobile microfinance system and its boundaries. Adopting the *holistic viewpoint* sheds the light on the forces social (e.g. demographic), economic, technological, ecological, and political factors the affects the sustainability of the project from the outside-in. The policy makers can then make their decision based on the wider context and issue feasible transforms to the role of the mobile telecoms in non-voice services such as branchless banking.

Figure 5: Research Process

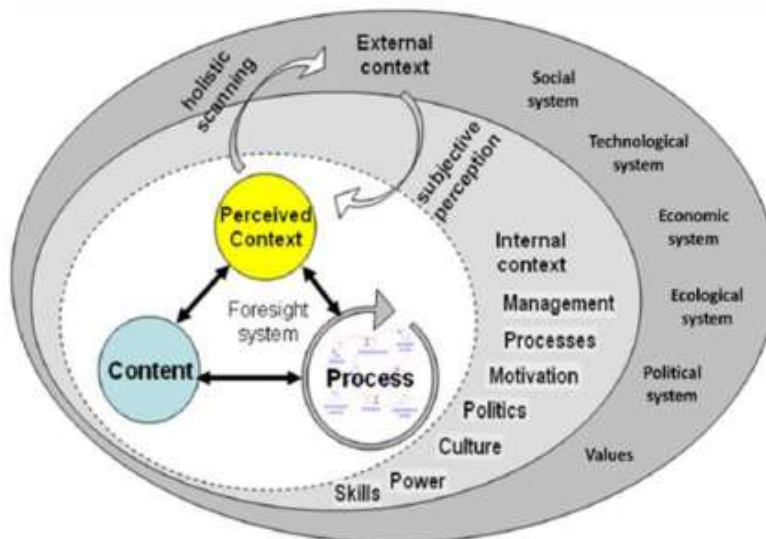


Understanding the hierarchy of the mobile microfinance system help the analysts prioritise the structural and functional boundaries for scenarios. Accordingly, we conducted a stakeholder analysis to reveal the macro, meso, and micro layers of the “My Village Phone” case study. Feed-back and feed-forward communications among those boundaries have been captured to improve the flexibility of our foresight analysis against the changes in the inner and outer environments (Saritas, 2013). Understanding the hierarchy would bridge between “*what is expected*” in our foresight and “*how it can be carried out*” by the policy makers and other actors “*who perform on the BoP context*” (Pettigrew, 1987).

Considering the *dynamic nature* and continuous self-transformation of the mobile microfinance system, the SFM will help us draw different scenarios of development impact in response to different entry mode by the mobile telecoms. Then an action plan can be imposed to change the entry mode and its consequent impact. As shown in Figure 6, the SFM reflects how our scenarios (contents) for the entry modes and the development impact are affected by the antecedent economic, political, technological and historical (context) (Smith & Saritas, 2011). Corporate strategy, management style, marketing mix<sup>8</sup>, employees’ motivation, and power structure identify (the process) through which the entry modes take place and their interdependent impact.

To develop a SFM for our case study, we started with an overview of the antecedent conditions to develop a systemic understanding of the shared views and mutual appreciations of the mobile telecommunication and microfinance. Then we followed the systems synthesis and scenarios modelling to investigate alternative entry modes of the telecoms through which a new context of mobile microfinance arises at the Egyptian BoP.

Figure 6: Systematic foresight model



Adopted from Saritas (2013: 92)

This facilitated developing systemic templates (matrices) of alternative development paradigms for the BoP living in poverty and how the policy makers can transform them to off-

<sup>8</sup> Marketing mix includes the 4Ps: Price, Place, Promotion, Product (American Marketing Association, 1995).

poor or middle classes. Both scenarios help develop alternative futures and decisions for policy makers. Such matrices also help the policy makers to maintain a sustainable relationship with the telecoms, NGOs, and the poor community to develop by them not for them. Accordingly, systemic actions can be put in place to structural and behavioural transformations for the stakeholder and their interaction at the BoP context. The next section shows our scenario analysis and a detailed discussion of the unequal power among stakeholders.

## 5. Discussion:

### 5.1. *Entry modes scenarios:*

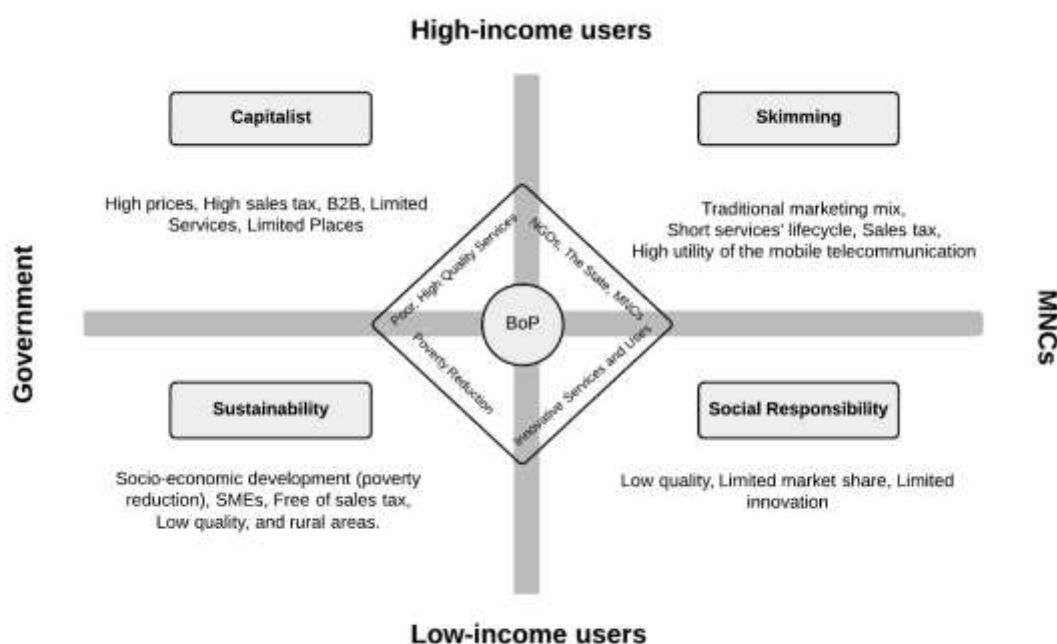
This section offers a guide to mobile telecoms and policy makers to mitigate the negative impact of inappropriate entry mode and adapt to new policies to fully utilise the positive outcomes. It also shows a road map to create a deep dialogue with stakeholders in the BoP society to improve the success and governance of future projects in this context.

In the period between May-Sep 2011, our team conducted semi-structured qualitative interviews with a snowball convenient sample of executives from Vodafone foundation, AYB SD, and the NTRA (See figure 5). The participants reflected their ethnographic accounts and social discourses. Rather than relying on theoretical claims, translating the executives' perceptions was our main focus. Consequently, we could get an in-depth understanding of tensions/collaborations among those stakeholders at the macro and meso levels.

Our case evidence pinpoints two sectors that supply mobile telecommunications in Egypt; the governments Vs the multinational telecoms. Mobile telecommunication requires huge investment, massive infrastructure, corporate capabilities, advanced technology applications. On the demand side, users are either low-income, high income or middle class. These are the three layers of the population's economic pyramid. Based on the supply and demand pillars we developed Matrix 1 that shows different scenarios for the entry mode as follow:

*Capitalists' mode* is a state-led strategy in which a limited standardized set of mobile telecommunication services is provided for business-to-business market and high-income users. The success of this mode comes from replicating the institutional and market ecosystem into new promising markets. It also encompasses high prices and limited institutional use. Telecoms that follow this mode impose high sales tax on the top of their bills and offer multilink services. For instance, "Telecom Egypt" is the only governmental network provider of mobile telecommunications who granted the license for the three corporations "Vodafone", "Mobinil", and "Etisalat" and provides them with the needed infrastructure and technical support. "Telecom Egypt" can also provide big airtime slots to MFIs to allocate them to loan groups in the villages. Another example is the broadband service available for more than 70 US Dollars per month. The standard users of this service are internet Cafés who used to extend illegal wires and the intranet to their neighborhood community to cover the high cost and get a satisfactory profit margin on the top off it. The capitalists' mode results in limited services in terms of geographical expansion and narrow use within communities.

Matrix 1: Scenarios of telecoms entry modes to the Egyptian market



Source: Authors' systemic foresight analysis

**Skimming mode** is a strategy led by multinational telecoms where they push their services into the developing markets through extensive promotion campaigns. This mode encompasses high quality, high price, and advanced telecommunication services such as web 2.0 applications, 4G services, and electronic payment. Such mode targets the high and middle income classes. It also helps mobile users in the developing countries to follow the accelerating technological advances and bridge the digital divide. The lifecycle of this mode, however, is very short and lacks the “going concern” principle. High competition between telecoms, changing user needs, high sales tax makes it easy for the elite users to switch to other rivals or alternative services. Another problem in this mode is the focused marketing strategy that it covers only high income class (estimated 20% of the Egyptian population), while neglects the biggest share of the population that proven to be a profitable market (Prahalad, 2009). Last, but not least, this mode offers a limited number of advances services for personal use than business use. Services that can be provided through central (short) distribution channels where users have to deal directly with the network operators not through intermediaries (i.e. Do not spread in the rural areas).

**Social responsibility mode:** is a private-led entry mode in which the multinational telecoms partner with NGOs build trust with the poor communities and penetrate in the BoP market. Such a mode commences with a short-term (normally pilot) from the telecoms to increase their reputation by doing good for the disenfranchised users living in the slum (i.e. Doing well by doing good). This help can be in forms of financial grants or by selling the mobile telecommunication services with special prices for the poor community. As a prerequisite for this entry mode, telecoms need to economies their scale of operation to maintain a fixed flow of surplus and create socially responsible mutual investment funds (Hamilton & Statman, 1993).

Then the telecoms adjust their traditional marketing mix to target the less-educated low-income users. It offers affordable services within a limited period of time distributed to particular

regions with a minimum level of quality. So, sustainability and limited geographical scope of operations are the major challenge of this mode.

Deskilling the customer service and retail staff is another challenge that telecoms face in this mode. They usually rotate socially oriented experts to serve the low-income users than to recruit employees from the BoP community who know the poor needs and how they best served. They need employees who speak the same dialect and have the same mindset. The governmental providers are normally marginalised from the service both technically and administratively.

***Sustainability mode*** is a state-led market strategy serves the poor communities. It requires collaboration with non-traditional partners such as the NGOs who have long experience and accurate information about the slum areas. Those partners act as market intermediaries and work on not-for-profit base and time limitations. Such strategy has a wider outreach in the poor community by helping microentrepreneurs to build their own business using mobile telecommunication as an enabler. For instance, the Social Fund for Development (SFD), a quasi-government financial provider, recruits low-income youth and train them to develop their skills to work as operators for “Egypt Telecom” and then asks them to train others in the poor community on how to build telecentres. This entry mode is characterised by widespread and penetration in the low-income community, low prices, non-profitability, but short-term lifecycle.

***Base of the Pyramid mode*** is an entry mode led by multinational telecoms through full collaboration with the state, the NGOs, and the poor community. They work with varying stakeholders to co-create new business values in a sustainable manner (Prahalad, 2009). This strategy tends to maintain mutual socioeconomic return for the stakeholders in “My Village Phone” in Egypt. Our case achieved fast penetration of Vodafone services in the farthest areas, hamlets, and farming areas. The case has also been replicated in small scale in “Ain Es-Sira conditional cash transfers”. The project was led by the American University in Cairo and scheduled to be fully implemented between the years 2014 (Pathways, 2014). “My Village Phone” braved the road for Vodafone cash and e-Masary systems that offer money remittance services. The BoP entry mode introduces the mobile telecommunication services as enablers of digital and financial innovations such as m-banking, m-health, m-government, m-cloud computing (Mohamad et.al, 2014c). In this mode, telecoms build special branches (retails) in the hamlets and far areas to serve the disenfranchised people. Telecoms that follow this strategy, develop escalating price policy and friendly use technology for the less educated users. A Vodafone executive says “*Mobile Skype services can be used to call local carpenters, which means a Skype ID book can be issued to look for craftsmen on their own handsets. Mobile users can very easily and at no cost call the craftsmen to fix urgent breaks*”. A national wide Skype ID can then create more jobs for craftsmen and faster service for the slum areas. Electronic payment for games at the Café shops was another innovative use where the teenagers transfer airtime to the manager of the Café instead of cash.

## ***5.2. Development Scenarios:***

Achieving sustainable growth in Africa is a key millennium development goal. This, however, requires building sustainable foundations that achieve mutual return for the majority of varying stakeholders (Culey, 2014). African business leaders have to play as boundary Spanners across sectors of the economy and learn from the failures of the rest of the world.

In the *second stage* of data collection, we conducted field semi-structured interviews with a convenient sample of “My village Phone” retail agents and the loan groups as microentrepreneurs and also end-users. The sample has been selected from three villages to explore their different uses of mobile telecommunications as well as of microcredit. This helped us to get ideas about the degree of empowerment and improve on the poor’s life standard (Mohamad, 2011). Based on our transcribed data, we developed the second scenario matrix that helps setting a vision for the development impact of mobile use at the BoP market. This matrix guides the service providers, the multinational telecoms in particular, how to maximise the potential of the BoP entry mode and to start a deep dialogue with Egyptian society to improve governance of the standard telecommunications and other diversified remittance services. Matrix 2 shown below is designed based on two main pillars of socioeconomic development: *location* and *source*. The participatory development studies in the areas of agriculture (See Puri & Sahay, 2007), *Biomedical engineering* (See Boulos et.al, 2011) and society in general (See Wilson, 2002) reveal that the development at the BoP can be top-down that led by the MNCs or bottom-up that led by the disenfranchised community itself. The development flame might start overseas where the MNCs operate or at the BoP where the poor communities face their daily life challenges. In some cases, the development policy gets designed overseas and then transferred to the local neighborhoods.

Based on these two pillars, five mobile for development paradigms aroused: Pro-poor, Para-poor, and Per-poor, Per-poor exports, and Networked.

***Pro-poor*** is a development approach where mobile telecoms design special packages for the poorest communities in their home (mainly western) countries in isolation of the targeted users. Then they replicate their successful experiences in different international markets through foreign direct investment and transfer the technological infrastructure to the new markets. Despite the prompt impact of this paradigm on the poor community, it does not sustain for long. In my Village Phone, low income users absorbed the new mobile telecommunication service to expand their social capital and human networks aiming to secure a fair source of income through their new kiosks and the loans collected from AYB SD and Vodafone foundation.

Ayshaa, a retail agent, started to communicate FMCGs to help them collect their credit sales from a far area in Assuit city. She then uses her allocated quota to perform business-to-business transactions than to sell it to individual users. In doing so, Ayshaa saves time and money for the FMCs and secures commissions against her collections from groceries in the neighborhood. It has been reported by a senior retail agent that he trained Ayshaa on how to replicate successful cases of Grameen ladies in Bangladesh. This paradigm, however, is not fully customized for the BoP community and does not help them bridge the digital divide (Kappel et al. 2005). This paradigm takes long-time to grasp (i.e. It can be interrupted) an observable impact and the payback period of the foreign direct investment take one decade in average (Costa & Filippov, 2008). Further, this paradigm does lead to service improvement and helps



telecoms to push their traditional call and data services offered in the western market. Even innovative use, like Ayshaa case, will stay in the shed of the so called informal market.

**Para-poor** is another development paradigm that arises locally and driven by the social needs of the poor community. M-Pesa in Kenya is a reported example of this paradigm, where Vodafone Group acquired 40% of the national Kenyan mobile network operator (i.e. Safaricom) to tap the unbanked people in the country with mobile-based financial services. In “My village Phone”, Vodafone foundation delivered a similar impact through partnership with the ministry of social solidarity and AYB SD to recruit the retail agents. Local customised business model and government collaboration are not enough to assure the users’ satisfaction. In this model, the multinational telecoms create R&D centers located in the area where the service is delivered. However, only community elites and engineers get involved in the system design (including mobile interface) and the marketing mix.

Heeks (2008) argue that this paradigm does not also heal the digital divide rather makes the MNCs think they know what is needed, but they do not really know what it takes to bridge it. A member of “My Village Phone” loan group said” [*We have not been involved; We see the wall of retail agents who have no control over the service. In case of having a weak signal, delay in the airtime top-up, or any technical difficulty, we have to wait for the retail agent to solve it for us. We never meet people from Vodafone Foundation to tell them about our concerns*].

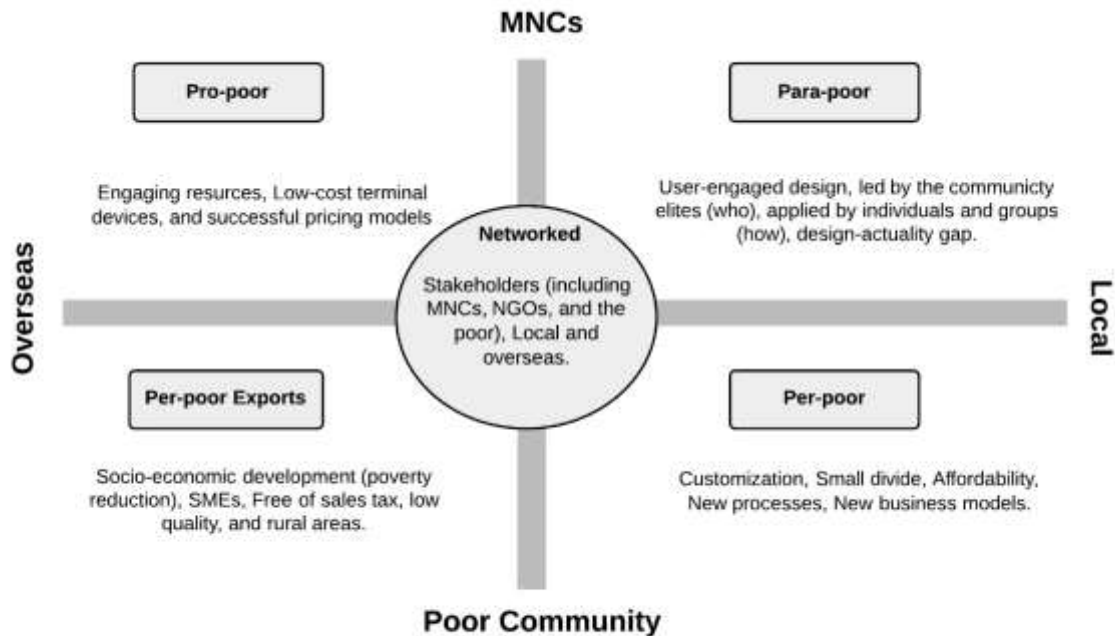
To succeed, the para-poor paradigm requires the collective efforts of individual executives and functional groups to create jobs and microenterprises with and around the mobile telecommunications.

**Per-poor** is the third paradigm where service design, diffusion, and use take place in the Slum area by the hands of the local community. Social need and disenfranchising pushed the locals to invent artefacts and add new innovative uses of mobile telecommunications. Kareem, a retail agent, started using his airtime slot as a store of value to pay for the grocery shop. [*Being an Arabic teacher in a small village, I used to give private courses to students after the school time. I do accept airtime transfer instead of cash; because I can sell to others and get my cash back in my pocket. The student’s parents easily transfer the airtime from any distance and do not need to meet me in person. This way also assures the parents that the tuition fees reached for my hands and that their kids did not spend it on playing video games at the Internet Café; Said by Kareem*].

Heeks (2008) argue that this paradigm usually leads to new processes, new business models, and perhaps new products/services at the BoP. An example for new processes is texting the street vendors (instead of making a phone call) to place an order and track the order in progress (Donner, 2008). Using airtime (electronic mobile top-up) and a currency is a sign of new business model. Complementary products get also invented such as mobile accessories and ring tones that create jobs for the loan groups and retail agents.



Matrix 2: Development scenarios for the BoP entry mode



Source: Authors' systemic foresight analysis

*Per-poor exports* is the fourth development paradigm that takes place overseas where the telecoms export their standard call and data services to the BoP market, but offer a license privilege to local exclusive agents in the local market. In this case, those agents customise the marketing mix and deliver the products and services through other intermediaries in the villages and slum areas. They, however, have no control over the technical issues of the service. Our participants reported that Nokia handsets are available for less than \$100 US Dollars at the local stores. However, the maintenance service is only available in towns and not free. In other cases, members of our loan groups could not differentiate between Vodafone service's technical problems and the device's technical problems.

This paradigm is more flexible than the per-poor paradigm, because it allows the MNCs to economise their scale of operations, while the local agents customise the services and products to the local BoP context (Chen and Watanabe, et al., 2007).

*Networked* is the last paradigm we uncovered in "My Village Phone" case study. It is usually launched by an implementing actor normally business development company or mobile telecoms who maintain a network of public-private partners. It is based on mutual benefits for all actors as a base for sustainable impact at the BoP. Vodafone's public relations manager possesses a massive business ties with the NTRA, the ministry of social solidarity, and other official. He then opened his doors to a successful entrepreneur and academic Raghda El-Ebrashi who founded AYB SD in the first place. Recruiting youth from the slum areas and train them as qualified mobile agents was not an easy task for either Vodafone foundation or AYB SD. So El-Ebrashi decided to build her team of students and representatives in the poorer communities to select the right people and get them connected to "My Village Phone" project. AYB SD and their representative played an intermediary role along with the boundary spanner

from Vodafone foundation. The recruited retailers had their own networks of allies in the local community and invented new uses of mobile telecommunication services. While “My Village Phone” offers standard telecommunication services, the project has a unique business web that customises the final delivered service to the loan groups as well as the final users to improve their wellbeing.

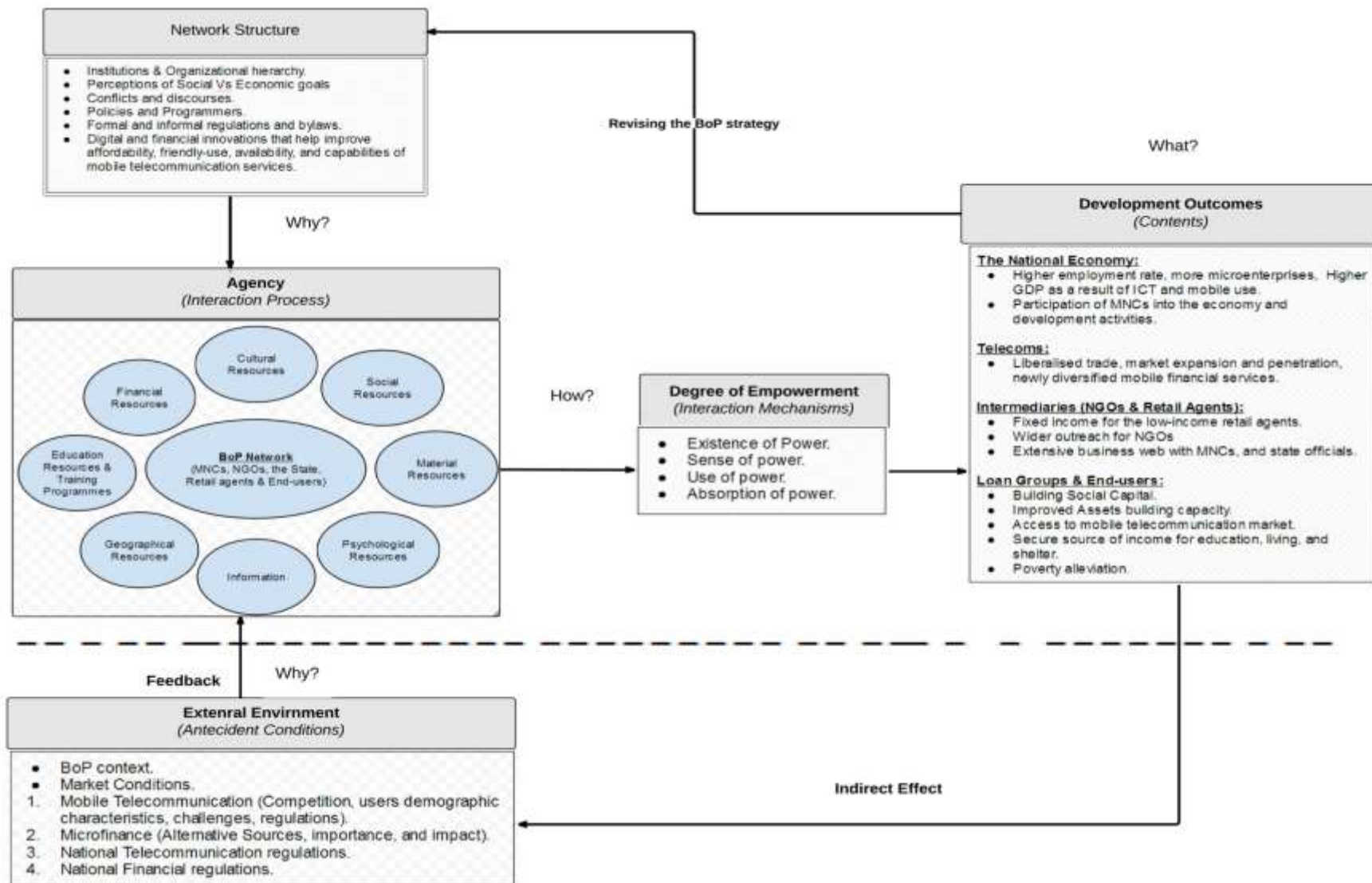
### ***5.3. Re-allocation of the Economic Power***

Albin (1997) constructed an in-depth conceptual framework of building system dynamics in multistakeholders context. His model was a revised model of Heroin-Crime system that suggests four steps to conceptualise stakeholders’ interaction; Conceptualization: determining the model purpose, model boundary, shape of the reference modes, and basic mechanisms. Our study also offered a framework of stakeholder interaction and access to the BoP context. In doing so, we used the system thinking as a lens to conceptualise our research and explain the antecedent conditions. Afterward, we set scenario models for telecoms entry modes and the consequent development impact. Each scenario has boundaries and stakeholders involved in it. We then offered constructive matrices as shapes of references.

Our next stage is to explain how the interaction mechanisms through which networked organizational structures, and participative value chains relieve economic Vs social polarization and return the balance to the equation. In doing so, we present a conceptual framework that is contingent to our qualitative case study. As shown in Figure 7, the BoP network (i.e. MNCs, NGOs, the State, Retail agents, and end-users) interact differently in response to the internal and external environment. One of the key internal factors is the shared vision developed by Vodafone foundation and AYB SD based on which they set policies, regulations, daily tactics, and performance measures. Further, changes in business models (including financial and digital innovations) are performed by the project’s staff and the way they inspire the retail agents and loan groups to change the course of actions and open black boxes. Decentralised management would be another essential factor to handle technical and administrative problems in the hamlet and rural areas. Service delivery in this case requires friendly mobile interface. This means developing logo-based and SIM toolkit mobile interface as well as voice commands enabled services to waive the end-users high illiteracy rate.

The external environment revealed strong competition between the three mobile telecoms in the market. Such a competition shapes the way Vodafone builds sustainable relationships with other stakeholders at the BoP to secure the biggest market share in the mobile telecommunication market. In doing so, Vodafone succeeded to lead the accelerating move towards mobile payment and money remittance services. High rates of poverty, illiteracy, and unemployment force the poor people to use the microfinance services as a last resort. Limited sources of microfinance and the high interest rate imposed by the money sharks and commercial banks also leave no choice for the poor community to stay in the deep poverty. These factors collectively increased the success of “My Village Phone” and the need to use mobile telecommunication as a source of microfinance that brings a fair level of income.

Figure 7: Power reallocation framework for the BoP strategy



Each stakeholder (social agency) exchanges a wide variety of technical, financial, and cultural, psychological, material capabilities and gets others in return. In “My Village Phone”, telecoms manage the investment, technical infrastructure and assistance, in addition to, offering 24/7 customer service. In return, the telecoms escape from the market saturation and compete with the other two telecoms in new unknown markets (i.e. Guerrilla strategy). Then they use the profit margin at the BoP market to reduce prices in the core high and middle-income classes located metropolitan areas. AYB SD holds a wide dataset of social and demographic information about the poor community. They also hold trust-based relationship with the slum communities due to their previous successful projects for youth employment and poverty alleviation. Gradually, both of Vodafone foundation and AYB SD could get full attention from the state officials to build legal frameworks for mobile and microfinance that assures security and transparency.

At the core of our framework, we refer to events where stakeholders who share more resources have more power over others. In doing so, they move to upper layers and have more control over the economy. For instance, when the state empowers the MNCs, they will invest more in the economy and create jobs and improve the GDP. In this case the economy will be private oriented and interfere not only on business, but also in politics. Our case evidence shows that the BoP initiative creates iterative balance between the economic actors. When the MNCs get tax exemptions and flexible investment regulations, then they need to help the government through helping the public to improve their wellbeing. This means that MNCs get the power, absorb it, and send it back to the state and the public. The BoP then offers power circulation (Al Gore, 2013).

On the top right corner of our framework, we discuss the outcomes of the BoP entry modes and its benefits for the multinational telecoms, the State and the economy, the NGOs, and the poorest community. At the national level it liberalises trade and reconcile the power balance between the economic actors. At the institutional level, it helps creating cross-sector innovative value chains. And finally, at the individual level, this approach helps users to create social capital and improve their financial decision making skills (Bessant and Tidd, 2007).

## **Conclusion:**

Our study offers a conceptual model of how the BoP strategy helps the poor to alleviate their poverty. This model, however, suggests that stakeholders of the BoP initiative collaborate to grasp the full socioeconomic potential. In doing so, we suggested the theory of power to highlight the shift of low-income people to the middle class by absorbing more economic power (income building capacity). In doing so, mobile telecommunication as a commodity transforms the informal market (the slum) into a more productive and organized market. Then the economic power can be transferred to the poor with low intervention from the government. Accordingly, we have been pushed to rethink of the theory of the invisible hand of Adam Smith. The incremental transformation offered by the BoP strategy leads to radical changes in terms of new mobile uses and developmental impact.

Our research started with a key question of “*how mobile technology empowers its users to escape from poverty and turn to off-poor or middle classes*”. To answer this question we then explored different entry modes of mobile telecoms to the slum market. In the first section, we explored the BoP market in Egypt and highlighted the role of the MNCs, the state, and consumers in spreading the mobile telecommunication at the Egyptian BoP. We then conducted

a business analysis of the mobile telecommunication market and reached to a conclusion that Vodafone Egypt has a better potential to serve the slum areas in the country with more diversified mobile services such as microfinance. The first section, though, helps Vodafone at a multinational corporation to determine their initial steps toward becoming involved in the BoP.

The research team suggests that the BoP and the networked development paradigm get conceptualised through different other theoretical lenses than the theories of power. This will help draw replication features and evaluation criteria. Then building best practices toolkit will be a matter of time and will be easy to compare and contrast between BoP initiatives when replicated.

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