CHAPTER 1: SCOPE AND NATURE OF THE STUDY

[The BOP offers] a massive opportunity for private sector firms to engage in ways that improve poor peoples’ lives.

Michael Klein

1.1 INTRODUCTION

Recent years saw a number of retail, FMCG and consumable companies, among others, entering the BRICS countries (Brazil, Russia, India, China, South Africa) in search of growth opportunities given the greater current global economic situation. With this, Africa also has become a favourable environment for investors and companies looking to expand their business footprint.

Rural and informal markets do not only include positive spinoffs for the investor on the supply side but also for the user / client on the demand side, i.e. mobile phones can be used as an early warning system for people in rural areas when floods are predicted while products and services become more accessible to the user and general population. In other words, the expansion into rural areas and informal markets do not only hold financial (on the supply side) but also social rewards (on the demand side). The rural population in developing countries is severely underserviced by telecommunication (telecom) companies. This not only hampers the potential socio-economic advantages for the population themselves but also the potential return telecom companies stand to lose if not entering these markets (Chick et al., 2010: 3-20). “World Bank figures have shown that for every 10% increase in mobile penetration, there is a corresponding 0.8% increase in GDP” (Alfreds, 2013:1).

The proposed research firstly focuses on the telecom industry with specific reference to mobile phones. Increasing the focus of this research, the base of the pyramid (BOP), the more informal and/or rural markets are considered as the main market segment. The reasoning for this is that these markets are typically what is encountered in developing countries which requires a different strategy opposed to
Formal markets and the developed world can be seen as saturated and in order to grow revenue and subsequently share price, companies need to gain market share. This is sometimes easier said than done while informal markets in the developing world lie waiting. A different and innovative approach is, however, required to unlock these potential substantial markets. A report by the GSMA (Association of Mobile Operators) in 2010 indicated that:

- 1.13 billion people between the ages of 14 and 65 living in rural regions covered by GSM are not connected.
- South Asia and Sub Saharan countries are the most significant untapped markets, in which people could access mobile services (they live in a GSM covered area) but don’t own a phone.
- Based on the average ARPU (average revenue per user) for rural regions per country, GSMA estimates incremental revenue for operators amounts to US $73 Billion per year.

A report by the World Bank (2006:7) highlights the impact on rural economic activities as a result of high transaction costs and high risks. The report underlines the high input costs, associated lower returns and high risk factors in the rural agricultural sector which in turn limits motivation to produce, as an example. Using this example as possible evidence to the deterrents of retail investment in rural areas can add insight to an understanding of lower levels of retail investment in rural areas. The lower expected returns in rural areas as a result of diluted market potential hinder companies from investing in these areas. Commercial activities have a slowed take-up rate due to low service levels in rural areas (World Bank, 2006: 10). These factors form part of the barriers to entry in rural areas.

The research makes use of a GIS (Geographic Information System) aiding in the reworking and the ultimate data result which add a spatial dimension. The framework and methodology used could be applied to other industries and geographical regions. The purpose is to develop a model with the aid of a GIS and existing datasets which
can be used to assess the opportunity in the BOP, ultimately maximising return through targeting the right areas.

1.2 PROBLEM STATEMENT

“A South African who lives in an impoverished, crime-ridden neighbourhood of Johannesburg has no bank account, cannot order items from a distant store, and is sometimes robbed of her pay packet. She finds that a new financial service offered by a local start-up company allows her mobile phone to become a solution – her pay is deposited directly to her phone-based account, she can make purchases via an associated debit card, and she carries no cash to steal” (Hammond et al., 2007:13).

Conventional markets are becoming saturated hence business needs to find alternate markets in order to continue growth through new revenue streams (Hammond et al., 2007:14; Hammond & Prahalad, 2002:51). New revenue streams can be realised through changes to the product offering but also changes in the market orientation. One such market is the BOP. The benefits from mobile phones in the BOP are evident in Hammond et al. (2007). Consensus has not yet been reached on the size of the BOP with different estimations. In other words, the actual size of the BOP in South Africa is still unclear. Companies have ventured into this market segment with some success while it is true that others are failing.

1.3 OBJECTIVES OF THE STUDY

1.3.1 Primary objective

The primary objective of the study is to determine the size of the telecom retail market in the South African BOP.

1.3.2 Secondary objectives

These include:

- Quantifying the value of this market by including mobile phone expenditure figures.
- Determining what areas are covered by existing telecom retailers.
• Identifying the size and locational spread of the BOP while looking into the probability of this market adopting a mobile phone.
• Ascertaining the extent of the opportunity at the base of the pyramid (BOP) for telecommunication companies with specific reference to mobile phones, in South Africa.
• Establishing a platform for easy viewing and interpretation of the results.
• Assessing the contribution of a GIS to retail business.
• Identifying the characteristics of as well as determining the extent of the BOP.

1.4 RESEARCH METHODOLOGY

The informal market potentially offers significant rewards; however, companies are hesitant to venture into these untapped and unknown markets. This research proposes to develop a methodology, through theoretical research as well as making use of a case study, which can be used in determining areas that offer the greatest opportunities.

This research makes use of quantitative as well qualitative methods in order to reach the research objectives. The required data can be summarised into two main categories: demand and supply side variables. The demand variables speak to the requirement of the population. The recently publicised 2011 Census offers a contemporary quantitative point of departure and underpinning database to quantify the BOP in South Africa. In other words, the demographic demand for certain goods and services of which mobile phones form part of.

At the other end of the economic equation lies the retail supply. The retail supply equates to the offering by retailers to cater for the demographic demand. In this research two datasets are used to quantify the offer. In an effort to quantify the general retail supply, shopping centres encompassed in the South African Council for Shopping Centres (SACSC) data are used to determine the general retail supply as shopping centres offer a better opportunity for formal retail to move into areas previously not catered for. Alongside, the shopping centre data, locations of mobile
operators’ retail stores will be used to determine geographic ‘coverage’ of a formal mobile phone offering.

These datasets are then utilised to determine areas of higher mobile phone demand where formal mobile phone retail has not yet penetrated the market. In essence, comparing mobile phone demand with supply will indicate quick win areas for mobile phone operators to enter.

Thompson and Walker (2005: 251) identified numerous methods whereby GIS can be used in retail network planning in order to achieve competitive advantage. These are summarised in figure 1. The methodology followed in this approach is a combination of numerous of these examples and markets due to the encompassing nature of the study. Specific reference is, however, made to the retail and property markets. The application of a case study forms part of the qualitative nature of the study whereby a specific area is investigated. This then also includes catchment (trade area) analysis, new store sales forecasts and impact analysis.
1.5 SCOPE OF THE STUDY

The study focuses on mobile phone usage of the BOP in South Africa. As such it makes use of mobile phone statistics and BOP literature in South Africa to quantify this market. Similar to Hart and Simanis (2008), this research makes use of the term ‘base’ and not ‘bottom’ as referred to in some research, given the negative connotations attached to the latter term. This is a comprehensive study of all households in South Africa (the total mobile phone market) as to give context to mobile phone opportunity in the BOP.

1.6 LIMITATIONS OF THE STUDY

While conducting this research certain limitations that came up included:

- This study focuses on a general assumption that base infrastructure such as mobile base stations is already in place. Given the complexities around mobile
communication, it is difficult to quantify the exact influence and cost of the different generations of technologies such as EDGE, 3G and LTE.

- Technology adoption is another complex matter which requires a number of variables to be considered. For this study reference is made to technology adoption models; however, the influence of this within the research will be limited to desktop available data. Conversely, questionnaires would have been required to record variables pertaining to personal preferences.

- Some irregularities have been found between different datasets which would affect the calculations and ultimate outcome of the findings. However, the datasets used are the most trustworthy and generally applied data in the industry. This research relies primarily on two main datasets – 2011 demographics from Stats SA (through Census) and industry specific data from the All Media and Product Survey (AMPS) dataset from Eighty20, a consumer and market research consultancy.

- Given the considerable size of the dataset utilised in this research, processing power of programmes used added to the time requirement as the processing speed of the programmes increased dramatically. Different programmes may have had a more favourable result with regards to the time requirement. It was, however, still decided to work with more widely available software to increase data viewing from the reader’s perspective.

- A lack of freely available datasets in South Africa has a limiting effect on research possibilities. The majority of public sources furthermore only offered physical addresses, sometimes lacking street addresses. Data had to be manually captured and mapped.

- Given the lack of quantifiable research in the South African BOP telecom market, greater emphasis was placed on specific research sources such as Hammond et al. (2007).

At this stage it is important to clarify some terms which will be used throughout the rest of this research. These terms focus on retail; however, given their general description there is a need for clarity to avoid confusion between retail and cellular application. Firstly, unless otherwise stated, “coverage” refers to the coverage of retail stores offering a specific product and not the coverage of a mobile service
operator’s ability to offer signal in specific areas. Secondly, “network” refers to the store network of a retailer which allows them the ability to cater to potential customers in specific areas. Combining these two terms – “network coverage” – would ultimately mean referring to the retail store network of a mobile service provider’s formal channel to cater to customers through formalised retail stores. Lastly, “penetration” refers to the number of customers as a percentage of the total population of the area in question (province, municipality, region), similar to market share based on number of customers. With the above in mind, “network expansion” would then refer to increasing the retail footprint through adding additional stores to the network.

1.7 CONTRIBUTION OF THE STUDY

Contributions of this study include:

- The methodology proposed in the investigation of the South African market is robust and can easily be applied to other potential markets. Thus, this study can aid in establishing a methodology which can be applied across different markets and adjusted for different products.

- Given the limited volume of research conducted on the BOP in South Africa and even less on the telecom retail market in South Africa, this research can aid in setting the groundwork for other possible future research in these markets.
1.8 LAYOUT OF THE STUDY

**Problem Statement**
Determining the size of the telecom market in the BOP of South Africa.

**Analyse existing information**

**Benchmarks**
- Identify the BOP;
- Determine adoption rate in the BOP;
- Mobile phone expenditure to quantify the BOP.

**Methodology**
- Through applying industry benchmarks to datasets, areas of higher opportunity (where demand outweighs supply), can be identified.
- Given that the expected demand is quantified in the above, required investment can be determined in an effort to optimise return.

**Data requirements**
- Census 2011 breakdown;
- Shopping Centre attribute data;
- Formal Mobile operators retail locations.

**Apply benchmarks to secondary data**

**Findings**
Determining the orientation of existing telecom retail stores to the market and opportunity not currently catered for.

**Conclusion**

**List of References**
1.9 SUMMARY

This study focusses on the telecommunication market in the BOP within South Africa. A large number of inputs and expansive datasets will be applied in order to quantify the telecommunication opportunity through a retail perspective.