The influence of macro and micro-environmental factors on the consumption of mobile phones and marketing strategies

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The influence of macro and micro-environmental factors on the consumption of mobile phones and marketing strategies

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A thesis submitted for the degree of Doctor of Business Administration

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October 2016
STATEMENT OF ORIGINAL AUTHORSHIP

I, Yvonne Yam, certify that the ideas, research, analysis and conclusions reported in this thesis are entirely my own, except where otherwise acknowledged. I also certify that this work is official and has not been previously submitted for any degree other than the one it was written for. I also certify to the best of my knowledge all help received in the preparation of the thesis and all sources used have been acknowledged in this thesis.

___________________
Yvonne Yam
October 2016
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1. My supervisor, Dr Wong Wai Nam: for his invaluable input throughout the whole process.
2. My co-supervisors, Associate Professor Michelle Wallace and Dr Scott Niblock: for the final push to completion.
3. My family: for their support.
ABSTRACT

This study aims to explore how the mobile phone presents itself at the heart of consumption identity as it moves from a communications utility to a lifestyle tool, with a view to understanding how firms can use this knowledge to better manage customer relationships. The core theoretical focus is on consumer decision-making and motivation, particularly identity formation in relation to mobile phone consumption in the context of everyday life. The final aim of the research is to study the impact of micro-environmental and macro-environmental factors on consumer behaviour and marketing strategies. The factors in the macro-environment have been identified as globalization, media and global brands/global marketing, while the factors in the micro-environment have been identified as social networks, personal history, symbolic meaning of products and glocalization.

A mixed methods approach with a combination of both qualitative and quantitative data enables a comprehensive analysis of mobile phone consumption from a constructivist perspective with a view to the following research questions:

1. To what extent is consumer mobile phone behaviour dependent on factors in the micro-environment?
2. To what extent is consumer mobile phone behaviour dictated by dynamic changes in the macro-environment?

These questions are addressed by way of an exploratory study through case-based research and investigative study through a structured questionnaire. The following hypotheses were examined:

_Hypothesis 1: Factors in the micro-environment do not affect consumer identity in mobile phone consumption_

_Hypothesis 2: Factors in the macro-environment do not affect consumer identity in mobile phone consumption_

KEYWORDS: micro-environment, macro-environment, identity, mobile phones, consumer behaviour
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CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND TO THE RESEARCH

The global consumption environment

The contemporary consumption environment is characterized by advancements in technology, the need for hyper-connectivity via social media and a wide array of goods and services (Lingle, 2013). In the past, consumers had limited choices and consumed whatever was available in the marketplace in the production-driven society (Dahl, 2000; Friedman, 2000; Prahalad & Ramaswamy, 2004). Today’s global consumer is spoiled for choice and may even dictate what goods and services should be provided as he uses his consumption habits to reinforce his individual identity (Castells, 1997; Friedman, 1999), often in the form of lifestyle choices. Consumption practices are no longer dictated by traditionally ascribed ‘identity categories’ of class, race and ethnicities (Crook, Pakulski & Waters, 1992). Rather, consumers are influenced by the dynamic changes in their micro (family and local landscape) and macro (global landscape) environments (Lewis, 2007). This is illustrated in Figure 1.1.

![Figure 1.1 Contemporary consumer makes his consumption decision by considering factors in the micro and macro-environments](source: Developed for this study)
The empowered consumer of today makes his consumption decision against the backdrop of globally accepted practices (macro-environment) within the constraints of a local social context (micro-environment). Advancements in communication technology and the presence of global media add to the complexity of connecting effectively with consumers.

**Challenges for corporations**

The highly fragmented consumer market presents several challenges for corporations. Firstly, a one-size-fits-all market strategy is not a viable and sustainable option for the long term as market conditions continue to be locally differentiated (Robertson, 1985; James & Howells, 2001). Prior research also supports that consumers tend to define their social contexts locally rather than globally (Dahl, 2000). This suggests cultural influences. As such, corporations must have in-depth knowledge of each local context (country) in order to make a successful connection to the local consumer. Within each local environment (country), there are cultural differences and lifestyle differences to be considered. Also, the changing dynamics in the macro and micro-environments through the course of life provide additional challenges. Secondly, with lower costs and wider product offerings, it is becoming increasingly difficult to capture the attention of the consumer. Corporations that are successful in this aspect are those who adopt targeted segmentation strategies to accommodate life cycle changes and truly engage with their customers. Other successful approaches include customized loyalty programs, as well as increased interactions with the consumers through popular mediums such as the internet or the mobile phone. All these are part of customer relationship management techniques employed to make an emotional connection to consumers. Thirdly, the pervasiveness of social media as part of the contemporary hyper-connected society (Lewis, 2007) adds another level of challenge as corporations have to interact directly with the consumers in order to provide a personalized and engaging user experience (Daye, 2010; Sutter, 2012; Lingle, 2013).
Thus, the contemporary competitive business environment must be considered in the context of three inter-related assumptions reflective of contemporary societal life:

1. The continuous presence of traditions as an active agent in defining contemporary societal life.
2. The relevance of technology in influencing collective and individual identity in the consumption process.
3. The global significance of local knowledge.

For the post-modern consumer, consumption is not just about using things but the production of identity-constructing experiences through the usage of products (Firat & Dholakia, 1998). The focus on this study will be specifically on the consumption of mobile phones and how it relates to identity-construction as a ubiquitous everyday life object (Hjorth, 2009; Ling & Donner, 2009). This will be further discussed in Chapter Two.

**Situating the mobile phone in this context**

The mobile phone is the epitome of modern living. Never has a consumer product infiltrated society so greatly that it is considered a prerequisite of contemporary lifestyle (Plant, 2002; Alexander, 2000; Fortunati, 2001; Brown, 2001; Fox, 2001; Ling, 2001; Gergen, 2002; Lasen, 2003; Harkin, 2003; Geser, 2004; Campbell, 2007; Tchouaffe, 2009; Deloitte, 2011; Sutter, 2012; Lingle, 2013). Mobile technology is affecting the contemporary consumption environment in a myriad of ways. For many consumers, life is scarcely imaginable without their mobile phones as they utilize it to manage the different aspects of their busy lives. The proliferation of portable tablets adds to the hyper-connectivity of contemporary living as consumers are using their mobile devices to maximize available moments for absorbing content and spontaneous socializing (Sutter, 2012; Nielson, 2013). The worldwide success of the mobile phone attests to its importance in contemporary societal life. What this means is that contemporary marketing eschatology has to include the mobile phone as a significant medium for connection to consumers (Sutter, 2012).
Specifically, how can corporations leverage on the popularity and widespread use of the mobile phone as an effective marketing tool? How much of this consumer mobile phone behaviour is dependent on factors in the micro-environment? How much of this consumer mobile phone behaviour is dictated by dynamic changes in macro-environment? Figure 1.2 represents the conceptual framework developed for this study.

**Fragmented consumer market due to:**
1. Access to a wide variety of goods and services to choose from.
3. Changing dynamics in the micro and macro environments.

**Challenges facing Corporations:**
1. Competitive consumption environment as consumers are spoiled for choices.
2. Consumers tend to define their social contexts locally even though they are influenced by global trends.
3. The pervasiveness of social media as a means of emotional connection to consumers.

**Research questions:**
1. To what extent is consumer behaviour dependent on factors in the micro environment?
2. To what extent is this consumer mobile phone behaviour dictated by dynamic changes in the macro-environment?

**Strategies that can be adopted:**
1. Targeted campaigns based on segmentation of consumer groups at various life stages.
2. Customized loyalty programs that appeal to the lifestyle needs of the contemporary local customer.
3. Direct interaction with consumers via social media channels for an engaging user experience.
4. Using the mobile phone to connect with consumers on the move.

*Figure 1.2 Conceptual framework for this study*

*Source: Developed for this study*
1.2 JUSTIFICATION FOR THE RESEARCH

In order to thrive in such a dynamic business environment, corporations need to adopt successful customer relationship management strategies. This often means knowing how and when to ride with important consumer trends in order to forge a meaningful and sustained relationship with consumers. As discussed in Section 1.1, the mobile phone is one of the ways in which corporations may effectively reach out to their target audience in each local context. Indeed, the mobile phone is fast evolving to be a signifier of modern everyday living. This worldwide phenomenon is manifested in several major global developments.

The pervasiveness of mobile technologies in contemporary societal life
The last two decades have seen dramatic changes in mobile communications technology and the resulting changes in how people communicate. The growth is particularly staggering in developing countries with little “landline” telephone infrastructure. Many remote areas in the third world have gone from having no telecommunications infrastructure to having satellite-based communications systems. The International Telecommunications Union (2013) estimates that there are about 6.8 billion mobile subscriptions with mobile penetration rates of around 128 percent in developed nations. Table 1.1 below shows the Key Global Telecom Indicators for the World Telecommunications Service Sector in 2012.

The pervasiveness of mobile phones in contemporary societal life is reflected in the fact that they are also used within the intestines of the government. In 2005, the Finnish government decided that the fastest way to warn its citizens of disasters was through the mobile network. More recently, the Egypt’s government shutdown on internet and mobile phone services to prevent people from rallying together to protest against the government proved how important it was to stay connected especially with regard to international human rights (Richtel, 2011). This rapid diffusion of mobile phone usage suggests that the mobile phone could be an important connection medium to consumers on the move.
Mobile phone users are increasingly emotionally connected to their handsets
As the mobile phone serves as a symbol of one’s social network (Plant, 2002; Fox, 2001; Ling, 2001; Lasen, 2003; Geser, 2004; Deloitte, 2011), its perceived value goes beyond its tangible cost but to the emotional connections involved. The mobile phone is always physically close to its owner (Rudich, 2011; Sutter, 2012). No other medium has been considered so personal that panic arises if it is lost (Grant & Kiesler, 2001) and many consider the loss of it a form of bereavement (Harkin, 2003). In addition, many delight in personalizing their mobile phones with adornments or customized screensavers and ringtones (Plant, 2002; Rudich, 2011). By virtue of their ubiquity, utility, portability and the fact that no other digital device evokes so much emotion and personalized involvement suggests that targeted marketing strategies may allow for sustained emotional connection to consumers.
More functions on mobile phones aimed at simplifying life

One reason why mobile phones are popular is because the utilitarian functions of the mobile phone are helping consumers simplify their everyday life (Plant, 2002; Brown, 2001; Lasen, 2003; Harkin, 2003; Geser, 2004; Rudich, 2011; Sutter, 2012). The increasing applications that a mobile phone support makes it possible to incorporate it to an individual’s complex everyday life. The mobile phone provides the individual with the flexibility of rapid role-switching, allowing him to micro-coordinate time, filling time that otherwise might be wasted (Progressive, 2001) as he can play multiple roles simultaneously. Lasen (2003) adds that mobile phones facilitate an increased temporal efficiency by flexibility in the use of time. For instance, texting serves as a time-saver for those who do not have the time to carry on a full-fledged conversation and provides a discrete mode of communication in situations where phone conversations are inappropriate. In fact, texts are considered to be the currency of modern conversations (Sutter, 2012). The mobile phone is more than just a communication tool but a lifestyle gadget. Understanding consumer motivations for using the mobile phone in the various aspects of their lives may provide insights to improved customer relationship management.

Growth of mobile content services/mobile advertising

According to the MobiThinking (2014), the global mobile content market is set to hit US$18.6 billion by 2017. This growth is propelled by rising affluence due to increases in disposable incomes, technological advancements in mobile devices with expanding functionalities aimed at simplifying life like the smartphone as well as increases in mobile bandwidth. Websites are increasingly being offered in impressive mobile versions to target mobile phone users on the move (MobiThinking.com, 2014). With the proliferation of smartphones and the global app market, businesses have multiple ways within a mass media tool (the mobile phone) to connect with their consumers. Figure 1.3 below shows the various activities global consumers are using their smart phones for. Keeping pace with what consumers are using their mobile devices for will enable corporations to better engage their target consumers.
Mobile phone habits are distinctively local

While the technology behind the mobile phone may be global, cultures, values and lifestyles are not (Rogers, 1995; Scott, Quinn, Timmerman & Garrett, 1998; Leonardi, 2002; Barley, 1986, Widman, Jasko & Pilotta, 1988; Lewis, 2007). The local context determines the socio-cultural fit of the product in question. For instance, in China, people rarely react to the loud phone conversations (Plant, 2002) while in Japan, train commuters are constantly reminded via the public announcement systems to switch their
mobile phones to ‘silent’ mode to maintain the tranquility of the environment (Campbell, 2007; Canton, 2012). Mobile phone usage patterns accentuate the social difference between people of different cultural backgrounds and are tightly correlated with the various purposes of the social actions as well as the different situations, social relationships and social roles (Geser, 2004).

Even the types of mobile phone devices differ from country to country which suggests that the micro-environment (local context) has a greater impact on mobile consumption. The mobile devices are split into three main categories. Smart phones are those with or without touchscreens. Multimedia phones are those with touchscreen and/or QWERTY keyboard but without an advanced operating system. Feature phones have no touchscreens, QWERTY keyboard or advanced operating system. Figure 1.4 shows a summary of the types of mobile phones in different countries.

![Figure 1.4 The types of mobile phones in different countries](source: Nielson’s Mobile Consumer Report (2013))
Understanding the cultural norms of each local context will enable businesses to devise suitable marketing campaigns to effectively connect with their customers. In addition, Figure 1.5 shows the global smartphone penetration in 2014. The high penetration rates are a clear indication of the mobile wave and its impact on today’s hyperconnected world (Saylor, 2012). Access to real-time information allows users to magnify their knowledge and make more informed decisions while on the go. Given such global developments, it is imperative for firms to understand how local consumers are influenced by micro-environmental and macro-environmental factors in order to be more effective in their consumer communications. This is the premise of this research.

![Figure 1.5 Global smartphone penetration 2014](image)

*Source: Consumer Barometer (2014)*
1.3 OBJECTIVES OF THE RESEARCH

Based on the broad framework described in Section 1.1, this study seeks to explore the macro-environmental factors that influence consumer mobile phone behaviour in Japan, China and Singapore. In addition, this study analyses the micro-environmental factors that affect consumer mobile phone behaviour in the Singapore context. Thus, the following objectives define the scope of this study:

- To examine the macro-environmental factors that influence consumer mobile phone behaviour in Japan, China and Singapore. The factors to be explored will be specifically in the cultural dimension.
- To investigate the impact of the macro-environmental and micro-environmental factors on consumer mobile phone behaviour in Singapore.

Based on the objectives as stated above, the research questions are as follows:

- To what extent is consumer mobile phone behaviour dependent on factors in the micro-environment?
- To what extent is consumer mobile phone behaviour dictated by the dynamic changes in the macro-environment?

1.4 METHODOLOGY

This study adopts the research design framework provided by Sekaran (1992). A qualitative and descriptive study is to be undertaken to collect and organize information about how corporations can leverage on the popularity and widespread use of the mobile phone as an effective marketing tool. The mixed methodology approach employed is based on three country case studies (Singapore, China and Japan) that focus on macro-environmental factors using secondary data, along with additional primary survey data (Singapore), which considers micro-environmental factors. The research for the study will be conducted on two levels in a concurrent manner. Each of these types of research has a distinct and complementary role to play in this particular study.
The combination of data collection methods gives a broad data foundation and a more reliable base for interpretations (Yin, 1994). The first phase of the study is exploratory using secondary sources of data. As there is limited information about the cultural interpretation of changes in the global context specifically with regard to mobile phone usage, exploratory research is the most appropriate method as it can be used to diagnose a situation, screen alternatives and discuss new ideas (Zikmund, 2000). The exploratory phase includes the literature review and specific case studies covering Japan, China and Singapore utilizing secondary sources. The second phase of the study is the investigative and descriptive phase. This draws on the data that was obtained in the literature review and represents a snapshot in time. This is obtained through a structured survey questionnaire and focuses on one Asian country – Singapore. The primary data for this study was collected in 2009 with the sample intended as a snapshot in time. The emphasis of the structured questionnaire was on phone (or voice) calls and text messaging – two phone functions which are still widely popular in today’s smartphone era (Saylor, 2012).

A detailed description on the methodology and approach will be covered in Chapter Three of the thesis.

1.5 DELIMITATIONS OF THE RESEARCH

The fundamental way in which people communicate with their social networks via mobile phones has not changed even though the means to do so has changed due to rapid advancements in communications technology such as the rise of smartphones (as explained in Section 1.2) and the corresponding mobile app market. This study covers the on the pre-smartphone mobile phone landscape. The delimitations are discussed in detail in Chapter Three of the thesis.

1.6 OUTLINE OF THE RESEARCH

This study on the macro and micro-environmental factors affecting consumer mobile phone behaviour is presented in a five-chapter format as suggested by Perry (2002).
Chapter One provides an introduction to the study by way of presenting the theoretical background to the research. Justification for the study and the research propositions and objectives are discussed. A conceptual framework developed for the study will be introduced. The methodology for the research will also be discussed and the outline for the report is presented.

Chapter Two deals with the extant and pertinent literature on the global mobile phone environment. It aims to provide a broad overview of prior scholarship on mobile phone consumption from a macro-environmental perspective. It includes the context for the research, a section covering the theoretical foundations of the research as well as a discussion on the relationships among culture, consumption and technology as they relate to consumer identity. A research model concludes this chapter and provides the research framework for the study.

Chapter Three covers the research design and methodology used for this particular study. The research paradigm underpinning the research is chosen and justified. It includes the details on the design of the survey instrument, the data collection and the ethical considerations. The limitations of the research pertaining to methodology are also discussed.

Chapter Four examines and discusses the results of the data collated in both the case studies and the survey conducted. It provides a detailed description of the findings and analyses.

Chapter Five serves as a conclusion to the research. The research propositions and objectives as outlined in Chapter One are revisited and conclusions made. The limitations of the study and suggestions for further research are also covered.
1.7 SUMMARY OF CHAPTER ONE

This chapter laid the foundations for this study by providing a broad overview of the research. The justification for the research, the methodology, and a conceptual model for the study were also presented. In addition, the outline of the five-chapter report was discussed. In the next chapter, the literature review will be presented. It includes the theoretical foundations for the study and the research context. It also discusses the development of the research model and the hypotheses for this research.
CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

In the previous chapter, the scope and the rationale for this study were outlined. In this chapter on literature review, existing research by accredited scholars and researchers are explored and critiqued on their relevance to the research topic. Researchers use the scholarly literature in a study to present results of similar studies, to relate the present study to the ongoing dialogue in the literature and to provide a framework for comparing results of a study with other studies. According to Bruce (1994), the literature review is an important chapter in a thesis as its purpose is to provide the background and the justification for the research undertaken. For this research, the literature review would focus on pertinent literature relating to contemporary consumption and in particular, that of contemporary mobile phone consumption. The aim of the review is to identify the gaps in existing literature that provide the impetus for the research propositions and the subsequent research questions. Cooper (1998) believes that a well-written literature review is one that is characterized by a logical flow of ideas that is unbiased and comprehensive and may consist of scholarship that is empirical, theoretical, analytic or methodological in nature.

Given the complexity of the research questions and its relation to the contemporary world, the literature review also serves as part of the exploratory study for the research. This aids in painting the landscape for the research with a holistic look at the elements that constitute reality as relevant key concepts such as culture, consumption and technology are examined. Specifically for the purpose of this research, this chapter attempts to provide an integrated body of text that reviews the critical points of current knowledge on contemporary mobile phone consumption and its links to the factors in the micro and macro-environments. It includes Lasen’s (2003) “A comparative study of mobile phone use in public places in London, Madrid and Paris, Crabtree, Nathan and Roberts’s (2003) study “Mobile UK –Mobile Phones and Everyday Life”, Plant’s (2002)
research “On the mobile – the effects of mobile telephones on social and individual life” and Geser’s (2004) “Towards a Sociological Theory of the Mobile Phone”.

Inspiration was also drawn from Bell’s (2004) two-year ethnographic research in Asia on how the urban middle class are adopting and using mobile technologies in their daily lives as well as Bar, Pisani and Weber’s (2007) study on “Mobile technology appropriation in a distant mirror: baroque infiltration, creolization and cannibalism”. Some insights were also gleaned from Saylor’s (2012) “The Mobile Wave: How Mobile Intelligence Will Change Everything” on how mobile technology is affecting our lives in a myriad of ways. Prior to that, works of Maslow (1943), Hofestede (1991) and Lewis (2007) helped to explain cultural dimensions and provided some clarity to the research context in terms of how culture affects identity. This literature review also draws on the research of contemporary writers such as Friedman (2000) and Huntington (2000) to identify the trends in the contemporary consumption environment. This helped to build the theoretical foundation upon which the research is based.

This chapter has been organized into six major sections. Section 2.1 provides a brief introduction to the chapter and the structure for the entire chapter. Section 2.2 carries on from Chapter One’s outline and delves into a detailed explanation for the research context and theme. It also includes the broad framework guiding the literature review. Section 2.3 deals with the theoretical foundations of this study to provide a rationale for using ‘culture’ as a central link to consumer behaviour. It provides the background to the origins of culture, consumption and technology and explores the relationships among culture, consumption and technology. Section 2.4 expands on the relationships by relating specifically to contemporary society and mobile phones. These lead to the development of the research model and hypotheses in Section 2.5. Finally, this chapter concludes in Section 2.6 with a summary of the major issues discussed before moving on to the Methodology chapter as detailed in Chapter Three.
Table 2.1 represents the broad structure and its key contents for the literature review.

| 2.1 Introduction | • Brief introduction  
|                  | • Structure for Chapter Two |
| 2.2 Research context | • Explanation of the research context and main themes  
|                  | • Broad framework guiding the literature review |
| 2.3 Theoretical foundations | • The relationships among Culture, Consumption and Technology as they relate to Consumer Identity |
| 2.4 The mobile phone in contemporary society | • Links background knowledge in 2.3 to contemporary society and how it relates to specific research focus – factors in the micro and macro-environments. |
| 2.5 Research model and hypotheses | • Development of the research model and hypotheses |
| 2.6 Summary of Chapter Two | • A short summary of the major discussion points in the chapter |

Table 2.1 Structure for Chapter Two  
Source: Developed for this study

2.2 RESEARCH CONTEXT

This section expands from the outline in Chapter One and provides the context for the research on mobile phone consumption and how it relates to the micro and macro-environments. It provides a broad overview of the contemporary consumption arena by way of explaining the challenges of corporations in a competitive business environment. These were identified in Section 1.1 and illustrated in Figure 1.2. Some of these include advancements in technology, the global availability of a wide selection of goods and services, the importance of local knowledge and the empowered consumer.

The main argument is that the global consumption environment has provided new and interesting challenges for corporations with regard to physical distance, time, markets and competition (Sheth & Sisodia, 1999; Friedman, 2000). The global availability of a wide selection of goods and services and advancements in communications technologies has empowered the contemporary consumer. The one-size-fits-all worldwide strategy has
given way to ‘glocalization’ (Robertson, 1992) as local conditions are a mix of global and local influences (Dahl, 2000). In addition, the contemporary consumer wants to co-create value with corporations to achieve better consumer experiences (Prahalad & Ramaswamy, 2004). The corporation-centric focus of the 1980s has shifted to a consumer-centric focus in the 21st century (Prahalad & Ramaswamy, 2004). Increasingly, corporations are being recast around core value-adding processes of operations, innovation and customer creation and retention as the contemporary consumer has a more dynamic and influential role to play in the consumption process.

Specifically, the role of marketing as a business function has become viewed as an integral constituent of overall corporate strategy as corporations understand the necessity and bottom-line advantage of broadening and deepening their customer focus. Corporations today face an increasingly demanding and empowered consumer who is individualistic, independent, informed and involved in the consumption process. Consumption practices are no longer dictated by traditionally ascribed ‘identity categories’ of class, race and ethnicities (Crook, Pakulski & Waters, 1992). Rather, consumers are influenced by the dynamic changes in their micro and macro-environments. This expansion of individuality comes at a time of booming supply of products, services and information, giving the consumer a multitude of products and services to choose from an ever-growing number of channels (Dahl, 2000). As a consequence, the consumer of today is discerning, demanding and uses his consumption habits to demonstrate and reinforce his individual identity (Castells, 1997; Friedman, 1999).

Indeed, consumption is now the central focus of contemporary societal life as people use material things as signifiers of their individual identities (Baudrillard, 1988; Belk, 1988; Carrier, 1995). The pursuit of material interests is viewed as an important life value (Kasser & Ryan, 1993; Mick, 1996; Richins & Dawson, 1992) as individuals take a more active role in defining their self-identity (Holt, 2002). Firat and Venkatesh (1995) suggest that consumption can be a liberating and meaningful collective experience. Friedman
(2000) and Halberstam (1993) believe that consumption is a culturally accepted means for seeking success, happiness and the populist notion of the good life. Further to this, consumption is embedded within social and cultural symbols and structures (Hill, 1998). Hofstede (1991) believes that all products have cultural connotations. This means that there is no identity or meaning unless it is considered in relation to other people and things (Barthes, 1957; Fishman, 1972; Morley & Robins, 1989) often within a local context (Fleck & Howells, 2001).

The process of consumption is further complicated by the fact that identity projects continually evolve over time (Kegan, 1982) and are based increasingly on desires rather than needs (Baudrillard, 1988). Also, the advancements in communications technology add to the onslaught of material pursuits as people are exposed to a greater array of goods and services through increased cultural interactions (Castells, 1997; Friedman, 1999). The marriage between culture, consumption and technology has resulted in an increasingly fragmented consumer market. The traditional underpinnings of marketing involved key concepts, such as market segmentation, demographics, age and gender. Utilizing these concepts, firms could identify groups of customers with similar needs. Now, customers are treated individually by interacting with each uniquely and by providing the value each customer wants. The raison d’être for creating a compelling consumer experience ensures that each consumption experience turns into a memorable, repeatable experience that not only fits into but enhances the lifestyle of the consumer (Featherstone, 1991). Indeed, the product is no longer the basis of value; the entire consumer experience is (Prahalad & Ramaswamy, 2004).

Figure 2.1 below depicts the broad framework guiding the literature review and indicates how the material in this chapter leads to the development of the conceptual framework for this study.
Competitive Business Environment

As seen in the challenges facing corporations

1. Contemporary societal life is influenced by traditions and it is imperative that corporations have local knowledge.
2. The global availability of a wide selection of goods and services signals the rise of a consumption-led economy as consumers dictate what corporations produce.
3. Advancements in communications technologies serve as catalysts in the consumption process.
4. Local conditions are a mix of global and local influences.
5. Consumers want to co-create value with corporations to achieve better consumer experiences.

Consumer Identity

These are reflected in

The consumer serves as an interpreter of factors in

This process is dynamic and constantly evolving.

And the strategies corporations are adopting

Contemporary marketing strategies

1. Used by corporations to win consumer mindshare
2. Customized loyalty programs – the consumer product/service experience
3. Corporate brand management global media channels like the Internet and popular social media sites like Facebook, Pinterest and Instagram
4. Popular mediums for consumer connection such as the mobile phone

The Micro-environment

2. Personal history – maintenance of key life roles and identities (Holt, 2002; Fishman, 1972; Maslow, 1943; Fiske, 1987)
3. Symbolic meanings of products (Baudrillard, 1974; Belk, 1988; Douglas & Isherwood, 1980)

The Macro-environment

1. Globalization (Friedman, 2000; Dahl, 2002; Huntington, 1996; Barber, 1999; Albrow, 1997; Hammond, 1998)
2. Media influences (Barber, 1999; Friedman, 2000; Lewis, 2007)
3. Global marketing; global brands (Friedman, 2000; Holt, 2002; Fournier, 1998; Korten, 1995)

The relationships among culture, consumption and technology

These factors are interrelated

Understanding the factors in the macro and micro-environments allow corporations to continually adopt successful marketing strategies

Figure 2.1 Broad framework guiding the literature review

Source: Developed for this study
Figure 2.1 expands on the conceptual framework developed in the previous chapter. Reiterating, today’s competitive business environment poses interesting challenges for corporations in the form of three inter-related assumptions: the continuous presence of traditions as an active agent in defining contemporary societal life, the relevance of technology in influencing collective and individual identity in consumption and the global significance of local knowledge. Coupled with the wide array of choice goods and services available due to technological innovations and advancements in communications technologies, the contemporary consumer is able to dictate what corporations produce instead of consuming whatever was produced as in the production-driven era of the 20th century. As such, the marketing strategies adopted by corporations to win consumer mindshare such as customized loyalty programs, corporate brand management and popular medium for consumer connections such as the mobile phone, reflect the growing importance of understanding the consumer identity. The consumer interprets the dynamic and constantly evolving changes in the macro and micro-environments in the process of building his identity. This interplay is observed in the relationships among culture, consumption and technology as discussed in Section 2.3.

2.3 THEORETICAL FOUNDATIONS

In this section, the relationships among culture, consumption and technology as they relate to consumer identity are examined based on existing research. It deals with the theoretical foundations of this study to provide a rationale for using ‘culture’ as a central link to consumer behaviour. It provides the background to the origins of culture, consumption and technology and explores the relationships among culture, consumption and technology.

Within a systems approach, the consumer is seen in interaction with three environments - his micro-environment (family) (Deacon & Firebaugh, 1985), his mesoenvironment (societal systems including political and technological environments) and his macro-environment (international and global environment) (Erasmus, Kok & Retief, 2001). For the scope of this study, attention is restricted to the micro-environment and the macro-environment. The micro-environment represents the immediate environment in the day-to-day life of an individual and is defined by the influence of the local context and social networks. Stacey (1990) defines the social network to include members from the formal family (through
blood and legal relations) and the informal family, where ties are formed by the individual’s feelings of belonging and emotional closeness. The macro-environment relates to the international and global environment. This includes global media structures. For the purposes of this study, the factors in the micro-environment are confined to those relating to social networks, personal history, symbolic meaning of products and glocalization. Similarly, the factors in the macro-environment are represented by those relating to globalization, media and global marketing/global brands. Based on the overview as depicted in Figure 2.1, an understanding of the research issues necessitates an appreciation of the core theoretical areas of culture, consumption and technology and how they relate to the factors in the micro and macro-environments. In particular, the focus will be on consumer identity. Figure 2.2 also shows how the themes of culture, consumption and technology are closely interrelated. Central to the three themes is the issue of personal identity. Culture provides a systematic way in which to fulfil needs. As such, culture plays a part in affecting consumption desires and motivation (Dahl, 2000), attaching symbolic meanings to products (Hofstede, 1991) and linking consumption to both individual and collective identity (Triandis, 1972; Hall, 1959; Kluckhohn, 1962; Kroeber & Parsons, 1958) as individuals associate consumption with their personal identity (Baudrillard, 1988; McCracken, 1988). In addition, technology use is often connected to social practices and understood in cultural contexts (Rogers, 1995; Scott, Quinn, Timmerman & Garrett, 1998; Barley, 1986; Widman, Jasko & Pilotta, 1988; Leonardi, 2002). These themes will be further discussed in the following sub-sections.

Figure 2.2 Relationships among culture, consumption and technology

Source: Developed for this study
2.3.1 Consumption

Daye (2010) believes that what we consume defines who we are. This section begins with the definition of consumption and describes traditional and contemporary theories of consumption. The theme of consumption as it relates to personal identity is also explained. Hogg and Michell (1996) define consumption as the “search for, choice, possession and disposal of goods and services” (pg. 629). Belk (1988) believes that “possessions are a major contributor to and reflection of our identities” (pg. 139). Hill (1998) adds that this sense of self is “embedded in the interactions and roles played within society” (pg. 317). Carrier (1995) suggests that material things are a way to define who we are to ourselves and to others.

Contemporary consumption is characterized by the fragmentation of markets and the media which has led to a blurring between the formerly clear-cut entities of producer and consumer. One of the most significant developments in the global consumption environment is the dynamic changing role of the consumer. Once a passive recipient of whatever was available in a production-driven economy (O’Connor, 1997), today’s consumer can dictate to a certain extent, what they want to consume and thus, what corporations should be producing (Friedman, 1999). Prahalad and Ramaswamy (2004) suggest that today’s consumption is about co-creating value, with the active participation of both the producer and the consumer. Consumption is no longer viewed simply as a financial or utility-driven activity but as a force in the creation of meaning and expression of identity for individuals (Daye, 2010).

The link between consumption and self-identity has been established in past research. Social scientists Bauman (2000), Giddens (1991) and Beck (1992) believe that possessions are the way people define themselves in their search for self-identity. People associate their identity with what they consume and active consumption allows the symbolic construction of both collective and individual identity (McCracken, 1988; Baudrillard, 1988). This self-identity development is not conceptualized simply as a linear process but an iterative evolutionary process (Kleine & Kleine, 1999), continually reordered against the backdrop of shifting day-to-day experiences (Harkin, 2003). Consumption is an integral aspect of personal psychological well-being as possessions build identity and desire as an investment of meaning in things in a process of building the ‘self’ (Csikzentmihalyi & Rochberg-Halton, 1981). Kleine and Kernan (1991) believe that past experiences (personal history) and daily
transformations (everyday life) as social interactions play equal roles in contributing to a person’s sense of self. That is, the meaning people ascribe to a consumption object is influenced by both its personal significance and the amount of external context. Consumption opens up to new interpretations and uses (Miller, 1997) as consumption practices become established and acquire meaning over time (everyday life).

The belief that well-being can be enhanced through one’s relationships with objects is not a new concept. Barthes (1957) believed that there is always a dual aspect to consumption. It fulfills a need and also conveys what is embedded within social structures. Through the consumption of objects, one can utilize the object in question as well as reinforce one’s identity within one’s social network. This view is supported by Baudrillard (1988) and Bourdieu (1984) who believe that the motivation to consume goods and services correspond to the meanings they generate for the individual within his social network as objects build self-identity (Csikzentmihalyi & Rochberg-Halton, 1981; Belk, 1988). Identity construction occurs in the context of a social network which provides confirming or disconfirming feedback (Hoelter, 1984). Even before Barthes, Maslow (1943) posited a hierarchy of needs theory to suggest that an individual’s consumption is related to his physiological needs, the needs for safety and security, the needs for love and belonging and the need to actualize one’s self – to define oneself, in that order. Each of us is motivated by needs and each of these needs must be satisfied in turn, starting with the first – need for basic survival. Only when the lower order needs of physical and emotional well-being are satisfied will individuals be concerned with the higher order needs of influence and personal development. All these relate to self-identity at the various stages in life.

Contemporary consumption is most noticeably associated with the concept of materialism - widely viewed as an important life value (Kasser & Ryan, 1993; Mick, 1996; Richins & Dawson, 1992) and the notion of a good life (Halberstam, 1993). Richins and Dawson (1992) define materialism as “a set of centrally held beliefs about the importance of possessions in one’s life” (pg. 308). A defining characteristic of highly materialistic individuals is a belief that well-being can be enhanced through one’s relationships with objects (Burroughs & Rindfleisch, 2002). Recent writers have touched on the global consumerist culture, evidenced by the ‘commodification’ of everything (Robertson, 1992) and symbolized by the Western ideals of fast food, movies and popular music. Bauman (2000) argues that consumption today
is about wants and the need for immediate gratification. Du Plessis and Rousseau (1999) add that this materialism is selfish oriented and dominated by commercially centred motives that encourage the accumulation of possessions. The increasing need for possessions also corresponds with an individual’s multiple roles in contemporary society.

The traditional view of the consumer as the passive recipient of all that marketing offers by way of products, services and communications, has shifted to the recognition that the consumer is an active player in his own consumption. In a globalized world where an increasing number of goods and services are available for choice selection, consumers can choose their identities through the consumption process (Warde, 1994) in the context of a social network. Choi (2002) adds that consumers constitute their identities increasingly on the basis of their active consumption of products offered to them through leisure, media and consumer goods industries. Each consumption decision represents how the individual is expressing his identity to the outside world as he continually re-creates his identity (Slater, 1997) through the course of life.

As consumption is now a major force in the creation of meaning and expression for individuals in the process of defining their self-identity (Holt, 2002), contemporary marketing is all about creating delightful experiences and building on-going relationships. Wikstrom (1996) argues that the consumer should be viewed as a co-producer as consumption and production are processes that occur interchangeably (Firat & Venkatesh, 1995). Prahalad and Ramaswamy (2004) suggest that today’s consumption is about co-creating value, with the active participation of both the producer and the consumer. This allows the consumer to design and create identities to enhance his sense of self (Daye, 2010).

The evolution of consumption can be viewed from a marketing perspective as discussed by Prahalad and Ramaswamy (2004). As shown in Table 2.2 below, the evolution of consumption can be observed from how corporations are connecting with the consumers and also how their respective roles have been evolving. The 1950s was characterized by transactional marketing. Consumers were targeted with offerings produced by firms whose roles were to provide products of value based on survey feedbacks received. The consumer played a passive role in the exchange while the firms defined and created value for the consumers. This progressed in the 1980s when firms provided a wider variety of products to consumers. In addition, firms were also interested in building long-term relationships with
their consumers. This relationship marketing era saw firms playing a more active role in attracting, developing and retaining profitable consumers. Beyond 2000 marked the era of collaborative marketing where the market serves as a forum where value is co-created through active dialogue with pro-consumers. The firms are constantly engaging consumers in defining and co-creating unique and meaningful consumer experiences.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Transactional Marketing</th>
<th>Relationship Marketing</th>
<th>Collaborative Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950s</td>
<td>The firm’s offering in an exchange</td>
<td>The customer relationship in the long run</td>
<td>Co-created experiences</td>
</tr>
<tr>
<td>1980s</td>
<td>Place where value is in the exchange</td>
<td>Market is where various offerings appear</td>
<td>Market is a forum where value is co-created through dialogue</td>
</tr>
<tr>
<td>Beyond 2000</td>
<td>Passive buyers to be targeted with offerings</td>
<td>Portfolio of relationships to be cultivated</td>
<td>Pro-consumers – active participants in co-creation</td>
</tr>
<tr>
<td></td>
<td>Define and create value for customers</td>
<td>Attract, develop and retain profitable customers</td>
<td>Engage customers in defining and co-creating unique value</td>
</tr>
<tr>
<td></td>
<td>Survey customers to elicit needs and solicit feedback</td>
<td>Observe customers and learn adaptively</td>
<td>Active dialogue with customers and communities</td>
</tr>
</tbody>
</table>

Table 2.2 Depicting changes in the role of marketing over time

In summary, the contemporary consumption environment has given rise to changes in the traditional roles played by both the producer and the consumer. The advent of globalization has increased the choice selection of goods and services consumers have and has empowered the consumer to better express his identity through the consumption process. This is because possessions are the way people define themselves in their search for self-identity. As the process is one that is iterative and evolutionary, corporations have to co-create and define value with the consumer in order to provide what the consumer wants in the marketplace.

### 2.3.2 Culture and Consumption

This section expands on the previous section on consumption and examines the part that culture plays in the consumption process and how it relates to consumer identity. The next few paragraphs can be distinguished into three broad categories: an explanation of the theme of culture, a presentation of cultural consumption and a discussion on contemporary cultural consumption.
As discussed in Section 2.3.1, consumption occurs in the context of a social network. Specifically, this means that culture has a part to play in the consumption process. Culture affects consumption desires, motivations and symbolic meanings consumers attach to products and relates to both collective and individual identity (Triandis, 1972; Hall, 1959; Kluckhohn, 1962; Dahl, 2000; Hofstede, 1991; Kroeber & Parsons, 1958). Rokeach (1973) and Schwartz (1992) suggest that individual values can only be meaningfully understood when considered as part of a larger value system. There is no meaning or identity unless it is considered in relation to other people and things (Morley & Robins, 1989).

Kluckhohn (1962) defines culture as a set of definitions of reality held in common by people who share a distinctive way of life. Hofstede (1991) adds that culture is the collective programming of the mind while Trompenaars (1993) states that culture is the way in which a group of people solve everyday problems through a complex meaning-making process involving the interaction of past experiences, personal intentions and new experiences. Krauss (2005) believes that “the most fundamental aspect of a human social setting is that of meanings” (pg. 762) and suggests that the role of meaning is important to human life. According to Chen (2001), meanings are the cognitive categories that make up a person’s view of reality. As such, a person’s life experience generates and enriches meanings. Culture also encompasses artefacts and products (Dahl, 2000) which corresponds to Baudrillard’s (1988) theory that an individual seeks order within a society from objects. In turn, material objects will influence an individual’s scope of options and hence influence his practices and development of experience. In this sense, the goods and services consumed by an individual and the ways in which they are consumed create meanings for the individual and for those within his social network (Barnard, 1996; Bourdieu, 1984; Baudrillard, 1988; Isherwood & Douglas, 1996). Research has demonstrated that people tend to conform to the majority opinion of their membership groups when forming attitudes (Festinger, 1954). Briley, Morris and Simonson (2000) suggest that cultures endow individuals with different rules/principles that provide guidance for making decisions and a need to provide reasons activates such cultural knowledge. Burroughs and Rindfleisch (2002) add that consumption is a culturally accepted means of seeking happiness, success and the populist notion of the good life.

While cultural studies used to presuppose a passive cultural consumer, recent research looks at the way a cultural product is received, reconfigured and reused by consumers according to
their own needs (Ger & Belk, 1996). People make a purchase with the knowledge of the product and the interpretation of that knowledge is culturally bound (Hofstede, 1991). Relativists argue that some understandings and emotions are unique to a particular culture, and that the meanings and functions may remain permanently beyond the comprehension of outside observers of the foreign culture (Edgerton, 2000). Shweder (2000) and Huntington (1996) add that membership in some particular tradition of meanings is an essential condition for personal identity and individual happiness. As such, while marketing their services and products internationally, successful enterprises must form a strategy that allows for cultural differences even though they may not be part of traditional marketing (Eramus, Kok & Retief, 2001). Mc Donald’s has been widely successful in its worldwide localization strategy (Ritzer, 1998).

Benson (1998) believes that every culture has a unique ‘cultural standard’ that distinguishes itself from other cultures. This ‘cultural standard’ defines what belongs within a culture and what is perceived as ‘alien’ and thus unacceptable. This may explain why certain products are readily accepted into cultures while others take time or never gain acceptance. Given that the new global arena is characterized by a plurality of cultures and unique identities (Huntington, 1993; Robertson, 1992), cultural adaptation is becoming a norm. This process has been coined ‘glocalization’ by Robertson (1992) and understood very well by Coca-Cola’s contention, “we are not multi-national, we are multi-local” (Morley, 1992, p. 289) or the Sony classic, ‘think globally, act locally’. Indeed, today’s local cultures are a mix of local particulars and global universals as represented by the micro-environment and the macro-environment respectively.

The emergence of a ‘cosmopolitan’ culture is the best example of contemporary consumption in relation to culture. With increased interactions between people of different origins (Dahl, 2000) through the cultural globalization process, people of various cultures are able to relate to meta-symbols like ‘Coke’ and ‘Mc Donald’s’ (Ritzer, 1998). This so-called ‘world culture’ seems to be driven more by consumption practices rather than by traditionally ascribed ‘identity categories’ of class, race and ethnicities (Crook, Pakulski & Waters, 1992). Fiske (1987) believes that what today’s consumer culture offers is meaning, pleasure and social identity for the consumer. The subject is invited to find his identity no longer in pre-given structures and ascribed roles but by means of his consumption to make, to create and to
design himself. This corresponds with McCracken’s (1988) view that consumption is symbolically meaningful and contextually relative.

Contemporary culture is a mix of both local and global cultures. The globalization of markets and people (Dahl, 2000) has led to an emergence of a ‘cosmopolitan’ culture as people can readily identify with global meta-symbols such as ‘Coke’ and ‘McDonald’s’ (Ritzer, 1998). This has given rise to a so-called ‘world culture’ that seems to be driven more by consumption practices than by traditionally ascribed ‘identity categories of class, race and ethnicities (Crook, Pakulski & Waters, 1992). However, this consumption is tailored to suit local cultures, coined ‘glocalization’ by Robertson (1992) as every culture still retains what is unique to their culture (Benson, 1998) while appropriation the product to suit their needs. Thus, the consumption environment is a mix of local particulars (unique to individual cultures) as well as global universals (standards commonly accepted) as represented by the micro-environment and macro-environment respectively.

Today’s consumer is able to create his identity based on his consumption practices. He is able to maintain traditional values associated with his ethno-cultural identity while reconciling with the demands of a globalized world. This in turn creates a unique consumer identity. Figure 2.3 depicts how contemporary culture relates to factors in the micro and macro-environments and how it in turn, creates unique consumer identity.

![Figure 2.3 Culture and factors in the micro and macro-environments create unique consumer identity](image)

*Source: Developed for this study*
The micro and macro-environments are interconnected because contemporary culture is a mix of both local particulars as represented by factors relating to social networks, personal history, the symbolic meaning of products and glocalization as well as global universals as represented by factors relating to globalization, media and global marketing/global brands. This in turn, creates unique consumer identity.

2.3.3 Culture, Consumption and Technology

Having discussed the role that culture plays in consumption, this section focuses on the interplay between culture, consumption and technology as they relate to consumer identity. This is depicted in Figure 2.2 and was briefly explained in Section 2.3. According to Friedman (1999), contemporary society is rapidly transforming into one shaped by mobility as characterized by the fluid movement of capital, labour and information globally. As a consequence, consumers’ perception of time and space has changed considerably. In a world of ever-changing and increasing technologies, the concept of ‘doing more with less’ has become a reality as consumers harness the power of information technology to aid them along in their daily lives (Castells, 1997; Friedman, 1999; Dahl, 2000; Lasen, 2003; Bell, 2004; Tchouaffe, 2009; Rudich, 2011; Sutter, 2012). Friedman (1999) adds that consumers of today have embraced information and communication technologies in many aspects of their lives. Interestingly, sometimes the technological product and the service it provides are used in ways unforeseen by designers, makers and sellers of the product. Consumers buy what technologists design and often fashion innovative uses around them (Crabtree, Nathan & Roberts, 2004). The measure of a product’s success lies in how far it diverges from its creator’s intention. The social context influences how individuals make sense of what they do with technology as reflected in how individuals incorporate technology into their everyday life. The frequent occurrence of unanticipated uses of communication technologies (Rogers, 1995; Scott, Quinn, Timmerman & Garrett, 1998) suggest that technology use is often influenced by social practices. Leonardi (2002) adds that technologies are always understood in cultural contexts.

Researchers today have begun to show how behavioural patterns regarding technology are shared among members of a culture. Not only do such groups construct people’s meanings of technology, they continually define and reposition it throughout the changing contexts of life (Barley, 1986). In fact, because no technology inherently makes sense for a given cultural
system, the social group ensures that there is a socio-cultural fit of the technology (Widman, Jasko & Pilotta, 1988). Indeed, technological devices and their systems of use are part of the material culture of a society. At the same time, they serve as the instruments with which individuals use to conduct their daily lives. The way that technology is used is the result of how people project their respective social world onto the technology (Lasen, 2003). This relates directly to the social identity of individuals. Jamison and Hard (2003) suggest that the appropriation of technology from a cultural perspective is the adoption and modification of a technology to fit with the respective cultural environment of a particular group.

According to Barnett (2005), in the bid to understand how people live and employ technologies, cultural anthropologists are on staff at most large technology companies like Microsoft, British Telecom and Intel. At IBM for instance, the research group that includes anthropologists and other social scientists has grown from 8 in 2003 to about 60 in 2005. This reflects how cultural differences can affect the design of technology. Bell (2004) believes that while underlying technologies may be the same across societies, the ways different cultures employ technologies have undergone radical shifts and repurposing as new technology is adapted within a culture and used to support existing patterns of behaviour.

At the other end of the spectrum, there have been criticisms of technology’s impact on the cultural fabric of societies across the world. Many look with scepticism and concern at the increasing role technology plays in their lives. Postman (1993) has a pessimistic view of technology’s impact on cultures and believes that technology is a dangerous enemy that has intruded and destroyed cultures. His argument is not without merit. He suggests that because technology requires change in the environment in order to make it compatible with human needs, it has changed cultures considerably. He terms this “technopoly”. According to Evers and Day (1997), there is a chance that culturally appropriate products which preserve cultural values and preferences may not make it to market because people have already been exposed to the less culturally specific versions. Griffith (1998) believes that when software producers localize software for small indigenous cultures, somehow, elements of that culture are being preserved. Bell (2004) suggests that cultures are more robust and changes occur slowly with regard to technology. In fact, the lack of user acceptance has been the reason for the failure of many information systems. Omar (1992) found differences between cultures in attitudes towards computers. In a comparative study of some 400 university students from the United
States and Kuwait, he found that students from the United States had positive attitudes toward computers while Kuwaiti students had less positive attitudes towards computers.

Weil and Rosen (1995) carried out an extensive study of technological sophistication and the level of technophobia among 3,392 first year university students at 38 universities in 23 countries. Their main findings indicate that many countries showed a majority of technophobic students and the differences between the countries were explained by public attitudes towards technology, cultural characteristics, political climate, and the use of computers in the educational system and general availability of technological innovations. In more recent research on culture, consumption and technology, the use of mobile phones are enabling people to create their own micro-cultures, demonstrating that consumers are repurposing technology for their own use (Plant, 2002; Harkin, 2003; Bell, 2004; Rudich, 2011). Bar, Pisani and Weber (2007) add that mobile phone users go beyond mere adoption to make technology their own and embed it within their social, economic and political practices. All these support Leonardi’s (2002) belief that technology is understood in social contexts and that societies determine if technology fits into their cultures. Culture drives technology. As noted by Castells (1999, pg. 9), “social development today is determined by the ability to establish a synergistic interaction between technology innovation and human values”.

In summation, contemporary society is characterized by consumption as marked by the shift from a production-driven economy to a consumption-driven economy. As such, corporations have to include the consumer as a significant factor in the production of their goods and services. While culture and consumption have always been interrelated, the advent of global communications technologies adds to the complexity. According to Rothkopf (1997), culture is not static but instead, grows out of a systematically encouraged reverence for selected customs and habits. This view is echoed by Lewis (2007). Central to the interplay of culture, consumption and technology is the issue of personal identity which is in turn influenced by factors in the macro and micro-environments. The following section will situate the mobile phone into this context and lead to the development of the conceptual framework for this study.
2.4 THE MOBILE PHONE IN CONTEMPORARY SOCIETY

Section 2.2 provided the context for the research, while Section 2.3 dealt with the theoretical foundations. In this section, the interplay among culture, consumption and technology as it relates to personal identity and factors in the micro and macro-environments are examined in the context of mobile phone consumption in contemporary society.

2.4.1 Introduction

Mobile phones have soared in popularity across the globe. Statistics show that the world market for mobile phones and base stations is growing at an average of 30% a year. Table 2.3 shows the Top 14 Mobile Markets by number of subscriptions in 2013. These 14 countries have 100 million mobile subscribers with China and India leading the pack. With the proliferation of smartphones, these numbers are expected to grow even more. Growth rates are particularly staggering in third world countries where there is little “landline” infrastructure. Many remote regions in the developing world went from having no telecommunications infrastructure to having satellite-based communications systems.

<table>
<thead>
<tr>
<th>Country</th>
<th>Mobile subscriptions in millions</th>
<th>Population in millions</th>
<th>% of population</th>
<th>3G/4G subscriptions in millions</th>
<th>% of population</th>
<th>Sources</th>
<th>Last update</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>6,987.4m</td>
<td>7,046m</td>
<td>93.5%</td>
<td>1,876.6m</td>
<td>26.6%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>China</td>
<td>1,246.3m</td>
<td>1,351m</td>
<td>92.3%</td>
<td>448.3m</td>
<td>33.2%</td>
<td>China Mobile, China Unicom, China Telecom</td>
<td>02/14</td>
</tr>
<tr>
<td>India</td>
<td>772.6m (Active: 1,237m, Total: 893.3m)</td>
<td>1,237m</td>
<td>62.5%</td>
<td>41.935m</td>
<td>3.4%</td>
<td>TRAI</td>
<td>01/14</td>
</tr>
<tr>
<td>United States</td>
<td>345.2m</td>
<td>313.9m</td>
<td>110.0%</td>
<td>287.4m</td>
<td>91.6%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Indonesia</td>
<td>285.0m</td>
<td>246.9m</td>
<td>115.4%</td>
<td>45.5m</td>
<td>18.4%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Brazil</td>
<td>272.6m</td>
<td>216.7m</td>
<td>137.2%</td>
<td>110.2m</td>
<td>55.5%</td>
<td>Anatel/Teleco</td>
<td>02/14</td>
</tr>
<tr>
<td>Russia</td>
<td>237.1m</td>
<td>143.5m</td>
<td>165.2%</td>
<td>41.2m</td>
<td>28.7%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Japan</td>
<td>137.9m</td>
<td>127.6m</td>
<td>108.0%</td>
<td>108.8m</td>
<td>85.3%</td>
<td>TCA</td>
<td>02/14</td>
</tr>
<tr>
<td>Vietnam</td>
<td>127.7m</td>
<td>86.6m</td>
<td>143.8%</td>
<td>16.0m</td>
<td>20.3%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Pakistan</td>
<td>126.1m</td>
<td>179.2m</td>
<td>70.4%</td>
<td>N/A</td>
<td>N/A</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Nigeria</td>
<td>128.6m (Active: 128.6m, Total: 175.0m)</td>
<td>168.8m</td>
<td>76.2%</td>
<td>12.7m</td>
<td>7.5%</td>
<td>NCC Informa</td>
<td>02/14</td>
</tr>
<tr>
<td>Germany</td>
<td>113.6m</td>
<td>81.9m</td>
<td>138.7%</td>
<td>46.0m</td>
<td>56.2%</td>
<td>BRA, Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>116.0m</td>
<td>154.7m</td>
<td>75.0%</td>
<td>34.6m</td>
<td>22.3%</td>
<td>BTRC Informa</td>
<td>09/13</td>
</tr>
<tr>
<td>Philippines</td>
<td>109.5m</td>
<td>96.7m</td>
<td>113.2%</td>
<td>16.6m</td>
<td>17.1%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
<tr>
<td>Mexico</td>
<td>102.7m</td>
<td>120.8m</td>
<td>117.6%</td>
<td>19.8m</td>
<td>16.4%</td>
<td>Informa</td>
<td>06/13</td>
</tr>
</tbody>
</table>

Table 2.3 Top 14 Mobile Markets by number of subscriptions in 2013

Source: International Telecommunications Union via mobiThinking (2014)
The year 2002 marked a turning point in the history of telecommunications as the number of mobile phone subscribers overtook the number of fixed-line subscribers (ITU 2004). These figures attest to the growth of mobile phone consumption as one of the most conspicuous social changes in the last decade. Figure 2.4 shows the mobile phone evolution from 1995 to 2012. It is the single artefact that characterizes modern living (Wajcman, Bittman & Brown, 2009) and is the 21st century’s equivalent of a Swiss Army Knife (Boyd, 2005). It is well-advanced in its global diffusion and is deeply embedded in society (Ling, 2012) as people utilize it in everyday life to maintain a ‘connected presence’ (Licoppe, 2004) with one’s social network (Wellman & Lee, 2012).

![Figure 2.4 Mobile phone evolution 1995 – 2012](image)

Despite the phenomenal rise of mobile phone consumption, few studies are concerned with this technology because of its rapid acceptance in society (Lasen, 2003; Cooper, 2001) as an extension of the fixed phone line. Regardless of the lack of intellectual enthusiasm and scientific research endeavours, the mobile phone has made its presence felt in almost every region in the world. Today’s mobile phone is a miniaturized internet connectivity device and carries with it the added benefit of mobility. As mobile phone technologies continue to develop further, simultaneously, its enhancements support the increasingly complex lives of individuals by way of providing convenience. Its multi-media functionalities are combined with portability, reduced energy needs and significantly lower buying prices. In addition, its much simpler user-interface makes it possible for people of all ages to use it as opposed to
the more complex Microsoft Office in personal computers (Geser, 2004). Puro (2002) adds that because mobile phones are becoming ubiquitous and homogeneous across all population segments, the device creates a feeling of equality irrespective of age, gender, cultural background or social standing. Particular age cohorts and subcultures have begun to use mobile phones to help define their social identity. In addition, the ubiquity of mobile phones has caused changes in certain cultural norms (Plant, 2002).

2.4.2 A Brief History of the Mobile Phone

Brown (2001) considers the development of mobile telephony a ‘non-development’. According to Lasen (2003), the first commercial systems were up and running in the 1940s. When it was first introduced, it was highly priced and targeted at business users and also suffered greatly from the lack of capacity. It actually took thirty years for the mobile phone to be accepted into the mainstream community. The first prototypes were fairly crude technologies that suffered from a chronic lack of capacity and thus prevented them from becoming mass-market devices. Car-based radios would broadcast and receive transmissions from a single fixed based station where the radio channel would be connected to a land phone line. The frequencies used by a call could not be reused and were blocked by one call for as far as the radio transmissions were received. There was a separate channel for each call. This technology could not hit mainstream not because of the lack of public interest but the lack of frequency. In 1976, there were 44000 people in the United States with mobile phones and 20,000 individuals on a waiting list of between 5 – 10 years. Interestingly, the solution to the capacity problem had already been resolved in 1947 by splitting the coverage area into individual cells and the technological challenges that arose were subsequently met by the late 1960s. However, mobile telephony was delayed throughout the 1970s due to decisions made by governments and telephone companies. As a consequence, the first mass market for a commercial mobile phone system in the United States started only in 1983, 37 years after the first carphone service.

Kopomaa (2000) defines the three stages of the spread of the mobile phone

1. Class market (1975- 1990): Mobile phones were expensive and rare; used by sales business people.
3. Diversified mass markets (1995 – present): Mobile phones are manufactured to suit the various lifestyle needs of different groups of consumers.

In many aspects, the uptake of the mobile phone is similar to the adoption pattern of the fixed phone line. But its popularity in contemporary society has exceeded that of a landline. The World Telecommunications Development Report (2002) shows that the mobile phone has contributed to the narrowing of the century-gap in telephone usage between highly developed and less developed nations. Indeed, the relatively low costs and simplicity of the mobile phone have made its spread and reach unique in the history of technology (Plant, 2002). In fact, in remote parts of several developing countries, mobile phone technology has leapfrogged landline technology because of the high costs involved in laying cables and building the basic infrastructure. Townsend (2000) feels that one of the major impacts of the mobile phone stems from its capacity to include partly illiterate mass populations of less developing countries in the southern hemisphere who will never have the means to purchase a computer and were never even connected through traditional fixed phone line networks. By 2008, some 2.5 million Kenyans were able to deposit and withdraw money via their mobile provider’s airtime sales agent through text messaging.

Harper (2003) believe that the mobile phone is a new type of technology despite its links with Alexander Bell’s invention of 1876 as it allows for different types of communication patterns: short calls and messages, the possibility of transmitting a particular experience in real time and the ability to conduct short, productive business conversations. Brown (2001) suggest that the computer is now embedded in the mobile phone as the latter is an address book, a calendar, an alarm clock, a gaming console and a modem. It is fast becoming a navigation tool determining the coordinates of everyday living (Plant, 2002; Lasen, 2003; Harkin, 2003; Rudich, 2011. Wajcman, Bittman & Brown, 2009; Elliot & Urry, 2010; Ling, 2012; Saylor, 2012).

### 2.4.3 Mobile Phone Geopolitics in the 21st Century

This section highlights pertinent literature that examines factors in the micro and macro-environment and how they relate to mobile phone consumption and more specifically, consumer identity. As discussed in Section 2.3, identity projects continually evolve over time
and this identity exploration resides at the threshold of societal life and identity-supporting connections within society. Identity change is often influenced by changes in the external environment and through the use and show of possessions (Stryker, 1980). This constant process of re-evaluating and modifying the self-concept results from a constantly changing environment and changing personal situations. The external environment is represented by contemporary societal life. This is broadly divided into the micro-environment, relating to social networks, personal history, symbolic meaning of products and globalization and the macro-environment, relating to globalization, media and global marketing/global brands.

The mobile phone serves as the identity-related possession. Figure 2.5 identifies the relationships among factors in the micro and macro-environments and how they relate to individual identity through mobile phone consumption. Contemporary societal life is influenced by factors in both the micro-environment and macro-environment. This is often in the outward show and use of possessions such as the mobile phone as a reinforcement of one’s personal identity.

![Figure 2.5 Micro and macro-environments and individual identity through the consumption of mobile phones](image_url)

*Source: Developed for this study*
2.4.3.1 The micro-environment

The micro-environment represents the immediate environment in the day-to-day life of an individual. As identified in Figures 2.3 and 2.4, the factors in the micro-environment are social networks, personal history, the symbolic meanings of products and glocalization.

2.4.3.1.1 Social networks

Much research has documented the importance of social influence on consumer behaviour (Fournier, 1998; Price, Feick & Higie, 1987; Stacey, 1990; Bearden & Etzel, 1982). Research shows that people tend to define their social context locally rather than globally and look to local sources for social recognition and identity. As identity is a product of socialization, friends, family and co-workers provide influential feedback on personal consumption and provide key basis for social comparison (Richins, 1995). An individual belongs to a social network, part of which can be described as a family in terms of its special meaning to the individual (Stacey, 1990). As such, connection to family is significant to an individual’s sense of social identity.

Even though mobile phones are a ubiquitous part of modern living (Goggin, 2012) and flexibility accorded by mobility (Elliot & Urry, 2010) allow individuals to extend their networks much wider (Wellman & Lee, 2012), ‘voice calls and text messages remain the bulk of most people‘s mobile behaviour’ (Ling & Donner, 2009, p. 71). Phone conversations and texting messaging are particularly significant (Hoflich & Gebhardt, 2005) in the Asian context (Chu et al. 2012), with SMS being the primary phone application in Asia (Minges, 2005; Igarashi, Takai & Yoshida, 2005; Ito, Okabe & Matsuda, 2005; Castells, Fernandez-Ardevol, Qiu, & Sey, 2007). Texting has also developed into a channel where some groups feel comfortable expressing thoughts and feelings that were once reserved for co-present interaction (Ling, 2008). Calls and messages are so engrained in the normal progression of daily interaction that they become normalized and part of a “connected presence” (Licoppe, 2004) especially in the immediate circle of family and friends (Ling, 2008). According to Castells et al. (2007), texting acts as a catalyst for the construction and reinforcements of peer groups. In fact, Ling (2008) believes that this is the way we develop social cohesion as we engage in perpetual contact (Katz & Aakhus, 2002) in everyday ritual interactions.
To a large extent, the introduction of the mobile phone has altered the way in which an individual conducts his everyday life as the mechanics of social interaction has changed (Ling, 2008). This ‘dynamic social technology’ (Alexander, 2000) serves as a demonstration of the individual’s social networks. Licoppe and Heurtin (2002) believe that when an individual receives a call on his mobile phone, it reflects that he has not fallen into complete oblivion in his social circle but is still very much connected to his social network. Ling (2012) suggests that the mobile phone provides a taken-for-granted link to the people closest to us such that when we are without it, social and domestic disarray may result. Cox and Leonard (1990) add that phone calls are a powerful reminder of social connectedness with an individual’s social circle, regardless of what is being communicated. Ling (2008) adds that the mobile phone strengthens social bonds between among family and friends as they engage in perpetual contact (Katz & Aakhus, 2002) through “connected presence” (Licoppe, 2004). Indeed, the advent of the mobile phone has led to an increase in the number of ‘grooming calls’ or gossip calls, essential to one’s social, psychological and physical well-being (Fox, 2001). The mobile phone serves as a symbolic decoder of ‘fitting in’ with one’s social network and reinforces the individual’s social identity.

Given the mobile phone’s capacity to aid in the retention of primary social relationships over physical distance, the use of mobile phones help to cushion the traumatic experiences of foreign environments as one can still be tightly connected to loved ones at home (Geser, 2004). Individuals who travel or have to live away from home are assured that they can connect with their loved ones even when on the move, regardless of physical proximity. Licoppe and Heurtin (2002) feel that short, frequent and informative calls may strengthen the formation and maintenance of deep bonds not because of their content but the reassurance they create or reinforce. This relates to the individual’s sense of belonging and enhances his sense of self-identity within his social circle of close friends and family.

The need to maintain contact with a large social network is made more convenient with the mobile phone. The mobile phone has equalized the opportunities for communications between moving and non-moving people. Communication no longer occurs from one fixed point to another as with landlines but at different point with a multitude of both moving and still people (Wellman & Lee, 2012). The mobile phone has opened up a new way of establishing and maintaining one’s social network. Frequent interactions with one’s social
network through phone calls and text messages reinforce an individual’s social identity. Harper (2003) believes that communication with one’s social network will take precedence over other functions the mobile phone provides. The enhanced social networks afforded by mobile phones plus the highly personalized nature of the mobile phone means that its form and use reinforces individual identity (Ito & Okabe, 2006; Katz, 2002; Pedersen, 2005).

Specifically, the use of text messaging provides a less intrusive way of establishing contact with one’s social circle when immediate reactions may not be possible (Geser, 2004). Ling and Yttri (1999) add that text messaging is more private and can be done without anyone else taking notice. Text messaging has become particularly popular with individuals in more conservative cultures as a means to communicate without the need to voice feelings and thoughts (Plant, 2002). Fox (2001) believes that even shy people can utilize text messaging to communicate as they do not have to expose themselves in a highly personalized way. Text-messaging also allows one to ‘exteriorlize’ his thoughts spontaneously - communicating his thoughts the moment they arise. This allows the individual to communicate with his social circle at all times and helps to reinforce his social identity. Because text messaging provides the opportunity of delaying the reception and answering at a more appropriate time, Fox (2001) suggests that text messaging allows the individual extra time to formulate his thoughts and express them more clearly. In fact, text messaging is often used for conveying apologies or to communicate things which make one uncomfortable as it offers intimacy of a controlled form, particularly useful for discretion (Harkin, 2003; Ito & Okabe, 2006; Riviere & Licoppe, 2005; Ling, 2008). This function allows the user to maintain his social identity while minimizing unpleasant conflicts.

Eldridge and Grinter (2001) add that the hundred and sixty character limit for a text message means that short, abrupt messages are acceptable without the preliminary ‘How are you?’ typical in phone conversations. As such, text messaging can be an efficient way to provide or obtain information from a large group of people in one’s social network. It provides a unique way of communicating without the need to say too much (Plant, 2002). It allows for constant communication without being too intrusive. As such, text messages are highly functional for widening the sphere of one’s social network by an ever-changing multitude of peripheral relationships. Text messages also serve as ‘trailers’ for gossip that would be further expanded in a personal face-to-face encounter (Fox, 2001). Texts are widely considered the currency of
modern conversations and texting offers just the right amount of access as well as control (Licoppe, 2004; Ling, 2008). In fact, texting remains the most popular use of a mobile phone (Nielson, 2013).

However, there are some drawbacks to the use of mobile phones as a means of reinforcing one’s social identity. The over-reliance on the mobile phone for social connectedness may backfire as a mobile phone that never rings could generate unprecedented loneliness and isolation (Plant, 2002; Ling, 2008; Wellman & Lee, 2012). Just as a phone call is a powerful reminder of social connectedness, the lack of calls could suggest that one has been displaced from one’s social circle. With call screening and voice message systems in place, unreturned calls and messages signal that people do not want to be contacted. This alienation impacts the social identity of the individual who is trying to make the connection.

Also, the fluid and spontaneous lifestyle made possible by the mobile phone gets one accustomed to the flexibility of rescheduling (Townsend, 2000), making social life highly volatile and unpredictable as despite all the arrangements, some events never occur (Plant, 2002; Geser, 2004). However, Ling (2004) believes that this flexibility aids in micro-coordination to maximize little pockets of time and allows people to make last minute arrangements. Lasen (2003) suggests that the use of mobile phones may alter social distances as calls and messages often function as substitutes for face-to-face interactions. Also, the quality of face-to-face interactions may be compromised by the ‘always-on’ mobile phone. Interaction with those co-present can be interrupted at any time by a remote other, leading to a scenario of always-on but never there (Licoppe, 2007; Plant, 2002). Even a silent mobile phone tends to siphon concentration, aptly labelled the ‘gooseberry effect’ as the receiver may receive a call or message at any time and that would disrupt the existing conversation (Plant, 2002). Turning off the mobile phone in the presence of others shows that one is committed to the present conversation and reinforces the respect the mobile phone user has for the other parties present. However, the thought of others being unable to reach the individual on his mobile phone may serve as a distraction to the individual and impacts his social identity as well (Lasen, 2003; Sutter, 2012).

The freedom associated with ‘anywhere, anytime’ becomes a curse when weekends, vacations and sick leave are not completely ‘free’ as one is still reachable (Bachen, 2001) and
the person on the end of a line is ‘always there’. As a consequence, the accentuation of the traditional symmetries of social power and control has emerged: employer over employee and parents over children. Thus, mobile phone users have to contend with increased personal responsibility (Geser, 2004) as excuses of unavailability become less convincing. In addition, the constant and unexpected calls or messages strains the capacity of the individuals to switch roles/identities and may cause unnecessary psychological stress (Geser, 2004; Rudich, 2011).

2.4.3.1.2 Personal history – maintenance of key life roles and identities

Research indicates that consumers interpret information from social networks within the context of their personal history and life projects (Coulter, Price & Feick, 2003). Life projects are the “construction and maintenance of key life roles and identities (such as being a loyal employee, a successful parent)” (Huffman et al. 2000, p.15, 18). These are modified and shaped by factors in the macro-environment such as global brands and media influences but are more distinctly rooted in personal history and social networks (Huffman, Ratneshwar & Mick, 2000; Lewis, 2007).

Recent research has established a strong foundation in the conceptualization of one’s self as a stored network of interrelated personal constructs and self-knowledge (Markus, 1977). Over time and through a variety of consumption experiences, consumer learning is reflected in network structures connecting self-related goals and values with specific products and behaviours that satisfy him. The individual in identity construction accumulates experiences with products that assist him in the execution of his multiple roles in life. The mobile phone with its utilitarian functions, is uniquely adaptable and multi-functional (Hulme & Peters, 2003; Brown, 2001; Rudich, 2011; Jenkins, 2006; Ling & Donner, 2009; Saylor, 2012), often allowing itself to play useful roles in a wide variety of cultural contexts, social worlds and individual lives. This gives the individual the ability to integrate and structure his life much more efficiently which in turn reinforces his individual identity.

Before the advent of the mobile phone, work and personal life were more distinct, as segregated by work hours and after office hours. With the introduction of the mobile phone, the distinct lines of work and personal life are blurred (Ling, 2001; Grant & Kiesler, 2001) as individuals become increasingly mobile (Chesley, 2005; Ling & Donner, 2009). Fox (2001)
and Ling (2012) believe that the mobile phone serves a lifeline for an individual’s complex everyday life as it aids in the micro-management of his pockets of time. Rakow and Navarro (1993) speak of ‘remote mothering’ in which working mothers can continue to communicate with their children since the phone is mobile and not chained to a specific location (Lange, 1993). This allows the individual to play both the roles of a mother and an employee. Gergen (2002) believes that the mobile phone can be seen as a technology that empowers one to continue primary social bonds during periods of spatial separation, providing a ‘nomadic intimacy’ (Fortunati, 2001) by making it possible for those on the move to remain embedded in their personal social networks. This sense of ‘remote belonging’ is important to an individual as it relates to his sense of identity.

Many studies indicate that mobile phone usage is subject to further expansion as users gradually change habits and learn to apply the new technology for a growing variety of purposes and in a widening range of situations that constitute modern life (Geser, 2004; Rudich, 2011; Silverstone, 2005; Ling, 2008; Nielson, 2013). The increasing applications that a mobile phone support makes it possible to incorporate it to an individual’s complex everyday life (Rudich, 2011; Licoppe, 2007; Nielson, 2013). The mobile phone provides the individual with the flexibility of rapid role-switching, allowing him to micro-coordinate time, filling time that otherwise might be wasted (Progressive, 2001) as he can play multiple roles simultaneously (Ling, 2012). Lasen (2003) adds that mobile phones facilitate an increased temporal efficiency by flexibility in the use of time. With the context of increasing stress and complexity, the mobile phone serves as lifeline for the individual, allowing him to perform a myriad of tasks related to both work and private life (Lasen, 2003; Rudich, 2011; Licoppe, 2007; Ling, 2008). This strengthens the individual’s sense of identity as he is able to fulfil his multiple roles successfully.

At the same time, this ‘time softening’ allows for last minute gatherings, complicating one’s social life by creating many new decision dilemmas associated with ‘availability management’ (Licoppe & Heurtin, 2002). The fact that one is reachable (Bachen, 2001) as long as his mobile phone is turned on has made it impossible to clearly distinguish between private personal time and social life. Lasen (2003) believes that the mobile phone has in itself become a place where its owner can be found. Roos (1993) adds that it is the combination of both mobility as well as permanence that makes a mobile phone different because the call is
mobile while the person who is being contacted is always there. Even though this seems to suggest the accentuation of traditional symmetries of social power of and control has emerged such as that of employer over employee and parents over children, Ling (2004) highlights how teenagers have found creative ways to circumvent the watchful eyes of parents with their unique uses of both voice communication and text messaging. Lasen (2003) suggests that the possibility of maintaining a continuous connectivity coexists with the constant worry about the continuity of accessibility, concerning unwanted demands, the annoyance of being interrupted and the fear of being controlled. This may add unnecessary stress to an individual’s life as he has to try to manage his multiple roles effectively and according to circumstances (Geser, 2004). Rudich (2011) adds that marketers should be wary of intruding onto consumers’ personal space or risk annoying loyal customers.

2.4.3.1.3 Symbolic meaning of products

As discussed in Section 2.2.1, individuals cultivate and preserve their identities via the symbolic use of possessions (Belk, 1988; Solomon, 1983). Stryker (1980) believes that identity change is in the use and show of possessions – the external representation of one’s identity. In addition, certain goods and services have been known to possess emotional value in excess of their functional utility (Hirshman & Holbrook, 1982).

The literature on materialism provides a framework which helps to understand the meaning that consumers attach to worldly possessions (Belk, 1985). Conspicuous consumption still plays a significant part in shaping preferences for many products which are purchased or consumed in public context as it reinforces social identity. Recent studies on mobile phone consumption have identified that mobile phones are likely to provide subjective intangible benefits. They help to convey personal and social identity (both actual and desired) in particular settings and towards various audiences. They may, in addition, enhance people’s feelings about themselves, either directly or by virtue of supportive feedback from others (Schlenker & Weigold, 1992). Kleine and Kleine (1999) add that one’s social networks provide the opportunity to learn about and receive feedback about one’s identity attempts.

As socially shared meanings are important to consumers’ choices, the mobile phone has a social function in addition to any other benefits it provides. The mobile phone can also be
thought of as a ‘prop’ to manage particular audiences’ impressions (Goffman, 1963; Solomon, 1983; Schlenker, 1980). The value of the mobile phone is motivated by the individual’s desire to enhance or support his self-concept through referent identification (Kelman, 1961). In Plant’s (2002) global study, she found that access to a mobile phone and its secrets can function as an emblem of group trust and group solidarity as well as a medium for self-expression for the teenage subcultures. As mentioned in Section 2.4.3.1.1, the mobile phone serves as a symbolic decoder of ‘fitting in’ with one’s social network and reinforces the individual’s social identity. This supports Kleine and Kleine’s (1999) belief that identity exploration stems from an outside-in influence.

In addition, the physical presence of the device serves as a reminder of the network of friend and loved ones stored within its phonebook (Harkin, 2003; Ling, 2012; Wellman & Lee, 2012). As such, it is kept close to one’s body. This sense of attachment lies more in the imagined connections within the phone than the value of the actual connections it facilitates. Palen, Salman and Young (2001) liken the mobile phone to an ‘umbilical cord’, allowing parents to retain a permanent channel of communication in times of spatial distance. While anxious parents view this as a means to ensure the safety of their children, children view this as some form of surveillance monitoring, choosing to use the call screening facility to evade parental control (Taylor & Harper, 2003).

While there are some who purchase mobile phones simply for functionality purposes, there are some who purchase mobile phones because of the status that the particular brand or design represents (Katz & Sugiyama, 2006); the phone is not just a tool of convenience, but a way in which consumers express their identity (Katz & Aakhus, 2002). Similar to other fashion objects, the mobile phone is now an item that users customize to suit their sense of self and group affiliation (Katz & Sugiyama, 2006). Indeed, no other device has infiltrated society so widely and is so connected with identity that people see it as a technological extension of themselves (Hulme & Peters, 2003; Campbell, 2007). No other medium has been considered so personal (Grant & Kiesler, 2001) that panic arises if it is lost. In a 2003 UK survey, 46 per cent of mobile phone users described the loss of their mobile as a form of bereavement (Harkin, 2003). Harper (2003) suggests that to lose one’s mobile phone is akin to losing one’s connection to society. The fact that mobile phones are under personal ownership as opposed to fixed-line phones which are considered ‘public’ utility reinforces the
link between mobile phones and individual identity (Grant & Kiesler, 2001). Calls on a fixed-line phone can be for any member of the household whereas calls or messages on mobile phones are directed at the individual and for the individual only. In a 5000 person global survey conducted by Qualcomm and Time, 68% of mobile phone users sleep with their phones next to them (Sutter, 2012). This enhances the feelings people have about themselves and make them feel closely connected to their social networks (Harkin, 2003).

Phone giant Nokia claims that the mobile phone is the most intimate communications device in the modern world. Fortunati (2002) links this intimate relationship between mobile phones and users to the fact that usage of the phone relates to the simultaneous involvement of the ear, mouth and voice. Both physical and emotional attachment to the mobile phone handsets attest to this. Many are afraid to leave home without it and feel uncomfortable when others peruse their mobile phone menus or messages (Licoppe, 2004; Pedersen, 2005). Harkin (2003) believes that mobile phones function as comfort objects - antidotes to the hostile terrain of wider society. The fact that one’s social network is just a phone call away creates a sense of social connectedness and enhances one’s well-being (Plant, 2002; Fortunati, 2005; Katz, 2006; Hoflich & Hartmann, 2006).

The emotional relationship the individual has with the mobile phone can be observed in how many delight in adorning the phones with personalized ringtones and covers (Plant, 2002) and customizing its display (Rudich, 2011). Everything from the colour of the handsets to the sound of its ring tone can be given a personal touch. Unlike other modern technologies, the mobile phone lends itself to ‘personalization’ (Geser, 2004), allowing itself to be an accessory, a fashion statement, an instant messenger, a toy and a social prop all at once. This corresponds with an individual’s multiple roles in life and reinforces his individual identity. An interesting study undertaken in the United Kingdom showed that there is a positive correlation between using mobile phone and smoking. While the number of teenagers using mobile phones has increased, the percentage of teens who smoke has also dropped. Pragmatic observers believe that teenagers are chatting more and smoking less because their money is being used to pay their phone bills. Others feel that mobile phones are grownup, glamorous and costly; they offer something to do when one is bored and keeps one embedded in one’s social setting (Ling & Donner, 2009).
Bautsch et al. (2001) suggests that one reason why so many mobile phone activities occur in the public could be associated with the symbolic display of intense social integration. Having one’s phone ring in public seems to suggest an individual’s importance or popularity (Plant, 2002). Lasen (2003) adds that the mobile phone may also serve as a 'symbolic bodyguard' to suggest to others that the individual may be physically alone but still very much connected to his social network (Plant, 2002). Fox (2001) suggests that the idea of one’s social network of family and friends being somehow ‘in’ the phone means that just touching or holding the phone gives one a sense of being protected and sends a signal to others that one is not vulnerable despite being physically alone. To a certain extent, mobile phones enhance the owner’s feeling of increased personal security and safety, and the ability to respond to sudden outside changes (Kopomaa, 2000). Women in several cities in the UK emphasized the value of the mobile phone as a phone-shield against unwanted attention (Plant, 2002). Research among mobile phone users in Norway found that the majority make their initial purchase as a device to increase personal security in the event of an emergency (Harkin, 2003). Harkin (2003) adds that this trust in mobile phones may symbolize a lack of trust in the community at large. Ironically, users forget that their mobile phones are still dependent on a largely invisible infrastructure that users have no control over.

The ‘gift-nature’ of text messages also contributes to the symbolic meaning of the mobile phone. People tend to save messages they cherish on their mobile phones. The text messages have value which is connected to the giver, the recipient and the context in which the exchange takes place and is retained in material form. This allows one to peruse the messages from loved ones over and over again (Ling, 2004). This relates to an individual’s need to feel connected to his social network and reinforces his social identity. Plant (2002) believes that text-messaging can be symbolized as a new kind of contact, “opening a channel which has been described as being somewhere between making a call, sending an email and making no contact at all. It is a unique way of saying something without saying too much” (pg. 80). Even though the convenience of using the mobile phone has led to ‘work to family spillover’ (Chesley, 2005), research has shown that texting and calling are primarily used to stay in touch with those within the ‘intimate sphere’ (Ling, 2008) that includes families, romantic interests and closest friends (Ling, Bertels & Sundroy, 2012). Calls and messages on the move allow mobile users to maintain connection to their most important networks (Elliot & Urry, 2010; Ling & Stald, 2010).
According to Harkin (2003), the mobile phone has given rise to whole new forms of courting ritual. In a 2003 UK survey, 69 per cent of text messages are passed between romantic intimates. Research from Finland shows that text-messages are often shared among intimates as a sign of confidence. On the flip side, the mobile phone also symbolizes infidelity. The device has made it much easier to lie about feelings and intentions and especially whereabouts (Plant, 2002). Tchouaffe (2009) adds that texting may aid in the cheating process as students use their mobile phones to receive information from outside the classroom. As mobile phones become commonplace in the information revolution age (Goggin, 2012; Saylor, 2012), the physical device itself has less bearing on consumer identity as it becomes an acceptable part of modern everyday life (Ling, 2012). The introduction of digital tablets in recent years also provides another avenue for consumers to partake in social media for connection to their social networks, perhaps diminishing the importance of mobile phones to a certain extent (Saylor, 2012).

2.4.3.1.4 Glocalization

According to Briley, Morris and Simonson (2000), “the debate in international marketing between the proponents of globalization versus adaptation turns on the issue of whether consumers in different countries are alike in their preferences and decision tendencies. Although Levitt (1983) and others have described a general convergence in the preferences of consumers around the world, suggesting that globalization strategies may be increasingly viable, a growing wave of research points to cultural differences in the cognitive processes through which consumers make decisions, suggesting benefits of cultural adaptations (Aaker & Maheswaran, 1997; Han & Shavitt, 1994; Schmitt & Zhang, 1998)” (pg. 157).

As discussed in Section 2.3.2, every culture has a unique ‘cultural standard’ that distinguishes itself from other cultures and defines what belongs within a culture and what is perceived to be ‘alien’ (Benson, 1998). Today’s consumption environment is a meeting of local particulars and global universals, coined ‘glocalization’ (Robertson, 1992) and the mobile phone stands at the axis of the global and local environments. This is shown in Figure 2.6 below. Contemporary societal life is characterized by both factors in the micro-environment which is the local environment, as well as the factors in the macro-environment which is the global environment. The mobile phone stands at the axis of the global and local environments as the technological product that is closely linked to consumer identity.
This idea is predicated on three inter-related assumptions:

1. Local traditions serve as active agents in defining contemporary societal life.
2. Technology is part of contemporary societal life.
3. Local knowledge has global significance.

While the main functions of the mobile phone remain universal, the ways in which people use their mobile phones show distinct local flavours, suggesting the role that local cultures play in the glocalization process. Culture operating as an authorizing agency can be observed in a variety of settings where social practice and communication technologies intersect. In Beijing China, people rarely react to the loud phone conversations they overhear as the nature of it is so entrenched in their daily lives (Plant, 2002). Bell (2004) adds that the people in China take their mobile phones to the temple to be blessed. Reflecting their culture, the French are more reluctant to make private phone calls in public (Lasen, 2003). In Japan, the culture is one that does not tolerate loud and extraneous noise. Train commuters are constantly reminded with recorded announcements to switch their mobile phones to ‘silent’ or ‘vibrate’ mode (Campbell, 2007; Canton, 2012). As such, norms of mutual non-intrusion persist. In Bangkok, people are not even perturbed by the one-sided conversations in the cinema (Plant, 2002). In the Middle East, mobile phones are equipped with a special compass that enables them to find Mecca, the Holy Land for Muslims. This feature works even in areas where GPS
services are unavailable. The mobile phone has become a religious and spiritual tool that fits into the lifestyles of Muslim users (Bell, 2004). In India, devotees can dispatch a prayer via SMS while the Pope has turned to texting to get his message across (ITU, 2004). In Spain and Italy, mobile phones users are not averse to discussing their personal lives in public (Canton, 2012).

For some cultures, the public display of a mobile phone is often a matter of style, fashion, covert social messages and hidden agendas. It is deeply associated with personal lifestyles. Bloch and Richins (1983) argue that certain product classes tend to have certain significant meanings within a culture and thus, are more involving for the consumers. Zaichkowsky (1985) adds that consumer values, life goals and themes also affect product involvement. Plant (2002) notes that some mobile phone users enjoy exploiting the presence of third parties by ‘stage-phoning’, pretending to be engrossed in an important conversation while displaying that he is a person with ‘integrative social links’. Plant (2002) also reports that the usage of the mobile phone has made it easier to lie about feelings and intentions, arrangements and whereabouts. Italy reports that most extramarital affairs are initiated and accelerated by the use of mobile phones. In China, the most expensive phones are owned by prostitutes for work and to display their wealth. In Bangkok, those in the sex trade find the mobile phone an empowering device as it allows them to make independent and private arrangements (Plant, 2002).

Ling (2002) believes that the boundaries that govern between private and public space is embedded in the setting. The technology behind the phone may be global but culture, values and lifestyles are not. Mobile phone usage patterns still accentuate the social differences between people of different cultural backgrounds and are tightly correlated with the various purposes of the social actions as well as the different situations, social relationships and social roles (Geser, 2004). While appropriation is important for all kinds of technology, Bar, Pisani and Weber (2007) suggest that it is particularly so for mobile communications technologies because of their flexibility to be customized to a certain extent by service providers, content creators and end-users. They propose a technology evolution cycle to explain the levels of appropriation of technology by end-users. The evolution of mobile technology can be conceptualized as a cyclical process composed of three principal stages. This is shown in Table 2.4 below.
In stage one of the technology evolution cycle, users decide to adopt the mobile phone technology and use it as designers of the technology intended for it to be used. In this stage, factors in the macro-environment may play a pivotal role in influencing whether the users are willing to adopt the technology. In stage two, users start to appropriate the mobile phone technology to suit their personal and individual needs based on the local context as represented by the factors in the micro-environment. In stage three, the technology has run its course in terms of its technical limitations and a new technological platform is introduced. The cycle then starts again as users have to determine if they are willing to adopt the new technological platform.

Wellman and Lee (2012) suggest that the changing social environment is adding to people’s capacity to create media and project their voices to extended audiences in the new operating system called ‘networked individualism’. Mobility has allowed people to function more as connected individuals and less as embedded group members. This can be linked to Bar, Pisani and Weber’s (2007) process of appropriation where people adopt technologies to suit how they utilize them. The ways in which modern individuals are networked awards them more individual discretion, abundant opportunities for communication and flexibility in how they remain embedded within their social networks (Wellman & Lee, 2012).

The global diffusion of mobile phones (Goggin, 2012) has made it an acceptable instrument in everyday living (Jenkins, 2006; Elliot & Urry, 2010). It is an essential device to maintain a ‘connected presence’ (Licoppe, 2004) through ‘real-time networking’ (Townsend, 2000) with the intimate sphere of close friends and family (Ling, 2008) as well as a wider network of selected contacts (Wellman & Lee, 2012). With the increased functionalities of the mobile

<table>
<thead>
<tr>
<th>Stages</th>
<th>End-user behaviour</th>
<th>How it relates to this research</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Users decide to adopt mobile phone technology and employ it to support their social/business functions.</td>
<td>Users employ the functions of the mobile phone as designers of the technology intended. Factors in the macro-environment may play an important role at this stage.</td>
</tr>
<tr>
<td>Two</td>
<td>Users start to appropriate the technology to suit their individual needs and desires through experimentation.</td>
<td>The local context plays an important role at this stage as users customize the mobile phone to suit their individual lifestyles.</td>
</tr>
<tr>
<td>Three</td>
<td>Experimentation runs into its limits imposed by either the architecture of technology itself or by its providers. Re-configuration is then required which is represented by a substantial transformation of the technology platform.</td>
<td>The change in the technology platform necessitates the need for the iteration of the mobile phone adoption process.</td>
</tr>
</tbody>
</table>

Table 2.4 The mobile phone technology evolution cycle

Source: Adapted from Bar, Pisani and Weber (2007) for this research

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phone, especially with the introduction of smartphones and apps, its function as a device for basic communication (phone calls and messaging) has been taken-for-granted (Ling, 2012) as more people are appropriating the device for the coordination of everyday life. It has become as common as the clock and car in global society (Ling, 2012).

Table 2.5 summarises the factors in the micro-environment and how they relate to mobile phone consumption and consumer identity.

<table>
<thead>
<tr>
<th>Factors in the micro-environment</th>
<th>How the factor relates to mobile phone consumption and consumer identity</th>
</tr>
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<tbody>
<tr>
<td><strong>Social networks</strong></td>
<td>Phone calls are a powerful reminder of social connectedness with an individual’s social circle (Cox &amp; Leonard, 1990). The mobile phone serves as a symbolic decoder of ‘fitting in’ with one’s social network and reinforces the individual’s social identity. Short, frequent and informative calls may strengthen the formation and maintenance of deep bonds not because of their content but the reassurance they create or reinforce (Licoppe &amp; Heurtin, 2002). In addition, it helps to cushion the traumatic experiences of foreign experiences as one can still be tightly connected to loved ones at home (Geser, 2004).</td>
</tr>
<tr>
<td>Personal history – maintenance of key life roles and identity (Holt, 2002; Fishman, 1972; Maslow, 1943; Fiske, 1987)</td>
<td>The utilitarian functions of the mobile phones provide the user with the flexibility of rapid role-switching so that he can perform a myriad of tasks related to both work and private life (Lasen, 2003; Ling 2008). This strengthens the individual’s sense of identity (multiple) as he is able to fulfil his ‘roles’ successfully. The mobile phone serves as a lifeline and aids in the micro-management of an individual’s time (Fox, 2001; Saylor, 2012). It also facilitates a temporal efficiency by flexibility in the use of time (Lasen, 2003; Saylor, 2012).</td>
</tr>
<tr>
<td><strong>Symbolic meaning of products</strong> (Baudrillard, 1974; Belk, 1988; Douglas &amp; Isherwood, 1980)</td>
<td>The mobile phone has meaning for the user beyond the physical possession of the product. Mobile phones lend themselves to ‘personalization’ as one is able to adorn the product with accessories and individualized ringtones and wallpapers through which an individual is able to assert his personal identity, even within his social circle (Rudich, 2011). The idea of one’s social network of family and friends being somehow ‘in’ the phone (Fox, 2001) serves as a ‘symbolic bodyguard’ (Lasen, 2003) and gives one a sense of security that one is not alone (Fox, 2001; Geser, 2004; Saylor, 2012). The mobile phone also serves as a social prop to demonstrate a user’s social network through impression management (Plant, 2002). The mobile phone is seen as a technological extension of the self as demonstrated by both the physical and emotional attachments consumers have to the handsets (Grant &amp; Kiesler, 2001; Rudich, 2011; Sutter, 2012).</td>
</tr>
<tr>
<td><strong>Glocalization</strong> (Aaker &amp; Maheswaran, 1997; Han &amp; Shavitt, 1994; Schmitt &amp; Zhang, 1998; Robertson, 1992; Dahl, 2000).</td>
<td>Every culture has a unique ‘cultural standard’ that defines what belongs within a culture and what is perceived as ‘alien’ (Benson, 1998). This can be observed in the usage of mobile phones in the public domain. The technology behind the mobile phone may be global but culture, values and lifestyles are not. Mobile phone usage patterns still accentuate the social differences between people of different cultural backgrounds and are tightly correlated with the various purposes of the social actions as well as the different situations, social relationships and social roles (Geser, 2004).</td>
</tr>
</tbody>
</table>

Table 2.5 Summary of how factors in the micro-environment influence mobile phone consumption and consumer identity

*Source: Developed for this study*


2.4.3.2 The macro-environment

The macro-environment relates to the international and global environment. As identified in Section 2.3.3, the factors in the macro-environment are globalization, media influences and global marketing/global brands.

2.4.3.2.1 Globalization

According to Castells (1997), globalization has always implied a fundamental rethinking of social organization and cultural patterns. As mentioned previously, contemporary society is characterized on two dimensions: outward into geographic space (Hassan, 1999) as evidenced by the rapid movement of capital, labour, goods and services across the world (Friedman, 1999); and inward into culture and society (Hassan, 1999). These can be observed in the global trends in mobile phone consumption. Mobile telephony has moved swiftly from being the technology of a privileged few to an essentially mainstream technology (Castells et al. 2007). The soaring popularity of mobile phones across the globe has made a huge difference to regions where fixed-line telephone services are unavailable, inefficient or prohibitively expensive (Plant, 2002). Townsend (2000) adds that even partly illiterate mass populations in developing nations are enjoying the benefits of being connected through the mobile phone. Indeed, it has become the technology of choice for developing countries in order to reduce their connectivity gap (Castells et al. 2007). The growth is particularly staggering in developing countries with little “landline” telephone infrastructure. Many remote areas in the third world have gone from having no telecommunications infrastructure to having satellite-based communications systems (The Economist, 2008). In remote parts of several developing countries such as Swaziland and Somalia, the mobile phone has been introduced in the form of payphone shops in villages which never had landlines (Plant, 2002). The developing world missed out on much of the excitement of the initial web revolution, the dotcom boom and Web 2.0 because they did not have an internet infrastructure. Thus, the introduction of the mobile phone has created a feeling of equality across the world regardless of age, gender, cultural background or social standing (Puro, 2002). This reinforces one’s social identity.

Mobile phone calls can come at any time, any place and in the company of any number of onlookers and eavesdroppers; taking precedence over the social interactions it interrupts (Plant, 2002; Campbell, 2007). Gergen (2002) notes that when a mobile phone rings, it is the
causal relationship with the bystanders that gets broken. Geser (2004) adds that in a public place, mobile phones make it easier for users to find themselves physically near complete strangers as there is a ‘virtual exit option’ simply by contacting someone on the phone. Plant (2002) feels that the introduction of the mobile phone has created a ‘simultaneity of place’ as the public space is becoming a ‘common living room’ (Kopomaa, 2000) and the home is becoming a communication hub (Bachen, 2001). Tchouaffe (2009) believes that the concept of space is no longer valid. The blurring of the public and private space makes it difficult to control the intrusiveness of mobile phones ringing and conversations (Campbell, 2007) as communication is increasingly dislocated to ‘non-places’ which have no intrinsic relationship to the messages or messengers involved (Auge, 1995). This requires an adaptation of the social rules of interaction (Lasen, 2003; Campbell, 2007). Mobile phone use facilitates the display of emotions in public settings where those physical expressions used to be absent (Scherer, 2001). Tchouaffe (2009) suggests that the mobile phone promotes a culture of immediacy that empowers the sender.

With the need for rapid role-switching, the individual has to grapple with ‘impression management’ techniques. In Goffman’s (1963) study of the apparently insignificant details of social interaction, social interactions are performances with a ‘front stage’ and a ‘backstage’. The immediate surroundings of the individual constitutes his ‘front stage’ where he needs to present himself in a favourable light and in ways appropriate to a particular role he is playing and to the particular social setting he finds himself in. The ongoing conversation represents the ‘backstage’ where the individual enjoys his private conversation without the need for ‘impression management’. However, it can be difficult to manage the two different situations. On the one hand, the individual needs to interact with the telephonic interlocutor. On the other hand, he needs to interact with the other people in his physical location through some form of body language. One of the obvious consequences is that sometimes the non-verbal gestures do not go along with prevailing circumstances. The mobile phone requires its users to manage the intersection of the real present and the conversational present in a manner that is mindful to both (Plant, 2002; Campbell, 2007). This can be a highly difficult task that can be equally conflicting. Murtagh (2001) and Puro (2002) believe that individuals reinforce their social distance to others by using various nonverbal gestures. Interestingly, Ling (1997) suggests that this has created the new role of a ‘hanging bystander’ who has to engage in a ‘waiting strategy’ during a call and think about how to continue the original interaction once
the call has ended. The need to reconcile with respect for privacy for one and others in a public setting and to create a private environment in a public setting can be a complex undertaking. An unanswered phone is frowned upon just as much as long intimate conversations in public settings. Bautsch et al. (2001) consider the involuntary immersion into other people’s intimate lives a subtle form of battery. Some businesses and public spaces have devised ways to minimize the impact of such disruptions. New York City passed a law in 2003 fining people whose mobile phones ring during performances. Some cinemas have taken matters into their own hands by setting up jammers to block mobile phone signals (ITU, 2004).

Mobile phones have changed the structuring of daily life. This diffusion has occurred worldwide independent of different cultural habits, values and norms. Mobile phones have even penetrated ‘techno-phobic’ contexts like Italy where computers and other modern technologies are less accepted in society (Fortunati, 2003) and also in Scandinavian countries where people are traditionally introverted and silence is a highly valued quality (Puro, 2002). In much of the Pacific Asia where human interaction and interconnectivity to loved ones are more highly prized than any notions of privacy, the mobile phone is readily accepted by those with the constant need to feel within reach (Plant, 2002). Cooper (2001) calls the mobile phone an ‘indiscrete technology’ as it blurs the distinctions between ostensibly discrete domains such as public and private, remote and distant and work and leisure (Ling, 2001). Castells et al. (2007) believes that the system of mobile communication allows for the blurring, mixing and recomposing of a variety of time/space contexts. Individuals have to construct an ‘at-home’ environment regardless of the physical environment they are in as they are always reachable (Bachen, 2001). The mobile phone has encouraged the use of public spaces for informal social interaction (Campbell, 2007). Places like restaurants, supermarkets and other “polyvalent” place not committed to specific purposes have become enriched with communicative behaviour from mobile phone users (Lasen, 2003). Auge (1995) believes that communication is more dislocated to “non-places” which have no intrinsic relationship to the messages or messengers involved and the content of which is determined by the participants rather than at the setting at which the interaction takes place. This constant role-switching affects their social identities considerably and may cause unnecessary psychological stress (Geser, 2004) with the need to grapple with impression management techniques continuously.
Lasen (2003) believes that the question of accessibility is directly linked to the mobile phone as a tool of surveillance. Mobile phones serve as a form of remote background monitoring activity for workers on the move which help with the catch-up period when returning to the office (Green, 2001). Calls made to the office are also a way to avoid being ‘forgotten’ (O’Hara, Perry, Sellen & Brown, 2001). According to Sherry (2001), mobile workers face a combination of two realities: the need to harmonize among multiple flows of activity and the interplay of planned and improvised action. They have to suffer the tension of the “anytime, anywhere” possibilities of communication while on the move. The potential disruptions of the constant availability make the control of access a necessity (Lasen, 2003). Laurier (2001) describes ways of avoiding the undesirable consequences of permanent accessibility by using call screening and voice mail. These services allow one’s time-space to be extended, orientating towards to more urgent requests as opposed to the less immediate ones.

The widespread use of the mobile phone means that an increasing amount of information is now being stored on handsets. In the case of loss of theft, personal information that is stored on the mobile phone may be subjected to misuse (Saylor, 2012). It is a fact that the criminal class avails more readily and speedily to technological advances than the general population. The mobile phone provides an easy vehicle for trafficking in drugs, arms and women through nearly untraceable networks. Terrorists are particularly technologically proficient. The world of organized crime, facilitated by mobile phone networks, is probably more insidious than statistics indicate (Stiglitz, 2003). Lasen (2003) believes that the association between sensational crime and new communication devices is not a new phenomenon. The threads that bind the interconnected world where goods and services flow freely also harbour the threats in this increasingly connected world (Stiglitz, 2003). Critics of mobile technologies argue that they are essentially hostile to social life. This context of ‘everyone culture’ (Kroker & Kroker, 1996) can cause ‘civilization scepticism’ as people start to question the progress of technology on the invasion of privacy (Jones, 1997). Since the launch of camera phones and their increasing popularity, people are snapping pictures as and when they fancy and posting them on popular social media sites such as Facebook and Instagram. But when put to criminal intent, these pictures may invade the privacy of those snapped unknowingly. There have been instances of sexual perverts lurking in public toilets, waiting for a chance to take pictures of unsuspecting victims. In Japan, all handsets have to emit a beep of at least sixty-five decibels whenever a picture is taken. This helps to safeguard the privacy of people (ITU, 2004).
2.4.3.2.2 Media influences

The process of shaping one’s identity is complicated by the changing dynamics of communication, partly fuelled by the presence of media images. The diffusion of global media via the television, the internet, the radio and digital technologies have exposed people to diverse cultural outputs and values (Silverstone, 2001; Lewis, 2007). Satellites, computers and new technology have made news gathering and dissemination almost instantaneous. According to Rothkopf (1997), technology is not only transforming the world but creating its own metaphors in the process as people around the globe are exposed regularly to a wide range of cultural stimuli. The media has a critical role to play in the spread of cultural globalization and through it; cultural attributes are spread largely and widely. Consumers’ worldview is subject to reality as well as reel world of televisions and media of all forms; more recently fuelled by the pervasiveness of popular social media sites. The media serves as cultural intermediaries, connecting the world of culturally constituted meanings to consumption meanings (Mc Cracken, 1988). The importance of information accessibility in consumer decision-making and judgement is well documented (Alba, Hutchinson & Lynch, 1991) and contributes to the meaning structure of consumption. As a result, consumers are empowered with a vast network of information and resources to create their social reality and in turn their identities.

Specifically, with mobile technologies, virtual environments are no longer detached from the physical world. Less a telephone today than a multi-purpose computer, mobile phones today serve as game consoles, still cameras, video cameras, email systems, text messengers and carriers of entertainment and business data (Geser, 2004; Hume & Peters, 2003; Brown, 2001; Rudich, 2011; Saylor, 2012; Nielson, 2013). People can readily identify with the functions on their mobile phones as they are used in the structuring of their daily lives. The functionalities of the mobile phone, coupled with the constant media bombardment of mobile phone usage globally have a rippling effect on society. Chapman and Schofield (1998) point to a rise in the number of “mobile” Samaritans as civic-minded citizens phone radio or TV stations about traffic congestions or other developments of widespread interest. In addition, the capability of today’s camera phones encourage photojournalistic tendencies such as capturing shots of natural disasters or crimes in action as depicted in global crime television series. In fact, mobile phones were the first to capture videos of world shattering events like
the 2004 tsunamis in Asia, the attacks on the London transit system in 2005 and the 2011 earthquake in Japan. Amateur photojournalistic tendencies through the mobile phone have forever changed the media coverage of important events (Weinreb, 2005) as consumers are empowered by the functionality of the mobile phone to help define their social identities. With the popularity of social media sharing sites, mobile phone users are no longer passive recipients of media but active media creators (Lewis, 2007).

Social scientists do worry that the over-dependence on the mobile phone can cause individuals to be less likely to develop ‘social competencies’ that would aid them in situations when the mobile phone is of little use (Plunct, 2002). Mobile phones are still dependent on a largely invisible infrastructure that users have no control over (Harkin, 2003). In Japan, people kill time by fiddling with their mobile phones instead of reading books and newspapers (Plunct, 2002). The mobile phone is often used an “escape to something more interesting” when boredom sets in (Sutter, 2012). Further studies will have to show whether the absorption of communicating with close ones will make individuals less concerned about the wider context of world issues.

The effect of mobile phones on cultural and political identity must not be overlooked. The use of text messages has been cited for being partly responsible for the overthrow of President Joseph Estrada of the Philippines (ITU, 2004). In his book ‘Smart Mobs – the next social revolution’, Howard Rheingold describes the ‘thumb tribes of Japan and the power of a collective mobile force. He cites an example in Stockholm, Sweden, where mobile phone users use text messages to warn others of spot checks by transport officials in order to avoid fines for ticket-less travelling. These mobile fare jumpers alert each other to spot checks by transport officials by sending out short messages to a distribution list. In 2003, trade associations in India protested against value-added tax by launching a text message campaign. The campaign strategy was similar to the age-old ‘chain-letter’ system: each trader was asked to send the text message to at least 10 other persons, telling the recipients about Value Added Tax and how it would affect both traders and consumers (ITU, 2004). Smart mobs emerge when communication and computing technologies amplify human talents for cooperation.
Mobile phones have flattened traditional hierarchical structures and enhanced the accessibility to political institutions, allowing individuals to vote or lodge complaints with authorities directly. Hungary has conducted SMS elections. Since March 2002, mobile phone users in China can send text messages to the two thousand nine hundred and eighty-seven deputies in the National People’s Congress, allowing them a new freedom of expression unprecedented in China (ITU, 2004). Thus, global media structures provide consumers with ideas to construct their own identities through their own choices of ideology, aesthetic forms of expressions and social activities. The individual consumer is not passive but continually using what is available through consumption, to construct his own identity (Lewis, 2007).

2.4.3.2.3 Global marketing/global brands

According to Gielser (2003), brands are central to marketing and that a brand is a mobile army of meanings. Holt (2002) believes that “brands will become another form of expressive culture, no different in principle for films or television programs or rock bands. Brands that create worlds that strike consumers’ imaginations, that inspire and provoke and stimulate” (pg. 87). Conventional marketing wisdom holds that image brands succeed when “they make an emotional connection with consumers” (Tybout & Carpenter, 2000, pg. 88). Indeed, a well-functioning product or service is not enough as ‘connected consumers’ are becoming increasingly informed and more attuned to the concept of perceived value and are networking around common skills, interests and experiences. Such perceptions are shaped by actual experience as well as seeing the object in use. As such, contemporary global marketing emphasizes on the consumption experience as consumers move from consuming out of needs to consuming out of wants and desires. The product is no longer the basis of value but the entire consumption experience (Prahalad & Ramaswamy, 2004; Goggin, 2011).

Aaker and Joachimsthaler (2000) suggest that global brands can have common appeal among people of different cultures as the values that people fundamentally hold and the benefits that may be derived from products are universal. The emergence of a ‘cosmopolitan’ culture as mentioned in Section 2.3.2 attest to this as people are able to relate to meta symbols like ‘Coke’ and ‘McDonald’s’ (Ritzer, 1998). Global consumers are using their consumption for meaning, pleasure and social identity. Specifically, the mobile phone has become somewhat a status symbol. Manufacturers now offer a wide array of brightly coloured phone covers to
change the look of the mobile phone to match the personality of the individual (see Figure 2.4). This relates to individual identity.

Cross-cultural similarities in mobile phone usage can be understood in shared life conditions such as the need to juggle between work and personal life. This explains why certain lifestyle constructs can appeal to people across different cultures as universal notions of the ‘good life’ are highly similar and driven more by consumption practices rather than traditionally ascribed ‘identity categories’ of class, race and ethnicities (Crook, Pakulski & Waters, 1992). Consumers use a particular brand of mobile phone because the product and its associations are related to their lifestyles and personal identity. For instance, Nokia was the first to come up with a series of ‘expression’ phones where users can change phone covers to suit their lifestyles and personalities (see Figure 2.4). Owning a mobile phone has become a practical necessity as well as a status symbol for youths grappling with peer pressure and conformity (Prichard, 2004). This supports Baudrillard’s (1988) belief that it is the ideas and not the objects that are being consumed.

In addition, the relationship between a brand and the consumers in a particular culture can be deepened by nurturing the culture-specific meanings on which the brand is also based. A brand may be created to be global but also have indigenous meaning. From this perspective, cultural differences among consumers seem to be receding as worldwide media and internet technologies proliferate and converge. Table 2.6 below summarises how factors in the macro-environment influence mobile phone consumption and consumer identity.

The mobile phone has extensive implications for cultures and societies in which it is used as it changes the nature of communication and in the process, affects identities and relationships. According to Plant (2002), what a consumer wants from a mobile phone ranges from the concrete (music, messaging and games) to the abstract (style, personality and individuality). This also reflects that there is a shift in how consumers define value – from products to experiences. However, tastes and preferences differ considerably across different cultures. As mentioned previously, Hofstede (1991) believes that material objects have cultural connotations. The mobile phone, like other cultural objects, is bound in historical context. The manner in which mobile phones have come to be understood is deeply connected with their social histories.
Factors in the macro-environment | How the factor relates to mobile phone consumption and consumer identity
--- | ---
Globalization (Friedman, 2000; Dahl, 2002; Huntington, 1996; Barber, 1999; Albrow, 1997 and Hammond, 1998) | The introduction of the mobile phone into contemporary societal life requires an adaptation of the social rules of interaction (Lasen, 2003) as the user grapples to find a balance between his global identity and his local identity (his immediate social environment). This can be observed in general mobile phone trends across the globe – the blurring of public and private domains and of work and leisure (Ling, 2001), the power of a collective mobile force (ITU, 2004) and the emotional attachment consumers have to their mobile phones (Plant, 2002; Harkin, 2003; Campbell, 2007; Rudich, 2011; Saylor, 2012). Mobile phones have changed the structuring of daily life. This diffusion has occurred worldwide independent of the different cultural habits, values and norms.

Media influences (Barber 1999, Friedman 2000 and Lewis, 2007) | The diffusion of global media via the television, the internet, the radio and digital technologies have exposed people to diverse cultural outputs and values (Silverstone, 2001). Global media structures provide consumers with a vast network of information and resources and serve as cultural intermediaries, connecting the world of culturally constituted meanings to consumption meanings (Mc Cracken, 1988; Lewis, 2007). As such, informed consumers are in the position to decide on how they wish to use their mobile phones and in the process, create their identities. The ubiquity of mobile phones has also spawned the growth of “mobile” Samaritans, allowing consumers to be both media creators and media receivers. This is seen in SMS elections in Hungary and the video capturing of catastrophic events such as the 2005 Tsunami.

Global marketing: global brands (Friedman, 2000; Holt, 2002; Fournier, 1998; Korten, 1995) | Specifically, global marketing today emphasize on the consumption experience as consumers move from consuming out of needs to consuming out of wants and desires. Global brands can have common appeal among people of different cultures as the values people fundamentally hold and the benefits that may be derived from products are universal (Aaker & Joachimsthaler, 2000). The product is no longer the basis of value but the entire consumption experience (Prahalad & Ramaswamy, 2004; Saylor, 2012). Consumers use a particular brand of phone because the product and its associations are related to their lifestyles and personal identity.

| Table 2.6 Summary of how factors in the macro-environment influence mobile phone consumption and consumer identity |

| Source: Developed for this study |

The social context also influences how people make sense of what they do with their mobile phones. The social context allows them to understand and explain what they do. This in turn, impacts how they subsequently interact with their phones. Though technologies may improve how much content the mobile phone can provide, the way people use them ultimately determines the impact of the user experience (Prichard, 2004). Adler (1997) adds that the cultural orientation of a society reflects the complex interactions of values, attitudes and behaviours displayed by its members.

2.5 RESEARCH MODEL AND HYPOTHESES

In this section, the basis for the research is explained with the justification of the research, the development of the research model and the research questions.
2.5.1 Justification of Research

The rapidly increasing importance of the international business environment has led corporations to invest in trying to better understand how the macro and micro-environmental factors affect consumption and the role that culture, specifically consumer identity plays in the consumption process. In turn, they can build on more effective global marketing approaches to connect with their target audience. The tide of popular opinion as to how to market internationally has swung between the multi-local or adaptation premise, which presupposes that consumers in each country market are different, to the standardization premise which presupposes that consumers around the globe are similar (Briley, Morris & Simonson, 2000).

The mobile phone stands at the centre of this debate. A modern navigation tool determining the coordinates of everyday living (Lasen, 2003; Rudich, 2011; Haddo & Green, 2010; Goggin, 2011), it serves as a representation of contemporary communications technology infused with traditional values. Consumer behaviour with regard to mobile phone consumption is a combination of universally accepted norms (the macro-environment) as well as social etiquette guided by the local context (the micro-environment). While the technology behind the mobile phone may be global, cultures, values and lifestyles are not (Rogers, 1995; Scott, Quinn, Timmerman & Garrett, 1998; Leonardi, 2002; Barley, 1986; Widman, Jasko & Pilotta, 1988; Bell, 2004; Lewis, 2007).

There have been several studies covering the micro and macro-environmental influences on mobile phone consumption (Plant, 2002; Lasen, 2003; Geser, 2004; Prichard, 2004; Taylor & Harper, 2003; Ling, 2001; Alexander, 2000) indicating that there are global norms as well as local differences in the mobile phone consumption patterns of various cultures. The studies also support the relationships between culture, consumption and technology in relation to consumer identity as explained in Section 2.3. Even though some of these studies were conducted over a decade ago, the fundamental theories with regard to culture and mobile phone consumption are still relevant today and still applicable to the mobile phone landscape. However, given the short history of the mobile phone, there have not been many specific in-depth studies examining the link between mobile phone consumption and consumer identity (in the context of both the global and local environments). This is important as it was established in Section 2.3 that consumer identity is tied to the interplay between culture,
consumption and technology. Identity change is often influenced by changes in the external environment and through the use and show of possessions (Stryker, 1980). Existing studies, some sponsored by mobile phone giants like Nokia, Motorola and Ericsson, focus on how consumers from different cultures are using their mobile phones. This understanding enables them to design mobile phones that consumers want. There have also been several comprehensive studies about how youths are embracing mobile phone technology and how it affects their growth and development (Prichard, 2004; Taylor & Harper, 2003). While mobile marketing companies such as Nielson and MobiThinking provide mobile statistics on what global consumers are using their mobile devices for, they have been little published data on the link between mobile phone consumption and consumer identity.

Based on existing literature on mobile phone consumption, there is evidence to support the cultural implications of the mobile phone. Lasen’s (2003) exploratory study of mobile phone use in public places in London, Madrid and Paris indicates cultural differences in the way people use their mobile phones and what mobile phone behaviour is considered culturally accepted etiquette. Crabtree, Nathan and Roberts’s (2003) study “Mobile UK – Mobile Phones and Everyday Life” researched on the past and present of the mobile phone through the current practices of everyday life, providing a clear indication of the likely future of mobile devices and applications in the United Kingdom. Plant’s (2002) research “On the mobile – the effects of mobile telephones on social and individual life” provided a great overview of how people around the world are using their mobile phones. Bell’s (2004) ethnographic research explored some of the ways mobile technologies are shifting function and form in the Asian context. In sum, all these studies support that macro and micro-environmental factors do play a part in influencing how an individual consumer uses his mobile phone as explained in Section 2.3.3. There have, however, been no existing studies investigating which environment – the micro or macro plays a greater part in influencing a consumer’s mobile phone behaviour. In addition, there seems to be little research on how corporations, other than those in the mobile communications industry, can leverage on this knowledge to better connect to their consumers. This is particularly relevant as advancements in communication technology continue to evolve and aid in the conduct of everyday life. Thus, this study aims to address this issue by way of answering the following research questions:
1. To what extent is consumer mobile phone behaviour dependent on factors in the micro-environment?
2. To what extent is consumer mobile phone behaviour dictated by the dynamic changes in the macro-environment?

2.5.2 Research Model

Based on the relatively scarce research on mobile telephony and supported by research on consumer behaviour, four factors in the micro-environment and three factors in the macro-environment have been identified. These factors and how they relate to mobile phone consumption and more specifically, consumer identity have been explained in Sections 2.4.3.1 and 2.4.3.2 and illustrated in Figure 2.7. The four factors in the micro-environment are social networks, personal history, symbolic meaning of products and glocalization. The three factors in the macro-environment are globalization, media and global marketing/global brands. The second stage of the study is the investigative phase through a structured questionnaire that represents a snapshot in time in 2009 with a specific focus on how individuals are communicating via traditional mobile phone usage methods: text messaging and voice calls.

![Figure 2.7 Simplified conceptual model developed for this study](Source: Developed for this study)
2.5.3 Research Questions and Hypotheses Developed for this Study

Determining the research questions in a study is crucial because these questions narrow the research objective and research purpose to specific questions that researchers attempt to address in their studies (Creswell, 2003; Onwuegbuzie & Leech, 2006). According to Johnson and Christensen (2004), research questions are interrogative statements that represent “an extension of the statement of the purpose in that it specifies exactly the question that the researcher will attempt to answer” (pg. 77). Onwuegbuzie and Leech (2006) identified the multiple roles research questions play in a study. One, they provide a framework for conducting the study, helping the researcher to organize the research and giving it relevance, direction and coherence, thereby ensuring the researcher keeps focus during the course of the investigation. Two, research questions help to delimit the study thus revealing the boundaries to the investigation. Three, research questions point to the data that will eventually be collected as part of the research endeavour.

This research uses the expectancy-value theory of motivation as a guiding orientation. The central premise of this theory is that objects have value only because they produce desirable consequences or enable one to avoid negative consequences (Atkinson, 1964; Tolman, 1951). It also stresses on a product’s role in achieving one or several desired states rather than conceiving of the product itself as the repository of value (Hansen, 1969; Cohen, 1979). Applying the expectancy-value theory of motivation to this study, the mobile phone’s value is in its reflection of consumer identity. This study also draws on Barry Wellman’s (1999) research which suggests that the mobile phone (1) weakens “communities” and (2) strengthens “networks”. Applying his research specifically to this study, situation (1) is represented by factors that are influenced by the macro-environment while situation (2) is represented by factors that are influenced by the micro-environment.

The research undertaken for this study will be conducted in two different stages. The first stage of the study is the exploratory phase that combines specific case studies on countries in Asia with the literature review. The second stage of the study is the investigative phase through a structured questionnaire that represents a snapshot in time. Each of these types of research has a distinct and complementary role to play in this study. The combination of data collection methods gives a broad data foundation and a more reliable base for interpretations. Detailed description on the methodology used will be discussed in Chapter Three.
As discussed in Section 1.4, the objectives of this study are:

- To examine the macro-environmental factors that influence mobile phone behaviour in Japan, China and Singapore. The factors to be explored will be specifically in the cultural dimension.
- To investigate into the impact of macro and micro-environmental factors in Singapore in relation to mobile phone consumption.

The research questions are:

- To what extent is consumer mobile phone behaviour dependent on factors in the micro-environment?
- To what extent is mobile phone behaviour dictated by the dynamic changes in the macro-environment?

By applying the research questions to the research model as illustrated in Section 2.4.2, two hypotheses are formulated for this study. They are as follows:

**Hypothesis 1**
This is based on the first research question: “To what extent is mobile phone behaviour as it relates to consumer identity, dependent on factors in the micro-environment?” As explained in Section 2.3.3.1, micro-environment factors are social networks, personal history, symbolic meaning of products and glocalization. These micro-environmental factors represent the independent variables. The dependent variable is consumer identity. The independent variable is the presumed cause, while the dependent variable is the presumed effect.

*Hypothesis 1: Factors in the micro-environment do not affect consumer identity in mobile phone consumption*

**Hypothesis 2**
This relates to the second research question: “To what extent is mobile phone behaviour as it relates to consumer identity, dictated by dynamic factors in the macro-environment?” As discussed in Section 2.3.3.2, the factors in the macro-environment are globalization, media influences and global marketing/global brands. These factors are the independent variable while consumer identity is the dependent variable.

*Hypothesis 2: Factors in the macro-environment do not affect consumer identity in mobile phone consumption.*
2.6 SUMMARY OF CHAPTER TWO

The chapter focused on reviewing the pertinent literature on mobile phone consumption. First, the context for the research was discussed. Then, the theoretical foundations that guide this research were touched on and the relationships among culture, consumption and technology were explained. The mobile phone in contemporary society was discussed in relation to its role in both the micro and macro-environments. The focus was on how the micro and macro-environments affect consumer identity. Based on existing studies on mobile telephony and consumption, the research model and questions were conceptualized. This study attempts to investigate which environment – the micro or the macro-environment – influences consumer behaviour specifically, consumer identity. This is done using the mobile phone as the identity-related possession. Understanding which external environment plays the more dominant role in influencing consumer identity will in turn help corporations better connect to their customers. Two hypotheses were proposed as follows:

Hypothesis 1: Factors in the micro-environment do not affect consumer identity in mobile phone consumption

Hypothesis 2: Factors in the macro-environment do not affect consumer identity in mobile phone consumption.

In the next chapter, the research design and methodology used will be explained in greater detail. This includes discussion of the questionnaire and sampling design, as well as the ethical considerations and limitations to the research.
CHAPTER THREE: METHODOLOGY

3.1 INTRODUCTION

According to Perry (2002), the goal of the chapter on methodology is to give a detailed account of all the major methodology used in the research. Punch (2000) attests that a well-documented research is a good marriage between its research questions and the methods that are used. Having developed the research questions for this research at the end of the preceding chapter, the next step is to operationalize the conceptual structure and point to the data that must be collected as part of this research endeavour. Integral to the discussion is a detailed account of the research design, guided by Sekaran’s (1992) research design framework. The methodology used for this study is mixed methods based on secondary research through case studies on three countries – Japan, China and Singapore and one set of primary research through survey data conducted for one country – Singapore. The major components for this chapter are presented in six sections. Section 3.1 begins with a brief introduction to the chapter and presents the structure for Chapter Three. The blueprint for the research and the justification of the research approach adopted for this study are discussed in section 3.2. Section 3.3 documents the procedures for the research, while Section 3.4 highlights the ethical considerations for the researcher-respondent relationship. The limitations to the methodology adopted are discussed in Section 3.5. Section 3.6 concludes with a summary of the major discussion points in the chapter. This is shown in Table 3.1.

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Introduction</td>
<td>Brief introduction, Structure for Chapter Three</td>
</tr>
<tr>
<td>3.2 Research Design</td>
<td>Paradigm and justification, Research method and justification, Issues with mixed method research, Research design framework</td>
</tr>
<tr>
<td>3.3 Procedures</td>
<td>Assumptions and scope, Procedures for case study, Design of the survey instrument</td>
</tr>
<tr>
<td>3.4 Ethical Considerations</td>
<td>The notion of ethics, Ethical considerations for this study</td>
</tr>
<tr>
<td>3.5 Limitations</td>
<td>Limitations to the methodology are discussed</td>
</tr>
<tr>
<td>3.6 Delimitations</td>
<td>The parameters of the study are discussed</td>
</tr>
<tr>
<td>3.7 Summary of Chapter Three</td>
<td>A short summary of the major discussion points in the chapter</td>
</tr>
</tbody>
</table>

Table 3.1 Structure for Chapter Three

Source: Developed for this study
3.2 RESEARCH DESIGN

Nachmias and Nachmias (1976) describe a research blueprint as a basic scheme of arrangement that serves as a logical guide to aid the investigator in the process of collecting, analysing and interpreting observations in a cohesive way. The main objective of the research design is to ascertain that the trail that leads to the data collection continually addresses the initial research questions. A good research blueprint will ensure that the researcher can foresee and identify the seemingly infinite decisions regarding the planning and collecting of data, data processing and analysis (Manheim, 1977). Punch (2000) adds that research design includes strategy, survey sample, survey objects, tools and procedures to be used for data collection and analysis of empirical data.

3.2.1 Selection and Justification of an Appropriate Paradigm for the Study

The motivation for any form of research can be linked to its philosophical framework. The term ‘research paradigm’ refers to the theoretical blueprint or structure which underpins the research process. It serves as a guide for the researcher as it helps to reflect what is important, reasonable and legitimate in the conduct of the research. According to Guba and Lincoln (1994), a paradigm can be defined as the basic underlying worldview that serves as a map for researchers. The framework provides a sound guiding structure and a range of acceptable tools that aid a researcher in addressing the questions that would be answered by the research.

Bryman and Bell (2003) conclude that a research paradigm is structural blueprint of beliefs that addresses what should be studied, how the research should be conducted and how the results should be appropriately interpreted. As there are numerous paradigms to guide research, three research paradigms – positivism, critical theory and constructivism - were explored to ascertain the most appropriate approach for this study. The paradigms were examined on the basis of their ontology and epistemological doctrines. A summary of the basic belief system of alternative enquiry paradigms is presented in Table 3.2 below.
Table 3.2 Basic belief systems of alternative enquiry paradigms

<table>
<thead>
<tr>
<th>Item</th>
<th>Positivism</th>
<th>Critical theory</th>
<th>Constructivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontology</td>
<td>Naïve realism: reality is real and apprehensible</td>
<td>Historical realism: ‘virtual’ reality shaped by social, economic, ethnic, political, cultural and gender values, crystallized over time</td>
<td>Critical realism: multiple local and specific ‘constructed’ realities</td>
</tr>
<tr>
<td>(Worldview)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epistemology</td>
<td>Objectivist: findings true</td>
<td>Subjectivist: value mediated findings</td>
<td>Subjectivist: created findings</td>
</tr>
<tr>
<td>(the science of knowing)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methodology</td>
<td>Experiment/surveys: verification of hypotheses; chiefly quantitative methods</td>
<td>Dialogic/dialectical: Researcher is a ‘transformative intellectual’ who changes the social world within which participants live</td>
<td>Hermeneutical/dialectical: Researcher is a ‘passionate participant’ within the world being investigated</td>
</tr>
<tr>
<td>(the science of finding out)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2 Basic belief systems of alternative enquiry paradigms

**Positivism**

According to Guba and Lincoln (1994), the fundamental essence of the positivism paradigm is based on the premise that one and only one objective reality exists. This reality consists of discrete components whose nature can be discovered and appropriately grouped. It is likened to a one-way mirror (Guba & Lincoln, 1994) where the researcher plays the passive role of the observer. This helps to serve as a guarantee that the research stays objective and value-free. As such, the positivist paradigm is inappropriate for this study for the following reasons. Firstly, given that this study deals with the subjective nature of culture and the complex social behaviour of human beings with relation to the consumption of mobile phones, it is difficult to work under the assumption of one objective reality. This would suggest the need to create a ‘reality’ in a controlled environment more suitable for experimental research (Guba & Lincoln, 1994). Cultural studies reveal that cultural traits have a determining influence on people’s perception of life and in turn, their consumption of products reflects this (Baudrillard, 1988; Ger & Belk, 1996). Hence, perception and meaning, principles and meaning, values and judgements have to be culturally contextualized. In fact, because culture is dynamic and constantly evolving, reality for one particular culture may not constitute reality for another (Huntington, 1996; Robertson, 1985). Furthermore, a controlled environment in such a study would most likely produce results that are irrelevant in the real world (Guba & Lincoln, 1994).
Secondly, the positivism paradigm requires the researcher to play the role of a passive observer in order to maintain objectivity and ensure that the research is value-free. It is impossible in this study for the researcher to play the role of a passive observer on two counts. One, the researcher is part of the ‘world’ being researched both as a mobile phone user and as a recipient of the effects of mobile phone consumption and part of cultural globalization. Two, direct involvement in the research aids in better understanding of the subject matter and enables the researcher to express the phenomenon’s salient features more distinctly (Gilmore & Carson, 1996).

**Critical theory**

Critical theory is a method of investigation based on the use of critique (McCarthy, 1991). The premise of critical theory is that human actions are constrained by dynamic social and cultural structures and not certain distinguishable variables. In short, this theory is interested in studying social change as it occurs in relation with social struggle. It is a theory with practical intent (Reed, 1999).

Even though critical theory considers the dynamic social and cultural aspects of a research as in this research, it is an inappropriate approach. Specifically, critical theory requires an explicitly set forth standpoint and theoretical orientation to its research questions (McCarthy, 1991), suggesting a certain measure of subjectivity. This qualitative study requires a humanistic approach whereby participants ascribe to their actions and the researcher interprets the actions and draws meaning from them. This would ensure that the participants are observed in their ‘natural’ settings. This would in turn, elicit the most realistic responses.

**Constructivist theory**

The scientific paradigm that is chosen for this study is the constructivist paradigm. The ontology for this paradigm reflects the belief that reality is constructed by human beings who participate in it, both individually and collectively (Reeves, 1996; Guba & Lincoln, 1994) as persons exist and grow in living webs of relationships. The underlying theory is that social reality is constructed and it is constructed differently by different individuals. The constructivist paradigm is in particular, relevant in the context of contemporary society where the globalization of world markets has led to the transmission of culture globally (Held et al. 1999), resulting in the global arena being characterized by a plurality of cultures and
unique identities (Huntington, 1993; Robertson, 1992). This corresponds to the constructivist theory of the infinite complexity of the real world (Reeves, 1996). Given that an individual’s perceived reality is shaped by factors in the micro and macro-environments (Dahl, 2002), this means that multiple realities exist for different people in society (Robertson, 1992) and represents their constructed realities. In addition, the constructivist paradigm argues for the importance of culture as symbolic systems for individuals to construct and make sense of the world and themselves (Bruner, 1990) in search of self-identity. Constructivism targets identity – the need to identify with others and to be recognized by others. Identity serves as the medium through which individuals translate similarities and differences into ontological statements about cultural relations.

The ‘hermeneutic’ aspect of the constructivist paradigm serves to explain the underlying values that govern these ‘realities’ (Schubert & Schubert, 1990). This would explore the cultural values of individuals and how these values contribute to the creation of a constructed reality. As an extension of this, the ‘interpretivist’ perspective of the paradigm focuses on putting these analyses into proper situational contexts to gain a deeper understanding of why and how people use mobile phones based on their ‘reality’. This stresses on the need to present multiple interpretations of the various groups involved. The ‘qualitative’ aspect emphasizes that the human being is the primary research instrument.

### 3.2.2 Selection and Justification for Choice of Research Method Used

The research method is the procedure utilized by the researcher in order to investigate reality. There are three broad methodological research approaches – quantitative, qualitative and mixed methods (Creswell, 2003). They form different approaches to social investigations and hold significant epistemological and ontological considerations (Bryman & Bell, 2003). Investigations involving the quantitative have a tendency to identify key attributes and measure the frequency and extent (Nau, 1995). In contrast, qualitative studies places significance on understanding a research through examining people’s words, actions and records (Morse, 1991; Creswell, 1994). Mixed methods research bridges the gap between qualitative and quantitative methodologies by combining the two research methodologies (Tashakkori & Teddlie, 1998). Table 3.3 below summarises the features of qualitative and quantitative research succinctly (Miles & Huberman, 1994).
The aim of **qualitative** analysis is a complete, detailed description. In **quantitative** research we classify features, count them, and construct statistical models in an attempt to explain what is observed.

Recommended during earlier phases of research projects. Recommended during latter phases of research projects.

Researcher may only know roughly in advance what he/she is looking for. Researcher knows clearly in advance what he/she is looking for.

The design emerges as the study unfolds. All aspects of the study are carefully designed before data is collected.

Researcher is the data gathering instrument. Researcher uses tools, such as questionnaires or equipment to collect numerical data.

Data is in the form of words, pictures or objects. Data is in the form of numbers and statistics.

Qualitative data is more 'rich', time consuming, and less able to be generalized. Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.

Researcher tends to become subjectively immersed in the subject matter. Researcher tends to remain objectively separated

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of <strong>qualitative</strong> analysis is a complete, detailed description.</td>
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</tr>
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<td>Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.</td>
</tr>
<tr>
<td>Researcher tends to become subjectively immersed in the subject matter.</td>
<td>Researcher tends to remain objectively separated</td>
</tr>
</tbody>
</table>

**Table 3.3 Summary of qualitative and quantitative research**

*Source: Miles and Huberman (1994)*

The strengths and weaknesses of mixed methods are summarised in Table 3.4.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Words, pictures and narrative can be used to add meaning to numbers</td>
<td>Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team</td>
</tr>
<tr>
<td>Numbers can be used to add precision to words, pictures and narrative</td>
<td>Researcher has to learn about multiple methods and approaches and understand how to mix them appropriately</td>
</tr>
<tr>
<td>Can provide quantitative and qualitative research strengths</td>
<td>Methodological purists contend that one should always work with either a qualitative or quantitative paradigm</td>
</tr>
<tr>
<td>Researcher can generate and test a grounded theory</td>
<td>More expensive</td>
</tr>
<tr>
<td>Can answer a broader and more complex range of research questions because the researcher is not confined to a single method or approach</td>
<td>More time-consuming</td>
</tr>
<tr>
<td>A researcher can use the strengths of an additional method to overcome the weaknesses in another method by using both in a research study</td>
<td>Some details of a mixed research remain to be worked out fully by research methodologists (e.g. problems of paradigms mixing, how to qualitatively analyse quantitative data, how to interpret conflicting results)</td>
</tr>
<tr>
<td>Can provide stronger evidence for a conclusion through convergence and corroboration of findings</td>
<td>Qualitative and quantitative research used together produce more complete knowledge necessary to inform theory and practice.</td>
</tr>
<tr>
<td>Can add insights and understanding that might be missed when a single method is used</td>
<td>Can be used to increase the generalizability of the results</td>
</tr>
<tr>
<td>Qualitative and quantitative research used together produce more complete knowledge necessary to inform theory and practice.</td>
<td>Can be difficult for a single researcher to carry out both qualitative and quantitative research, especially if two or more approaches are expected to be used concurrently; it may require a research team</td>
</tr>
</tbody>
</table>

**Table 3.4 Strengths and weaknesses of mixed methods**

*Source: Johnson and Onwuegbuzie (2004)*

**Justification and research strategy employed in this research**

The study employed a mixed methods approach. This section will cover the justification and employment for the mixed methods approach as a research strategy by weighing the pros and cons of quantitative and qualitative approaches in relation to this research. The key advantage of using both qualitative and quantitative methods is that they complement each other in ways that help to evaluate the data better. Existing mobile telephony research utilizes either very
strong qualitative methodologies such as interviews and ethnography or quantitative methodologies such as surveys. The mixed method approach is suggested to enhance research on mobile telephony by providing a more thorough explanation on the subject matter. This supports Brewer and Hunter’s (1989) theory that when researchers apply a mixed method of data collection, the resulting combination will likely produce complementary strengths and overlap weaknesses. Nau (1995) believes that the blending of qualitative and quantitative methodologies can result in a final product which can pinpoint the important contributions of both. Jayaratne (1993) adds that qualitative data can enhance the significance of quantitative research and lead to a more thorough understanding of the subject matter. Tashakkori and Teddlie (1998) emphasize that mixed methods influence multiple stages of the research, including type of inquiry, data collection/operations and analyses/inferences.

However, the selection of the best sequence of usage such that the outcome of one method can be improved by the use of the other method was a challenging endeavour. The mixed method approach is one that is based on priority and sequence of information (Tashakkori & Teddlie, 1998). Doing qualitative research followed by a quantitative survey is perhaps one of the more common multi-method complementarity and was employed in this study in a two-pronged approach. In the first stage, qualitative research in the form of an exploratory study was used. Given that there was little published and comprehensive data on mobile phone consumption in relation to factors in the micro and macro-environments, there was a need to explore the phenomenon further. This could not be done using quantitative research as the research concept is still ‘immature’ (Morse, 1991). The exploratory study based on secondary data sources that contributed to the literature review (Chapter Two) provided the context-specific information on mobile phone consumption that was crucial for the development of the survey questionnaire, to aid in the development of specific hypotheses and to make a provision for an overall context in which the quantitative findings can be interpreted in a precise manner. Specifically, the exploratory study provided rich contextual details on mobile telephony from a broad perspective. The information obtained was then narrowed and focused on the relevant issues pertaining to this study. These serve as input to the second stage, a structured questionnaire used to quantify the observations at a ‘snapshot’ point in time. Here, the strength of a quantitative approach was utilized to increase reliability and validity of the data.
3.2.3 Issues with Mixed Methods Research - Relating Paradigm and Methods

Given that there have many debates over the appropriateness of using the mixed methods approach in the study of society and in particular, human behaviour (Denzin & Lincoln, 1994; Guba, 1994; Reichardt & Rallis, 1994; Samdahl, 1999), this section was included to discuss the two main schools of thought and how it specifically relates to this study. According to Mactavish and Schleie (2000), one point of contention questions the suitability of having a combination of quantitative and qualitative methods within the context of a single study (Tashakkori & Teddlie, 1998). From a long-standing purist point of view, because the method and paradigm are inextricably linked, qualitative and quantitative approaches have to be viewed as separate, distinct and incompatible (Guba & Lincoln, 1994). Smith and Heshusius (1996) support this perspective, agreeing that it is the major issues such as validity and reliability that make the two methods incompatible. However, others, notably Bullock (1993), Firestone (1987), Merriam (1998), Patton (1990) and Henderson (1991), argue that the two research strategies are not mutually exclusive and hence, it would not be inappropriate to combine the two methods.

There are also opposing views with regard to the strengths and weaknesses of mixed method research. The methods of defining ‘qualitative’ and ‘quantitative’ have long been associated with the different paradigmatic approaches to research – relating to the different assumptions about the nature of knowledge (ontology) and also the means of obtaining it (epistemology). Because of the inability to resolve the intrinsic philosophical differences at the paradigmatic levels, the purist positivist stance is that mixed methods research is greatly flawed. There are pragmatists who are less rigid about this. Their argument is that this is merely an abstraction and does not take away the strengths of mixed method designs (Tashakkori & Teddlie, 1998). They firmly believe that decisions regarding research methods should be propelled by the purpose of the research and questions and not by adhering strictly to specific worldviews (Reichardt & Rallis, 1994; House, 1994; Howe, 1988; Patton, 1990). Specifically, the strengths of mixed methods research can be seen when the purpose is to (a) search for convergence (triangulation); (b) scrutinize interconnected and/or distinct aspects of a phenomenon (complementarity); (c) observe similarities, contradictions and new perspectives (initiation); (d) utilize methods in situations that complement each other and (e) give breadth...
and scope to a project (Greene, Caracelli & Graham, 1989). These are the five purposes that are typically associated with a mixed method study (Onwuegbuzie & Leech, 2006). Additionally, mixing paradigms can pose problems for designs with triangulation or complementary purposes but still are acceptable; pose difficulties for designs with a development or expansion intent and strongly suggested for designs with an initiation intent (Greene, Caracelli & Graham, 1989).

**How it relates to this research**

Based on the five purposes of research (Greene, Caracelli & Graham, 1989), the purposes of this study were identified as *triangulation* and *complementarity*. As indicated by the authors, mixing paradigms would pose problems for the purposes of this research. Reiterating Section 3.2.1, the paradigm selected for this study is the constructivist/naturalistic paradigm. The basic assumption of this paradigm is that social reality is constructed by people’s perceptions and experiences which results in multiple ways of knowing and comprehending social reality (Henderson, 1991; Merriam, 1988; Patton, 1990). Bullock (1993) and Henderson (1991) acknowledged that this school of thought can aid in the comprehension of social phenomena such as in this study on mobile phone consumption. Additionally, this paradigm also provides a flexible blueprint that allows the inclusion of emerging insights and information as the research develops (Mactavish & Schleie, 2000). Tashakkori and Teddlie’s (1998) call for heightened clarity and coherence in the description of mixed methods design was also taken into consideration. According to Mactavish and Schleie (2000), the failure to connect this type of research to an underlying paradigm leaves mixed methods vulnerable to charges that it lacks sound ontological and epistemological grounding, which in turn diminishes the potentially important contributions of these approaches in generating and extending knowledge (Datta, 1994; Guba & Lincoln, 1994; Samdahl, 1999).

**3.2.4 Research Design Framework**

Having established the appropriate paradigm underpinning this research and the research approach, the next step was to develop a suitable research design framework that would guide in the collection of the necessary data to address the research questions outlined. This study adopted the research design framework provided by Sekaran (1992). This framework covers the elements of good research design through a logical sequence of rational decision-making choices as shown in Figure 3.1 below.
3.2.4.1 Nature of the study

The primary objective in conducting research is to obtain knowledge and comprehend the phenomena that occur and to build theories based on the research findings. The nature of the study is primarily dependent on the knowledge in the research area. According to Sekaran (1992), the design decisions tend to be more vigorous as they progress from the exploratory phase to the descriptive phase and then to the hypotheses-testing phase.

Exploratory study

An exploratory study is typically undertaken when the research area is one that is relatively unexplored and little is known about the phenomenon (Sekaran, 1992; Morse, 1991; Wolcott, 1990; Creswell, 1994). In such instances, there is a need for extensive preliminary work to be done in order to better understand the situation and to develop a viable model for a complete and comprehensive investigation into the subject matter. When the data reveal some pattern, theories are then developed and hypotheses formulated for subsequent testing.
**Descriptive study**

Descriptive study is undertaken in order to ascertain and describe the characteristics of variables in a situation. The objective of a descriptive study is to give a detailed account of the relevant aspects of the phenomena of interest to the researcher. It seeks to obtain the answers to, whom, what, when, where and how questions and has its foundations grounded on some previous understanding of the nature of the research problem (Sekaran, 1992). Descriptive studies that present data in a meaningful form thus help to (1) understand the characteristics of a group in a given situation, (2) think systematically about aspects in a given situation, (3) offer ideas for further probe and research and/or (4) help make certain simple decisions (such as how many and what kinds of individuals should be transferred from one department to another’ (Sekaran, 2003, p. 122).

**Hypotheses testing**

Studies that apply hypothesis-testing are those that try to describe the nature of certain relationships or determine the differences among groups or independence of two or more factors in a given setting (Sekaran, 1992).

**Strategies employed in this study**

As explained Section 3.2.2, this study adopted a mixed method approach and utilized both qualitative and quantitative research. Each of these types of research had a distinct and complementary role to play in this research study. Table 3.5 below shows the differences in theory building in quantitative and qualitative research and explains how it relates specifically to this study. In this research, the logic of theory is both inductive (based on the exploratory study) as well as deductive (based on the survey research). The exploratory aspect was undertaken to provide a clearer perspective of what should be examined in greater detail in the descriptive part of the study. It provides useful background information to the research problem, helps to clarify issues and aids in the generation of the hypotheses. In this research, the exploratory study included the literature review (Chapter 2) and case studies supported by secondary data. As qualitative research was employed first, the theory was conceived from reality – how people use their mobile phones. Theory verification takes place concurrently and all theories verified at the end of the process.
<table>
<thead>
<tr>
<th>Differences</th>
<th>Quantitative research</th>
<th>Qualitative research</th>
<th>Relevance to this research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logic of theory</td>
<td>Deductive</td>
<td>Inductive</td>
<td>Both methods employed so research is both inductive and deductive.</td>
</tr>
<tr>
<td>Direction of theory building</td>
<td>Begins from a theory</td>
<td>Begins from reality</td>
<td>As qualitative exploratory research was employed first, the theory was conceived from reality.</td>
</tr>
<tr>
<td>Verification</td>
<td>Takes place after theory building is complete</td>
<td>Data generation, analysis and theory building takes place concurrently</td>
<td>Data generation, analysis and theory building takes place concurrently. Theories verified after theory building is complete.</td>
</tr>
<tr>
<td>Concepts</td>
<td>Firmly defined before research begins</td>
<td>Concurrently. Begins with orienting, sensitizing or flexible concepts</td>
<td>Combination of both.</td>
</tr>
<tr>
<td>Generalizations</td>
<td>Inductive, sample-to-population generalizations</td>
<td>Analytic or exemplar generalizations</td>
<td>The exploratory phase provided some exemplar generalizations about mobile phone geopolitics around the globe. The descriptive phase provided sample-to-population generalizations about the factors in the micro-environment and mobile phone consumption in a specific country.</td>
</tr>
</tbody>
</table>

Table 3.5 Theory building in quantitative and qualitative research

*Source: Adapted from Vlahos (1984) for this study*

Some key concepts were firmly defined in the onset of the research while some were defined in the exploratory phase. The exploratory phase provided some exemplar generalizations about mobile phone geopolitics around the globe as well as in the three countries singled out for the case studies. The descriptive phase provided sample-to-population generalizations about the factors in the micro-environment and mobile phone consumption in a specific country through a structured survey questionnaire.

3.2.4.2 Type of investigation

To answer a research question, a researcher has to determine the type of investigation that will be conducted (Sekaran, 1992). ‘The study in which the researcher wants to delineate the
cause of one or more problems is called a causal study. When the researcher is interested in delineating the important variables associated with the problem, the study is called a correlational study’ (Sekaran, 2003, p. 126). This research was a correlational study to determine which environment – the macro or micro – influences consumer mobile phone behaviour more.

### 3.2.4.3 Extent of researcher interference

The extent of researcher interference extends from the type of investigation being carried out in the study. According to Sekaran (1992), the extent of researcher interference has a direct bearing on whether a correlational or causal study is undertaken. In causal studies to establish cause-and-effect relationships, the researcher is required to manipulate the dependent variable of interest in order to study the effects. In contrast, correlational studies stress on the importance of the ‘natural’ setting with the researcher playing the role of a passive observer of events (Sekaran, 1992). This relates directly to the study setting in Section 3.2.4.4.

### 3.2.4.4 Study setting

According to Denscombe (2002), qualitative research tends to place high value on retaining the naturalness of the setting (non-contrived setting) and generally avoids imposing controls on the situation such as in an experiment (contrived setting). Correlational studies fall into the non-contrived setting category while causal studies are in the contrived setting category where the researcher manipulates the extraneous settings to establish cause-and-effect relationships (Sekaran, 1992). This study employed a non-contrived setting since this objective of the study is not to determine the cause and effect of mobile phone consumption but to investigate the associations with the factors identified in the micro and macro-environment.

### 3.2.4.5 Unit of analysis

The unit of analysis relates to the measurement of the data during analyses (Sekaran, 1992). It is the primary focus when the data is being analysed. Zikmund (2000) and Sekaran (1992) believe that choosing the unit of analysis based on previously determined research questions is one of the most crucial aspects of a research design. It is essential to determine the unit of analysis at the beginning of the research since the data collection methods, sample size and even the variables included the blueprint may sometimes be influenced by the level at which the data will be examined at the time of the analysis (Sekaran, 1992). In this study, the unit of
analysis differs for the two phases of the research. In the first phase of the research, which is exploratory, the unit of analysis is the country. In the second phase of the study, individuals were required to fill out a questionnaire to determine which environment – macro or micro – played a greater role in influencing mobile phone behaviour. Thus, the unit of analysis is the individual.

### 3.2.4.6 Time horizon
A cross-sectional study is one in which there is just one-time data gathering to answer a research question. This data may be collected over a time period of several days, weeks or even months (Sekaran, 1992). In contrast, a research may require the study of people or phenomena over a period of time may require data gathering to occur at several points in time. This is described as a longitudinal study (Sekaran, 1992). While longitudinal studies often need more effort as well as time, a well-organized longitudinal study could help pinpoint cause-effect relationships. This research was a cross-sectional study. In the exploratory phase, secondary sources of data were collected over a period of time to contribute to the theoretical foundations in the literature review. The findings that were extrapolated from the literature review contributed to the construction of the survey phase of the research where the primary data was collected once through a structured questionnaire.

### 3.2.4.7 Sampling design
A sample is taken from a statistical population and studied to gather information about the greater population. Generally, a good sample is expected to mirror the population from which it comes from. However, there is no assurance that any sample will be the accurate representative of the population from which it comes from. Sampling is the process or procedure of selecting a suitable representative part of a population for the purpose of ascertaining the parameters or characteristics of the whole population (Zikmund, 2000). According to Zikmund (2000), a crucial aspect of business research is the determination of a reasonable sample size for the research. The sample has to be representative of the population in order to be able to generalize from sample to population. Otherwise, selection bias is a possibility. Sampling bias usually occurs as a consequence of a poor sampling plan.

Determining the size of a sample is a difficult task. To take a larger sample size than needed is a waste of resources. There are constraints to determining sample size. The main objective
is to obtain both a desirable accuracy and a desirable confidence interval with minimum cost. Some researchers use a minimum of 100 subjects to allow for statistical inference but this may not always be the case (Sarantakos, 1998). In fact there have been published research literature which has proven that many statistical measures have actually been designed for samples smaller than 30 (Bryman & Bell, 2003; Leedy & Ormrod, 2005; Robson, 1993). In qualitative research, even small samples may aid in the identification of theoretically provocative ideas that merit further exploration. A guideline would be to have a sample size that is big enough to detect the smallest noteworthy effect or relationship between variables. This study used a small sample size of 40 because the objectives of the study were to investigate associations between factors in the macro and micro-environment in relation to mobile phone consumption. Even though such a small sample size cannot determine causality, it was a great way to reinforce the findings in the exploratory phase with regards to the contribution of the macro and micro-environmental factors to mobile phone consumption. As the research approach undertaken in this research is mainly qualitative, the researcher has taken due care to ensure that qualitative sampling aspects are considered when choosing the sample for the survey investigation. The sample that is chosen is a reflection of the characteristics of the population from which it is drawn. Even when the qualitative sampling size is relatively small, there are positive outcomes in terms of time, cost and ease of use. This is illustrated in Table 3.6 through a summary of quantitative and qualitative sampling by Sarantakos (1998). The researcher used this as a guideline for sampling design.

<table>
<thead>
<tr>
<th>Quantitative sampling</th>
<th>Qualitative sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is relatively large</td>
<td>Is relatively small</td>
</tr>
<tr>
<td>In most cases, it employs statistics</td>
<td>In most cases, it employs no statistics</td>
</tr>
<tr>
<td>Is often based on probability theory</td>
<td>Is often based on saturation</td>
</tr>
<tr>
<td>Allows no researcher bias in selection</td>
<td>Allows researcher influence in selection</td>
</tr>
<tr>
<td>Its size is statistically determined</td>
<td>Its size is not statistically determined</td>
</tr>
<tr>
<td>Occurs before data collection</td>
<td>Occurs during data collection, involves simple procedures</td>
</tr>
<tr>
<td>Involves complex procedures</td>
<td>Its parameters are flexible</td>
</tr>
<tr>
<td>Its parameters are fixed. Involves high costs</td>
<td>Involves very low costs</td>
</tr>
<tr>
<td>It is time-consuming</td>
<td>It is not time-consuming</td>
</tr>
<tr>
<td>It is representative</td>
<td>It is not representative</td>
</tr>
<tr>
<td>It is laborious</td>
<td>It is easy</td>
</tr>
<tr>
<td>It treats respondents as units</td>
<td>It treats respondents as persons</td>
</tr>
<tr>
<td>Facilitates inductive generalizations</td>
<td>Facilitates analytical generalizations</td>
</tr>
</tbody>
</table>

Table 3.6 Summary of quantitative and qualitative sampling

Source: Sarantakos (1998)
There are two types of sampling methods, classified as either probability sampling or non-probability sampling. These are explained in the next few sections while the detailed sampling procedures pertaining to this study are described in Section 3.3.

**Probability sampling**
Probability sampling is based on chance. This means that every element within the population has a probability of being selected. When this happens, it suggests that that the test results have a better chance of being representative of the entire target population. Probability sampling is the only sample that offers a true presentation of the total target population. The major advantage of probability sampling is that the sampling error can actually be calculated. Sampling error measures the degree to which a sample may differ from the total target population. The types of probability samplings include random sampling, systematic sampling and stratified sampling (Sekaran, 1992; Sarantakos, 1998; Zikmund, 2000).

**Random sampling**
Random sampling is the purest form of probability sampling. In simple random sampling, every member in the population has an equal and known chance of being chosen and being included in the sample. However, when the population samples are large, it is often hard or even impossible to identify every member of the population so the sample of available subjects becomes a bias sample (Sekaran, 1992; Sarantakos, 1998; Zikmund, 2000).

**Systematic sampling**
Systematic sampling resembles simple random sampling and is often used in place of random sampling. It is commonly known as the Nth name selection technique. After getting the required sampling size, every Nth record is selected from the pool of population members. As long as the list is not ordered, this method mimics random sampling with one clear advantage over the random sampling: simplicity. For instance, systematic sampling can be used to select a specified number of records from a computer file (Sekaran, 1992; Zikmund, 2000).

**Stratified sampling**
Stratified sampling is a frequently used method that has a clear advantage over random sampling because it reduces sampling error. A stratum is a subset of the population that shares at least one common trait. The researcher has to first identify the relevant strata and their actual representation in the population. After that random sampling is then used to select a sufficient number of subjects from each stratum. The stratified sampling has a tendency to
be used when one or more of the stratum's in the population have a low incidence relative to the other stratum's (Zikmund, 2000).

**Non-probability sampling**
A non-probability sample is one in which elements are selected in a manner that makes it impossible to estimate the probability of being selected. The key difference between non-probability sampling and probability sampling is that the former has built-in bias that cannot be taken apart or calculated. The types of non-probability sampling include convenience sampling, judgment sampling, quota sampling and snowball sampling (Sekaran, 1992).

**Convenience sampling**
This is used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth. The advantage of convenience sampling is that it relies on the easy availability of willing participants. This non-probability method is usually used during preliminary research in an attempt to get a gross estimate of the results, without the incurred cost or time to select a random sample (Sekaran, 1992).

**Judgment sampling**
In judgment sampling, the researcher relies on his own judgement to select the sample. This extends from convenience sampling as mentioned in the preceding paragraph. If the researcher chooses to use this method of sampling, he must be confident that the chosen sample is truly representative of the entire target population (Sekaran, 1992).

**Quota sampling**
Quota sampling is the non-probability equivalent of stratified sampling mentioned previously. In quota sampling, the researcher first singles out the stratum's and their proportions as they are represented in the population. Then convenience or judgment sampling is then applied to select the required number of subjects from each stratum. This is different from stratified sampling, where stratum's are filled by random sampling (Sekaran, 1992).

**Snowball sampling**
Snowball sampling is a unique non-probability method that is used only when the desired sample characteristic is a rare occurrence. For instance in a situation when it may be extremely hard and expensive to locate respondents that fit the sample. As such, snowball sampling relies on referrals from initial subjects to generate additional subjects. Even though
this technique can drastically lower the search costs incurred, it comes at the expense of introducing bias because the technique itself reduces the likelihood that the sample will represent a good cross-section from the target population (Sekaran, 1992).

Sample size and choice of sampling methods aside, sampling also introduces some common problems which the researcher acknowledges. Some of the sampling problems include:

1. **Dealing with mismatched sampling frames.** More often than not, the sampling frame does not match the primary sampling unit (Garson, 2008). For instance, the sampling frame may be a list of retail outlets, but the ultimate sampling units are the individuals that own the retail outlets.

2. **Dealing with poor response rate.** The response rates for surveys are often low. According to Garson (2013), response rate can be increased by the following ways
   a. Getting legitimate sponsorship for the survey, using sponsors who are highly-regarded in the community
   b. Including a brief and concise explanation justifying the survey
   c. Letting individuals know in advance that a survey is coming
   d. Keeping the survey questionnaire short, and letting prospective subjects know that they do not need to spend a lot of time answering the survey.
   e. Assuring total confidentiality and anonymity.
   f. Offering to reschedule the survey to accommodate a subject's schedule.
   g. Making the necessary call-backs (four is typical) where needed. In mail surveys, provide a new copy of the instrument each time.
   h. Beginning the survey with non-threatening questions that arouse interest.
   i. Offering the subject the final results if they want them.
   j. Offering a little token as remuneration.

3. **Analysing non-response.** The researcher has to assume that non-respondents will differ significantly from respondents in relation to the variables of interest. Garson (2013) suggests three general non-mutually exclusive strategies for measuring the effect of non-response.
   a. **Population comparison.** Using the averages in the survey averages and comparing them with known population averages, particularly workable for demographic variables such as gender, age distribution, income, occupation, and other variables. Specifically for educational studies, population data may
be available on the population distribution of gender, age, class, and test performance. The researcher seeks to pinpoint variables where the sample mean deviates from the population mean, and predicts (preferably on the basis of prior literature) on the impact of such bias on the dependent variables of interest.

b. **Intensive post-sampling.** Using an intensive effort to interview a sample of non-respondents and using the post-sample to assess non-response.

c. **Wave extrapolation.** The researcher codes the initial response set and also every one of the four call-back response sets. The mean of key variables on each of the five sets are then computed and assessed to see if consistent extrapolation is possible for any of the variables.

d. **Imputing responses.** When not all respondents answer all items in a questionnaire, imputation produces an ‘artificial’ value to replace a missing value.

4. **Dealing with missing data.** In surveys, it is virtually assured that a certain level of non-response would occur. Data is often missing due to a variety of causes – commonly known as the missing data mechanism. Sometimes, study participants fail to complete all the items on the survey. Other times, there are problems with data recording. The process of discarding subjects with missing items or substituting them with the sample mean has a tendency to lead to biased parameter estimates. But too much missing data would probably indicate a problem with the question that has caused the respondent to severely misunderstand the question. If there is enough missing data, it is often best to discard a respondent or that particular variable from the data file (Sekaran, 1992).

The detailed sampling procedures specific to this study are described in Section 3.3.

**3.2.4.8 Measurement**

Measurement is the act of observing and recording the observations as part of a research effort. The concept to be measured must be clearly defined so as to determine how it will be measured (Zikmund, 2000). The level of measurement is a classification system that describes the nature of the information contained within the numbers given to objects and therefore, within the variable. This aids the researcher in how to interpret the data from the
variable. The knowledge of the level of measurement enables the researcher to decide what statistical analysis methods to employ. According to Stevens (1946), different mathematical operations on variable can be employed and that depends on the level at which a variable is measured. The branch of measurement that involves the construction of an instrument that associates qualitative constructs with quantitative metric units is known as scaling. There are typically four major levels of measurement: nominal, ordinal, interval and ratio.

Objects are assigned numbers or letters for the purposes of identification in nominal scales. Ordinal scales will place objects or alternatives according to their magnitude in a systematic and ordered relationship. Interval scales measure order (or distance) in units of equal intervals. Ratio scales relate to absolute scales, starting with absolute zero – total absence of the attribute. The type of scale that is used will determine what numerical and statistical operations can be used when analysing the measurements. A scale is a ranked list of responses that run from one pole to another such as “strongly agree” to “strongly disagree”. Respondents will indicate how strongly they agree or disagree with carefully constructed statements that range from the very positive to the very negative toward the attitudinal object. This measures the attitudes of the respondents. The most common response option in surveys is undoubtedly an ordinal scale of five or seven categories with verbal labels to anchor the endpoints. The scales are commonly used to measure ratings, feelings, opinions or other subjective state of almost anything. Researchers should consider the following when determining the number of scales to be used:

1. When there are a larger number of scale points, it is easier to apply the use of general linear model techniques such as regression.
2. Scale of 5 points or more provide a reasonably reliable indication because they consistently measure the object of question.
3. If respondents have not thought much about the issue or subject matter, providing a greater number of scale points may reduce reliability or at least, make the response task more difficult.
4. Scales of 3 or 4 points are too small and tend to make the use of general linear model techniques very questionable.
**Evaluating measuring instruments**

Measuring instruments can be evaluated in the areas of *reliability*, *validity* and *sensitivity*. Reliability refers to measurement when similar results are obtained over time and across situations. Broadly defined, reliability is the extent to which measures are free from error and as a result, tends to yield consistent results (Zikmund, 2000). Two dimensions must be considered for reliability: repeatability and internal consistency. The test-retest method involves using the same scale or measure with same respondents on two separate points in time as a test for stability. If the measure is stable over time, similar results should be obtained. To check for internal consistency, the splitting halves technique is applied. This is especially important when a measure contains a large number of items. In the split-half method, the researcher may take the results gathered from one-half of the scale items (e.g. odd-numbered items) and evaluate them against the results from the other half of the items (e.g. even-numbered items). In the equivalent-form method, two alternative instruments are designed to be as equal in value as possible. Each of the two measurement scales is then applied to the same group of subjects. If the correlation between the two forms is high, the researcher can conclude that the scale is reliable (Sekaran, 1992; Zikmund, 2000).

Validity addresses the challenge of whether a measure actually measures what it is supposed to measure. Face validity or content validity relates to the subjective agreement between professionals that determines if a scale logically appears to reflect accurately what it purports to measure. The content of the scale appears to be adequate. Criterion validity refers to a researchers attempt to ensure that the measure used can correlate with other measures of the same construct. There are two types of criterion validity - concurrent validity or predictive validity. This largely depends on the time sequence of associating the “new” measurement scale and the criterion measure. If the new measure is taken simultaneously along with the criterion measure, the method is called concurrent validity. Predictive validity is set up when an attitude measures a future event. The two measures are only different on the basis of a time dimension, that is, only if the criterion is separated in time from the predictor measure. Construct validity is set up by the degree to which the measure affirms a network of related hypotheses generated from a theory that is based on the concepts. Construct validity is established during the statistical analysis of the data. In construct validity, the empirical evidence is consistent with the theoretical logic of the concepts. In order to achieve construct validity, the researcher must have already ascertained the meaning of the measure by
determining convergent validity and discriminant validity. Convergent validity is synonymous with criterion validity. The criterion may be a construct that one would logically expect to be linked to the new measure. A measure is said to have discriminant validity when it has low correlation with measures of dissimilar concepts (Zikmund, 2000).

The sensitivity of a scale is a significant measurement concept, especially when changes in attitudes or other hypothetical constructs are under scrutiny. The term ‘sensitivity’ refers to an instrument’s ability to precisely measure variability in stimuli or responses. Adding additional questions or items to a scale based on a single question or item can increase the sensitivity of a scale (Sekaran, 1992). The detailed measurement procedures for this study are explained in Section 3.3.

### 3.2.4.9 Data collection method

There are two types of data – one is primary data and the other is secondary data (Zikmund, 2000). The data that is collected is said to be primary if it was collected first hand by the researcher for a specific study. In contrast, secondary data refers to data that has selected by a researcher who is not one of the original data creators, for a purpose that may be different from that of the original purpose in which the data was first collected (Leedy & Ormrod, 2005). Table 3.7 is a summary of the comparison of primary and secondary approaches to data collection (Sekaran, 1992).

<table>
<thead>
<tr>
<th>Data collected</th>
<th>Primary research</th>
<th>Secondary research</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• The investigator must design and implement the data collection. This can be a controlled (laboratory) experiment or a sample survey.</td>
<td>• The investigator does a search for relevant data.</td>
</tr>
<tr>
<td></td>
<td>• An experiment can isolate the factors of interest and eliminate or control for unwanted factors.</td>
<td>• Investigators can use a variety of sources of data. These could be statistics published by governments or other organizations, census, scholarly articles published in journals and archive data.</td>
</tr>
<tr>
<td></td>
<td>• Randomized investigations can avoid bias.</td>
<td></td>
</tr>
<tr>
<td>Pros</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cons</td>
<td>• Experiments can be contrived and artificial so that the scope to generalize them to the real world may be limited.</td>
<td>• The investigation is limited by the data available.</td>
</tr>
<tr>
<td></td>
<td>• A large investigation may be expensive.</td>
<td>• The data available may not exactly match what is required for the research.</td>
</tr>
<tr>
<td></td>
<td>• Investigations can take a long time to complete.</td>
<td>• The data that has been published might be a biased selection.</td>
</tr>
</tbody>
</table>

**Table 3.7 Comparison of primary and secondary research approaches to data collection**

Source: Sekaran (1992)
Yin (1994) compared five major research strategies based on three conditions. These conditions were identified as (1) the type of research question posed (2) the extent of control a researcher has over actual behavioural events and (3) the degree of focus on contemporary events as opposed to historical events as seen in Table 3.8.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Form of Research Questions</th>
<th>Requires control over behavioural event?</th>
<th>Focuses on contemporary events?</th>
<th>Suitable for this research study?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How, why</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, what, where, how many, how much</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>Who, what, where, how many, how much</td>
<td>No</td>
<td>Yes/no</td>
<td>No</td>
</tr>
<tr>
<td>History</td>
<td>How, why</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Case study</td>
<td>How, why</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3.8 Relevant situations for different research strategies

*Source: Adapted from Yin (1994)*

This research utilized a combination of both primary as well as secondary data. The study drew from empirical secondary data through exploratory research (Chapter Two and case studies) to obtain the foundations underlining the theoretical framework and theories proposed in this research. The exploratory research provided the structure for the primary data investigation which was then generated from a survey investigation.

**Case study**

Case studies can be single or multiple-case designs. A multiple-case design tends to follow a replication rather than sampling logic while single cases are used to ascertain or challenge a theory or to represent a unique or extreme case. The main advantage of multiple cases is that the results are strengthened by replicating the pattern-matching thereby increasing the robustness of the theory (Yin, 1994). Every individual case study consists of a “whole” study. This means that data is gathered from various sources and deciphered for the purposes of the study. Case studies strive towards giving the researchers a holistic view of culture and its systems; that is how people live their lives (Feagin, Orum & Sjoberg, 1990). The case study is commonly known as a triangulated research strategy because of its holistic encompassing nature. This can occur with data, investigators, theories and even methodologies (Feagin, Orum & Sjoberg, 1990).
Case studies may involve six sources of proof or evidence. These are documentation, archival records, interviews, direct observation, participant observation and also physical artefacts (Yin, 1994). The documentation could be in the form of letters, memoranda, agendas, administrative documents, newspaper articles or any article that is relevant to the investigation. These documents serve to corroborate the evidence from other sources too. Researchers can use documents to make inferences about events. Archival records refer to documents such as service records, organizational records, lists of names, survey data and other similar records. When a field visit is conducted during a case study, the researcher can conduct a direct observation. When the researcher is an active participant in the events being studied, participation observation occurs. Physical artefacts refer to tools or some other physical evidence that may be collected during the study as part of a field visit (Tellis, 1997).

However, not all the sources used are useful for all case studies (Yin, 1994). Even though one of the key strengths of case study as a research method is that it allows for rich information to be gathered and subsequently potentially useful hypotheses can be generated, it can be a really time-consuming endeavour. Another drawback is that it is also inefficient in researching situations that are already well-structured and in situations where the important variables have already been pinpointed. It is also weak at reaching rigorous conclusions or determining precise relationships between variables. The advantages and disadvantages of case-based research are summarised in Table 3.9.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple sources of evidence lead to the development of converging lines of inquiry which makes case-based research suitable for exploratory studies.</td>
<td>Huge volumes of data are accumulated and it is time-consuming to sort out the relevant information.</td>
</tr>
<tr>
<td>Single cases are used to confirm or challenge a theory or to represent a unique or extreme case.</td>
<td>Inefficient in researching well-structured situations where the important variables have already been identified.</td>
</tr>
<tr>
<td>Multiple cases strengthen the results by replicating the pattern-matching thereby increasing the robustness of the theory.</td>
<td>Due to the number of case/s examined, the case study lacks utility when attempting to reach rigorous conclusions or determining precise relationships between variables.</td>
</tr>
<tr>
<td>They strive towards a holistic understanding of the cultural systems of action.</td>
<td></td>
</tr>
<tr>
<td>Case-based research is also known as a triangulated research strategy because it allows for the triangulation of data, investigators, theories and even methodologies.</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.9 Advantages and disadvantages of case-based research

Source: Compiled for this research based on Yin (1994), Tellis (1997) and Feagin, Orum & Sjoberg (1990)
**Case study strategy for this research**

This research utilized the case study research approach as an extension of an exploratory study that included the literature review. The literature review provided some insights to the factors in the micro and macro-environments and how they relate to the identity aspect of mobile phone consumption. The case studies aimed to strengthen the findings by providing a more holistic view of each country, taking into consideration each country’s unique cultural system (Feagin, Orum & Sjoberg, 1990). The three countries selected for the case studies relate to multiple-case designs that strengthen the results by enabling the researcher to do pattern-matching between the cases (Yin, 1994).

Each individual country also played a specific role within the scheme of research. Japan was chosen because the country’s advancements in both mobile technology as well as diffusion of the said technology into society. China was selected because of its phenomenal growth in the worldwide telecommunications industry both as a manufacturer of handsets as well as the world’s largest consumer of mobile phones. Singapore was chosen because the country is small but boasts of a high mobile penetration rate. In addition, the structured questionnaire in the second phase of this research relates to mobile phone consumers in Singapore – the researcher’s country of residence.

For this research, the sources of evidence came from documentation of various sources such as documented reports of events and specific newspaper clippings and other similar articles appearing within the mass media channels– and archival records – survey data by previous studies. Inspiration was drawn from Yin’s 1979 (Yin, 1994) study on organizational innovation where he integrated both case study and survey evidence. When the same questions are posed for two groups – the smaller group covering case studies and a larger group covering a survey, the answers from the two groups can be compared for consistency. Also, the case studies may produce insights into the cause-and-effect of a phenomenon while the survey can reaffirm the existence of a phenomenon (Yin, 1994).

In this research, the literature review guided the researcher in the selection of cases for detailed examination (case studies) as well suggested factors worthy of special attention that were tested on a structured survey to reinforce the findings from the exploratory phase. The qualitative findings from the exploratory studies aided the researcher to better interpret quantitative results of the survey as well as help to structure the survey questions.
Survey research
Survey research is one of the most significant areas of measurement in applied social research as it often used to assess thoughts and feelings about a subject matter. The broad scope of survey research covers any measurement procedures that involve asking respondents a series of questions. This may be anything from a brief paper-and-pencil feedback form to a long and intensive one-on-one in-depth interview with a respondent. Surveys can be broadly classified into 2 categories - questionnaires and interviews.

Questionnaires
Questionnaires typically involve printing questions on a piece of paper which a respondent completes. This can be questionnaires that are mailed out as well. Mail questionnaires are particularly useful for surveying subjects that are geographically dispersed (Yammarino, Skinner & Childers, 1991). This is a cost effective method that also has another advantage. It allows respondents to take their time to participate at their discretion and in turn, be able to provide thoughtful responses (Churchill, 1996) that are accurate (Aaker, Kumar & Day, 1998). Because mail questionnaires are self-administered, it also reduces the possibility of interviewer bias (Zikmund, 1999) as respondents may choose to remain anonymous through mail questionnaires. The anonymity aspect is significant contributing factor in the honesty of responses obtained (Churchill, 1996) and especially so in the wake of particularly sensitive topics (Malhota, 1996).

However, mail questionnaires tend to be more structured and lengthy, unlike other forms of survey communication, making response rates low (Zikmund, 1999). It is not recommended for detailed written responses. The group administered questionnaire is another type of questionnaire. A group of respondents are gathered and asked to partake in answering a questionnaire. Table 3.10 below lists the advantages and disadvantages of using questionnaires according to Sarantakos (1998). Further, the researcher used the advantages and limitations of using questionnaires by Sarantakos (1998) as a guideline when determining the questions for the survey questionnaire in this research.
<table>
<thead>
<tr>
<th>Questionnaire advantages</th>
<th>Questionnaire limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Questionnaires are less expensive than other methods</td>
<td>• They do not allow probing, prompting and clarification of questions</td>
</tr>
<tr>
<td>• They produce quick results</td>
<td>• They do not offer opportunities for motivating the respondent to participate in the survey or to answer the questions</td>
</tr>
<tr>
<td>• Questionnaires can be completed at the respondent’s convenience</td>
<td>• The identity of the respondent and the conditions under which the questionnaire was answered are not known. Researchers are not sure whether the right person has answered the questions.</td>
</tr>
<tr>
<td>• They offer greater assurance of anonymity</td>
<td>• It is not possible to check whether the question order was followed</td>
</tr>
<tr>
<td>• They offer less opportunity for bias or errors caused by the presence or attitudes of the interviewer</td>
<td>• Questionnaires do not provide an opportunity to collect additional information (e.g. through observation) while they are being completed. There is no researcher present, for instance, to make observations while the questions are being answered</td>
</tr>
<tr>
<td>• Questionnaires are a stable, consistent and uniform measure, without variation</td>
<td>• Due to the lack of supervision, partial response is quite possible</td>
</tr>
<tr>
<td>• They offer a considered and objective view on the issue</td>
<td></td>
</tr>
<tr>
<td>• The use of questionnaires promises a wider coverage, since researchers can approach respondents more easily than other methods.</td>
<td></td>
</tr>
<tr>
<td>• They are not affected by problems of ‘no-contacts’</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.10 The advantages and limitations of using questionnaires

Source: Sarantakos (1998)

**Interviews**

Interviews are face-to-face interactions with the interviewer asking from a set of questions and recording the answers. This is best used in a situation when the desired sample consists of respondents in a very specific target population. A key advantage to personal interviews is that the interviewer is able to probe deeper into the issues and can personally observe any “attitudinal behaviour”. However, interviews are extremely time-consuming and the sample is non-representative of the population.

**Survey strategy used in this research**

Based on the advantages listed in Table 3.10, the questionnaire survey was the most appropriate method for this study to capture a ‘snapshot’ of the associations between the macro and micro-environmental in relation to mobile phone consumption. The researcher ensured that the survey was properly constructed with certain built-in checks. This helped to overcome the weaknesses of surveys as an evaluation method and in turn, provide highly credible data.

This study employed a mixed methods approach which was carried out in two stages. Stage 1: an exploratory study based on case studies of 3 countries – Japan, China and Singapore. Stage 2: a survey study of 40 respondents in Singapore as a snapshot of time in 2009.
Figure 3.2 summarises the data collection process for this research. First, in the exploratory study, secondary data collected from various sources was used to determine the research context and broad based theories such as the relationship between culture, consumption and technology and identity theories in the literature review. These findings then pinpoint to the selection of cases for the case studies as well as contributed to the development of the questions for the survey. The findings for the case studies and survey were then presented and conclusions drawn.

![Figure 3.2 Summary of the data collection process for this research](source: Developed for this study)

### 3.3 PROCEDURES

This section documents the procedures taken in this study. Given that a mixed methods approach was used in this study, which included multiple methods of data and multiple forms of analysis that increase the complexity of the designs (Creswell, 2003), care was taken to explicitly document the steps that were taken.

Several mixed methods research topologies (Creswell, 2003; Patton, 1990; Tashakkori & Teddlie, 2003) were considered in the conduct of this research. According to Johnson and Onwueguzie (2004), a researcher can administer mixed–model designs by combining qualitative and quantitative approaches within and across the stages of research. Morgan
(1998) and Morse (1991) suggest that the researcher may also weigh the dimension of paradigm emphasis (deciding whether to give the quantitative and qualitative components of a mixed study equal weightage or to give a particular paradigm the dominant status in the research). In addition, the time order of the qualitative and quantitative phases is another significant consideration as the phases can be carried out either sequentially or concurrently. Another measure for viewing mixed methods research is the extent of mixture, which would form a continuum from mono-method to fully mixed methods. According to Johnson and Onwuegbuzie (2004), most of mixed methods designs are derived from two major types of mixed methods: mixed-model (mixing qualitative and quantitative approaches within or across the stages of the research process) and mixed-method (the inclusion of a quantitative phase and a qualitative phase in an overall research study).

To build a mixed-method design, the researcher has to make two primary decisions: (a) whether the researcher wants to work largely within one dominant paradigm and (b) whether the researcher wants to run the phases either at the same time or in a sequence. In stark contrast to mixed-model designs, mixed-method designs tend to be similar to carrying out a quantitative mini-study and a qualitative mini-study in one overall research study. Nonetheless, to be considered a mixed-method design, the findings must be integrated at some junction in the process (for instance, a qualitative phase might be conducted to inform a quantitative phase in a sequential manner or if the quantitative and qualitative phases are undertaken concurrently, then the findings must, at the very least, be integrated during the interpretation of the findings).

As mentioned in Section 3.2.1, the research paradigm selected for this study is constructivism. To reduce the complexity of the research, the researcher used constructivism as the dominant guiding paradigm for the research. The study employed a mixed method design with data collected concurrently, with part of one set of data (qualitative from the literature review) contributing to the next set of data (quantitative from the structured questionnaire). As explained in Section 3.2.3, the purposes for this research are triangulation and complementarity design. Triangulation comes from the use of the different methods, each with offsetting biases while the complementarity design stems from using the results from one method to offset the results from another. The researcher also ensured that several quality assessment strategies were stringently adhered to in the conduct of this research. These are detailed in Table 3.11 below.
<table>
<thead>
<tr>
<th>Criterion/definition</th>
<th>Measures</th>
<th>Phase of research in which strategy was applied</th>
<th>Measures applied within this research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliability</strong> is the approximation of the extent to which a measurement is free of random or unstable error (Lincoln and Guba, 1985).</td>
<td>Using multiple sources of data/evidence</td>
<td>Data collection</td>
<td>Pre-testing the questionnaire</td>
</tr>
<tr>
<td><strong>Dependability</strong> is concerned with establishing whether the procedures/techniques used in the research process are consistent.</td>
<td>Using multiple sources of data/evidence Triangulation of research methods</td>
<td>Data collection/data analysis Research design</td>
<td>All procedures were documented Assumptions were explicitly stated</td>
</tr>
<tr>
<td><strong>Credibility</strong> is about establishing whether the findings reflect the reality of the phenomenon under investigation (Yin, 1994).</td>
<td>Triangulation of research methods</td>
<td>Data collection/data analysis</td>
<td>The use of several research methods within this research included the literature review, case studies and survey findings.</td>
</tr>
</tbody>
</table>
| **Construct validity** is the ability of a measurement instrument to measure a construct or concept | Use of multiple sources of data | Data collection | • Literature review  
• Multiple sources of data collection  
• Establishing a chain of evidence. Appropriate references were given so that the reader could follow the evidence from the initial research issues to the conclusions (Yin, 1994).  
• Researcher’s supervisor reviewed the analysis |
| **Objectivity** refers to the use of objective decisions rather than subjective judgement in data collection | Incorporation of documented measures and procedures Use of multiple sources of data | Data collection/Research design | • Procedures for data collection were clearly documented.  
• Assumptions made were explicitly stated.  
• Multiple sources of data collection |

Table 3.11 Quality assessment strategies used in this research

*Source: Developed for this research*

For the reliability criterion, the researcher used multiple sources of data – both primary (survey results) as well as secondary sources (literature review and case studies) that was applied at the data collection phase of the research. It also included pre-testing the questionnaire to ensure reliability. For the dependability criterion, the researcher used multiple sources of data during the data collection, data analysis and research design phases of the research. All the procedures used were documented with assumptions explicitly stated. For the credibility criterion, the researcher employed a triangulation of research methods in the data collection and data analysis phases of the research. The use of several research methods to triangulate the data included literature review, case studies and survey findings.
The researcher also used pattern-matching in the data analysis phase to identify the established patterns in the research data. For the construct validity criterion, the researcher used multiple sources of data at the data collection phase of the research to establish a chain of evidence to support the findings. These analyses were reviewed by the researcher’s supervisor. For the objectivity criterion, the researcher incorporated documented measures and procedures and used multiple sources of data during the data collection and research design phases of the research. All the procedures used were documented with assumptions explicitly stated.

3.3.1 Exploratory Study

Gilmore and Carson (1996) believe that understanding elements that contribute to a particular phenomenon allows the researcher to interpret the data in his own terms. Stake (1994) adds that the research may even bring out previously unknown relationships leading to a complete rethinking of the subject matter. Reiterating from Section 2.5 of the previous chapter, most current research on mobile phone consumption focused mainly on how people are using their mobile phones and how mobile phone giants are adding more technological features to enhance the use of the mobile phone for everyday activities. The literature review also supports the cultural implications of the mobile phone and the role that the micro and macro-environments play in influencing how a consumer uses his mobile phone. However, there have been no existing studies investigating which environment – the macro-environment or the micro-environment – plays a greater part in influencing a consumer’s mobile phone behaviour.

In addition, there seems to be little published research on how corporations, other than those in the mobile telecommunications industry, can leverage on this knowledge to better connect to their consumers. Thus, this study aims to address the following research questions:

1. To what extent is consumer mobile phone behaviour dependent on factors in the micro-environment?
2. To what extent is consumer mobile phone behaviour dictated by the dynamic changes in the macro-environment?

The exploratory phase of the study which included the literature review and specific case studies was descriptive and qualitative. A descriptive method was used to allow for the accurate description of the cultural characteristics that drive consumption of mobile phones in
Asia. Characteristics of the phenomenon can be represented in a meaningful form that would in systematic thinking and offer ideas for the more quantitative aspect of the research as represented by the structured survey in the phase two of the study. Thus, the main goals of the exploratory study were to (1) cast a wider net to further explore the issues raised within the literature review but inadequately captured in existing studies (2) start to include the findings from the qualitative elements of the study thus far into the development of suitable questions for the survey and (3) start the development of the hypotheses for the survey.

**Case Studies**

Three Asian countries, Japan, China and Singapore, were selected for the case study research portion of the study. The data was obtained from secondary sources. The evidence from multiple cases allows for a more robust and compelling study (Yin, 1994). Each case was carefully selected so that it either (a) enables the prediction of similar results (literal replication) or (b) gives rise to contrary results for predictable reasons (theoretical replication). Each individual case study consists of a ‘whole’ study in which data are gathered from various sources and for the researcher to interpret the data. The three countries were selected because they share similar characteristics which reinforce the results by replicating the pattern matching (literal replication). In addition, the use of the case study research method aimed to reveal some of the salient characteristics specific to each country while examining the macro and micro-environmental factors that affect how consumers use their mobile phones (theoretical replication). Specifically, the focus will be on consumer identity. The macro and micro-environmental factors have been identified in Chapter Two (Section 2.4.3) and shown again in Figure 3.3 below.

To narrow the area of study and to focus on key issues, several assumptions were made. According to Simon (2010), assumptions are things in a research that are beyond a researcher’s control but if they are not stated, would make the research less relevant. Leedy and Omrod (2010) posited that “Assumptions are so basic that, without them, the research problem itself could not exist” (p. 62). The assumptions made in this research were drawn largely on prior research on mobile telephony - specifically, Crabtree, Nathan and Roberts’ (2003) study “Mobile UK – Mobile phones and Everyday Life”, Plant’s (2002) research “On the mobile – the effects of mobile telephones on social and individual life” and Bar, Pisani and Weber’s (2007) research “Mobile technology appropriation in a distant mirror: baroque infiltration, creolization and cannibalism”.

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Everyday life is not a sequence of isolated practices. To a certain extent, there is a ritualistic quality to it that generates some sort of pattern and ensures some form of functional and symbolic order. This would occur in the relationship between an individual user’s coordination between work, chores and leisure, family relations and other activities. This pattern character of everyday life provides the impetus to acquire a mobile phone if the product fits into the existing order of things. Inversely, it can produce resistance to the purchase of a mobile phone if the purchase has the potential to jeopardize the existing order. Once this technology - the mobile phone - has been appropriated and domesticated, it is interesting to examine if individuals have adapted their lifestyle to suit the acquisition of the mobile phone or if the mobile phone has transformed an existing lifestyle. This takes into consideration the cultural implications of the mobile phone as identified in the literature review and supports that the technology behind the mobile phone may be global but culture, values and lifestyles are not (Ling, 2002; Geser, 2004; Campbell, 2007).

The organization of everyday life and its ascribed meanings stem from an interplay of our socio-structural conditions, the specific life history of the individual and the inherent social context and cultural influences. This relates to the maintenance of key life roles and identities as explained in Section 2.4.3.1.2. Therefore each individual lifestyle paths may differ greatly and subsequently a person’s acquisition and domestication of the mobile phone may differ.
too. However, this study does not aim to put individuals into typology groups typical of lifestyle research. Stereotype responses are not in the interest of this research. Instead, this research focuses on the associations between the macro and micro-environments in relation to mobile phone consumption.

**Justification for the choice of cases**

The phenomenal growth of the Asian mobile phone markets provides a useful insight into the diffusion of mobile phone technologies into society. The three cases represent different stages in the evolution of a ubiquitous networked society. Japan serves as the undisputed leader in the utilization of mobile technologies in the conduct of everyday life. China is the developing nation with phenomenal growth in the telecommunications both in terms of handset output as well as subscriber rates. In many rural areas in China, the mobile phone is the first phone families or individuals own yet her data transfer rates are higher than that of the United States.

Singapore is the small but rich developed country with a mobile penetration rate that is significantly higher than its PC penetration rates. Additionally, these three countries share similar cultural traits. For instance, they are all high-context cultures – where a greater degree of communication is implicit. Also, within each society, micro-cultures are being created, modifying certain cultural norms and values and demonstrating the consumer’s ability to repurpose technology for his own use. Thus, these three case studies will be able to provide some insights into the macro and micro-environmental factors that influence mobile phone consumption.

**Case study protocol**

Given that case studies produce voluminous amounts of data, the researcher adopted a set of case study protocol as suggested by Yin (1994). A well-organized protocol should consist of the following sections:

- A brief overview of the case study project (goals, issues and topics being researched)
- The field procedures (this includes the credentials and access to sites and also sources of information)
- A set of case study questions (specific questions that the researcher must bear in mind during the data collection)
• A blueprint for the case study report (this may include the outline as well as the format for the narrative)

Stake (1995) believed that the use of protocols will help to ensure accuracy and alternative explanations and also supports the ethical need to confirm the validity of the processes used. This is important because case studies provide multiple perspectives and analyses that require the researcher to not only consider the voice and perspectives of the subjects involved in the case but also, of the relevant groups and the interactions between the groups (Yin, 1994). Using a set of protocols also provides the boundaries for the case studies so that the selection of cases leads to maximizing what can be learned in the period of time available for the study.

The researcher adopted a set of case study protocols as documented in Table 3.12.

<table>
<thead>
<tr>
<th>Objectives of the case studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen the findings from the literature review</td>
</tr>
<tr>
<td>Provide contextual and cultural details about mobile phone consumption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of evidence came from</td>
</tr>
<tr>
<td>Documentation – written reports about events and newspaper clippings and other articles appearing in the mass media relating to mobile phone consumption in each of the three countries</td>
</tr>
<tr>
<td>Archival records – data from previous research on mobile phone consumption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case study questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What role does globalization play in influencing how people in each of the countries use their mobile phones?</td>
</tr>
<tr>
<td>What role do the media play in influencing mobile phone consumption in each of the countries?</td>
</tr>
<tr>
<td>How do global brands/global marketing affect the consumption of mobile phones in each of the three countries?</td>
</tr>
<tr>
<td>Are there any specific culture-related behaviour?</td>
</tr>
<tr>
<td>How do people in the three countries assert their individual identities when using the mobile phone in their everyday activities?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guide for case study report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic demographic statistics for each country such as total population and mobile phone penetration rates</td>
</tr>
<tr>
<td>The evolution of mobile phone technologies in each country</td>
</tr>
<tr>
<td>Similarities in behaviour</td>
</tr>
<tr>
<td>Differences in behaviour</td>
</tr>
</tbody>
</table>

Table 3.12 Case study protocols for this research

Source: Developed for this study

3.3.2 Survey Research

Every successful survey research project starts with a sound instrument design. The construction of the survey instrument started with a careful consideration of existing literature on the subject matter (Chapter Two) as well as the case studies, in order to find appropriate
measures for the key constructs. Inspiration was also drawn from Scheaffer, Mendenhall and Ott’s (1996) survey planning procedures.

Objectives of the survey

1. To reveal some of the consumption dynamics that influences a young working individual’s attitude towards mobile phones.
2. To investigate how these young consumers use the mobile phone technology in their everyday life (cultural influences) and how this technology subsequently became integrated into their lifestyles.
3. To understand how an individual’s macro-environment affects his perception and usage of mobile phones. This relates to social behaviour with relation to the use of a mobile phone.

Target population

The target population consists of working adults between the ages of 25 – 45 in the Information Technology sector. Ethics approval was obtained before the survey was administered online. Respondents consisted of 28 males and 12 females. Since the focus is on how the mobile phone is used in the coordination of everyday life (cultural influences), respondents were selected according to the criteria that best exposed these characteristics. Specifically, this sector was chosen because the focus of the study is how consumers are utilizing mobile phone technology in the coordination of everyday life and not how consumers are learning to use the technical aspects of the mobile phones in the coordination of everyday life. It is assumed that individuals in the information technology sector will be familiar and comfortable with the use of mobile technology. This also facilitates the administration of the web-based survey. This group was selected for the following reasons:

1. A huge body of work has already covered the youth segment (Prichard, 2004; Taylor & Harper, 2003; Ito & Okabe, 2006; Katz & Sugiyama, 2006; Haddon, 2008) quite substantially. Also, the youth segment’s consumption behaviour is largely reliant on certain structural absolutes such as dependence on parents, education requirements and rules in public places.
2. The selected group falls under the ‘younger’ generation group that has considerable disposable income. This means that any decision-making with regard to mobile phones would probably be made by the individual. In addition, this ‘hip and trendy’ group would
probably be aware of and interested in new mobile technologies.

3. Some of those within this age group are also just starting to have families of their own. Individuals with families will typically experience special consumption dynamics related to children and these can be important in relation to the features of the phone like the camera or picture message functions. Also, they would most likely use the mobile phone for the coordination of household activities in everyday life.

4. The interplay between work and leisure could also provide interesting insights into how these young individuals perceive the use of mobile phones in a context-switching environment.

5. Given that the popularity of mobile phones manifested in recent years, this group would have experienced what life was before the use of mobile phones became widespread. They would be able to provide some insights on how the mobile phone has changed their social networks.

**Questionnaire design**

A well-designed questionnaire should meet the research objectives. The main steps in the design of a questionnaire are (1) ascertain the questions to be asked; (2) choose the question type for each question and decide on how it should be worded and (3) structure the question sequence and overall questionnaire layout (Burgess, 2001). Borgatti (1996) offered the advantages and disadvantages of choosing open-ended or closed-ended questions as shown in Table 3.13 below. Based on the suggestions by Burgess (2001) and Borgatti (1996), the researcher derived a set of questionnaire guidelines for the design of the survey instrument:

1. Given that this is a self-administered questionnaire, questions that will raise interest are placed at the start of the questionnaire.
2. The questions should flow logically and there should be some variety in the questions to vary the pace and sustain interest.
3. Questions should be laid out neatly and put in meaningful order and format.
4. Avoid double-barrelled and loaded questions.
5. Questions should be clearly worded and presented in a concise manner.
6. The questions asked must be relevant to the objectives of the survey.
<table>
<thead>
<tr>
<th>Closed-ended questions</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Easy and quick to answer</td>
<td>• Can put ideas in respondents’ heads</td>
<td></td>
</tr>
<tr>
<td>• Answers across respondents are easy to compare</td>
<td>• Respondents with no opinion answer anyway</td>
<td></td>
</tr>
<tr>
<td>• Answers easier to analyse on computer</td>
<td>• Respondents can feel constrained/frustrated</td>
<td></td>
</tr>
<tr>
<td>• Response choices make question clearer</td>
<td>• Many choices can be confusing</td>
<td></td>
</tr>
<tr>
<td>• Easy to replicate study</td>
<td>• Can’t tell if respondents misinterpreted the question</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fine distinctions may be lost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clerical mistakes easy to make</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Force respondents into simple responses</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Open-ended questions</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Permit unlimited number of answers</td>
<td>• Respondents give answers with different level of detail</td>
<td></td>
</tr>
<tr>
<td>• Respondents can qualify and clarify responses</td>
<td>• Answers can be irrelevant</td>
<td></td>
</tr>
<tr>
<td>• Can discover the unanticipated</td>
<td>• Inarticulate or forgetful respondents are at a disadvantage</td>
<td></td>
</tr>
<tr>
<td>• Reveals respondents thinking processes</td>
<td>• Coding responses is subjective and tedious</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Requires more respondent time and effort</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Intimidates respondents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• When a respondent omits a response, can’t tell if it is because of belief or just forgetfulness</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.13 Advantages and disadvantages of open-ended and closed-ended questions

*Source: Borgatti (1996)*

**Sampling design**

Reiterating Section 3.2.4.7, sampling refers to the selection of the subjects to measure in a research project. A good sampling will ascertain how much and how well the researcher can generalize the findings from the study. For this study, random probability sampling was utilized. A list of sizeable corporations in the technology sector with employees of > 400 was drawn up and a random generator was used to select one corporation from the list. The relevant person in the corporation was then contacted over the phone to request for their employees to participate in an online survey. If the corporation that was selected by the random generator declined to participate in the online survey, the random generator would be used to select another corporation from the list. The number of employees in the corporation not only provided a large pool of respondents for random probability sampling but also assured a more diverse sample of respondents. Additionally, the researcher also took steps to deal with the possible sampling problems as mentioned in Section 3.2.4.7.

**Method of measurement and measurement instrument**

The method of measurement is a web-based structured questionnaire utilizing a Likert (1932) – scale format. The Likert (1932) point scale is a popular method of measuring attitude
because it is simple to administer and easy for respondents to answer (Schiffman & Kanuk, 1994). A five-point scale was employed in this study with 5 being “strongly agree” with the statement and 1 being “strongly disagree”. Respondents then check or write the number corresponding to their level of “agreement” or “disagreement” to each of the statements that describe the attitude-object being researched.

**The pre-test**

Prior to distribution, a series of pilot tests were conducted with a group of individuals in the information technology sector. The test participants were asked to complete the questionnaire in a simulated situation - that is, in front of a computer and then evaluate the questionnaire for clarity, bias, ambiguous questions and the relevance of the questions. The pre-test also indicated the length of time required for the completion of the questionnaire. After the questionnaire was finalized, it was administered to the sample population.

**Organization of data management**

Each of the completed survey questionnaires was given a unique identification number. The data is then screened for completeness and entered into a spreadsheet. Every fifth survey was then checked to verify data entry accuracy. These steps ensure that the records are organized and will enhance the overall quality of subsequent analyses.

**Data analysis**

The mixed methods research process model utilizes Onwuegbuzie and Teddie’s (2003) seven-stage conceptualization of the mixed methods data analysis process. This covers” (a) data reduction; (b) data display; (c) data transformation, (d) data correlation, (e) data consolidation, (f) data comparison and (g) data integration. Data reduction involves the reduction of both the dimensionality of the qualitative data as well as the quantitative data. Display data covers the pictorial description of the qualitative data and quantitative data. Next is the data transformation stage, wherein the quantitative data are changed into narrative data so that they can be analysed qualitatively and/or qualitative data are changed into numerical codes that can be represented in a statistical format. Data correlation relates to the quantitative data being correlated with the qualitised data or the qualitative data being correlated with the quantitised data.
This is then followed by data consolidation, wherein both quantitative and qualitative are consolidated to create data sets. The data comparison stage includes comparing data from the qualitative and data sources. The final phase is data integration. At this stage, both quantitative and qualitative data are combined into either a coherent whole or two separate sets of coherent wholes. Onwuegbuzie and Leech (2006) presented the relationships among research questions, research design and mixed methods data analyses as shown in Figure 3.4.

**Types of Qualitative and Quantitative Questions**

- **QUANT = descriptive**
  - QUAN = descriptive, causal-comparative or experimental
  - QUAN = descriptive, correlational or causal-comparative

- **QUANT = correlational**
  - QUAN = descriptive

- **QUANT or QUAL = comparative**
  - QUAN = descriptive

- **QUANT = descriptive**
  - QUAN = descriptive

- **QUANT = correlation**
  - QUAN = descriptive

- **QUANT = comparative**
  - QUAN = descriptive

**QUAN** = Quantitative; **QUAL** = Qualitative; **FLEXIBLE** = Any of the major qualitative research designs

**Figure 3.4 Relationships among research questions, research design and mixed methods data analyses**

*Source: Onwuegbuzie and Leech (2006)*

**Structure of the survey instrument**

The questionnaire comprises of four sections with each section corresponding to a single micro-environment factor as identified in Chapter Two. These are detailed as follows:

1. Section 1 pertains to questions covering the micro-environmental factor social networks.
2. Section 2 covers questions relating to the micro-environmental factor personal history.
3. Section 3 consists of questions pertaining to the micro-environmental factor the symbolic meaning of products.

4. Section 4 comprises of questions relating to the micro-environmental factor glocalization.

The survey questions, the rationale for the questions and the supporting literature are presented in detailed tables in Appendix 3.

3.4 ETHICAL CONSIDERATIONS

The notion of ethics is closely linked to the idea of morality. The word ‘ethics’ is derived from the Greek word ‘ethos’ which refers to a person’s character or disposition. The Latin word ‘mos’ relates to customs, manners or character (Kimmel, 1996). Thus, the term ‘ethics’ covers the broader systems of moral principles and rules of conduct (Denscombe, 2002). There is a high level of difficulty to strictly adhere to a set of standards because of the unforeseen constraints put on researchers. The researcher ensured that the research was conducted in an ethical manner by taking into consideration existing professional practices and ethics for researcher-respondent relationship and adhering to the following:

1. Ensuring the participants that anonymity and confidentiality would be preserved;
2. Participation was strictly voluntary and that participants may choose to withdraw from the study without completing the survey questionnaire without ramifications;
3. The information collected would be used only by the researcher and only for the purpose of this study as noted in the objectives of the survey (p. 109); as suggested by Sarantakos (1998).

This approach is further highlighted in Table 3.14 below. The researcher incorporated the ethics standards for researcher-respondent relationship as suggested by Sarantakos (1998) when conducting the survey research. Participants were assured that anonymity and confidentiality would be preserved. In addition, participation was voluntary and participants may withdraw from the study at any time without ramifications. The researcher also ensured that due credit was given to prior researchers for the inspirational ideas and facts that facilitated the conduct of this research.
Practices/Ethics standards | Description
--- | ---
Proper identification | Codes of ethics suggest that the researcher should identify himself to the respondent and avoid giving false impression of the researcher or the project sponsor.
Clear outset | Researchers should inform the respondent of the type of questions, the degree of question sensitivity or stress and the possible (true) consequences that the questioning and the research in general might have in the respondent.
Welfare of the respondent | The researcher should always be concerned with the welfare of the respondent, including mental and physical health and safety, and take all possible precautions to avoid incidental injury. The researcher should also avoid questions or issues that may cause embarrassment, guilt, discomfort, hazards or risks to the respondent. Where such conditions might occur, the researcher should inform the respondent accordingly at the outset of the study.
Free and informed consent | Respondents should participate in the research freely and not be pressured to do so or be deceived in any way. They should also be fully informed about the nature and goals of the study before they are asked to take part in the project.
Right to privacy | Researchers should respect respondents’ privacy when entering their private sphere and asking questions, and should allow respondents to leave unanswered questions for which they do not wish to provide the information required.
The right to anonymity | Data collected by the researcher should be anonymous, that is, not relate to names of other forms of identification.
The right to confidentiality | Information offered by the respondent should be used by the researcher only, and only for the purpose of the study; it should not be made available to other people for any reason or purpose.

**Table 3.14 Ethics standards for researcher-respondent relationship**

*Source: Sarantakos (1998)*

### 3.5 LIMITATIONS

The contributions of any study should be considered in light of its limitations. As with all research, there are limitations to the interpretations of the methods used and other issues that need to be addressed. While a research strategy integrating the different methods has a tendency to produce better results in terms of scope and quality, the researcher recognizes that there are boundaries to what can be concluded from this research. Despite the effort made by the researcher, there are limitations to a comprehensive research endeavour.

#### 3.5.1 Limitations from the Design of the Study

**The scope of the research**

Given the time and resource constraints encountered, the scope of the research had to be restricted. Primary data via a survey instrument covering the micro-environmental factors was obtained from only one country – Singapore. If the scope of the research was extended to include China and Japan, the larger sample may have strengthened the validity and reliability of the data obtained. In addition, the findings may have been further strengthened by pattern-matching the case studies with the questionnaire survey to provide a more comprehensive view of both the micro-environmental and macro-environmental factors and how they affect mobile phone consumption.
The breadth of the coverage
The sample size that was employed was relatively small. As explained in Section 3.2.2.8, a large sample size would reduce selection bias and be more representative of the population from which it is chosen (Sarantakos, 1998). Correspondingly, the complexity of the data as well as the quality has a direct bearing on the time needed for data collection and analysis. While advances in technology may have improved on the time needed to process quantitative data, there is still a need to spend a considerable amount of time to create and pre-test questions for the survey questionnaire in order to obtain high response rates.

The depth of the research
The researcher acknowledges that mixed methods research used this study provided more comprehensive evidence for supporting the research objectives. However, additional qualitative research after the survey research will further enhance the study by providing richness, depth and complexity of real living mobile phone consumers. Direct observation in addition to both the case studies and the survey could reinforce the robustness of the theories proposed as seen in existing mobile phone studies utilizing ethnography.

The objectivity of the research
While care was taken to ensure that the data obtained was value-free and objective, there is some subjectivity involved to a certain extent (Keller, 1985). Taking into account the fact that this research concerns the everyday life activities of individuals living in society, it is not totally value-free. The cultural and technological conditions of a society are not stagnant but constantly evolving. Truth is therefore relative, rather than absolute. Conn (1981) and Peshkin (1988) believe that authentic subjectivity is genuine objectivity. Thus, the researchers must openly admit, clarify and criticize their own assumptions if their findings are to become more objective. For this research, the researcher ensured that the objectivity of the research was not compromised by documenting in details all procedures taken, the assumptions that were made and the challenges that were faced.

3.5.2 Limitations of Approach
The mixed methodology was adopted to counter the weaknesses of each approach in order to get the best blend of both approaches. However, because no framework exists for linking research questions to mixed method studies (Onwuegbuzie & Leech, 2006), a certain amount of finesse was required to achieve a harmonic balance using both approaches. While the main
virtue of using a mixed method approach is that it widens the scope of the analysis, it also produced a voluminous amount of data which required some creative interpretation and reformulation by the researcher. Unquestionably, mixed methods research is labour-intensive as it encompasses data collection at different phases and multiple analyses. This undertaking was further complicated by the complex and often paradoxical nature of the social world (Miles & Huberman, 1994) as well as the need to tap into the different domains of knowledge (Mathison, 1988).

Also, since this approach attempted to integrate worldviews, concepts and mixed methods involving both qualitative and quantitative approaches, it faced the difficult task of reconciling the often conflicting conceptualizations and practices of these two diverse approaches. The researcher used a single paradigm to reduce the complexity. However, there are even challenges within the constructivism inquiry. One, the goal in constructivism is to allow for the transferability of the findings, rather than the wholesale generalization of those findings (Pickard & Dixon, 2004). Because the goal is to gain comprehension of the complexity of human experience in relation to mobile phone consumption, a certain amount of flexibility in design, data collection and analysis of research is suggested so as to gain deep understanding of the phenomenon (Sidani & Sechrest, 1996). Thus, the question of applicability to other contexts arises. Dervin (1997) believes that because every context is different, research can only be particularized and that generalization in the traditional scientific sense is impossible. The ‘interpretive’ stance of constructivism also affects the confirmability of the study as it introduces a certain measure of investigator bias. Indeed, analysis of qualitative data may be intuitive in nature (Krauss, 2005). In addition, qualitative researchers should try to put down in writing in the research report any of their own biases, thoughts and feelings (Creswell, 1994). According to Lythcott and Duschl (1990), the constructivist ontology suggests that reality is not inherently objective but a combination of multiple realities constructed by human beings in an effort to construct meaning. To a certain extent, conclusions drawn from interpretive/intuitive analysis will be not be clear (Sidani & Sechrest, 1996) unless researchers provide a thorough audit trail of the research process.

3.5.3 Limitations of Surveys
According to Leedy and Ormrod (2005), construction of the questionnaire is an extremely demanding task as it requires competence in knowledge of methods but also extensive
experience with research and questioning techniques. Completing the questions of a survey is a high cognitive task. Thus, it is important for those who conduct surveys to have a clear understanding of how respondents will complete that task. Also, the researcher must be attuned to uncovering measurement issues that empirical approaches may not be sensitive to, such as when different groups of respondents respond similarly to one another in a given situation but may actually have different meanings. Leedy and Ormrod (2005) add that the process of creating a questionnaire is not only time-consuming but also challenging as the end product must be justifiable as a research tool.

The focus was on voice calls and text messaging and the questions asked in the survey questions reflect that. Even though smartphones were introduced in Japan prior to 2009, it was not widely used in both Singapore and China at that time. Thus, the survey questionnaire represented a snapshot in time in Singapore in 2009. However, there were aspects of the survey instrument that could have been better designed and implemented. A larger sample size of 60-80 respondents may have made the findings more robust. Also, the survey could have included more specific questions as to the specific age and nationality of the respondents. This would have provided an additional dimension to the analysis without compromising the anonymity of the respondents. In addition, the survey could have been extended to include the other two focus countries – China and Japan. This would have allowed for cross-country analysis across both the case studies and survey and reinforced the findings.

Some of the limitations of surveys were explained in Table 3.10. Also, survey findings usually suggest follow-up qualitative investigation. Further work, such as qualitative case study and group interview methods, will be essential to gather a full understanding of the phenomenon. There are also some challenges associated with the quantization of qualitative data. Qualitative codes are challenging because they are often multidimensional, providing insights into a host of interrelated conceptual themes or issues during analysis (Driscoll et al. 2007). In addition, there are certain shortcomings when it comes to utilizing quantized qualitative data for statistical measurement. Firstly, these data are susceptible to the problem of collinearity, wherein response categories are themselves linked as a consequence of the coding strategy. Secondly, the need to collect and analyse qualitative data may coerce researchers to keep to a small sample size. This in turn, places constraints on the kinds of
statistical procedures that could possibly be used for measures of association, such as t-tests and analyses of variance (Driscoll et al. 2007). In this study, there were aspects of the survey instrument that could have been better designed and implemented. A larger sample size would have made the findings more credible. Also, the survey could have included more specific questions as to the specific age and nationality of the respondents. These would have provided an additional dimension to the analysis without compromising the anonymity of the respondents.

3.5.4 Limitations of Case Studies

As a research methodology, case studies help to establish parameters but the findings are generalization that relate to theory and may not apply to populations (Yin, 1994). As such, it is sometimes thought of as “microscopic” because even utilizing a large number of cases does not turn a multiple-case study into a “macroscopic” study that may allow for generalizations to apply to populations (Hammel, Dufour & Fortin, 1993). According to Tellis (1997), construct validity poses a particular problem in case study research because of potential investigator subjectivity or bias. The researcher minimized this bias by using combining multiple sources of proof. In addition, the selection of cases for this study was a difficult task. As mentioned in 3.3.1, each case was carefully selected so that it either (a) forecasts similar results (literal replication) or (b) generates contrary results for predictable reasons (theoretical replication). While valid reasons for the choices for the case study were cited, the researcher acknowledged that the selection was made to best engage what can be learned with the time and resource constraints. However, the combination of the two methods worked in complementary ways to enhance the findings in the research. The case studies on mobile consumption provided very engaging and rich explorations in a real-life setting while the survey questionnaires confirmed the findings uncovered in the exploratory phase.

3.6 DELIMITATIONS

Delimitations are the characteristics that limit the scope and define the boundaries of a study that are within the researcher’s control (Simon, 2010). The contributions of any study should be considered in light of its delimitations, that is, the parameters set by the researcher. While Section 3.5 dealt with the limitations that are beyond the control of the researcher such as the shortcomings of approaches, this section addresses the boundaries the researcher has chosen for this study.
3.6.1 Delimitations of Literature

The rise of the smartphones and the apps market

Even though there have been recent literature on the rise of the smartphone as well as its corresponding apps markets, the research is primarily focused on the pre-smartphone mobile phone landscape. This is because it has become difficult to differentiate between mobile phone usage and internet use in the light of technological advancement in ICT use since 2009 (Chu, 2012). The survey questionnaire was a “snapshot” of mobile phone users in Singapore 2009 before the proliferation of the smartphone. The main reason is because the bulk of the published literature relating to the key topics of culture, consumption and mobile phones corresponded to the pre-smartphone landscape. In addition, the literature on the smartphone and the apps market is focused more on the technological advancements in communication technology as opposed to the whys of mobile phone consumption. Also, the case studies uncovered that government regulations played a significant part in spearheading the rate of adoption of mobile technologies such as the smartphone. This meant that an analysis of the pre-smartphone mobile landscape would yield more accurate results as to how consumers are adopting mobile phones as a communicative device as part of everyday life.

Mobile computing is becoming the universal standard channel through which people interact with each other using social media (Saylor, 2012). Although the use of traditional phones is in decline, there is evidence to support the view that voice calls and text messaging are still the primary ways in which mobile phone users connect with the wider economy and their “intimate sphere” of family and friends while on the go (Ling, Sundroy, Bjelland & Campbell, 2014). These two functions are so much part of everyday ritual that they have become normalised as part of “connected presence” (Ling, 2010; Wellman & Lee, 2012). In specific terms, the long history of text messaging as a reliable and efficient way of communication has stood the test of time with millions of text messages sent every month globally (Statistic Brain, 2015). Thus, the results of this research support the notion that voice calls and text messaging are still relevant in today’s smartphone era.

The social media landscape

The researcher acknowledges the importance of the social media landscape and pervasiveness of popular sites like Facebook, Pinterest and Instagram on how consumers are using their mobile phones as media creators. But since these social media sites are usually accessed by those using smartphones, the social media landscape is beyond the parameters of this study.
3.6.2 Delimitations of Population

*Youths*

Since today’s youth are considered the real “digital natives” having grown up with access to the Internet and digital communication and they are in the midst of discovering their individual identities, their use of mobile phones would be most closely related to the identity management aspect of this study. However, the youth group will presumably be using the most advanced smartphones and partaking in popular media sites, which is beyond the parameters of this study.

*The older generation*

This group has presumably adopted the use of mobile phones by social expectations and social controls from family members, friends and peers who want to maintain communications on the move. The older generation is possibly the least concerned about mobile phones being part of identity management. It is also assumed that they are of retirement age and are less constrained by time management issues. As such, the responses from the older generation group would probably be less relevant to the study.

3.7 SUMMARY OF CHAPTER THREE

This chapter began with a broad overview of major methodology and research design employed in this study. Research design serves as the glue that ties the entire research project together. The selection and justification of an appropriate paradigm for the study were explained. Having established the appropriate paradigm underpinning the research, the research design framework was developed. This study adopted the research design framework provided by Sekaran (1992). This encompassed nature of the study, sampling design as well as data collection methods. This discussion also included the procedures for the case study and the design of the survey instrument. The ethical considerations for researcher-respondent relationship were also described. In addition, limitations to the methodology inherent within this research were explained. The following chapter examines and discusses the results of the data collated. It provides a detailed description of the findings, analyses and conclusions.
CHAPTER FOUR: DATA ANALYSIS

4.1 INTRODUCTION

In the previous chapter, the methodology used for this study was described. Specifically, this chapter extends from the procedures mentioned in Chapter Three and the literature in Chapter Two, drawing on both numerical and non-numerical information to generate general and specific information about the factors in the macro and micro-environments that affect mobile phone consumption. The data collected for this research was then collated and presented in a meaningful form for analysis (see Appendix 1 & 2). This is illustrated in Figure 4.1.

![Figure 4.1 Linkages between the data analysis and the factors in the micro and macro-environments](Source: Developed for this study)

As explained in Chapter Two, contemporary societal life is broadly categorized into the macro-environment, which relates to globalization, media and global marketing/global brands and the micro-environment, which relates to social networks, personal history, symbolic meaning of products and glocalization (Section 2.4.3). The mobile phone serves as the identity-related possession. The case studies cover the countries of Japan, China and Singapore with the key focus on the factors in the macro-environment while the surveys focus on Singapore with the key emphasis on the factors relating to the micro-environment. The discussion on the findings of Chapter Four within the context of the literature as it relates to marketing opportunities for businesses will be covered in Chapter Five. Table 4.1 below represents the broad structure and its key contents for the data analysis.
4.1 Introduction
• Brief introduction to the chapter
• Structure for Chapter Four

4.2 Findings from the case studies
• Each of the three countries – Japan, China and Singapore – is examined based on the macro-environmental factors as identified in Chapter Two – globalization, media, global marketing/global brands.
• Similarities and differences between the cases are highlighted

4.3 Findings from the survey questionnaire
• Findings from the survey questionnaire are tabulated

4.4 Overall findings
• Integrated findings from both the case studies and the survey questionnaire

4.5 Limitations
• Challenges in the data collection and analysis are presented

4.6 Summary of Chapter Four
• Summary of major points discussed in the chapter

Table 4.1 Structure for Chapter Four
Source: Developed for this study

4.2 FINDINGS FROM THE CASE STUDIES

In this section, findings from the case studies are presented as individual cases. Each of the cases is presented as a ‘whole’ study in which facts are gathered from various sources and conclusions drawn from those facts. Keeping to the objectives and scope of this study, each case will primarily be based on patterns, themes and positions built on cultural orientation with a specific focus on consumer identity. These findings are discussed in the context of the macro-environmental factors as identified in Chapter Two – globalization, media and global marketing/global brands.

4.2.1 CASE STUDY: JAPAN

The next few sections can be distinguished into two broad categories: the characteristics of the Japanese mobile phone market and the peculiarities of Japanese mobile phone market. This is structured as shown in Figure 4.2 below.

Section 4.2.1.1 covers the characteristics of the Japanese mobile phone market which includes overview of the Japanese mobile phone industry and regulatory issues, the major players and subscribers and also how the Japanese utilize their mobile phones in everyday life. Section 4.2.1.2 focuses on the peculiarities of the Japanese mobile phone market.
4.2.1.1 Characteristics of the Japanese mobile phone market

Overview of the Japanese mobile phone market

Japan, with a population of 128 million (as of 2013), is well-known for its competitive and vibrant mobile phone market. Way ahead of other countries in terms of technological advancements and the rate at which their citizens embrace technology, Japan has always been a beacon for predicting trends in the global mobile phone market. The telecommunications regulatory authorities in Japan have been instrumental in shaping the industry and as a result, Japan has assumed a dynamic leadership role in many aspects of global and regional telecommunications.

Japan was the first country in the world to invest in third generation mobile phone networks way back in 2001. This increased broadband capabilities and allowed for better transmission of voice and data. As such, her leadership in the telecommunications industry is not only in terms of her sizable market but primarily in terms of innovation and the ability to be early adopters of advanced telecommunications technologies (ITU, 2013). Mobile marketing and advertising expenditures in Japan in 2009 was 103.1 billion Yen (Dentsu, 2010) and Japan’s mobile social game market will reach US$3.4 billion in 2012. As of April 2012, one in five mobile users in Japan owns a smartphone (www.comscore.com, 2012). The Japanese mobile phone market is dominated by three major players – NTT DoCoMo, KDDI and Softbank (as seen in Figure 4.3 below).
The Japanese government played in an instrumental role in boosting the adoption of 3G in Japan. To politically boost 3G adoption, carriers never had to pay a single Yen for mobile phone bandwidth. As a result, the country’s three main carriers churn out around 100 different Internet-enabled 3G handsets per year, each equipped with a whole array of flashy functions and the Japanese use their mobile phones for all aspects of day-to-day living.

Network carriers have driven the phone manufacturers’ product development and business strategies. They have used proprietary technologies at one end of the process and their control of the handset marketing at the other end to specify new bundles of applications in each new model. The consequence of this engineering-driven approach in Japan, together with the carrier’s massive network investments, is that the Japanese mobile services development has stayed at least three to four years ahead of the world in the last decade (Fujita, 2008). A timeline of mobile technology innovations/adoption in the Japanese mobile phone market is presented in Table 4.2 below.
<table>
<thead>
<tr>
<th>Mobile service/technology</th>
<th>Description</th>
<th>Year it was introduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location-based services</td>
<td>Service launched by NTT Personal that estimates a caller’s distance from a wireless transmission tower. Used primarily to locate pets, children and the elderly. J-phone started offering a ‘J-sky station’ in 2000. NTT DoCoMo introduced its location-based service ‘i-area’(see i-mode) in 2001.</td>
<td>1998</td>
</tr>
<tr>
<td>i-mode</td>
<td>Introduced by NTT DoCoMo. Main services were email, information services and applications such as internet banking and ticketing reservation ‘i-area’ service provides weather, dining, traffic and other information. The information is organized according to the handset’s current dialling code.</td>
<td>1999</td>
</tr>
<tr>
<td>Colour display handsets</td>
<td>Allows users to view contents on phone in colour.</td>
<td>1999</td>
</tr>
<tr>
<td>Audio services</td>
<td>Allows users to download ringing tunes by assessing a content provider’s website.</td>
<td>1999</td>
</tr>
<tr>
<td>3G network services</td>
<td>Increased broadband capabilities allowed for better transmission of voice and data.</td>
<td>2001</td>
</tr>
<tr>
<td>Java-enabled handsets</td>
<td>DoCoMo launched the first Java-enabled handsets offering the ‘i-appli’ service – an enhanced i-mode service which enabled the subscriber to download and run small Java applets.</td>
<td>2001</td>
</tr>
<tr>
<td>Movie mail</td>
<td>A multi-media messaging system which attaches a short movie to mobile email.</td>
<td>2002</td>
</tr>
<tr>
<td>Videophone service</td>
<td>Subscribers can see real-time images of each other.</td>
<td>2002</td>
</tr>
<tr>
<td>Camera phones</td>
<td>Integrated camera phones allowed users to take photos with their phones.</td>
<td>2003</td>
</tr>
<tr>
<td>Mobile TV</td>
<td>Continuous viewing was limited to an hour due to battery size but users can capture up to 9 pictures and record up to 30 seconds of moving pictures in MPEG-4 format from broadcasted TV programmes</td>
<td>2003</td>
</tr>
<tr>
<td>Sonic speaker handsets</td>
<td>Handset has a mechanism to transmit voice through bone conduction to support devices such as hearing aids for those who are hard of hearing.</td>
<td>2003</td>
</tr>
<tr>
<td>“FeliCA” based handsets</td>
<td>Sony’s RFID swipe chip card for purchases. This allows users to utilize their mobile phones as tickets or cash for services such as public transport.</td>
<td>2003</td>
</tr>
<tr>
<td>“Emoji”</td>
<td>Emoticons used in Japanese wireless messages and webpages. The characters are used much like emoticons elsewhere, but a wider range is provided, and the icons are standardized and built into the handsets. The three main Japanese operators have each defined their own variants of emoji.</td>
<td>2003</td>
</tr>
<tr>
<td>QR barcodes</td>
<td>Quick Response 2D barcodes printed on products and posters. Users pinpoint their mobile phones to the barcodes and are instantly brought to the relevant websites. The codes allow for the fast reading of large amounts of alphanumeric data.</td>
<td>2004</td>
</tr>
<tr>
<td>Mobile books</td>
<td>Books written on mobile phones for reading on mobile phones.</td>
<td>2006</td>
</tr>
<tr>
<td>Smartphone</td>
<td>The introduction of smartphones.</td>
<td>2007</td>
</tr>
<tr>
<td>Super 3G technology</td>
<td>Experimental Super 3G technology transmitting 250Mbps.</td>
<td>2008</td>
</tr>
<tr>
<td>4G technology</td>
<td>Field trials of LTE</td>
<td>2008/9</td>
</tr>
</tbody>
</table>

Table 4.2 Timeline of mobile technology innovation/adoption in the Japanese mobile phone market

Source: Compiled from various sources for this research
Mobile phones and the everyday life

The rapid progress of the Japanese telecommunications industry, led by the telecommunications authority and the local network carriers, has led to the incorporation of the mobile phone in the everyday lives of the Japanese people. Overall, comfort with electronic and digital gadgetry is well-established and people harness the power of the mobile phone in many aspects of their daily life. This is reflective of the Japanese reputation as early adopters of technology; they leap at new commercial products and are eager to try out new services (Coates & Holroyd, 2003). Table 4.3 summarises some of the capabilities of a Japanese mobile phone.

<table>
<thead>
<tr>
<th>Capabilities of a Japanese mobile phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV Phone</td>
</tr>
<tr>
<td>E-money service and various certification functions through Untouched IC card</td>
</tr>
<tr>
<td>Various service like NTT Docomo’s ‘osaifu-keitai (mobile phone with wallet function)</td>
</tr>
<tr>
<td>E-money service e.g. ‘Edy’</td>
</tr>
<tr>
<td>Function as ‘Suica’ which can be used for a season ticket or train ticket</td>
</tr>
<tr>
<td>Cmode: vending machine which can be used with QR code and ‘osaifu-keitai’ of a mobile phone</td>
</tr>
<tr>
<td>Crime prevention buzzer (with automatic report system to the police)</td>
</tr>
<tr>
<td>Pedometer</td>
</tr>
<tr>
<td>‘Read loud’ system</td>
</tr>
<tr>
<td>Touch-pad system</td>
</tr>
<tr>
<td>Mobile phones with HDD (Hard Disk Drive)</td>
</tr>
<tr>
<td>Mobile Centrex service with wireless LAN</td>
</tr>
<tr>
<td>A fingerprint/face certification system for the protection of personal data</td>
</tr>
<tr>
<td>Navigation by GPS</td>
</tr>
<tr>
<td>Configurable databases</td>
</tr>
<tr>
<td>Phone and address books</td>
</tr>
<tr>
<td>Alarm clocks and stopwatches</td>
</tr>
<tr>
<td>Games</td>
</tr>
<tr>
<td>Daytimers</td>
</tr>
<tr>
<td>Varying degrees of image enhancement capabilities, such as the option to create borders, to create animation etc.</td>
</tr>
<tr>
<td>Instant messenger</td>
</tr>
<tr>
<td>Calculator, calendar, schedule note and memo pad</td>
</tr>
<tr>
<td>Playback of downloaded music</td>
</tr>
<tr>
<td>Recording and playback of voices, music, images and pictures</td>
</tr>
<tr>
<td>Portable music player</td>
</tr>
<tr>
<td>Viewing and listening to TV and radio (FM/AM)</td>
</tr>
<tr>
<td>House key</td>
</tr>
<tr>
<td>Credit card</td>
</tr>
<tr>
<td>Input Japanese characters – “Emoji”</td>
</tr>
</tbody>
</table>

Table 4.3 Capabilities of a Japanese mobile phone

Source: Compiled from various sources for this research
As seen in Table 4.3, the Japanese mobile phone has many capabilities which correspond to the everyday activities of a typical Japanese citizen. Japan has long been a navigation beacon for understanding the diffusion of technology through society. Specifically, Japan has been widely successful in the convergence of mobile technologies with the local culture in the creation of a truly ubiquitous networked society (ITU, 2004). This is put succinctly by Ito (2004), “Japan has also been considered an incubator of popular consumer trends that integrate portable technologies with urban ecologies and fashion” (pg. 1).

The typical Japanese mobile phone user is familiar with technology and is accustomed to using his mobile device at every available opportunity – whether to contact old friends or to send meaningless prank messages. Mobile emails are also a considerate and less intrusive way to keep in touch and convey one’s thoughts quickly, yet without interfering with the other person’s activities. Most mobile messages are sent to tell others about something that had just happened or their thoughts of the moment. In addition to serving as an expressive extension of chit-chat, mobile phone email also fulfills instrumental needs because it is a convenient way to specify an appointment, confirm a location and so on, it can also serve more intimate need such as a channel for touchy subjects that may be difficult to talk about on the phone or face-to-face. Cushioning the words by using emoticons and hetamoji (funny handwriting characters) has made it easier to get messages across in difficult situations. Mobile communications are generally perceived as having improved Japanese relationships with both friends and family (Ito, Okabe & Matsuda, 2005).

Talking on the mobile phone while riding on a train or bus is frowned upon and messages asking passengers not to make calls and to switch their phones to the silent mode are played frequently (Ito, Okabe & Matsuda, 2005; Canton, 2012). This, combined with the low per-message price, the ability to enhance messages with special characters, emoticons, pictures and small animations and the write in English or Japanese, has made text messaging popular among people of all ages. Picture 4.1 below shows “Emoji” – a popular set of scores of pictographs essential in mobile messaging.
The Japanese mobile phone user is used to receiving rich-content advertising messages. In addition, the Japanese user is also willing to pay for mobile content. These trends make direct marketing through mobile phones a lucrative market for advertisers. The success of the mobile advertising market in Japan attests to the successful convergence of media sources as the mobile phone is widely considered the seventh mass media tool (Fujita 2008). Mobile operators typically establish their own mobile advertising agencies to support operators’ business models for mobile advertisements. Mobile marketing and advertising expenditures in Japan in 2009 was 103.1 billion Yen (Dentsu, 2010).

The long commute that millions of Japanese workers face to and from work also shaped the nation’s reaction to mobile internet and mobile commerce. The retail sector has adapted to the commuting culture as seen in the major stores attached to train stations and the wide reach of convenience stores. This provides a ready-made distribution system for e-commerce (Coates & Holroyd, 2003). The long commutes and typically small houses the Japanese live in made mobile internet particularly alluring. Another push factor was the dramatic expansion in Local Area Networks (LAN), positioned within coffee shops, libraries, airports, community centres and shopping centres to attract mobile internet users.
4.2.1.2 Peculiarities of the Japanese mobile phone market

Role of the government

The Japanese government has been instrumental in the shaping of the telecommunications landscape in Japan. Several proactive measures taken by the government include expanding wireless LAN to integrate the internet into national life ways (Coates & Holroyd, 2003) and forgoing profits to politically boost the adoption of 3G within the country (Fujita, 2008). This enabled carriers to focus their energies on building a reliable technical infrastructure and developing advanced mobile phone devices. In turn, innovative telecommunications technology was made affordable for the average mobile phone user (Coates & Holroyd, 2003).

In addition, the Japanese government encourages innovation by contributing largely to innovative research initiatives. The massive infusions of government money resulted in the development of price competitive and quality mobile devices, making the Japanese world leaders in this area (Fujita, 2008).

The local landscape

The local Japanese landscape also helped to facilitate the growth of mobile devices and services within the country. Bank machines that had become commonplace in other countries were difficult to find in Japan where the use of cash remains widespread (Coates & Holroyd, 2003). Carriers double as centralized billing institutions, significantly facilitating transactions conducted on cell phones (Fujita, 2008). In addition, Japan has an extensive network of convenience stores around the country. These are readily converted into delivery and pick-up centres for m-commerce purchases, thus further adding to the ease of digital shopping in the country (Coates & Holroyd, 2003).

Long commutes via public transportation in Japan’s heavily urbanized and complex grid systems made mobile global positioning systems popular (Coates & Holroyd, 2003) and web surfing on the mobile phone convenient (Fujita, 2008). Also, the mobile web in Japan is fast, sophisticated, technically stable, and easy-to-use. Users press one dedicated button on the phone and are online within seconds, usually starting to navigate via menus predetermined in the carrier’s landing page. Alternatively users can type in URLs directly to get to mobile web sites, which can then be conveniently browsed by using one-key shortcuts.
**Cultural traits**

The Japanese are well-known for their vibrant keitai (the Japanese term for mobile phone) culture, strongly reflective of Generation C (Community) where mobile phones are used for everything – from buying a can of drink to the writing of books and surfing of the internet. Also, the Japanese have commodified all areas of the device, from antennae covers, wristbands, stickers, faceplates, phone covers and carrying cases (Katz & Sugiyama, 2006). The keitai has become a statement of individuality. This relates to individual identity.

The market is full of ‘early adopters’, consumers who are willing to experiment with new products. The major companies conduct the normal market tests and reviews, release new items into the marketplace and then decide if they are going to keep them in production, revamp the design or concept or test the products in foreign markets. Japan offers manufacturers a wealthy, fast-moving and highly forgiving test market and many leading IT firms have capitalize on this important commercial foundation. The remarkable success of the Walkman, PlayStation and DoCoMo mobile internet phones and other digital devices are a testament to the willingness of Japanese consumers to try out new items and to shift to them en masse if the quality, price and nature of the product warrants (Coates & Holroyd, 2003).

The Japanese are particularly savvy in cultural adaptation. The Japanese mobile phones use an email-based system and not SMS as used in most other countries. The phones have the capability to use very large sets of characters and icons based on JIS standards that define characters for industrial appliances. More than one thousand characters including all of the Latin alphabet, hiragana, katakana, kanji and arrows, musical notes and more, can be used to compose messages. These character sets are used extensively and often in a way that do not use their original meaning by relying more on the information based on the shape each character has (Ito, Okabe & Matsuda, 2005).

Japan’s strength in cultural adaptation can be seen in her success in promoting mobile books. Prior to this, publishers had tried to release popular books like Harry Potter via mobile phones with little commercial success. The Japanese found a unique angle to publicize mobile books by promoting them as a literary outlet for budding authors. In 2007, five of the top ten bestselling printed books were originally released as mobile books. This market is worth US$82 million annually in Japan alone (Fujita, 2008).
The Japanese market is large enough to accommodate specific and directed marketing by product manufacturers. The Japanese can use their mobile phones, pinpoint to the barcodes on the products and they would be taken to the company’s website for more information about the product they are interested in. At every seat in the Chiba Lotte Marines baseball stadium, there is a barcode integrated into the seats, which once swiped, takes the mobile phone to a special home page where users can subscribe and get the latest *inside* information and columns available on the team site. Also, every game can be watched live on a phone, meaning instant coverage for the avid fans (Fujita, 2008).

Japanese companies never tried to duplicate the wired Internet experience but rather developed unique mobile ecosystems specifically for deployment on mobile phones. The main attraction of the combination of the telephone and the internet service is that it is perfectly suited for the Japanese life. The Japanese are known to spend long hours at work and a good portion of their time commuting to and from work on a daily basis (Coates & Holroyd, 2003).

### 4.2.2 CASE STUDY: CHINA

The next few sections can be distinguished into two broad categories: the characteristics of the Chinese mobile phone market and the peculiarities of Chinese mobile phone market. This is structured as shown in Figure 4.4.

![Figure 4.4 Structure of the case study on China](source: Developed for this study)

Section 4.2.2.1 details the characteristics of the Chinese mobile phone market. This includes the industry and regulatory issues, the major players and subscribers as well as the use of the
mobile phone in the everyday life of a Chinese mobile phone user. Section 4.2.2.2 focuses on the peculiarities of the Chinese mobile phone market by examining the cultural barriers, the unique Chinese mobile phone culture and the future directions for the Chinese mobile telecommunications market.

### 4.2.2.1 Characteristics of the Chinese mobile phone market

**Overview of the Chinese mobile phone market**

The Chinese telecommunications sector has been growing at a rapid rate, expanding at an annual rate of 30-50% since 1989 (Tan, 1997). By the end of 2006, China had become one of the hottest spots for international as well as domestic telecom operators, equipment and phone manufacturers with 461.1 million mobile subscribers (MII, 2006) (see Table 4.4).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main fixed lines in operation (thousands)</strong></td>
<td>87,420</td>
<td>144,829</td>
<td>214,419</td>
<td>312,443</td>
<td>367,812</td>
</tr>
<tr>
<td><strong>Main fixed lines per 100 inhabitants</strong></td>
<td>7</td>
<td>11.3</td>
<td>16.8</td>
<td>23.9</td>
<td>28.1</td>
</tr>
<tr>
<td><strong>Mobile telephone subscribers (thousands)</strong></td>
<td>23,863</td>
<td>85,260</td>
<td>206,270</td>
<td>334,824</td>
<td>461,082</td>
</tr>
<tr>
<td><strong>Mobile subscribers per 100 inhabitants</strong></td>
<td>1.9</td>
<td>6.67</td>
<td>16.19</td>
<td>25.6</td>
<td>35.3</td>
</tr>
</tbody>
</table>

**Table 4.4: Growth of telecommunication service in China**

*Source: MII (2006)*

China is a vast country with ICT penetration rates uneven across the regions (Jiang & Li-Hua, 2010). That said, the development of IT and information networks have dramatically changed people’s traditional ways of thinking about time and space (Qu, 2010). By 2003, the number of Chinese mobile phone users had surpassed that of landline sets (Guo & Wu, 2009). With more than 1.3 billion people, the world’s most populous nation is fast emerging as an
epicentre of the global mobile phone market with over a billion subscribers as of March 2013 (MobiThinking, 2014).

Over the last 15 years, China has developed an extensive mobile infrastructure to support its growing subscriber base. China’s telecommunications journey started in the early nineties with the Ministry of Post and Telecommunications being the sole provider of mobile services under China Telecom. This changed in 1994 when under pressure, China Unicom was introduced to the market. This failed miserably and in 1999, there was another round of restructuring and China Telecom was split into China Mobile, China Unicom and China Telecom Corp. All three are state-owned enterprises (Guo & Wu, 2009). Competition between players has significantly lowered the cost of access to telecommunications services. These price reductions have dramatically boosted consumer demand and stimulated growth in the sector (Jiang & Li-Hua, 2010)). Figure 4.5 shows the major players in the China market.

![Figure 4.5 Major players in China](source: Compiled for this study)

The breakdown of subscribers in China by three main operators – China Mobile, China Unicom and China Telecom is summarised in Table 4.5.

<table>
<thead>
<tr>
<th>Operators</th>
<th>Subscribers</th>
<th>3G users</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Mobile</td>
<td>667.2 million</td>
<td>61.9 million</td>
</tr>
<tr>
<td>China Unicom</td>
<td>209.5 million</td>
<td>51.8 million</td>
</tr>
<tr>
<td>China Telecom</td>
<td>135.8 million</td>
<td>45.6 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,012.5 million</strong></td>
<td><strong>159.3 million</strong></td>
</tr>
</tbody>
</table>

*Table 4.5 Mobile Subscribers in China by operator (as of March 2012)*

*Source: MobiThinking.com (2012)*
According to Analysys International, a Beijing-based research consultancy, there were 431 million mobile Internet users in China at the end of Q4, 2011. Figure 4.6 depicts the growth of China’s mobile internet users from Q1, 2009 to Q4, 2011.

![Figure 4.6 China’s mobile internet users 2009-2011](source: Analysys International)

China is also the largest smartphone market in the world with 22 percent of global smartphone shipments (MobiThinking, 2014). All these numbers point to China as the world’s largest and most important mobile phone market. Figure 4.7 shows eMarketer’s projections for China, 2010-2016.

![Figure 4.7 Mobile connections and penetration in China 2010-2016](source: www.eMarketer.com)
**Mobile phones in everyday life**

Since it was far cheaper to connect individuals by installing a single mobile base station in a town, rather than running telephone lines to every single house, the mobile phone is often the first phone a person or a family ever had in the rural areas. Since they are not PC users, their first experience with the internet will be over the mobile phone (Jiang & Li-Hua, 2010)). Aiming at the different needs of users, telecommunication providers have designed various services to satisfy different consumption needs in different market sectors, including text and multi-media messages, personalized rings and "palm stock market". "Customized cell phones" have also appeared as needed. They provide more mobile value-added services for the end users within a consortium of manufacturers, channel dealers, value-added explorers and other links.

Text messaging is one of the most popular functions of the mobile phone in China with more than 830 billion text messages sent in 2010 (CMIIT, 2010). Because of its low cost, immediacy and convenience, it is used for both interpersonal interactions as well as business communications such as advertising and marketing (Ling, 2010). Mobile texting is deeply embedded in ordinary Chinese people’s everyday life, as it is the primary means to stay in touch with the user’s social network. Younger users are engaged in more expressive uses of text messaging to convey emotional support to the social network. In contrast, older users preferred voice calls for its personalization and directness (Xia, 2012).

Nearly all of the mobile phone users are data users. They are comfortable with using text-messaging. 279 billion text messages had been sent by the end of 2007. Ringing tone downloads are very popular as well. A strong growth is also in seen in mobile games. The Chinese are crazy about PC and online games. As such, gaming communities on mobile phones in China support players of games like Counter Strike, Diablo and War Craft and many teenagers sign up for game tips of how to play these games better on their mobile phones. The number of mobile game users has reached 24 million as at October 2007. Other digital content services such as news, TV, social networking and advertising are slowly gaining momentum as well. Short messages and wireless music products have been driving the development of mobile value-added services in the last few years. Users have become accustomed to these well-received services (Jiang & Li-Hua, 2010)).
Given that the Chinese are not technology-averse, they have also embraced the use of smartphones for accessing the web. University students in remote parts of China have been buying Nokia N-series smartphones, costing several months of their disposable income. Such handsets are status symbols but also practical because it allows for students to access the web for their studies at a much cheaper rate than a fixed broadband internet connection. This reflects the discount-oriented culture of the Chinese – they are constantly looking for freebies or a good deal. As such, the Chinese mobile phone user is savvy and accustomed to mobile marketing. People like to express their opinions over the phone or send messages to the DJs. Polls are common and people love competitions and entertainment alerts are used as a means of attracting groups of people to different points of sale (Jiang & Li-Hua, 2010).

Mobile phone movies have emerged as a new industry in China, with the country’s great market potential attracting attention of investors, mobile-handset manufacturers, film directors, producers and advertisers. Mobile phone movies have spread among the youngest layers of the Chinese middle class. Their short duration fits perfectly within the context of a subway ride or coffee break. Figure 4.8 shows the growth of smartphone users and the penetration in China between 2010 -2016.

![Figure 4.8 Smartphone Users and Penetration in China, 2010 – 2016](www.eMarketer.com)

Source: www.eMarketer.com
4.2.2.2 Peculiarities of the Chinese mobile phone market

As with Japan, there are peculiarities in the Chinese mobile phone market which create unique cultural barriers. These include the unique local culture as well as the future trends for China after the implementation of 3G networks in 2009. The peculiarities of the Chinese mobile phone market are explained in the next few sections.

The local landscape

The size of the world’s most populous nation makes any growth in China a phenomenal one. Given that most of the rural areas do not have landlines, the leap from “no phones” to “mobile phones” has been staggering. In addition, deregulation of the sector has led to increased competition between telcos which has in turn, benefited local mobile phone users. The large market has also made it a great test market for targeted marketing campaigns.

However, given China’s low cost manufacturing competencies and the fact that the Chinese culture is one that prizes value above everything else, unless one has a low-cost value proposition, it is hard to make headway in China where the enforcement of intellectual property rights remains a challenge. China is number one in intellectual property theft. Chinese courts, which are not independent from the Communist Party, are typically hostile to foreign companies trying to squeeze Chinese companies who are stealing IP. The Chinese government has traditionally viewed Chinese IP theft as a win-win. It simultaneously builds Chinese know-how and Chinese manufacturing, but has the added benefit of damaging foreign competitors (Jiang & Li-Hua, 2010)). The Chinese opportunistic culture can be seen in the wake of the devastating earthquake in the Sichuan province in 2008 as depicted in Picture 4.2. The aftermath of the earthquake saw telcos setting up camp at the site to sell mobile phones to survivors.

![Picture 4.2 The devastating earthquake in Sichuan Province](Image)

*Source: Times Online (2008)*
Chinese work etiquette

Many Chinese who are used to working for inefficient, state-owned companies do not comprehend the obligation to return phone calls. Plus, Chinese workers are away from their desks most of the day, conducting meetings in the traditional, face-to-face Asian style and do not expect anyone to be answering their phones or checking for messages. This is one reason why mobile-based text messaging, which is cheaper than installing a complex office voice-mail system, is popular. In addition, many Chinese are not comfortable with leaving voice messages, especially with someone of a lower corporate rank as they consider it a loss of face (Guo & Wu, 2009). As a result of this, text messaging has emerged as a popular form of connection in place of traditional phone calls. According to Xia (2012), the market in China for SMS services is well-developed, economical and serves a large subscriber market. The short message has become a new type of informal literature, featuring political jokes and adult humour, bypassing the strict control that the Chinese government exercises over the public media.

4.2.3 CASE STUDY: SINGAPORE

The next few sections can be distinguished into two broad categories: the characteristics of the Singaporean mobile phone market and the peculiarities of Singaporean mobile phone market. This is structured as shown in Figure 4.9.

Figure 4.9 Structure of the case study on Singapore

Source: Developed for this study

As shown in Figure 4.9, Section 4.2.3.1 covers the characteristics of the Singaporean mobile phone market. This includes the overview of the Singapore mobile phone market, the major players and subscribers as well as the use of mobile phones in everyday life. Section 4.2.3.2 focuses on the peculiarities of the Singaporean mobile phone market.
4.2.3.1 Characteristics of the Singaporean mobile phone market  

Overview of the market  
As of 2012, Singapore has 8 million mobile phone subscribers with a penetration rate of 150% (IDA, 2014). With strong leadership from the government and good support from its telecom service providers, Singapore has continued to maintain its status as both a regional leader and a global player in telecommunications. The country has built a high quality and extremely progressive telecommunications regulatory regime that has, in turn, resulted in a richly competitive market. All restrictions on direct and indirect foreign ownership within Singapore’s telecom sector have been lifted. In fact, Singapore was one of the first countries in the world to have a 100% digital telephone network. Figure 4.10 shows the total infocomm industry revenue 2001-2012.

![Figure 4.10: Total Infocomm Industry Revenue 2001-2012](Source: IDA Singapore)

Singapore has always had a clear blueprint for its Infocomm Industry. The country is therefore well positioned for the development of a ubiquitous networked society. Table 4.6 below shows Singapore’s Infocomm Roadmap 1980 – 2015.
The Civil Service Computerisation Programme initially started with the focus on improving public administration through the effective use of infocomm technology. This involved automating work functions and reducing paperwork for greater internal operational efficiencies. Over time, this evolved into the provision of one stop services where government systems were extended to the private sector in implementations like TradeNet, MediNet and LawNet. Then in early 1990s, emphasis shifted towards the consolidation of computing resources.

eGAP was conceived to fulfil the vision of making Singapore one of the leading e-Governments in the world. Six strategic programmes were defined, namely: Electronic Services Delivery; Knowledge-based Workplace; Technology Experimentation; Operational Efficiency Improvement; Adaptive and Robust Infocomm Infrastructure; and Infocomm Education. Building on earlier efforts in the first e-Government Action Plan, eGAP II aimed to achieve the three distinct outcomes of Delighted Customers, Connected Citizens and a Networked Government. Specifically the focus was to deliver accessible, integrated and value-adding public services to our customers; and help bring citizens closer together.

iGov2010 is the Singapore Government's five-year masterplan that leverages infocomm to continue to delight our customers and citizens. To achieve this vision, four thrusts have been identified: Increasing Reach and Richness of e-Services; Increasing Citizens Mindshare in e-Engagement; Enhancing the Capacity and Synergy in Government; and Enhancing the National Competitive Advantage.

The action plans for e-Government have evolved in tandem with each National IT plan to bring about exciting changes to the way Singapore Government works, interacts and serves the public.

Championing ICT adoption in the government sector are the eGovernment Policies & Programmes Division (ePPD) and the Government Infrastructure & Technology Division (GITD). Together they architect and plan government infrastructures that meet the changing needs of the public service, and manage cum operate these infrastructures efficiently and effectively.

eGov2015 is the Singapore Government's five-year masterplan that leverages infocomm to co-create, connect and catalyse with its citizens. To achieve this vision, three thrusts have been identified: Co-creating for Greater Value; Catalysing Whole-of-Government Transformation and Connecting for Active Participation.

Table 4.6: Singapore’s Infocomm Roadmap 1980-2015

Source: IDA Singapore

The mobile phone industry in Singapore is dominated 3 major players – Singtel, MobileOne and Starhub as seen in Figure 4.11 below.
Singapore has a population of 5.3 million (as of 2012) with a mobile phone penetration rate of 150%. Figure 4.12 shows the mobile phone penetration between the years 2001 to 2013.

While Singapore is not known for innovations in mobile phone technologies, its small size allows it to implement new technologies within the country very rapidly. The high smartphone penetration rates make Singapore an ideal test bed for global applications (Enterprise Innovation, 2011). Table 4.7 below is a timeline of technology innovation/adoption in the Singapore mobile phone market.
<table>
<thead>
<tr>
<th>Mobile service/technology</th>
<th>Description</th>
<th>Year it was introduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near Field Communication</td>
<td>The Smart Poster Management System (SPMS) was introduced. Users can use their phones to tap on a Smart Poster to receive product and location information.</td>
<td>2007</td>
</tr>
<tr>
<td>Wireless marketing</td>
<td>Broadcast text messaging campaigns allow businesses to reach consumers.</td>
<td>2007</td>
</tr>
<tr>
<td>3G networks</td>
<td>3G networks were introduced which saw the rapid increase of 3G mobile subscriptions.</td>
<td>2009</td>
</tr>
<tr>
<td>Fibre-optic networks</td>
<td>In line with its vision for a ubiquitous networked society, Singapore started on its fibre-optic network strategy with slated completed in 2012.</td>
<td>2009</td>
</tr>
<tr>
<td>Handheld tablets</td>
<td>The introduction of popular handheld tablets added to the mobile subscription numbers and provided another avenue for consumers on the go to shop.</td>
<td>2010</td>
</tr>
<tr>
<td>QR codes</td>
<td>QR codes are increasingly being used by online retail stores to run marketing promotions.</td>
<td>2011</td>
</tr>
<tr>
<td>LTE 4G technology</td>
<td>LTE 4G technology was introduced, providing mobile phone users with faster access.</td>
<td>2012</td>
</tr>
</tbody>
</table>

Table 4.7 Timeline of mobile technology innovation/adoption in the Singapore mobile phone market

*Source: Compiled from various sources for this study*

The introduction of 3G networks also saw a rapid increase in the number of 3G mobile subscriptions as seen in Figure 4.13.

![Figure 4.13 3G mobile subscriptions 2009 – 2012](source: IDA Singapore)

**Mobile phones and the everyday life**

In line with the Singapore’s government’s initiative to achieve a ubiquitous networked society, its citizens are overall comfortable with electronic and digital gadgetry as seen in the high mobile penetration rates (Section 4.2.3.1) and how people utilize their mobile phones in everyday life as seen in Picture 4.3 below.
The three major telecommunications players offer competitive SMS broadcast services that integrate with tracking and analysis software. In addition, there are also specialist independent bulk SMS providers that provide campaigns for maximum efficiency and returns. As such, mobile phone users are accustomed to receiving text advertisements via their phones.

The government has also utilized the ubiquity of mobile phones by sending an island-wide multi-media text message to all citizens on their mobile phones when a suspected terrorist escaped from a detention facility in 2008. Government hospitals also send appointment reminders to patients via text messages.

2011 saw a record growth in mobile commerce to US$259 million from US$33 million in 2010. Figure 4.14 below shows the mobile spending categories in Singapore in 2011.
QR (Quick Response) codes are gaining popularity among those using smartphones. These codes are commonly seen in local newspapers and magazines as a way of connecting consumers to marketers.

4.2.3.2 Peculiarities of the Singaporean mobile phone market

The local landscape

Bank machines are located conveniently island-wide and people are accustomed to payments by traditional modes – automatic bank transfers (and recently, internet banking), cheques, post offices and stand-alone bank machines. As such, Singapore shows surprisingly little adoption for mobile payments through the mobile phone. The m-payments thus far are in the use of contactless cards for transportation and some limited retail usage. Currently, mobile banking is used by early technology adopters as a secondary channel to the internet. While the banks are in general agreement that mobile banking transactions may offer cost-benefit savings in the long run, consumer readiness is crucial to determining whether mobile banking will eventually be commonplace. In 2010, some local banks started offering mobile banking services through apps (IDA, 2014).

Unlike China and Japan, there is no flat-rate pricing for data downloads via mobile phones. As such, home broadband connections are high as people prefer to download larger files via their home networks. Figure 4.15 below shows the total wireless broadband subscriptions from 2009 to 2012.
Also, with the lower costs of laptops and free wireless access in the city areas, Singaporeans have an alternative mode to data downloads even while on the move and do not need to use their mobile phones. This would change if local telecommunications players offer flat-rate pricing for data downloads.

4.2.4 Similarities and Differences Between Cases

In this section, the similarities and differences between the three cases are discussed in the context of the factors in the macro-environment – globalization, media and global marketing/brands.

4.2.4.1 Similarities between cases

Globalization

As explained in Chapter Two (Section 2.4.3.2.1), Castells (1997) suggested that the process of globalization implies a fundamental rethinking of social organization and social patterns. This is seen in how all the social realities in all three countries have been altered by the introduction of the mobile phone. Table 4.8 below shows the similarities of the three countries in relation to the macro-environmental factor: Globalization.
<table>
<thead>
<tr>
<th>Globalization</th>
<th>Japan</th>
<th>China</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The mobile phone is used in everyday life.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The Japanese are accustomed to using the mobile phone for most aspects of</td>
<td></td>
<td></td>
<td>Singapore are among the most connected in the world. With a population of 5.3</td>
</tr>
<tr>
<td>everyday life like paying for a can of drink or travelling by train.</td>
<td></td>
<td></td>
<td>million, the mobile phone penetration rate is 150% which means most</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>subscribers own more than one mobile device.</td>
</tr>
<tr>
<td>2. Text messaging is a popular way to communicate.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The Japanese like to maintain peace and quiet in public areas so they</td>
<td></td>
<td></td>
<td>Text messaging is a popular way to communicate with many businesses</td>
</tr>
<tr>
<td>prefer using text messaging as a less intrusive way to maintain contact</td>
<td></td>
<td></td>
<td>using it to market their new products and services to consumers.</td>
</tr>
<tr>
<td>with their social networks. Plus Japanese phones have “emoji” which lets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>them communicate emotion through cute icons.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mobile phones provide a way to connect to the internet while on the go.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Japanese phones have had this function for many years so the Japanese</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>are accustomed to checking websites on their mobile phones while on the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>go.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Blurring of the public and private domains as the user is always</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>“available” or “on”.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile phones are ubiquitous in Japanese society.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Increasing amount of information is being stored on mobile phones.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The Japanese do a myriad of activities via their mobile phones (See Table</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3) so a lot of information is stored on their phones.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Mobile phones fill pockets of time during commute.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The Japanese are used to multi-tasking on their mobile phones during the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>long commutes to and from work.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8 Similarities between countries in relation to the macro-environmental factor: Globalization

Source: Compiled from various sources for this study

141
**Media**

According to Silverstone (2001), the diffusion of global media via the television, the internet, the radio and digital technologies have exposed people to diverse cultural outputs and values (Section 2.4.3.2.2). Table 4.9 shows the similarities of the three countries in relation to the macro-environmental factor: Media.

<table>
<thead>
<tr>
<th>Media</th>
<th>Japan</th>
<th>China</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mobile phones have become the remote controls of lives like a multi-purpose computer.</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>As Japanese homes are small and Japanese phone capabilities advanced, mobile phones have been the main communication device for most Japanese.</td>
<td></td>
<td>Rural villages in China have leapfrogged technologies. With the ubiquity of mobile phones and growth rates of mobile phone subscriptions, this will soon be the main communication device for the Chinese, most of whom will have their first internet experience over a mobile phone.</td>
<td>Mobile phones are popular among Singaporeans. It is the primary communication device while on the go.</td>
</tr>
<tr>
<td>2. Growth of mobile “Samaritans” and citizen journalism.</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>In the 2011 earthquake in Japan, footages taken by locals via their mobile phones were widely circulated by mainstream media in the reporting of the disaster. (IDA Singapore)</td>
<td></td>
<td>The mobile platform is providing the Chinese an avenue to air their political views in communist China.</td>
<td>Singaporeans capture real-time footages like the flash floods of 2010 to air on social networking sites like Facebook and YouTube.</td>
</tr>
</tbody>
</table>

Table 4.9 Similarities between countries in relation to the macro-environmental factor: Media

*Source: Compiled for this study*

**Global brands/marketing**

As explained in Chapter Two (Section 2.4.3.2.3), global marketing today emphasizes on the consumption experience as consumers move from consuming out of needs to consuming out of wants and desires. Consumers are using their consumption for meaning, pleasure and social identity. Table 4.10 below shows the similarities between the countries in relation to the macro-environmental factor: Global brands/marketing.

- Japan: Even though Japan has a plethora of local feature phones with advanced features, global brands have established a foothold with their simpler user interfaces.
- China: As mobile phones are considered status symbols in China, global brands like Apple’s iPhone are appealing to the Chinese.
- Singapore: Singapore has a mobile phone penetration rate of 150% with no local phone manufacturer so users are accustomed to purchasing global brands.

2. Growth of the mobile phone accessories market.

- Japan: First to popularize the “keitai”, personalizing one’s mobile phone is a way of asserting one’s individual identity.
- China: China is the world’s largest low cost manufacturer of mobile phone accessories.
- Singapore: There is a huge market for mobile phone accessories in line with the high mobile phone penetration rate.

Table 4.10 Similarities between countries in relation to the macro-environmental factor: Global brands/marketing

Source: Compiled for this study.

4.2.4.2 Differences between cases

The case studies support Agar’s (2003) view that different countries have different paths to mobility. Table 4.11 shows the differences between the cases as related to the macro-environmental factors of globalization, media and global brands/marketing.

Table 4.11 Differences between the countries

Source: Compiled for this study
4.3 FINDINGS FROM THE SURVEY QUESTIONNAIRE

The findings from the survey questionnaire are presented in this section. The survey was undertaken as part of the study on the influence of the micro-environmental factors on mobile phone consumption. The online survey sample consisted of 40 working individuals in the Information Technology sector in Singapore. The answers to the survey were laid out in a typical five-level Likert-scale format:

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

These measured the positive or negative responses to 39 statements. The 39 statements were divided into four sections which covered the four micro-environmental factors of social networks, personal history, symbolic meaning of products and glocalization.

4.3.1 Results from the Individual Statements

Statements 1 to 10 relate to the micro-environmental factor: Social networks.

![Figure 4.16 Results for Statement 1](source: Analysis of survey data)
Figure 4.16 above shows the results for Statement 1: The mobile phone is the primary means in which I stay in contact with my social network of family and friends. 60% of the respondents strongly agreed and 27.5% agreed with Statement 1. The remainder adopted a neutral stance.

![Figure 4.16 Results for Statement 1](image)

**Figure 4.16 Results for Statement 1**

*Source: Analysis of survey data*

Figure 4.17 shows the results for Statement 2: The mobile phone helps me to keep in contact with friends and family when I am out of the country or not within physical proximity of them. 62.5% of the respondents strongly agreed and 37.5% agreed with Statement 2.

![Figure 4.17 Results for Statement 2](image)

**Figure 4.17 Results for Statement 2**

*Source: Analysis of survey data*

Figure 4.18 shows the results for Statement 3: The mobile phone allows me to partake in last minute social gatherings.

![Figure 4.18 Results for Statement 3](image)

**Figure 4.18 Results for Statement 3**

*Source: Analysis of survey data*
Figure 4.18 above shows the results for Statement 3: The mobile phone allows me to partake in last minute social gatherings. 25% strongly agreed and 50% agreed with Statement 3. The remaining 25% opted for a neutral stance.

Figure 4.19 shows the results for Statement 4: I have used my mobile phone to convey apologies or communicate bad news. 62.5% of the respondents agreed with the statement and 27.5% strongly agreed with the statement. 10% opted for a neutral stance.

Figure 4.20 shows the results for Statement 5: Text messaging is a great way to receive or give out information to my social network.
Figure 4.20 above shows the results for Statement 5: Text messaging is a great way to receive or give out information to my social network. 72.5% strongly agreed with this statement and 25% of the respondents agreed. 2.5% remained neutral to this statement.

![Statement 6](image1)

**Figure 4.21 Results for Statement 6**
*Source: Analysis of survey data*

Figure 4.21 shows the results for Statement 6: The mobile phone provides a convenient means to reschedule planned activities. 72.5% strongly agreed with this statement and 25% of the respondents agreed. 2.5% remained neutral to this statement.

![Statement 7](image2)

**Figure 4.22 Results for Statement 7**
*Source: Analysis of survey data*
Figure 4.22 above shows the results for Statement 7: The mobile phone sometimes functions as a substitute for face-to-face meetings. 60% of the respondents strongly agreed with the statement and 40% agreed with the statement.

Figure 4.23 Results for Statement 8

Source: Analysis of survey data

Figure 4.23 shows the results for Statement 8: I have been left hanging in mid-sentence in a conversation because the other party received a phone call/text message. 75% of the respondents strongly agreed with the statement while 25% agreed with the statement.

Figure 4.24 Results for Statement 9

Source: Analysis of survey data

Figure 4.24 shows the results for Statement 9: I have interrupted a conversation to answer my mobile phone.
Figure 4.24 above shows the results for Statement 9: I have interrupted a conversation to answer my mobile phone. 77.5% strongly agreed with the statement. 22.5% agreed with the statement.

**Figure 4.25 Results for Statement 10**
*Source: Analysis of survey data*

Figure 4.25 shows the results for Statement 10: I have answered personal calls/text messages while I am at work. 72.5% of the respondents agreed with the statement. 27.5% strongly agreed with the statement.

Statements 11 to 18 relate to the micro-environmental factor: Personal history.

**Figure 4.26 Results for Statement 11**
*Source: Analysis of survey data*
Figure 4.26 above shows the results for Statement 11: I use my mobile phone every day. 95% of the respondents strongly agreed with the statement. 5% of the respondents agreed with the statement.

![Figure 4.27 Results for Statement 12]

*Source: Analysis of survey data*

Figure 4.27 shows the results for Statement 12: The mobile phone helps me to coordinate between the different roles I play in life (employer/employee/parent/child/colleague etc.). 70% of the respondents agreed with the statement while 30% strongly agreed with the statement.

![Figure 4.28 Results for Statement 13]

*Source: Analysis of survey data*
Figure above 4.28 shows the results for Statement 13: The mobile phone helps me to micro-manage little pockets of time. 77.5% agreed with the statement while 22.5% strongly agreed with the statement.

Figure 4.29 Results for Statement 14
Source: Analysis of survey data

Figure 4.29 shows the results for Statement 14: The mobile phone allows me to perform a variety of roles (both work and personal) when I am on the move. 82.5% strongly agreed with the statement. 17.5% agreed with the statement.

Figure 4.30 Results for Statement 15
Source: Analysis of survey data

Figure 4.30 shows the results for Statement 15: I have used the functions of the mobile phone to enhance the management of my life (e.g. Clock, calendar, mobile mail etc.).
Figure 4.30 above shows the results for Statement 15: I have used the functions of the mobile phone to enhance the management of my life (e.g. clock, calendar, mobile mail, etc.). 85% of the respondents agreed with the statement. 15% strongly agreed with the statement.

Figure 4.31 Results for Statement 16
*Source: Analysis of survey data*

Figure 4.31 shows the results for Statement 16: I have used my mobile phone to lie about my whereabouts. 50% of the respondents agreed with the statement and 25% of the respondents strongly agreed with the statement. 12.5% were neutral to the statement. 2.5% strongly disagreed with the statement while 10% disagreed with the statement.

Figure 4.32 Results for Statement 17
*Source: Analysis of survey data*
Figure 4.32 above shows the results for Statement 17: The mobile phone is the best way to reach me. 87.5% agreed with the statement while 22.5% strongly agreed with the statement.

![Figure 4.33 Results for Statement 18](image)

*Source: Analysis of survey data*

Figure 4.33 shows the results for Statement 18: I will always own a mobile phone. 87.5% agreed with the statement while 22.5% strongly agreed with the statement.

Statements 19 to 29 relate to the micro-environmental factor: Symbolic meaning of products.

![Figure 4.34 Results for Statement 19](image)

*Source: Analysis of survey data*
Figure 4.34 above shows the results for Statement 19: The mobile phone is a common technological device among my social network of friends and family. 75% of the respondents strongly agreed with the statement. 25% agreed with the statement.

![Figure 4.35 Results for Statement 20](image)

**Figure 4.35 Results for Statement 20**

*Source: Analysis of survey data*

Figure 4.35 shows the results for Statement 20: I feel an emotional loss when my mobile phone is lost/misplaced/stolen. 62.5% agreed with the statement. 17.5% strongly agreed with the statement. 7.5% disagreed with the statement. 12.5% remained neutral.

![Figure 4.36 Results for Statement 21](image)

**Figure 4.36 Results for Statement 21**

*Source: Analysis of survey data*
Figure 4.36 above shows the results for Statement 21: It is important that my mobile phone is personalized to suit my needs. 50% agreed with the statement. 17.5% strongly agreed with the statement. 10% disagreed with the statement. 12.5% remained neutral.

Figure 4.37 Results for Statement 22

Source: Analysis of survey data

Figure 4.37 shows the results for Statement 22: The physical presence of the mobile phone serves as a reminder of the network of friends and loved ones stored within my phonebook. 75% of the respondents strongly agreed with the statement and 25% agreed with the statement.

Figure 4.38 Results for Statement 23

Source: Analysis of survey data

Statement 23: I have used the mobile phone to screen calls and evade unpleasant situations.
Figure 4.38 above shows the results for Statement 23: I have used the mobile phone to screen calls and evade unpleasant situations. 67.5% of the respondents agreed with the statement and 27.5% strongly agreed with the statement. 5% of the respondents remained neutral.

**Figure 4.38 Results for Statement 23**
(Source: Analysis of survey data)

Figure 4.39 shows the results for Statement 24: I feel uncomfortable when others peruse my mobile phone menus and messages without my knowledge or permission. 27.5% agreed with the statement while 60% strongly agreed with the statement. 5% disagreed with the statement. 7.5% remained neutral.

**Figure 4.39 Results for Statement 24**
(Source: Analysis of survey data)

Figure 4.40 shows the results for Statement 25: I feel more secure when I have my mobile phone with me because it assures that help is just a phone call away.

**Figure 4.40 Results for Statement 25**
(Source: Analysis of survey data)
Figure 4.40 above shows the results for Statement 25: I feel more secure when I have my mobile phone with me because it assures that help is just a phone call away. 52.5% of the respondents strongly agreed with the statement. 37.5% agreed with the statement. 10% were neutral to the statement.

![Figure 4.40 Results for Statement 25](image)

**Source:** Analysis of survey data

Figure 4.41 shows the results for Statement 26: A constantly ringing mobile phone suggests that the person has an intense social network. 95% of the respondents agreed with the statement. 5% of the respondents strongly agreed with the statement.

![Figure 4.41 Results for Statement 26](image)

**Source:** Analysis of survey data

Figure 4.41 shows the results for Statement 26: A constantly ringing mobile phone suggests that the person has an intense social network. 95% of the respondents agreed with the statement. 5% of the respondents strongly agreed with the statement.

Figure 4.42 shows the results for Statement 27: I have used my mobile phone as a shield against unwanted attention.

![Figure 4.42 Results for Statement 27](image)

**Source:** Analysis of survey data

Figure 4.42 shows the results for Statement 27: I have used my mobile phone as a shield against unwanted attention.
Figure 4.42 above shows the results for Statement 27: I have used my mobile phone as a shield against unwanted attention. 95% of the respondents agreed with the statement. 5% of the respondents strongly agreed with the statement.

Figure 4.43 Results for Statement 28
Source: Analysis of survey data

Figure 4.43 shows the results for Statement 28: I save important messages on my mobile phone. 87.5% agreed with the statement and 22.5% strongly agreed with the statement.

Figure 4.44 Results for Statement 29
Source: Analysis of survey data
Figure 4.44 above shows the results for Statement 29: The mobile phone is a positive and important part of my everyday life. 55% of the respondents agreed with the statement. 37.5% strongly agreed with the statement. 7.5% remained neutral.

Statements 30 -39 relate to micro-environmental factor: Glocalization.

Figure 4.45 Results for Statement 30
Source: Analysis of survey data

Figure 4.45 shows the results for Statement 30: Hearing someone talk on the mobile phone in a public place does not bother me. 42.5% of the respondents agreed with the statement and 30% strongly agreed with the statement. 15% disagreed with the statement while 12.5% remained neutral.

Figure 4.46 Results for Statement 31
Source: Analysis of survey data

Statement 31: Hearing someone talk on the mobile phone in prohibited places does not bother me.
Figure 4.46 above shows the results for Statement 31: Hearing someone talk on the mobile phone in prohibited places does not bother me. 55% of the respondents strongly disagreed with the statement and 25% disagreed. 20% remained neutral.

![Figure 4.46 Results for Statement 31](image)

**Figure 4.46 Results for Statement 31**
*Source: Analysis of survey data*

Figure 4.47 shows the results for Statement 32: I have received unsolicited promotions/advertisements/calls on my mobile phone. 55% of the respondents agreed with the statement. 27.5% strongly agreed with the statement. 17.5% of the respondents disagreed with the statement.

![Figure 4.47 Results for Statement 32](image)

**Figure 4.47 Results for Statement 32**
*Source: Analysis of survey data*

Figure 4.48 shows the results for Statement 33: I have used my mobile phone to participate in promotional activities.

![Figure 4.48 Results for Statement 33](image)

**Figure 4.48 Results for Statement 33**
*Source: Analysis of survey data*
Figure 4.48 above shows the results for Statement 33: I have used my mobile phone to participate in promotional activities. 7.5% agreed with the statement while 12.5% strongly agreed. 57.5% of the respondents disagreed with the statement while 22.5% opted for a neutral stance.

Figure 4.49 Results for Statement 34
Source: Analysis of survey data

Figure 4.49 shows the results for Statement 34: The mobile phone is useful for informing me about activities that cater to my interests. 90% of the respondents agreed with the statement. 5% strongly agreed with the statement while 5% chose to remain neutral to the statement.

Figure 4.50: Results for Statement 35
Source: Analysis of survey data

Statement 34: The mobile phone is useful for informing me about activities that cater to my interests.

Statement 35: I feel comfortable using the mobile phone because it has gained social acceptance.
Figure 4.50 above shows the results for Statement 35: I feel comfortable using the mobile phone because it has gained social acceptance. 95% of the respondents agreed with the statement, while 5% strongly agreed.

![Bar chart showing the results for Statement 35](image)

**Figure 4.51 Results for Statement 36**

*Source: Analysis of survey data*

Figure 4.51 shows the results for Statement 36: Watching/observing how others utilize the mobile phone has taught me new ways of using mine. 55% of the respondents agreed with the statement while 37.5% strongly agreed with the statement. 7.5% remained neutral to the statement.

![Bar chart showing the results for Statement 36](image)

**Figure 4.52 Results for Statement 37**

*Source: Analysis of survey data*

Figure 4.52 shows the results for Statement 37: I have given out my mobile phone number so that my favourite stores/malls/activity clubs can reach me to inform me of new product arrivals/activities.
Figure 4.52 above shows the results for Statement 37: I have given out my mobile phone number so that my favourite stores/malls/activity clubs can reach me to inform me of new product arrivals/activities. 37.5% agreed with the statement while 27.5% strongly agreed with the statement. 30% disagreed with the statement while 5% opted for a neutral stance.

Figure 4.53 Results for Statement 38

Source: Analysis of survey data

Figure 4.53 shows the results for Statement 38: Human interaction and interconnectivity to loved ones are more important than privacy. 25% agreed with the statement and 25% strongly agreed with the statement. 22.5% of the respondents disagreed with the statement while 20% strongly disagreed with the statement. 7.5% opted for a neutral stance.

Figure 4.54 Results for Statement 39

Source: Analysis of survey data

Figure 4.54 shows the results for Statement 39: Text messaging is an efficient way of contacting those on my social network.
Figure 4.54 above shows the results for Statement 39: Text messaging is an efficient way of contacting those on my social network when I have information to share. 50% of the respondents agreed with the statement, 25% agreed and 25% were neutral to the statement.

4.3.2 Results from Statements Relating to Individual Micro-environmental Factors

The following sections show the combined results from statements relating to each of the micro-environmental – social networks, personal history, symbolic meaning of products and glocalization.

**Social networks**

![Figure 4.55 Responses for statements 1-10 relating to the micro-environmental factor: social networks](source: Analysis of survey data)

Figure 4.55 shows the combined responses for statements 1-10 relating to the micro-environmental factor – social networks. The majority of the respondents either strongly agreed or agreed with the statements which suggest the importance of social networks.
Figure 4.56 Responses for statements 11-18 relating to the micro-environmental factor: personal history

Source: Analysis of survey data

Figure 4.56 shows the responses for statements 11-18 which covered the micro-environmental factor: Personal History. Except for statement 16, the majority of respondents either agreed or strongly agreed with the statements relating to the micro-environmental factor: personal history. The unexpected results for statement 16 suggest cultural influences.

Symbolic meaning of products

Figure 4.57 Responses for statements 19-29 relating to the micro-environmental factor: symbolic meaning of products

Source: Analysis of survey data
Figure 4.57 above shows the responses for statements 19-29 which relate to the micro-environmental factor: symbolic meaning of products. Except for statements 20, 21 and 24, the majority of the respondents either agreed, strongly agreed or remained neutral to the statements.

**Glocalization**

![Figure 4.58 Responses for statements 30-39 relating to the micro-environmental factor: glocalization](source: Analysis of survey data)

Figure 4.58 shows the responses for Statements 30-39 which covered the micro-environmental factor: glocalization. This section of the survey yielded the most interesting range of responses.

### 4.3.3 Results from Similar Statements Relating to Individual Micro-environmental Factors

The Likert scale was used to measure the extent of a person’s agreement with the statements in the survey. However, Likert (1932) scales may be subject to distortion from several causes. For instance, respondents may avoid using extreme response categories (central tendency bias); agree with statements as presented (acquiescence bias); or try to portray themselves in a more favourable light (social desirability bias). As a check for bias and validity of responses, this section covers the results from similar statements relating to individual micro-environmental factors.
Figure 4.59 Results from statements 1 and 2 relating to the micro-environmental factor: social networks

*Source: Analysis of survey data*

Figure 4.59 shows the results from statements 1 and 2 relating to the micro-environmental factor: social networks. The responses for both statements were relatively consistent (assuming that people tend to avoid extreme responses). A small percentage chose a neutral stance suggesting that they had no opinion on the statement.

Figure 4.60 Results from statements 3 and 6 relating to the micro-environmental factor: social networks

*Source: Analysis of survey data*

Figure 4.60 shows the results from statements 3 and 6 relating to the micro-environmental factor: social networks. The responses for both statements were relatively consistent (assuming that people tend to avoid extreme responses).
Figure 4.61 Results from statement 12 and 14 relating to the micro-environmental factor: personal history

Source: Analysis of survey data

Figure 4.61 shows the results from statement 12 and 14 relating to the micro-environmental factor: personal history. The responses for both statements were relatively consistent (assuming that people tend to avoid extreme responses).

Figure 4.62 Results from statements 13 and 15 relating to the micro-environmental factor: personal history

Source: Analysis of survey data

Figure 4.62 shows the results from statements 13 and 15 relating to the micro-environmental factor: personal history. The responses for both statements were relatively consistent (assuming that people tend to avoid extreme responses).
Figure 4.63 Results from statements 24 and 25 relating to the micro-environmental factor: symbolic meaning of products

Source: Analysis of survey data

Figure 4.63 shows the results from statements 24 and 25 relating to the micro-environmental factor: symbolic meaning of products. While the majority of the responses for both statements were relatively consistent (assuming that people tend to avoid extreme responses), a small percentage disagreed with statement 24.

Figure 4.64 Results from statements 30 and 31 relating to the micro-environmental factor: glocalization

Source: Analysis of survey data

Figure 4.64 shows the results from statements 30 and 31 relating to the micro-environmental factor: glocalization. Since these two statements were opposing statements, the results were relatively consistent (assuming that people tend to avoid extreme responses) except for the 15% of respondents who disagreed with statement 30.
4.4 OVERALL FINDINGS

In this section, the overall findings for the research are presented. This includes the findings from the exploratory research as well as the investigative survey. This is illustrated in Figure 4.65.

![Diagram showing overall findings from exploratory study and investigative study](Image)

In consideration of the macro-environmental factors of Globalization, Media and Global brands/marketing as the independent variables and identity as the dependable variable (as identified in Chapter Two), the overall findings suggests that the global acceptance of mobile phones as normalcy in society provide a common frame of reference that users can identify with as an essential part of everyday living. Specifically, in the case studies of Japan, China and Singapore, there is a commonality as to how people are using their mobile phones in the coordination of everyday life. This suggests that the macro-environment does play a part in influencing an individual’s identity in mobile phone consumption.

This is seen through the proliferation of mobile phones globally and reinforced by the findings of the case studies. The device has become a ubiquitous device, synonymous with everyday life in contemporary society. This is evidenced by the widespread use of the mobile phone primarily for communication and also for many other purposes aimed at simplifying life by way of convenience. In consideration of the micro-environmental factors of Social Networks, Personal History, Symbolic Meaning of Products and Glocalization as the independent variables and identity as the dependable variable (as identified in Chapter Two), the overall findings suggest that it is the micro-environment that most affected consumer mobile behaviour.
The overall findings also reinforce the global trends in mobile phone consumption as identified in the literature review (Chapter Two). Some of these include the blurring of public and private domains, as seen in how the mobile phone is commonly used in public places and for both work and play. Also, the acceptance of the mobile phone as a key signifier of modern living is seen in how people respond to advancements in mobile phone technologies and most importantly, how the users appropriate the technology for their own use as reflected in the mobile phone evolution cycle (Bar, Pisani & Weber, 2007). Additionally, the research reinforced prior research that links the process of cultural globalization to the acceptance of meta-symbols like “Coke” and “Mc Donald’s” (Ritzer, 1998) as explained in Section 2.3.2. Specifically, the success of global players such as Nokia and Apple suggest that there might be a common frame of reference that resonates with people of different cultures. Current research suggests that sleek looks and easy-to-use interfaces are key selling points for mobile phones (Alford, 2008).

While the macro-environment played an important part in influencing how an individual utilized his mobile phone, it is the micro-environment that most affected consumer mobile phone behaviour. This means that the local context exerted the most influence in users’ consumption of mobile phones. Despite the global trends observed, local peculiarities persist (Sections 4.2.1.2, 4.2.2.2 and 4.2.3.2) suggesting cultural influences. This reflects Leonardi’s (2002) view that technology use is often connected to social practices and understood in cultural contexts (Section 2.3). Everyday life takes precedence over innovation in technology as seen in Japan where other forms of communication like texting, emailing, web surfing are more important than voice communication because the Japanese culture does not appreciate incessant chatter in public places.

The influence of the micro-environment can also be seen in the different paths the three countries took to grow the mobile telecommunications industry in their respective countries. Japan played the innovator role and laid the pathway for the growth of a vibrant mobile culture. Years ahead of others in advanced telecommunications technology and the fact that its success is solely attributed to its own market, make Japan’s success in the industry a phenomenal one. Japan has successfully integrated most aspects of everyday life with the use of a mobile phone with little compromise on what makes its culture unique. While voice communication seems like an integral aspect of mobile phone communication, the Japanese
prefer to use text messaging instead, so as to retain the tranquil environment the Japanese people enjoy. The strong ‘keitai’ culture demonstrates the influence of a country's culture on the progress of technology into society.

In China, the physical infrastructural constraints have allowed her to leapfrog land telecommunications technology and propelled the growth of the mobile telecommunications sector. Coupled with the huge population size and her competitive advantage in low cost manufacturing, China not only has the world’s largest subscriber base but is also the world’s largest mobile phone manufacturer.

In Singapore, the high mobile phone subscriber rate demonstrates the importance of the device in the conduct of everyday life. In particular, the high text messaging rates suggest the importance of communicating interactively and often. However, despite increasing 3G subscriber rates and the necessary infrastructure in place, mobile commerce has not hit the mainstream mobile phone users. This reflects the local environment and its readiness. Singapore’s a small island with a population of 5.3 million and an efficient public transport system and even suburban malls have automated banking systems in place.

In conclusion, the joint findings from both the case studies and survey reinforced the importance of culture in the consumption process (Section 2.3.2) and in particular, to the consumption of technology products (Section 2.3.3) as depicted in Figure 2.2. The different experiences in the three cases suggest that values, social relations, consumer movements and cultural patterns have both constrained and stimulated the expansion of digital delivery systems. Technology is both culture-bound, in that it reflects the values of the production system from which it emerged, and culturally framed. Not all societies will respond to new products and services in the same way. Those technologies which are well-suited for the culture, lifestyles and economic needs of a society will be adopted quickly; those which do not fit with local realities or which threaten well-entrenched social relationships or understandings are likely to do less well.

As a summary, Figure 4.66 below depicts the relationships among culture, consumption and technology based on the findings in this research. They point to the fact that technology is both culture-bound and culturally framed.
4.5 LIMITATIONS

As mentioned previously (Chapter Three, Section 3.5), every research should be considered in light of its limitations. While steps were taken to ensure that all bases were covered as detailed in the methodology chapter, there were several additional challenges that surfaced during the data collection and analysis process. These are presented briefly in the next paragraphs.

Imperfect information

While the data from multiple case studies allow for a more robust and compelling study (Yin 1994), imperfect information made it particularly challenging to present the case studies in a manner that allowed for direct cross examination of the cases. Given Japan’s leadership in the arena of telecommunications, there were plenty of data pertaining to Japan, in particular, how the Japanese utilized mobile phones in their everyday life. In comparison, there were fewer documents or archival records (Section 3.3.1) on China and Singapore. Perfect information would have enabled direct cross examination of the cases as they can be cross examined in a parallel fashion to draw out the similarities. This is illustrated in Table 4.12 below.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Japan</th>
<th>China</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Point 2</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Point 5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Table 4.12** Perfect information will allow direct cross-examination of cases

*Source: Developed for this research*

However, imperfect information actually provided more contextual information about each particular case and helped highlight the differences between the cases. This is illustrated in Table 4.13.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Japan</th>
<th>China</th>
<th>Singapore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point 1</td>
<td>X</td>
<td>Information is inferred</td>
<td>X</td>
</tr>
<tr>
<td>Point 2</td>
<td>X</td>
<td>Information is inferred</td>
<td>X</td>
</tr>
<tr>
<td>Point 3</td>
<td>X</td>
<td>X</td>
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<td>Point 4</td>
<td>Information is inferred</td>
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<td>X</td>
</tr>
<tr>
<td>Point 5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Table 4.13** Imperfect information allowed for inferred information about the cases

*Source: Developed for this research*

Hence, the challenges brought on by imperfect information actually helped to provide more information by way of inferred contextual information.

**Too much data and too little information**

It was also challenging to draw out the relevant information pertaining to the case studies. While prior research and archival documents provided credible sources of information (Yin 1994), there were massive amounts of data to examine. Although this was a shortcoming associated with case studies as elaborated in Chapter 3, the researcher acknowledged that it was hard to be completely thorough with all available data. Instead, the researcher focused on sources of information that mostly conformed to what was already uncovered in the literature review, particularly with regard to cultural aspects of mobile phone consumption. This served to reinforce the findings rather than suggest new findings and further minimized potential researcher subjectivity (Tellis, 1997).
4.6 SUMMARY OF CHAPTER FOUR

This chapter presented and summarised the findings from the data collection. It began with a broad structure for the chapter. Findings for both the case studies and the survey questionnaire were presented. In addition, difficulties that were encountered during the data collection process were reviewed and covered under limitations. The following chapter serves as a conclusion to the research. The research propositions and objectives as outlined in Chapter One are revisited and conclusions clearly made by drawing on the accumulated findings from the literature review, case studies and structured questionnaires. In addition, the implications for theory, policy and practice are discussed. The limitations of the study and suggestions for further research are also covered.
CHAPTER 5: CONCLUSIONS

5.1 INTRODUCTION

In the previous chapter, the data and findings from the case studies and structured questionnaire were reported. In this concluding chapter, the researcher discusses how this thesis makes a significant contribution to knowledge by synthesizing the data and findings in relation to the extant literature, the research propositions and the research objectives. This is illustrated in Figure 5.1 which shows the links among the chapters in this research.

Figure 5.1 Links among the chapters in the research

Source: Developed for this study
This chapter is structured and summarised as shown in Table 5.1.

| 5.1 Introduction | • Brief introduction to the chapter  
|                  | • Links among the five chapters  
|                  | • Structure for Chapter Five |
| 5.2 Conclusions about research objectives | • Incorporates the findings about the research problem and the new insights gained from the data collection |
| 5.3 Conclusions about research prepositions | • The findings for each research proposition are summarised and explained within the context of this research and prior research as examined in Chapter Two. |
| 5.4 Implications for theory | • Discusses how this research relates to a wider body of knowledge as examined in Chapter Two and also other theories beyond the scope of this research |
| 5.5 Implications for policy and practice | • Discusses the practical implications for both the public and private sectors  
|                  | • Checklist of procedures for managers based on research findings |
| 5.6 Limitations of the study | • The limitations to the study are examined with relation to resources, underlying assumptions and research design |
| 5.7 Implications for further research | • Discusses topics and methodologies for further research |

Table 5.1 Structure for Chapter Five

Source: Developed for this study

5.2 CONCLUSIONS ABOUT RESEARCH OBJECTIVES

In this section, the qualitative findings about the research problem developed during the research are examined. As discussed in Section 1.4 and reiterated in Section 2.5.3, the objectives of this study are:

1. To examine the macro-environmental factors that influence mobile phone behaviour in Japan, China and Singapore. The factors to be explored will specifically be in the cultural dimension.
2. To investigate the impact of the macro-environmental and micro-environmental factors on consumer mobile phone behaviour in Singapore.
5.2.1 Conclusions about the Macro-environmental Factors that Influence Mobile Phone Behaviour in Japan, China and Singapore

In this section, the findings from the case studies are presented. The conclusions about the macro-environmental factors that influence mobile phone behaviour in Japan, China and Singapore are presented as they relate to globalization, media and global marketing/global brands. This extends from the discussion in Chapter Four (Section 4.2.4) to include the theories that were covered in the literature review (Chapter Two). The case studies reinforced the findings uncovered in the literature review (Chapter Two) that mobile usage has gained social acceptance in contemporary societal life. The concept of owning a mobile phone today is widely accepted in all three countries – the same way people can relate to meta-symbols like ‘Coke’ and ‘McDonald’s’ (Ritzer, 1998) as explained in Section 2.3.2. This supports the theory that identity is linked to societal acceptance. The fundamental ways in which the people in each country use their mobile phones in the structuring of everyday life are highly similar which corresponds with the discussion in Chapter Two about how the diffusion of mobile phone consumption has occurred worldwide independent of cultural habits, values and norms. Even though the focus of the case studies was on the macro-environmental factors that influenced mobile phone behaviour, the findings support the intersection of the micro and macro-environmental factors as discussed in Section 2.3.2. This relates to the discussion on how consumer identity is a mix of local and global influences as illustrated in Figure 2.3.

Figure 2.3 Culture and factors in the micro and macro-environments create unique consumer identity

*Source: Developed for this study*
The following sub-sections will discuss the findings as they relate to the macro-environmental factors of globalization, media and global marketing/global brands and the ways they intersect with the micro-environmental factors of social networks, personal history, symbolic meaning of products and glocalization.

**Globalization**

Prior research (Chapter two, Section 2.4.3.2.1) uncovered that the process of globalization has always implied a fundamental rethinking of social organization and cultural patterns (Castells, 1997). Using the mobile phone as the specific tool of engagement in this consideration, the evidence clearly supports that the worldwide acceptance and increasing use of the mobile phone has contributed to interesting social and cultural changes. Specifically, the data from the case studies support that there are certain behavioural commonalities across the countries as influenced by the worldwide trends as identified in the literature review. This diffusion has occurred independent of the different cultural habits, values and norms. Examples of these behavioural commonalities were presented in Chapter Four (Table’s 4.8-4.10). Table 5.2 below summarises the commonalities uncovered in the case studies as they relate to prior research covered in the literature review (Chapter Two) specifically for the macro-environmental factor - globalization.

The acceptance of mobile phones as part of normalcy in contemporary societal life is evident in the proliferation of mobile phone users and the increased utilization of the mobile phone for the coordination of everyday living in all three countries. Some of the most common activities mobile phone users partake in include using the device for phone calls, text messaging, playing games, phone and address books, calculator, portable music player and portable camera. Generally, the mobile phone is being utilized to maximize efficiency in the coordination of everyday living. This corresponds to the dual aspect of consumption as identified in Chapter Two (Section 2.3.1) by Barthes (1957), it fulfils a need (in this case, the need to communicate with one’s social networks) and also conveys what is embedded within social structures (the acceptance of mobile phones as part of contemporary societal life).
Commonalities in the macro-environmental factor: globalization | As they relate to prior research as covered in the literature review (Chapter Two)
---|---


Increasing amount of information is being stored on the mobile phones so users are more attached to their mobile phones. | Palen, Salman and Young (2001), Grant and Kiesler (2001), Harkin (2003), Geser (2004) and Rudich (2011). Relates to the micro-environmental factors.


<table>
<thead>
<tr>
<th>Table 5.2 Commonalities in the macro-environmental factor: globalization as they relate to prior research as covered in the literature review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source: Developed for this study</td>
</tr>
</tbody>
</table>

Also, the widespread use of the mobile phone has resulted in the blurring of ostensibly discrete domains such as public and private, remote and distant and work and leisure (Ling, 2001) as explained in Chapter Two (Section 2.4.3.2.1). The findings from the case studies support this as the ‘mobile’ aspect of the mobile phone allows for social interactions at anytime and anyplace. People carry their mobile phones with them everywhere they go and thus can be reached 24/7 (Rudich, 2011; Sutter, 2012). This is seen in the number of transactions that take place throughout the day – be it playing online games, checking the stock market, paying bills or just texting.

There is a general attachment to the physical device as seen in the personalization of the device through physical adornments for the mobile phone (inspired by the Japanese keitai culture and proliferated by China’s low cost manufacturing) and other value added services for mobile phone users (Plant, 2002; Rudich, 2011).
Media

Table 5.3 summarises the commonalities uncovered in the case studies as they relate to prior research covered in the literature review (Chapter Two) specifically for the macro-environmental factor - media.

<table>
<thead>
<tr>
<th>Commonalities in the macro-environmental factor: media</th>
<th>As they relate to prior research as covered in the literature review (Chapter Two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phones have become the remote controls of lives like a multi-purpose computer.</td>
<td>The increasing applications that a mobile phone support makes it possible to incorporate it to an individual’s complex everyday life (Rudich, 2011; Saylor, 2012), allowing him to perform a myriad of tasked related to both work and private life (Lasen, 2003). It is a technology that allows those on the move to remain embedded in their personal social networks (Fortunati, 2000). Relates to the micro-environmental factors: Personal history – maintenance of key life roles and identities and social networks.</td>
</tr>
<tr>
<td>Growth of mobile “Samaritans” and citizen journalism.</td>
<td>Relates to the micro-environmental factor: social network.</td>
</tr>
</tbody>
</table>

**Table 5.3 Commonalities in the macro-environmental factor: media as they relate to prior research as covered in the literature review**

*Source: Developed for this study*

In all three countries, the mobile phone has emerged as a formidable media tool, establishing device users as media creators/generators as well as media recipients via the mobile phone. This has in turn, allowed consumers to create their unique identities. This relates to Silverstone’s (1991) belief that global media structures provide consumers with ideas to construct their own identities, supporting that the individual consumer is not passive but continually using what is available through consumption, to continually construct and reconstruct his own identity against the backdrop of every changing life experiences.

As the addition to the traditional mass media tool, the mobile phone emerged as an incredible viral marketing tool as seen in how the Chinese used the mobile phone to create a brand recognition campaign during the 2008 Sichuan earthquake (Sheridanin, 2008). Japan’s success with mobile books (Ahonen, 2008) has also spawned a profitable industry unheard of before the age of the mobile phone, cementing the mobile phone’s status as a formidable 21st century media tool. With the pervasiveness of social media sites like Facebook, Pinterest and
Instagram, mobile users are more vocal than ever in what they expect from the products and services they consume. As content for mobile phones proliferate, there will likely be more ways in which mobile phone users continue to be media generators.

**Global marketing/global brands**

Table 5.4 summarises the commonalities uncovered in the case studies as they relate to prior research covered in the literature review (Chapter Two) specifically for the macro-environmental factor – global marketing/global brands.

<table>
<thead>
<tr>
<th>Commonalities in the macro-environmental factor: global marketing/global brands</th>
<th>As they relate to prior research as covered in the literature review (Chapter Two)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Cosmopolitan” appeal of global phone brands.</td>
<td>The concept of owning a mobile phone is widely accepted in contemporary society, the same way people can relate to meta-symbols like ‘Coke’ and ‘McDonald’s’ (Ritzer, 1998). (Aaker &amp; Joachimsthaler, 2000) and (Prahalad &amp; Ramaswamy, 2004) Relates to the micro-environmental factor: glocalization.</td>
</tr>
<tr>
<td>Growth of the mobile phone accessories market</td>
<td>(Plant, 2002), (Lasen, 2003), (Harkin, 2003) and (Rudich, 2011) Relates to the micro-environmental factors: personal history and symbolic meaning of products.</td>
</tr>
</tbody>
</table>

Table 5.4 Commonalities in the macro-environmental factor: global marketing/global brands as they relate to prior research as covered in the literature review

*Source: Developed for this study*

The success of global brands like Samsung and Apple attest to the universal appeal of sleek designs and user-friendly interfaces and suggests that these are the qualities that resonate with people regardless of culture. The success of Japan’s NTT DoCoMo’s marketing model has created a global brand associated with strong successes in the telecommunications industry and speaks volumes about the importance of co-creating the consumer experience as explained by Prahalad and Ramaswamy (2004). The services provided by the telecommunications provider relate to the everyday life of a Japanese consumer and are constantly evolving to incorporate what consumers want. For instance, DoCoMo did not try
to duplicate the wired internet experience but rather, developed unique mobile ecosystems specifically for mobile phones (Beck & Wade, 2005; Caryl, 2007). While DoCoMo’s marketing model is not viable model globally because of unique cultural influences (as explained in Section 4.2.1.2), the philosophy behind the model point to the need to give consumers an experience that is relevant to their life context (Ito, 2004; Caryl, 2007; Alford, 2008; Daye, 2010; Rudich, 2011; Sutter, 2012). This also corresponds to Ger and Belk’s (1996) theory that a cultural product (the mobile phone) is received, reconfigured and reused by consumers according to their own needs (as explored in Section 2.3.2). Additionally, it also supports the theory that technology use is often connected to social practices and understood in cultural contexts (Roger, 1995; Scott, Quinn, Timmerman & Garrett, 1998; Barley, 1986; Widman, Jasko & Pilotta, 1988; Leonardi, 2002).

However, it must be noted that as mobile technologies proliferate, cultures do not remain static but are constantly evolving throughout the changing contexts of life (Barley, 1986). This relates to the fact that no technology inherently makes sense for a given cultural system; the social group (the individual countries) ensures that there is a socio-cultural fit of the technology (Widman, Jasko & Pilotta, 1988). For instance, when Apple’s iPhone was first introduced in Japan, it received a lukewarm response from the Japanese who preferred mobile phones produced by local manufacturers because they catered better to the local needs. This corresponds with Benson’s (1998) belief that every culture has a unique ‘cultural standard’ that distinguishes itself from other cultures. This ‘cultural standard’ defines what belongs within a culture and what is perceived as ‘alien’ and thus unacceptable (as previously discussed in Section 2.3.2).

In 2012, this changed as Apple’s iPhone became the bestselling smartphone in Japan (Apple Insider, 2012). This suggests that over time, what was once “unacceptable” within a social context could be accepted by the social group (the Japanese). By logical extension, it means that the consumer landscape is constantly evolving and that it is imperative that corporations respond to such changes so as to move in tandem with what the market demands. While the Japanese mobile phones incorporate many functions aimed at simplifying life, they are often complex and hard to utilize despite the designer’s best intentions. In contrast, the iPhone’s sleek design and simple interface appeal to the Japanese user. This supports that the consumer is constantly evolving and looking for ways to express his identity. Moreover,
Apple’s previous success in Japan with its iPod MP3 player had already won over Japanese users who associate the brand with quality and simplicity of function. All these point to opportunities for marketers hoping to get a slice of the lucrative mobile phone market in Japan.

5.2.2 Conclusions about the Impact of Macro-environmental Factors and Micro-environmental Factors on Consumer Mobile Phone Behaviour in Singapore

In this section, the findings from the survey questionnaire are presented. This covers the impact of the macro-environmental factors (globalization, media and global brands/global marketing) and micro-environmental factors (social networks, personal history, symbolic meaning of products and glocalization) on consumer phone behaviour.

**Social networks**

Findings from the survey reinforced the importance of the mobile phone in everyday life as respondents indicated that it was the primary means by which they stayed in contact with their social network of friends and family. It was sometimes used to replace face-to-face communication at times when respondents were not within physical proximity of the party. Respondents also agreed that the mobile phone had enabled them to partake in last minute social gatherings. The findings attest to the importance of the mobile phone as an integral part of everyday living as reflected in the global proliferation of mobile phones (Chapter Two and Chapter Four).

Text messaging remained a popular means by which to receive and send information out to one’s social network. Respondents have also used this method as a means to convey apologies and communicate bad news. The results support the global trend on using texting as a method of communication when verbal or face-to-face conversations are not possible and also when unpleasant situations arise.

Respondents have experienced mid-conversation interruptions when the other party received either a phone call or a text message. Similarly, they have interrupted conversations to tend to their phone calls or messages. Also, respondents have answered personal calls and text
messages at work. The findings support the global blurring of ostensibly discrete domains such as public and private, remote and distant and work and leisure as calls and messages can come at any time.

**Personal history**
Respondents agreed that they used their mobile phones every day, reflecting the importance of the device in contemporary societal life. The findings from the survey further reveal that respondents agreed that the mobile phone is used to coordinate the multiple roles they play in life, aiding in the efficiency in the conduct of life as micro pockets of time are utilized, even while on the move. The results support the global trend of using the mobile phone to aid in the performance of multiple roles while on the move, thus increasing temporal efficiency, which in turn reinforces an individual’s identity.

Respondents agreed that the mobile phone was the best way to get in touch with them which resonates with the global trend of being able to reach mobile phone users 24/7. The fact that all the respondents either agreed or strongly agreed that they will always own a mobile phone reflects the importance of the device in contemporary societal life.

**Symbolic meaning of products**
The fact that the mobile phone was a common technological device among respondents’ network of friends and family reflect how far the mobile phone has evolved to be part and parcel of everyday life. Respondents also revealed that it was important that the mobile phone is personalized to suit one’s needs, reflecting the importance of identity in the consumption process (Section 2.3). The symbolism is further reinforced by the fact that most mobile phone users store important messages on their phones and agreed that the physical presence of the mobile phone serves as a reminder of the network of people within the phonebook (Plant, 2002; Saylor, 2012).

In addition, a majority of respondents agreed that they would feel an emotional loss when the phone is lost/misplaced/stolen. Also, respondents feel uncomfortable when others peruse their phone menus or messages without their knowledge or permission. The mobile phone has also been used as a phone shield against unwanted attention and also to screen calls and avoid unpleasant situations. Personal identity and social benefits encourage the use of mobile
devices for these users; the devices have become extensions and expressions of the users themselves. This reflects the importance of identity in the consumption process as discussed in the literature review.

**Glocalization**

The ways that Singaporeans utilize their mobile phones correspond closely to the everyday life in the local context. Respondents agreed that they were unfazed by the use of mobile phones in public places but drew the line when utilizing the mobile phones in public places where it is prohibited. In general, respondents were comfortable using the mobile phones because the device has gained social acceptance. Further, texting remains a popular way to keep in contact with one’s social networks especially when one has information to share. Respondents revealed that they have received unsolicited promotions on the mobile phones. However, they also agreed that they have given out their numbers in exchange for timely information at their favourite stores/malls. In particular, they found the promotions useful for information pertaining to their interests. The findings from the survey reinforce the significance of the local context in influencing mobile phone behaviour as suggested by Robertson (1992) and Dahl (2000). People tend to define their social context locally rather than globally and look to local sources for social recognition and identity.

Even though the survey was administered to a relatively small sample in 2009 (intended as a snapshot in time), the survey questions focused on phone (or voice) calls and text-messaging which are still popular functions of the mobile phone today (Saylor, 2012; Ling, Sundroy, Bjelland & Campbell, 2014). For example, 561 million text messages were sent in June 2014 (Statistic Brain, 2015). Moreover, voice calls and text messages on the move are crucial everyday practices for connecting business, along with the “intimate sphere” of close friends and family (Ling, 2012; Wellman & Lee, 2012).

**5.3 CONCLUSIONS ABOUT RESEARCH PROPOSITIONS**

The findings for each of the research proposition are summarised from Chapter Four and explained within the context of this and prior research on the subject matter as examined in Chapter Two. Reiterating the research propositions as outlined in Chapter One: How can corporations leverage on the popularity and widespread use of mobile phones as an effective
marketing tool? How much of this consumer mobile phone behaviour is dependent on the factors in the micro-environment? How much of this consumer mobile phone behaviour is dictated by the dynamic changes in the macro-environment?

5.3.1 Conclusions about How Corporations Can Leverage on the Popularity and Widespread Use of the Mobile Phone as an Effective Marketing Tool

The accumulated chain of evidence (literature review, case studies and questionnaires) clearly demonstrates the important role the mobile phone plays in contemporary societal life. The global diffusion of mobile phones (Goggin, 2012) and the widespread acceptance as an essential tool in the coordination of everyday life (Ling & Donner, 2009; Saylor, 2012), along with the push from regulatory authorities (supporting the rapid advancements in communications technology) to create a ubiquitous networked society (Ling, 2012; Wellman & Lee, 2012) has greatly increased the adoption rates of mobile phones.

According to Silverstone (2005), it is within the sphere of everyday life that individuals are able to create their own worldviews based on their own cultures and values. This ties in with the individual identity aspect of the mobile phone. No other modern device is as closely linked to an individual’s identity as the mobile phone. No other digital device evokes so much emotion and personal involvement to be considered as a technological extension of an individual (Rudich, 2011; Sutter, 2012). Mobiles free people from spatial fixity (Elliot & Urry, 2010) and give them the freedom to extend and reaffirm networks so that they can stay engaged in ‘perpetual contact’ (Katz & Aakhus, 2002) in bounded solidarity (Ling, 2008) with the ones that mean the most to them. These are the ones that make up their social networks in the micro-environment.

Prior research has shown that even though the mechanics of social interaction has changed (Ling, 2008) as mobile technology is constantly being appropriated by individuals (as they continually re-create their identity (Slate, 1977) through the course of life – Chapter 2, page 27), and there is a potential for larger individual networks (Wellman & Lee, 2012), most people maintain a ‘connected presence’ (Licoppe, 2004) with their immediate circle of family and friends (Ling et al. 2014). This means that a consumer’s worldview is more closely
associated with their micro-environment and successful customer engagement must take that aspect into consideration.

As the mobile ecosystem gets more complex, coupled with the increasing software applications for mobile devices and the fact that mobile phones are always physically close to their owners, corporations will potentially be able to connect directly with their consumers anytime and anywhere. Because of their extraordinary reach, intimacy and interactivity, mobile devices offer an ideal avenue for direct customer engagement. Figure 5.2 shows the linkages between advancements in mobile technology, the mobile ecosystem and global marketing opportunities for corporations.

![Diagram showing linkages between advancements in mobile technology, the mobile ecosystem and global marketing opportunities for corporations.](source: Developed for this study)

The high penetration rates and the culturally unique ways that users appropriate mobile technologies for their everyday life attest to the fact that the mobile phone has been accepted as part of normalcy in contemporary societal life. The proliferation of mobile phones, in particular, smartphones with location-based technology in use, places a convenient tool for broadcasting to individuals (Rudich, 2011; Sutter, 2012) and connecting directly to them where and when a sale may be likely. The concept of a ubiquitous networked society is not far-fetched or new as supported by the findings in the case studies (Chapter Four). The success of the Japanese telecommunications market is a clear testament to how the convergence of mobile technologies with local culture has given businesses a direct channel to the consumer at the point where a sale is highly probable. In a market already saturated with electronic gadgets that the Japanese are well known for, the mobile phone has emerged as a personal network connection that delivers consumers news, entertainment and other
content at exactly when and where consumers want it. The fact that Japanese mobile phone users have accepted rich advertising content on their mobile devices implies the success of targeted mobile marketing strategies that truly engage the consumer. Bearing in mind that consumers’ identity is a mix of global and local cultures (as depicted in Figure 2.6), this reinforces the importance of ‘glocalization’ as a factor that corporations must take into consideration when planning their marketing strategies (Section 2.4.3.1.4).

As advancements in communications technologies and networks continue to accelerate, the landscape for mobile phone consumption will continue to evolve in unexpected ways as factors in the macro and micro-environment intersect, continually reordered against the backdrop of shifting day-to-day experiences (Harkin 2003) as explained in Section 2.3.1. People associate and preserve their identity with what they consume (Mc Cracken, 1988, Belk 1988, Soloman, 1983; Baudrillard, 1974). The findings from the research solidify the importance of consumer identity in the consumption process as explained in Chapter Two (Section 2.2). The consumption of mobile phones is no longer viewed simply as a utility-driven activity but a force in the creation of meaning and the expression of identity. This is seen in the need for the personalization of the mobile device, the physical proximity of the device to its owner as well as the discomfort the user feels when another person peruses his mobile phone without his permission. The continued growth of mobile phone subscriber rates also point to the constant need to communicate and socialize, particularly in Asia as suggested by Plant (2002) in the literature review in Chapter Two and reinforced by the findings in the case studies and survey (Chapter Four). Indeed, future success for corporations depends less on new customer acquisition and more on retention and deeper relationships with existing customers. As Paul May (2001) put succinctly, “Technology creates possibilities but people create probabilities.”

The implications are clear. Specifically, understanding the day-to-day activities that consumers use mobile phones for can enable firms to better leverage on the most cost efficient ways to connect directly with their key consumers. As Levinson (2004) so accurately said, “Today, the cell phone has become so ubiquitous that its wonders to behold are commonplace, astonishing part of everyday life” (pg.1). Corporations have to continually re-create and define values with the consumers in order to provide better and relevant consumption experiences. This corresponds to the co-creation of the consumption experience as suggested by Prahalad and Ramaswamy (2004) (Chapter Two, Section 2.3.1). The factors
in the micro-environment and macro-environment and how they influence mobile phone behaviour will be discussed in the next few sections.

5.3.2 Conclusions about How Much of Mobile Phone Behaviour is Dependent on Factors in the Micro-environment

The evidence from the case studies showed that culture and communications technology can co-exist, affirming the influence of the micro-environment on the consumption of mobile phones. This supports McCracken’s (1988) view that consumption is symbolically meaningful and contextually relative (Section 2.3.2) and also Bar, Pisani and Weber’s (2007) research that cultural appropriation is user-driven. Technology has not brought about a global village in which all consumers behave in the same way because they do not share the same values across cultures. It also reinforces the substantive view of technology that argues that technology, in its conception, design and application, is inherently valued-laden (Dholakia & Zwick, 2003). The meaning of technology depends on the cultural belief systems and social structures it is embedded in. In addition, the findings from the research resonates with Widman, Jasko and Pilotta’s (1988) view that technology does not inherently make sense for any cultural system and that the social group has to ensure that there is a socio-cultural fit of the technology (Chapter Two, Section 2.3.3). For instance, even though mobile phones are widely accepted in Japan, mobile phone users will use text messaging to communicate when travelling on public trains instead of talking on the mobile phone because of their culture’s inherent need for peace and serenity.

The findings from the case studies revealed how culture and communications technology can blend seamlessly to create an efficient and technologically enhanced society as a whole while retaining its strong cultural elements in the process. This is because people tend to define their social context locally rather than globally and look to local sources for social recognition and identity (Chapter Two, Section 2.4.3.1). It relates to Benson’s (1998) belief that every culture has a unique ‘cultural standard’ that defines what belongs within a culture and what is perceived as alien (Chapter Two, Section 2.3.2). The evidence from the exploratory study also supports the fact that consumers will continue to think of creative ways to incorporate the mobile phone into their everyday lives while retaining what is inherently unique to their culture and most importantly, their individual identities. In the literature review, it was established that a person’s identity is linked to his personal history.
(Section 2.4.3.1.2). It is up to the individual to decide how he wants to utilize the mobile phone and it has to be in harmony with his identity.

For instance, Japanese mobile phone users use text messaging in public places instead of voice communication because the Japanese culture is one that values tranquillity. In contrast, the Chinese and Singaporean mobile phone users utilize voice communication in most public spaces. The Chinese, in particular, enjoy speaking loudly on their mobile phones, impervious to those in the surrounding environment. These findings support Roger (1995), Scott, Quinn, Timmerman and Garrett (1998), Barley (1986), Widman, Jasko and Pilotta (1988) and Leonard’s (2002) view that technology use is often connected to social practices and understood in cultural contexts (Chapter Two, Section 2.3) as seen in how mobile phone consumption patterns relate to ethno-cultural identity. This, in turn, will determine how the mobile phone will manifest further as an effective marketing tool. Additionally, evidence from the case studies suggests that the consumption of mobile phone technology is not a linear process but a constantly evolving one. Everyday life influences how technology is utilized and technology must be constructed to enhance everyday life. Businesses will be better placed if they ensure that their marketing strategies take into account the context of everyday local life. In China, text messaging is extremely popular because people are not comfortable leaving voice messages, especially with someone of a lower corporate rank as they consider it a loss of face. In Japan, the long commute to and from work makes accessing the mobile internet a viable option (Coates & Holroyd, 2003; Motoko, 2008). Figure 5.3 depicts how technology has to be culturally compatible with everyday life in order for consumers to embrace mobile phone technology.

Figure 5.3 Technology has to be culturally compatible with everyday life

Source: Developed for this research
5.3.3 Conclusions about How Much of Consumer Mobile Phone Behaviour is Dictated by Factors in the Macro-environment

The literature review in Chapter Two revealed that people are connecting through shared life conditions and the general need to make life more efficient. The findings from the research support that certain consumer mobile phone behavioural traits has its roots in the factors in the macro-environment as a result of the cultural globalization process.

Specifically, the process of cultural globalization has led to the development of a common frame of reference with regards to communications technology, resulting in shared ideas of how to best utilize mobile phone technology to simplify everyday life. This phenomenon is evident in the diffusion of mobile culture globally seen through the global popularity of text-messaging, using the mobile phone in public places and the general consensus that the mobile phone is a necessity of everyday living (Section 2.4.3.2). Elements of Japanese ‘keitai’ culture have also made their rounds globally, resulting in a lucrative mobile phone accessories market fuelled by the vibrant Japanese mobile phone culture and accelerated by China’s low cost manufacturing competitiveness.

Global marketing/global brands also influence consumer mobile phone behaviour as seen in the success of aspiration brands such as Nokia and Apple. The universal appeal of Nokia’s expression phones and Apple’s simple-to-use interface and sleek designs suggest that people are able to share cultural influences on a global scale and conduct significant parts of their lives in common. The findings from the case studies reaffirm this and reinforce Aaker and Joachimsthaler’s (2000) view that the values that people fundamentally hold and the benefits that they derive from products are universal (Chapter Two, Section 2.4.3.2.3). Today’s consumption experience weighs heavily on its basis of value to the consumer. This perceived value in turn, relates closely to the identity of the consumer.

The role of global media has also influenced mobile phone consumption to a certain extent. As the functions and capabilities of the mobile phone increase, its ability to transmit media content will increase correspondingly. In the literature review, it was reported that many mobile phone users have played ‘Samaritan’ roles by reporting events as they unfold – a role traditionally played by conventional mass media players (Chapter Two, Section 2.4.3.2.2).
The findings from the case studies further reinforced this as mobile phone users are becoming significant media creators as the device itself is becoming a mass media tool – both as a receiver as well as a transmitter. This is illustrated in Figure 5.4.

![Figure 5.4 The consumer as interpreter and media creator](image)

*Source: Developed for this study*

With advancements in communications technology and the proliferation of social media sites, the potential of mobile phones as a media tool will provide another avenue for corporations to directly engage with their customers.

### 5.4 IMPLICATIONS FOR THEORY

The evidence cited in the preceding Sections 5.2 and 5.3 points to the influence of both the macro and micro-environmental factors playing a part in affecting mobile phone consumption. Additionally, this research unveiled some important implications with respect to theory. Specifically, consumer behaviour – the parent theory in this research - remains a pivotal issue. As seen in the light of mobile phone consumption, everyday life and the local context – that is, the micro-environment - are the primary contributing factors influencing how a mobile phone user utilizes his device. The mobile phone’s use is a constructed complex of habits, beliefs and procedures embedded in elaborate codes of communication which clearly indicates cultural influences. Adding to the complexity is the constant evolution of an individual’s identity against the backdrop of shifting day-to-day experiences.
as mentioned in Chapter Two (Section 2.3.1). As a result of these forces at play, corporations have to continually reformulate their global marketing strategies to truly provide value for their customers. The findings from this research support Prahalad and Ramaswamy’s (2004) view of the co-creation of value as discussed in Chapter Two (Section 2.3.1). Table 5.5 depicts the co-creation of value in the context of contemporary mobile phone consumption.

<table>
<thead>
<tr>
<th></th>
<th>Traditional approach</th>
<th>Co-creation approach</th>
<th>Applicability to this research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Premise</strong></td>
<td>Value is created by the firm</td>
<td>Value is co-created by the consumer and the firm</td>
<td>Products and services offered by corporations are only successful when consumers can relate to them in the context of everyday life and can utilize them to reinforce their identity.</td>
</tr>
<tr>
<td><strong>Basis of value</strong></td>
<td>Products and services</td>
<td>Co-creation experiences</td>
<td>Consumers are willing to pay for relevant content/services that enhance their everyday life like more talk time and text messaging and functions on the mobile phone that they can need to utilize.</td>
</tr>
<tr>
<td><strong>Marketing view</strong></td>
<td>Consumers represent demand for the firm’s offerings</td>
<td>The individual is central to the co-creation experience</td>
<td>Japan’s success story as a ubiquitous networked society attests to the importance of the entire consumer experience.</td>
</tr>
<tr>
<td><strong>Strategy</strong></td>
<td>Creation and delivery of a variety of offering; customization of offerings and staging experiences</td>
<td>Variety of co-creation experiences through heterogeneous interactions; personalization of the co-creation experience</td>
<td>As seen in shared technology but individualized handsets.</td>
</tr>
<tr>
<td><strong>Organization focuses on:</strong></td>
<td>Value chains and quality of internal processes Innovation of technology, products and processes Supply chains and demand management</td>
<td>The quality of consumer-firm interactions Innovating experience environments Experience networks</td>
<td>The consumer decides whether the technology fits into the context of everyday life.</td>
</tr>
</tbody>
</table>

Table 5.5 Co-creation of value in the context of contemporary mobile phone consumption

*Source: Adapted from Prahalad and Ramaswamy (2004) for this research*

The research findings also show how closely related the factors in the macro and micro-environments are which suggest that culture influences are at play. As such, even though consumers are converging through shared life experiences, glocalization is still an important
factor to consider as corporations deal with consumers from different countries with different life contexts.

Because cost efficiency remains an important factor for global corporations, the discussion on which aspects of marketing to standardize and which to localize will be ongoing. The homogenization scenario assumes that the global expansion of Western structures and the consumption of imported goods in and of itself have a standardizing and uniform effect. But the truth of the matter is that different societies deal differently with outside influences. Coca-Cola and McDonald’s global successes attest to the need for a glocalization strategy (as discussed in Chapter Two, Section 2.3.2) despite the standardization of certain aspects of marketing. Specifically, the process of cultural globalization has led to the development of a common frame of reference with regards to how to utilize mobile phone technology. Findings from this study clearly indicate that the factors in the macro-environment have allowed people to share cultural influences on a global scale and conduct significant parts of their lives in common as explained in Section 5.2.3.

Additionally, the importance of branding should not be overlooked. The essence of a brand is that it is a name in the memory of consumers. It is a perceptual map of positive and negative associations, a symbolic language and a network of associations. Holt (2002) suggests that brands could be another form of expressive culture (as discussed in Chapter Two, Section 2.4.3.3.3). Established brands are like old, familiar traditions that may be comforting in times of rapid change. This relates to conventional marketing wisdom that holds that image brands often succeed because they make an emotional connection to consumers. Harkin (2003) suggests that mobile phones are an important source of self-identity because they function as comfort objects, “antidotes to the hostile terrain of wider society” (pg. 9). Global brands have common appeal among people of different cultures as the values people fundamentally hold and the benefits that may be derived from products are universal (Aaker & Joachimsthaler, 2000 - as discussed in Section 2.4.3.2.3). A brand may be created to be global but may also have indigenous meaning. This reinforces what was discussed in the literature review (Chapter Two, Section 2.3.2) – contemporary culture is a mix of both global as well as local cultures. As such, localized advertising may manipulate existing brand meanings by ensuring that these meanings are interpreted in the light on the target’s motivations and aspirations which are rooted in local history. A brand’s meaning must fit the mental mapping of people.
The local and the global do not inherently exist as rivals or cultural polarities but as mutually interpenetrating principles (Tomlinson, 1999). Figure 5.5 shows the linkages between consumer behaviour, branding and the factors in the micro and macro-environments.

![Diagram showing linkages between consumer behaviour, branding and factors in the micro and macro-environment](image)

**Figure 5.5 Linkages between consumer behaviour, branding and factors in the micro and macro-environment**

*Source: Developed for this study*

All firms can benefit from the knowledge of how and why consumers use their mobile phones and specifically how the device relates to consumer identity especially since the media sphere today is becoming extremely crowded. The ubiquity of the mobile phone points to the device as the new mass media device, far more powerful than any current mass media tools. While traditional marketing mediums such as print advertisements and television advertising still work, the mobile phone may be a more powerful medium to reach audiences by virtue of its physical and emotional proximity to the user. The ‘always on’ aspect of the mobile phone virtually implies that the consumer can literally be reached 24/7. With richer content for mobile devices and increasing functions on the mobile phone, the device has the potential to be a formidable tool of engagement for firms aiming to building deeper and meaningful relationships with their customers.
Thus, the mobile phone must be one of the mass media mediums used for connection to consumers. The quick dispersion of information via text messaging as demonstrated by the political overthrow of President Estrada of the Philippines (Chapter Two, Section 2.4.3.2.2) and how locals uploaded videos via mainstream about Japan’s earthquakes (Chapter Four, Table 4.8) attest to the viral effects of mobile marketing which could level the playing ground for smaller firms who cannot afford to take traditional mass media routes. The mobile phone could be a viable and more economical channel to engaging and interacting with consumers.

5.5 IMPLICATIONS FOR POLICY AND PRACTICE

As the plethora of theories and models reviewed in this research have demonstrated, contemporary consumption is a mix of both the influences of the local as well as global factors and relates very closely to consumer identity in the everyday life (Figure 2.3). Any study on consumer buying behaviour must take into account the fact that macro and micro-environmental factors play an important role in influencing how a consumer utilizes any product or service. Successful marketing depends less on traditional strengths of distribution and brand management and more on understanding its constantly evolving consumers. Accordingly, corporations need to pay more attention to their changing business environment instead of just trying to optimize the activities within the firm. In particular, corporations need to make an emotional connection with consumers and engage them in the co-creation of value in order to sustain long-term and lasting relationships.

5.5.1 Implications for Global Marketing

Extant literature point to the inevitability of the cultural globalization process (Robertson, 1992; Huntington, 1996; Castells, 1997; Friedman, 2000) and the rapidly increasing importance of the international business environment. As a result, marketers have to invest much effort in trying to understand consumers so as to build more effective global marketing strategies. The tide of popular opinion of how to market internationally has swung between the adaptation premise, which presupposes that consumers in each country market are different (the influence of the micro-environment), to the standardization premise, which presupposes that consumers around the world are similar (the impact of the global environment). The findings in this research reinforce the need to consider both aspects as the global consumption is a mix of global universals and local particulars (Section 2.3.2). It also
supports Robertson (1992) and Dahl’s (2000) view that the one-size-fits-all worldwide strategy has given way to ‘glocalization’ (Section 2.2). This perspective is further illustrated in Figure 5.6.

![Figure 5.6 Global marketing strategies](source: Developed for this research)

Specifically, the world explosion in the growth of mobile communications raises a host of possibilities for innovative applications and new modes of interaction, unforeseen by designers of mobile technologies. Multi-media messaging services and streaming video have opened up exciting person-to-person services and customized entertainment as seen in Japan’s ubiquitous networked society and these services will continue to grow in the era of the smartphone.

**5.5.2 Policy Recommendations**

Collectively, the chapters in this research address the linkages between culture, consumption and technology (Figure 2.2) in relation to identity by examining the symbiotic relationship between mobile phone usage and consumer behaviour. Given that technology is both culture-bound and culturally framed, this means that technologies which are well-suited for the culture, lifestyle and needs of a society will be adopted quickly while those that do not fit in with local realities are less likely to do well (Coates & Holroyd, 2003; Steinbock, 2005;
Cheng & Bruns, 2007; Bar, Pisani & Weber, 2007; Alford, 2008; Motoko, 2008; Harwitt, 2008; Tchouaffe, 2009). For policy makers, this kind of research provides a perspective for them to understand why some new technologies and services gain popularity in some countries and not in others and how best to “localize” their marketing strategies to match the needs and wants of their consumers.

Based on the findings in the research, a checklist was developed for managers so that they can build and sustain long-term relationships with their key consumers. This is presented in Table 5.6 below.

5.6 LIMITATIONS OF THE STUDY

As mentioned in Chapter Three (Section 3.5), the contributions of any study should be considered in light of its limitations to a comprehensive research endeavour. As the limitations to the methodology (Chapter Three) and data analysis (Chapter Four) have been explained previously, this section reflects on the limitations on resources and underlying assumptions regarding the research. Firstly, time, facilities and money provide limiting factors on all research. Employing ethnographic methods in addition to the case studies and survey questionnaires would further strengthen the findings for the research. Understanding how local society has been altered since the introduction of mobile phones would provide more evidence as to the extent which cultural globalization has played in the growth of a mobile phone culture in Asia. This would include examining how conventional and traditional ways of doing mundane things have been changed to accommodate the use of mobile technologies, changing the way society works and affecting quality of life. This was beyond the scope of the study.

Also, a longitudinal approach as opposed to the cross-sectional approach used in this study could possibly yield different results giving the changing dynamics of everyday life. This could either strengthen the findings from this study or provide new insights for further study. Additionally, with increased time and resources, geographical boundaries could be expanded and sample size for both the case studies and surveys increased. Increasing the sources of data makes the research more convincing because of its representativeness (Sekaran, 1992) and may facilitate inductive generalizations (Sarantakos, 1998). These would aid in the triangulation of data, providing stronger evidence for a conclusion through convergence and corroboration of findings (Yin, 1994).
<table>
<thead>
<tr>
<th>1. What are the global consumer trends in the market?</th>
<th>The process of cultural globalization has resulted in a common frame of reference as people are able to relate to meta symbols like Coca-Cola and Mc Donald’s (Section 2.3.2).</th>
</tr>
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<tr>
<td>2. Have you considered the micro-environmental and macro-environmental factors that might affect your campaign?</td>
<td>The contemporary consumption environment is a meeting of global universals and local particulars (Section 2.3.2).</td>
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<td>3. Can the global trends be localized for individual countries, taking into account culture-specific needs and local social taboos? Does the marketing campaign relate to everyday life in the local context?</td>
<td>The global significance of the local context – ‘glocalization’ – is seen in the need for cultural adaptation of products (section 2.3.2) and specifically, the need to relate to the everyday life context (Section 4.4).</td>
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<td>4. Can a combination of media tools be used? Does this include the mobile phone as a media tool?</td>
<td>The successful convergence of media (Section 4.2.4.1.2) suggests that a combination of media tools including the mobile phone may help firms connect better with consumers.</td>
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<td>5. Is the campaign able to engage consumers in an emotional way? Does the message help the consumer construct his unique identity?</td>
<td>Contemporary marketing is all about creating delightful experiences and building on-going relationships with the active participation of both the producer and the consumer (Section 2.3.1). Brands that appeal to consumers are those that point to consumer engagement at a personal level, allowing the consumer to create his unique identity (Section 2.3.2).</td>
</tr>
<tr>
<td>6. Does your firm maintain a contemporary and relevant website that allows for the interaction between the company and potential/existing consumers? Does it have a version for mobile devices? Are you connecting directly with your customers via popular social media sites like Facebook, Pinterest and Instagram?</td>
<td>Contemporary marketing strategies include popular medium like the internet and the mobile phone (Figure 1.1). With the advent of technologies that allow consumers to access the internet on the move means that firms must engage strategies that allow for connection to mobile consumers. Partaking in popular social media sites will also allow for spontaneous dialogue between the firm and its end customers.</td>
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<td>7. Are there new processes in familiar functions/appropriation of technology that must be taken into consideration?</td>
<td>The relationships between culture, consumption and technology suggest that there may be new processes to old familiar functions. Specifically, the multiple and utilitarian roles the mobile phone plays in everyday life reinforces how cultures appropriate technology for their own use and fashion innovative uses beyond those envisioned by the original designers (Section 2.4.3 and Chapter 4).</td>
</tr>
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</table>

Table 5.6 Checklist for managers for policy and practice

*Source: Developed for this research*
Secondly, the underlying assumptions in this research also serve as limitations to a more objective research. Existing consumption theories and concepts provided the basic foundations for the research. However, the context at which these theories were derived may not be relevant in the contemporary consumption environment. The advent of globalization has altered the global marketing landscape, exposing consumers to a wide variety of goods and services and ideologies (Castells, 1997; Friedman, 1999). Attention to such theoretical and conceptual issues in view of contemporary consumption patterns may illuminate key constructs that were overlooked, thereby rethinking existing knowledge on the subject matter. Miles and Huberman (1994) warned of the dangers of oversimplifying. Given the complex and often paradoxical nature of the social world, good research may not have nice ‘watertight’ explanations. All sources of information have their limitations and there are perspectives and research questions that can benefit from seeking new lines of evidence.

While there are inherent limitations in this research, the strength of this research lie in the qualitative use of mixed methods as detailed in Chapter Three. According to Mathison (1988), the use of alternative methods may tap into different domains of knowledge as in-depth understanding is what is sought after in any interpretive study (Denzin, 1989). Additionally, good social research does not always depend on being able to identify one single causal factor that is responsible for the phenomenon. Given the complexity of social life, a more realistic ambition can be to show how a particular factor has a significant impact – recognizing that other factors may also have a role to play (Denscombe, 2002). The limitations in this research provide an agenda for future research.

5.7 IMPLICATIONS FOR FURTHER RESEARCH

With some refinements in approach and methodology, there could be some potentially significant additions to this research. While the process of globalization has altered the business landscape considerably in terms of the availability of a huge array of goods and services for consumers, it has not changed the fundamental way businesses can succeed. Corporations must still provide products and services of value to their customers. People like things that help to improve their lives in a tangible way or resolve an existing problem and this understanding should be at the heart of any marketing strategy.
As the world converges to a fully mobile society, differing patterns of how people utilize all their mobile technological devices while maintaining what is unique to their cultures will continue to provide interesting fodder for further scrutiny. This research unveiled the subtle cultural differences in which people of different cultures utilize their mobile phones. While the motivations for using the mobile phones may be similar because of shared life experiences through the process of globalization, there are subtle differences in the actual use of the mobile phone due to different life contexts. These differences can be attributed to cultural factors. Over time, these too may change as the dynamics in the macro and micro-environments through the course of everyday life constantly evolve. Already, the findings from this research (literature review, case studies and surveys) show how closely related the macro and micro-environmental factors are. Thus, direct observation in addition to both the case studies and survey could further enhance the robustness of the theories proposed. According to Yin (1994), observational evidence is particularly useful in providing additional information about the phenomena being studied as seen in the number of ethnographic studies on mobile phone consumption that have already been conducted. In addition, researchers need to recognize that consumers’ everyday lives might differ from their own and be open to unusual contexts and situations.

Specifically, in today’s consumption-led society, the users will be the ones determining how a product like the mobile phone should evolve. Again, this relates to the consumer identity which formed the premise for this research. Future research on mobile phone consumption should investigate from a person-centred perspective rather than a product-centred viewpoint as individuals take a more active role in defining their self-identity (Castells, 1997; Friedman, 1999; Holt, 2002). Markets are people and not products (de Mooij, 2005) and people will only buy into products that are relevant to their identities (Daye, 2010). Marketers must take into consideration the psychological, social and cultural divergences because of the mobile phone’s capacity to be used for different purposes in any sphere of life at different life stages.

Taking into account Moorman’s (1987) technique orientation theory in which the human dimension is left out when marketers look at consumers’ perceptions, desires and values in a mechanized fashion, global marketers must cease to hold on to conventional marketing wisdom of categorizing people as products but instead relate to the cultural mind-sets of the target group (de Mooij, 2005). Based on the findings from this research, consumers are
constantly thinking of ways to optimize their use of mobile technology. In Miller’s (1997) words: “Consumption is more than just purchasing; it is better understood as a struggle which begins with the problem that is the modern world we increasingly live with institutions and objects that we do not see ourselves as having created. We start with a kind of secondary relationship to the cultural world, we may not, however accept this passively; our aim is often to appropriate and use these forms for our own purposes” (pg. 26). The unique ways in which the Japanese mobile phone user optimizes the use of his mobile phone while maintaining his cultural identity clearly shows the influence of the social context on the appropriation of technology for everyday life (Chapter Two, Section 2.3.3 and Section 4.2.1).

Further research could possibly approach from the consumption experience perspective to examine the cultural differences in the adoption of mobile entertainment content and services. According to Ropke (2001), radical changes in everyday life will happen whenever a new technology leads to new processes in familiar functions or to completely new functions or forms of activity. Because the impact of culture is so natural and automatic, its influence is often taken for granted. The findings in this research provide the impetus to rethink this issue because they clearly indicate the importance of the micro-environmental factors (local context) in shaping sustained interest in mobile technology. Additional light will be shed on these interactions by advances in communications research.
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APPENDIX 1

Survey Questionnaire

This survey comprises of 4 sections and 39 statements.
Please indicate how much you agree or disagree with each of these statements by marking the answer that most corresponds to your level of agreement.

Section A

The mobile phone is the primary means in which I stay in contact with my social network of friends and family.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

2. The mobile phone helps me to keep in contact with friends and family when I am out of the country or not within physical proximity of them.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

3. The mobile phone allows me to partake in last minute social gatherings.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

4. I have used my mobile phone to convey apologies or communicate bad news.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

5. Text messaging is a great way to receive or give out information to my social network.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

6. The mobile phone provides a convenient means to reschedule planned activities.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __

7. The mobile phone sometimes functions as a substitute for face-to-face interactions.
Strongly disagree__ Disagree __ Neutral __ Agree __ Strongly agree __
8. I have been left hanging in mid-sentence in a conversation because the other party received a phone call/text message.

Strongly disagree Disagree Neutral Agree Strongly agree

9. I have interrupted a conversation to answer my mobile phone.

Strongly disagree Disagree Neutral Agree Strongly agree

10. I have answered personal calls/text messages while I am at work.

Strongly disagree Disagree Neutral Agree Strongly agree

Section B

11. I use my mobile phone every day.

Strongly disagree Disagree Neutral Agree Strongly agree

12. The mobile phone helps me to coordinate between the different roles I play in life (employer/employee/parent/child/colleague etc.).

Strongly disagree Disagree Neutral Agree Strongly agree

13. The mobile phone helps me to micro-manage little pockets of time.

Strongly disagree Disagree Neutral Agree Strongly agree

14. The mobile phone allows me to perform a variety of roles (both work and personal) when I am on the move.

Strongly disagree Disagree Neutral Agree Strongly agree

15. I have used the functions of the mobile phone to enhance the management of my life (e.g. clock, calendar, mobile mail etc.).

Strongly disagree Disagree Neutral Agree Strongly agree

16. I have used my mobile phone to lie about my whereabouts.

Strongly disagree Disagree Neutral Agree Strongly agree
17. The mobile phone is the best way to reach me.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

18. I will always own a mobile phone.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

Section C

19. The mobile phone is a common technological device among my social network of friends and family.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

20. I feel an emotional loss when my mobile phone is lost/misplaced/stolen.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

21. It is important that my mobile phone is personalized to suit my needs.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

22. The physical presence of the mobile phone serves as a reminder of the network of friends and loved ones stored within my phonebook.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

23. I have used the mobile phone to screen calls and evade unpleasant situations.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

24. I feel uncomfortable when others peruse my mobile phone menus and messages without my knowledge or permission.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

25. I feel more secure when I have my mobile phone with me because it assures that help is just a phone call away.
Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __
26. A constantly ringing mobile phone suggests that the person has an intense social network.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

27. I have used the mobile phone as a shield against unwanted attention.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

28. I save important messages on my mobile phone.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

29. The mobile phone is a positive and important part of my everyday life.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

Section D

30. Hearing someone talk on the mobile phone in a public place does not bother me.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

31. Hearing someone talk on the mobile phone in prohibited places does not bother me.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

32. I have received unsolicited promotions/advertisements/calls on my mobile phone.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

33. I have used my mobile phone to participate in promotional activities.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

34. The mobile phone is useful for informing me about activities that cater to my interests.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

35. I feel comfortable using the mobile phone because it has gained social acceptance.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __
36. Watching/observing how others utilize the mobile phone has taught me new ways of using mine.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

37. I have given out my mobile phone number so that my favourite stores/malls/activity clubs can reach me to inform me of new product arrivals/activities.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

38. Human interaction and interconnectivity to loved ones are more important than privacy.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __

39. Text messaging is an efficient way of contacting those on my social network when I have information to share.

Strongly disagree __ Disagree __ Neutral __ Agree __ Strongly agree __
## APPENDIX 2

Tabulated results from survey

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<th>Questions/Answers</th>
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APPENDIX 3

Detailed tables covering the survey questions, supporting literature and rationale

**Social Networks**

<table>
<thead>
<tr>
<th>Question</th>
<th>Supporting literature</th>
<th>Rationale for this question</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The mobile phone aids me in keeping in touch with friends/family/colleagues/others when I travel out of the country or when I am not within physical proximity of them.</td>
<td>Plant (2000), Lasen (2003), Harkin (2003) and Geser (2004).</td>
<td>Relates to the management of everyday life and personal identity.</td>
</tr>
<tr>
<td>4. I have used text messaging to convey apologies or communicate bad news.</td>
<td>Harkin (2003), Plant (2002)</td>
<td>Relates to personal identity, social perception/acceptance and the management of everyday life.</td>
</tr>
<tr>
<td>5. Text messaging is a great way to obtain or give information to my friends/family/colleagues/others.</td>
<td>Fox (2001), Plant (2000)</td>
<td>Relates to personal identity, social perception/acceptance and the management of everyday life.</td>
</tr>
<tr>
<td>8. I have been left hanging in mid-sentence in a conversation because the other party received a phone call/text message.</td>
<td>Plant (2002) and Geser (2004)</td>
<td>Relates to social perception/acceptance</td>
</tr>
<tr>
<td>10. I have answered personal calls/text messages on my mobile phone while I am at work.</td>
<td>Plant (2002), Lasen (2003), Harkin (2003) and Geser (2004)</td>
<td>Relates to the management of everyday life and social acceptance/identity</td>
</tr>
</tbody>
</table>
**Personal History**

<table>
<thead>
<tr>
<th>Question</th>
<th>Supporting literature</th>
<th>Rationale for this question</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The mobile phone allows me to utilize the dead times (waiting for someone/commuting) and micro-manage the little pockets of time that I have.</td>
<td>Plant (2002), Lasen (2003), Harkin (2003) and Geser (2004)</td>
<td>Relates to the management of everyday life.</td>
</tr>
<tr>
<td>4. The mobile phone allows me to perform a variety of roles (both work and personal life) even when on the move.</td>
<td>Lasen (2003) and Geser (2004)</td>
<td>Relates to the management of everyday life.</td>
</tr>
<tr>
<td>5. I have used the new features on my mobile phone (alarm/global positioning systems/mobile mail/world time/3G networks) to enhance the management of my life.</td>
<td>Bar, Pisani and Weber (2007)</td>
<td>Relates to the management of everyday life.</td>
</tr>
<tr>
<td>6. I have used the mobile phone to lie about my whereabouts.</td>
<td>Plant (2002) and Harkin (2003)</td>
<td>Relates to the management of everyday life and personal identity.</td>
</tr>
<tr>
<td>7. My mobile phone is the best way to reach me (as opposed to my office or home number).</td>
<td>Plant (2002) and Geser (2004)</td>
<td>Relates to the management of everyday life and personal identity.</td>
</tr>
<tr>
<td>8. The mobile phone is a positive and necessary part of my everyday life.</td>
<td>Plant (2002) and Aoki and Downes (2003)</td>
<td>Relates to the management of everyday life and personal identity.</td>
</tr>
<tr>
<td>10. The reasons for adopting the mobile phone have evolved since the initial purchase (e.g. security and convenience to item of necessity and a social networking tool).</td>
<td>Plant (2002), Bar, Pisani and Weber (2007)</td>
<td>Relates to the management of everyday life and personal identity.</td>
</tr>
</tbody>
</table>
### Symbolic Meaning of Products

<table>
<thead>
<tr>
<th>Question</th>
<th>Supporting literature</th>
<th>Rationale for this question</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. It is important that my mobile phone is personalized for my individual needs (ringtone/speed dial/wallpaper etc.).</td>
<td>Plant (2002) and Geser (2004)</td>
<td>Relates to personal identity.</td>
</tr>
<tr>
<td>Question</td>
<td>Supporting literature</td>
<td>Rationale for this question</td>
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</tr>
<tr>
<td>2. Hearing someone else talk on the mobile phone in places where it is prohibited such as the library or the cinema, does not bother me.</td>
<td>Plant (2002), Geser (2004) and Campbell (2007)</td>
<td>Relates to social perception/acceptance.</td>
</tr>
<tr>
<td>3. I have received unsolicited advertisements/promotions/calls on my mobile phone.</td>
<td>Fox (2001) and Plant (2002)</td>
<td>Relates to social perception/acceptance.</td>
</tr>
<tr>
<td>8. I have given out my mobile phone number so that my favourite stores/malls/activity clubs can reach me to inform me of new product arrivals/activities.</td>
<td>Geser (2004)</td>
<td>Relates to social perception/acceptance.</td>
</tr>
<tr>
<td>9. Human interaction and interconnectivity to loved ones are more important than privacy.</td>
<td>Plant (2002)</td>
<td>Relates to the management of everyday life.</td>
</tr>
</tbody>
</table>