The Impacts of Mobile Money Services
on Subsistence Marketplaces
in Rural Cambodia

A thesis submitted in fulfilment of the requirements for the degree of the Doctor of Philosophy

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award. The content of the thesis is the result of work that has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged, and ethics procedures and guidelines have been followed.

This thesis contains no material that has been accepted for the award of any other degree or diploma in any tertiary institution, and to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference is made in the text of this thesis.

Jeff Fang
January 2015
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Notice of Publication

With the permission of the PhD supervisors, parts of this thesis have been published in peer-reviewed journals and presented at peer-reviewed conferences.

**Academic Publications:**


**The first author is the PhD candidate for this thesis and contributed to the research design, data collection, data analysis, academic writing and authorship correspondence of the journal manuscript. The second and third authors are the PhD candidate’s supervisors and contributed to the editorial amendments of the journal manuscript.**

**Peer-Reviewed Conference Papers/Presentations:**


**The first author is the PhD candidate for this thesis and contributed to the research design, data collection, data analysis and academic writing of the above conference papers. The second and third authors are the PhD candidate’s supervisors and contributed to the editorial amendments of the above conference papers/presentations.**
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<th>Description</th>
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<tbody>
<tr>
<td>ASCA</td>
<td>Accumulating Savings and Credit Association</td>
</tr>
<tr>
<td>ATM</td>
<td>Automated Teller Machines</td>
</tr>
<tr>
<td>BCHEAN</td>
<td>Business College Human Ethics Advisory Network</td>
</tr>
<tr>
<td>BOP</td>
<td>Base of The Pyramid</td>
</tr>
<tr>
<td>CAQDAS</td>
<td>Computer-Assisted Qualitative Data Analysis Software</td>
</tr>
<tr>
<td>CDRI</td>
<td>Cambodia Development Research Institute</td>
</tr>
<tr>
<td>CMA</td>
<td>Cambodia Microfinance Association</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income</td>
</tr>
<tr>
<td>GSMA</td>
<td>Groupe Speciale Mobile Association</td>
</tr>
<tr>
<td>ICMB</td>
<td>International Conference on Mobile Business</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
</tr>
<tr>
<td>IJABIM</td>
<td>International Journal of Asian Business and Information Management</td>
</tr>
<tr>
<td>INTRAC</td>
<td>International NGO Training and Research Centre</td>
</tr>
<tr>
<td>IOM</td>
<td>International Organisation for Migration</td>
</tr>
<tr>
<td>ITU</td>
<td>International Telecommunications Union</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>MSC</td>
<td>Most Significant Change</td>
</tr>
<tr>
<td>MWCX</td>
<td>Master WING Cash Xpress</td>
</tr>
<tr>
<td>NBC</td>
<td>National Bank of Cambodia</td>
</tr>
<tr>
<td>NIS</td>
<td>National Institute of Statistics</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
</tr>
<tr>
<td>PDR</td>
<td>People’s Democratic Republic</td>
</tr>
<tr>
<td>PIN</td>
<td>Personal Identification Number</td>
</tr>
<tr>
<td>RESCA</td>
<td>Regular (Non-rotating) Savings and Credit Association</td>
</tr>
<tr>
<td>ROSCA</td>
<td>Rotating Savings and Credit Association</td>
</tr>
<tr>
<td>SE</td>
<td>Subsistence Entrepreneurs</td>
</tr>
<tr>
<td>SMS</td>
<td>Short Message Service</td>
</tr>
<tr>
<td>UNTAC</td>
<td>United Nations Transitional Authority in Cambodia</td>
</tr>
<tr>
<td>WCX</td>
<td>WING Cash Xpress</td>
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Summary

Accessing financial services via mobile phone technology, referred to as mobile money services, is a relatively recent innovation that is making a significant difference to the lives of those previously financially excluded in developing countries. The aim of this research is to explore the impacts of mobile money services on subsistence marketplaces.

Over four billion people live in subsistence marketplaces, consumer and entrepreneur communities living at subsistence income levels, concentrated mainly in developing countries. In 2011, about 55 per cent of the global adult population living in rural areas or subsistence marketplace regions had few or no opportunities to access formal financial services, but had better access to mobile phones. With global mobile phone subscriptions tripling from about 2.2 billion in 2005 to about 6.6 billion in 2013, the mobile phone has increasingly become a channel for providing access to basic financial services. By the end of 2013, mobile money services were available in most developing and emerging markets with 219 mobile money services implemented in 84 countries, compared to 179 services in 75 countries at the end of 2012.

Many studies have been undertaken on mobile money services focusing on consumer adoption, technology design improvements and business-driven models. However, the impacts of this innovation in the context of subsistence marketplaces are not yet well understood and require exploration to further reflect the subsistence level and informal economy setting. This research responds to the call for rich, qualitative research that can extend the conceptual understanding of the impacts of mobile money services on the lives of those living in subsistence marketplaces. This research extends previous mobile money impact studies and draws upon literature on subsistence marketplaces, consumer wellbeing, subsistence entrepreneurship and financial capability. Cambodia is used as an example in this thesis to increase understanding on the role and impact of mobile money services on subsistence marketplaces.
The Most Significant Change (MSC) methodological framework was adapted to suit the purpose of this study. Using the MSC as the basis for the research framework enables the qualitative research process to focus on the deeper issues of how mobile money services affects the daily processes of individual, community and business life. This involved the collection of significant change stories emanating from the field or from the micro-level that described the effects of an intervention on people’s lives. Primary data came from face-to-face interviews with a sample of mobile money customers. Observational data were also collected. These data were collected from 15 district towns within six rural provinces to capture in context customer perceptions/experiences before and after using mobile money services.

This research provides insights into understanding the impacts of mobile money services on financial capability, consumer wellbeing and subsistence entrepreneurship. The specific natures of the impacts are unique to the cultural contexts and needs of each society.

The findings show that mobile money services have the potential to gain greater market acceptance and penetration when used effectively to improve the wellbeing and daily activity processes of individuals, communities or business life within subsistence marketplaces. The mobile money platform as a business solution maximises the value of subsistence entrepreneurship activities through reduced transaction costs, improved business process activities, higher profit margins and greater market access opportunities. Understanding the effects of technology-based services, like mobile money services, on financial capability provides greater insights into how mobile technology can best be utilised to increase opportunities for consumers to access financial products and services. By doing so, appropriate and affordable products and services can further promote financial inclusion and improve financial habits, behaviours and practices in subsistence marketplaces.

This research contributes to the broad literature on the impacts of mobile money services on subsistence marketplaces from a theoretical perspective. This research also contributes valuable insights into the broader work of researchers, practitioners and policymakers seeking to improve people’s livelihoods through technology.
Chapter 1: Introduction

Financial exclusion is a significant problem globally, especially in developing countries. By the end of 2011, about 55 per cent of the global adult population lived in rural areas with little or no access to basic financial products and services (Demirguc-Kunt & Klapper 2012), hence preventing them from participating in the formal economy. One of the most important innovations in the last decade has been introducing mobile money services to developing countries. This innovation has captured the attention of global financial institutions, mobile network operators and international aid agencies, such as the World Bank. Mobile money services are seen as a promising vehicle to reduce global levels of financial exclusion.

This research will explore the impacts of mobile money services on subsistence marketplaces using the example of rural Cambodia—a developing country that is experiencing transition from a subsistence economy to a monetised society.

1.1 The Research Aim and Question

This thesis aims to explore the impacts of mobile money services on subsistence marketplaces. It does so by answering the research question:

What are the impacts of mobile money services (accessing basic financial services using mobile phone technology) on subsistence marketplaces?

To answer the research question, three research objectives are proposed:

- to explore the impacts of mobile money services on the financial capability of subsistence consumer and entrepreneur communities
- to explore the impacts of mobile money services on the consumer wellbeing of subsistence consumer and entrepreneur communities
- to explore the impacts of mobile money services on subsistence micro-entrepreneurs.
1.2 Financial Exclusion and Subsistence Marketplaces

Subsistence marketplaces, comprising consumer and entrepreneur communities living at subsistence income levels, are located all over the globe but are especially concentrated in large developing countries and regions (Sridharan et al. 2014b). Subsistence consumers typically have few or no opportunities to grow their income, access formal education, basic amenities and formal financial services (Viswanathan & Rosa 2007; Weidner, Rosa & Viswanathan 2010).

By the end of 2011, about 55 per cent of the global adult population (total population in 2011 was about 6.8 billion) lived in rural areas with few or no opportunities to access formal financial services or products that enable saving, access to credit or to transfer or receive money (Demirguc-Kunt & Klapper 2012; World Bank 2012). It was further estimated that only 22 per cent of rural residents in subsistence marketplace regions had a formal bank account, compared to 35 per cent among the urban residents (Demirguc-Kunt & Klapper 2012; World Bank 2012).

Figure 1.1 shows the distribution of respondents with a bank account in the context of the East Asia and Pacific region. This includes having an account (self or together with someone else) at a bank, credit union, another financial institution (e.g., cooperative, microfinance institution), or the post office (if applicable) (Demirguc-Kunt & Klapper 2012; World Bank 2012).

It was observed that more advanced economies displayed higher levels of financial inclusion while emerging East Asian economies like Cambodia, Indonesia, Vietnam, Philippines and Lao People’s Democratic Republic (PDR) displayed lower levels of financial inclusion. Interestingly, Cambodia had the lowest level of financial inclusion in the East Asia and Pacific region (only 3.66 per cent of the adult population reported having access to a bank account).
Figure 1.1: Account at a Formal Financial Institution (% age 15+) - East Asia and Pacific Region, 2011


The consequences of financial exclusion for subsistence marketplaces means subsistence communities face the prospects of continuous insecurities and lack of control over many aspects of their daily life activities (Weidner, Rosa & Viswanathan 2010). They will also lack basic human rights together with the lack of empowerment opportunities through collective or individual actions to improve their lives (Blocker et al. 2013). This also results in subsistence consumers experiencing severe resource constraints due to scarcity of information, education and infrastructure (Viswanathan et al. 2009).

Blocker et al. (2013) argue that the lack of income, access to products or services, and mobility further constrains the poor’s exchange opportunities and restricts individuals in the marketplace to consume many things required basic survival and achieve objects of desire throughout life (Blocker et al. 2013).

Financial exclusion in subsistence marketplaces also gives rise to inequality in economic opportunity (Narayan 2014) and makes many subsistence consumers disadvantaged with lack of fairness and opportunities to economic participation.
1.3 Mobile Phones and the Mobile Money Landscape

Although it is estimated that less than three per cent of the global adult population use a mobile phone to pay bills, send money and receive money (World Bank 2012), the largest number of mobile phone subscriptions comes from emerging economies (ITU 2014). Subsistence consumers display great interest and capacities in adopting technological products and services to empower themselves and significantly influence their day-to-day lives (Trujillo et al. 2010). As shown in Figure 1.2, global mobile phone subscriptions almost tripled from about 2.2 billion in 2005 to about 6.6 billion in 2013, of which about 5.1 billion (or about 78 per cent of the global mobile phone subscriptions) came from the emerging economy regions (ITU 2014).

Figure 1.2 Mobile Phone Subscriptions, 2005–2013

Source: ITU 2014
In the context of the East Asia and Pacific region, mobile phone penetration remains high as shown in Figure 1.3. With the exception of Lao PDR and China, all other East Asian and Pacific countries had a mobile phone penetration rate greater than 100 per 100 inhabitants. Cambodia had a mobile phone penetration rate of 128.53 per 100 inhabitants.

![Figure 1.3: Mobile Phone Penetration Rate (Per 100 Inhabitants), 2012 – East Asia and Pacific Region](image)


The mobile phone has increasingly become a channel for providing access to basic financial services in subsistence marketplaces. Hence, offering access to basic financial services using mobile phone technology called ‘mobile money services’ can potentially transform the lives of the subsistence consumers. Using mobile phones as a means of providing convenient access to financial services can potentially mean the inclusion of subsistence consumers in economic growth to reduce poverty.
Consumers in developed countries typically have access to financial services due to the already established and readily accessible financial infrastructure systems (Flood, West & Wheadon 2013). As such, mobile money adoption in developed countries may be low as most consumers already have access to formal financial services, with the mobile phone being just another channel to incrementally extend the convenience of accessing already existing service offerings by financial institutions (Flood et al. 2013; Mauree & Kohli 2013).

Mobile money services form a crucial link to the formal economy in developing countries for subsistence consumers by increasing levels of financial inclusion and overcoming inefficiencies of the financial infrastructure system (Flood et al. 2013). Figure 1.4 shows the rapid growth of live mobile money services for the unbanked by regions from 2001 to 2013, with about 52 per cent of live mobile money services occurring in the Sub-Saharan Africa region (Pénicaud & Katakam 2014).

Figure 1.4: Number of Live Mobile Money Services for the Unbanked by Region, 2001–2013

1.4 The Significance of this Research

There is a need to increase understanding of the impact of financial services offerings, particularly mobile money services, on consumer well-being (CWB) (Anderson et al. 2013) and how it has changed the lives of subsistence consumers. The transition from subsistence to a monetised economy has enormous implications for consumers and businesses and it is important to capture these cultural, social and financial changes (Albuquerque, Diniz & Cernev 2014; Dewan 2010).

There is a growing body of work confirming the value of mobile phones in improving communication between micro-enterprises, customers and suppliers (Donner & Escobari 2010). However, there is also the need to build knowledge on theory-inspired impact evaluations of technology-based application services using mobile phones on micro-enterprises, specifically mobile money services (Donner & Escobari 2010). Increased understanding is also required of how micro-enterprises within an informal setting or subsistence marketplace, conceptually termed as subsistence entrepreneurs (Viswanathan et al. 2014), leverage the advantages of various technologies (Donner & Escobari 2010).

The key areas that potentially add value to the understanding of mobile money services also include:

- geographical studies, particularly for Latin America, China and Southeast Asia
- conceptual approaches, especially in needs and impact research
- methodological approaches, especially in-depth qualitative studies (Albuquerque et al. 2014; Dewan 2010; Donner & Tellez 2008; Duncombe & Boateng 2009).

Each society and culture is unique, with varied social and cultural needs. Building on previous studies, this research aims to add to the knowledge and understanding of how mobile money services, serving as a mechanism for accessing basic financial services and mobilising financial assets, affect the well-being and daily activity processes of individual, community and business lives within subsistence marketplaces.
CHAPTER 1: INTRODUCTION

The motivation of this research therefore, is to identify and explore the impacts of mobile money services on subsistence marketplaces. By doing so, this thesis provides contributions to the following areas:

- financial inclusion and financial behaviour through the use of mobile phones in subsistence marketplaces
- financial services consumer behaviour research in subsistence marketplaces
- the impacts of uptake of mobile money services for subsistence micro-entrepreneurs
- the impacts of mobile money services on the financial capabilities of consumers in subsistence marketplaces.

This thesis will be useful to:

- researchers and the academic body of knowledge of financial inclusion and financial behaviour from the adoption of mobile money services. This will enrich the existing theoretical frameworks of CWB, subsistence marketplaces and financial capabilities.
- assist industry practitioners in developing suitable inclusive mobile financial services for the unbanked and poor
- policymakers in developing strategies to alleviate financial exclusion and improve the wellbeing of individuals, households and businesses in developing economies.

1.5 Thesis Structure

This thesis consists of nine chapters, including this introduction.

Chapter 2 provides discussion on the theoretical perspectives on subsistence marketplaces, consumer wellbeing, subsistence entrepreneurship and financial capability. These perspectives will inform the key theoretical conceptualisations of this thesis. The chapter will also examine the key topics of the use of mobile phones in the context of subsistence marketplaces and micro-enterprises, access to basic financial services, current issues and applications on mobile money services and impact evaluation.
Chapter 3 details the methodology used in this study. The chapter explains the theoretical foundations of this thesis based on epistemological, ontological and axiological orientations. A full description of the research design, which includes information on the research methodological framework adopted, is discussed. Details of the data collection steps and analysis techniques used are also provided. The chapter concludes by commenting on the challenges and limitations of this PhD research.

Chapter 4 gives an overview of Cambodia’s social demographics and the financial services landscape. It explains the elements of the mobile money service system and further describes how these elements have been rolled out across Cambodia’s provinces. Other external factors like the telecommunications sector, microfinance regulations and the dual currency environment, which influenced and shaped the mobile money ecosystem, in Cambodia are also discussed.

Chapters 5, 6 and 7 detail the findings of this PhD research. Chapter 5 examines the impacts of mobile money services on financial capability. Chapter 6 discusses the impacts of mobile money services on consumer wellbeing. Chapter 7 presents the impacts of mobile money services on subsistence entrepreneurship.

Chapter 8 provides a discussion on the significance of the research findings using the Most Significant Change (MSC) methodological framework.

Chapter 9 provides the conclusions by bringing together the main themes and final discussions on the findings. Theoretical and industry implications are discussed, followed by future research agendas and directions.
Chapter 2: Literature Review

2.1 Introduction

Identifying and exploring the impacts of mobile money services in subsistence marketplaces requires drawing upon a multi-disciplinary set of theoretical frameworks. First, it is necessary to focus on subsistence marketplaces and the development of concepts such as consumer wellbeing and marketing interactions that characterise this context. In particular, the discussion will focus on marketing exchanges and social network relationships.

Second, the concept of subsistence entrepreneurship will be explored and how the core activities of micro-enterprises are affected by the introduction of innovations, such as mobile money services. Transaction Cost Economics theory will also inform this discussion.

Third, it is important to understand the nature of financial exclusion in subsistence marketplaces so we can understand how the proliferation of mobile money services can affect the lives of the previously unbanked and their financial behaviours. The concept of financial capability will provide the theoretical lens for discussion.

2.2 Subsistence Marketplaces

Research into subsistence marketplaces was inspired by the ‘Economic Pyramid of The World’ (Hammond et al. 2007; Prahalad 2005; Prahalad & Hart 2002). The global marketplace can be conceptualised as an economic pyramid consisting of four tiers as shown in Figure 2.1.
Over four billion people belong to the bottom of the economic pyramid (Tier 4) and they are mostly in Africa, Asia and Latin America, with an estimated annual income below US$3,000 in local purchasing power (Hammond et al. 2007). They are also referred to as the ‘bottom of the pyramid’ or ‘Base of The Pyramid’ (BOP) (Prahalad 2005; Prahalad & Hart 2002). It is estimated between 1.5 to 1.75 billion people belong to the middle of the economic pyramid (Tier 2 – 3) with an estimated annual income of between US$3,000 and US$20,000 in local purchasing power while the remaining 75 to 100 million people belong to the top of the economic period (Tier 1) with an estimated annual income of more than US$20,000 in local purchasing power (Prahalad 2005; Prahalad & Hart 2002).

In particular, locations or incidences of Tier 4 marketplaces can be found within the Asia, Latin America and Africa regions where the populations live on less than US$2.00 a day at 2005 international prices as illustrated below in Figure 2.2. Most notably, the majority of Tier 4 marketplaces are found within the Asia region.

**Figure 2.1: Economic Pyramid of The World**

Business scholars have long advocated the BOP market as an untapped business market segment opportunity, which constitutes a potential US$5 trillion global consumer market (Hammond et al. 2007). Prahalad and Hammond (2002, p. 6) advocated this as ‘fundamentally new sources of growth for multinationals’ due to early growth stages.

However, Viswanathan and Rosa (2007) acknowledged that this research work was based around pitching the BOP market as a new frontier of business profitability opportunities. They further argued that this has effectively created awareness across multiple scholarly and business communities for improved social welfare and business profitability (Viswanathan & Rosa 2007). The knowledge has broadened since then with a need for a more inclusive label (Viswanathan & Rosa 2007). Viswanathan and Sridharan (2012) assert that the BOP market is more than just potential business target
markets for business profitability. More importantly, it is characterised by individuals and families engaging in long-term and, often informal, socially embedded modes of economic exchange. Hence, the BOP market has since been referred to as ‘Subsistence Marketplaces’ to better reflect the aforementioned attributes.

‘Subsistence’ defines the survivalist consumption needs of low to extremely low-income populations, while ‘marketplaces’ focuses on transactional exchanges and relationships that consumers rely on to satisfy livelihood needs regardless of their educational capabilities (Viswanathan & Rosa 2007; Viswanathan et al. 2012). In 2005, about 47 per cent of the developing regions’ populations, predominantly in subsistence marketplaces, lived on less than US$1.25 a day (United Nations 2013). Although the poverty rate significantly improved by 2010, 1.2 billion people are still considered to be living in extreme poverty conditions on less than US$1.25 a day (United Nations 2013). Viswanathan et al. (2007) describe a typical subsistence consumer as an individual and/or family household residing in sub-standard accommodations with uncertainty and lack of control over their daily life activities/processes. Despite such conditions, Viswanathan and Rosa (2007) forecast that subsistence marketplaces would be a driving force for 21st century economic and business developments. It is estimated that one billion new consumers possessing adequate discretionary incomes will enter the global consumer markets before 2020 (Viswanathan & Rosa 2007). They also predict that subsistence consumers who lacked discretionary incomes are expected to be more economically active in the near future due to expanded access to products and information through the internet and various wireless technologies (Viswanathan & Rosa 2007). This could be the result of increased one-to-one economic and social relationships that create strong inter-dependencies and word-of-mouth referrals among subsistence marketplace consumers (Weidner et al. 2010).

While early research studies present the big picture statistics to further advocate the untapped potential of BOP markets, the literature on the more inclusive subsistence marketplaces that promotes understanding of the lived experiences of subsistence consumers is still emerging and is in its early stages. As former United Nations Secretary-General Kofi Annan once said, ‘Almost half the world's population lives on less than two dollars a day, yet even this statistic fails to capture the humiliation, powerlessness, and brutal hardship that is the daily lot of the world’s poor’ (Annan
2000). Indeed, there are opportunities to build knowledge on the understanding of subsistence consumers in areas of societal consumption, impoverishment and wellbeing outcomes (Martin & Hill 2012).

**Consumer Wellbeing**

Consumer wellbeing (CWB) has been extensively discussed among industry and academia particularly in marketing, quality of life and general business disciplines (Lee & Sirgy 2012; Pancer & Handelman 2012).

The concept of CWB differs from consumer satisfaction. Much of the consumer satisfaction research is based on the notion that increased consumer satisfaction will decrease customer complaints and increase customer loyalty of choice, purchase behaviour, word-of-mouth communications and consumer spending (Lee & Sirgy 2012; Lee, Sirgy, & Rahtz 2007). This in turn translates into increased levels of repeat buying, customer retention, sales, investments returns, profitability and market share (Lee & Sirgy 2012; Lee, Sirgy, & Rahtz 2007).

CWB combines the concept of consumer satisfaction with Quality-of-Life (QOL). This means increased levels of CWB will lead to increased levels of consumer’s QOL such as life satisfaction, absence of ill-being, overall life happiness, and societal well-being (Lee & Sirgy 2012; Lee, Sirgy, & Rahtz 2007). Malhotra (2006) emphasized the need for a more theory-based framework to conceptualize how different CWB dimensions work together and classify their corresponding measures. Lee, Sirgy, and Rahtz (2007) and Sirgy and Lee (2006) subsequently explained how existing CWB measures, based on those strengths and weaknesses, differ from one another. Research gaps in the CWB literature were highlighted with a new comprehensive set of CWB measures proposed (Lee, Sirgy, & Rahtz 2007; Sirgy & Lee 2006). Sirgy (2008) focused on the ethical and public policy implications of CWB with the aim of developing better policies to deliver increased CWB levels. Lee and Sirgy (2012) recently updated a systematic and detailed description of various CWB measures and their underlying theoretical conceptual models to help private and public sectors, as well as academic researchers, choose suitable CWB measures.
The discussion on CWB progressed beyond the classic macro-economic approach to include more community-oriented and contextually-bound criteria to provide a cultural identity lens for the consumer and illuminate socio-cultural impacts (Pancer & Handelman 2012). This can further shape the CWB concept as a relevant and important topic in exploring CWB impact in transformative consumer research like poverty and subsistence marketplaces (Pancer & Handelman 2012).

CWB for subsistence marketplaces can be understood as aligning individual and societal needs (i.e. physical, psychological, economic and social) in relation to consumption (Burroughs & Rindfleish 2011; Pancer & Handelman 2012). Anderson et al. (2013) further termed this as eudaimonic wellbeing, which highlights dimensions like access, literacy, consumer involvement, respect, support and social networks at individual, collective and ecosystem levels. These same orientations are reflected by research studies that helped increase the understanding and enhancement of CWB in subsistence marketplaces. For example, research studies have focused on increasing marketplace literacy levels through designing innovative education programs for low-literate subsistence consumers and entrepreneurs (Bello-Bravo et al. 2010; Rosa 2012; Viswanathan, Gajendiran & Venkatesan 2008; Viswanathan et al. 2009). Research has also highlighted innovative ways of improving product development processes and developing effective marketing management strategies to successfully engage consumers in subsistence marketplaces (Viswanathan & Rosa 2007; Viswanathan et al. 2007; Weidner et al. 2010). Research has also focused on increased understanding of marketing interactions through marketing exchanges and social network relationships (Sridharan & Viswanathan 2008; Viswanathan 2007b; Viswanathan, Rosa & Ruth 2010; Viswanathan, Sridharan & Ritchie 2010; Viswanathan et al. 2012).

This research builds from the eudaimonic wellbeing dimensions of CWB combined with insights from marketing interactions to form the conceptual structure in exploring how mobile money services affect the Marketing Exchanges and Social Network Relationships in relation to CWB in subsistence marketplaces. These two aspects are further discussed in the subsequent sub-sections.
Marketing Interactions in Subsistence Marketplaces

Marketing Exchanges

The notion of exchange is widely accepted as the central theme of marketing that encompasses customer behaviours, channels and competitors (Lusch, Brown & Brunswick 1992). Bagozzi (1975) illustrates three types of exchange paradigms—restricted, generalised, and complex—with most marketing exchanges being generalised (at least three actors benefiting one another only indirectly) and complex (at least three actors with at least one direct exchange with mutual relationships). Lusch et al. (1992) further contend that marketing exchanges can occur internally to satisfy needs within the organisation and externally to satisfy needs outside the organisation. However, existing views of exchange paradigms are informed by phenomena established in formal economies through governing rules, formalised contracts and enforced policy regulations (Viswanathan et al. 2012). Marketing exchanges in the subsistence context focus instead on a parallel informal economy, where livelihood needs are not adequately met by formal marketing exchange settings (Viswanathan et al. 2012), and governed with little or no legally enforced regulations and protections (Chen 2007).

When examining the marketing exchange activities of subsistence consumers in South India, Viswanathan (2007b) highlighted four key characteristics of product and market interactions in subsistence marketplaces and singled out the aspects of day-to-day life as having uncertainty, lack of control and complexity. In characterising the interactions occurring within the marketing exchange, Viswanathan et al. (2012) further identified three specific exchange elements that are fluid, constantly customised and comprising highly responsive transactions from a social capital perspective. The nature of marketing exchange activities in subsistence contexts (Viswanathan 2007b) can also include the actual physical money transfer transactions, defined conceptually as a monetary marketing exchange using money as a medium of exchange (Duffy & Ochs 1999; Kiyotaki & Wright 1989).

By building conceptually from previous studies on marketing exchanges within subsistence marketplaces, this research increases our understanding by exploring the practice of the actual physical money transfer transaction and identifying the impacts of mobile money services on the monetary marketing exchange.
Social Network Relationships

The concept of marketing interactions also draws from ongoing discourses on social networks through social capital theory, broadly defined as encompassing the norms and networks to facilitate people’s collective action for mutual benefits (Woolcock 1998). Studies on social networks have shown the key role of embedded social networks within marketing interactions as being characterised by deep social relationships to help consumers and entrepreneurs operate and live within subsistence marketplaces (Sridharan & Viswanathan 2008; Viswanathan, Sridharan et al. 2010).

Recent research studies have also highlighted the impact of mobile phone usage on social networks. For example, Smith and Spence (2011) suggested the mobile phone as a platform for information sharing and connectedness to enable/strengthen social, economic and governance networks. In the subsistence marketplace context, they further explained that mobile phones can be used for maintaining family and social relations with the ability to act in emergencies and daily activities efficiently.

In another study, Donner (2006) determined that Rwandan subsistence entrepreneurs (SEs) use mobile phones to increase the frequency of contact with friends, family and existing business networks, as well as to establish new connections with business partners, suppliers, and customers. Mobile phones also helped subsistence marketplace producers/traders in India respond quickly to market demand, help coordinate supply and demand as well as provide free access to price information for demand catering in undersupplied markets (Abraham 2007).

In Cambodia, social networks are valued as khnang (‘strong back’) or connections and networks in the ‘string’ (khsae) of patronage relationships (linking ordinary villagers or subsistence consumers with higher status individuals) used to access opportunities, to help grow rural household wealth and secure favourable outcomes in local decision-making, conflicts and legal disputes (FitzGerald, Suvannariddhi & Suphal 2007).

Consumer behaviour within social network relationships is also guided by cultural customs, values, and beliefs (Arnould & Wallendorf 1994). Within these social network relationships exist traditional cultural values and social norms rich in cultural meaning,
and practices and obligations (Sridharan & Viswanathan 2008) to honour and maintain social relations and family ties (Ruth & Hsiung 2007). Gift giving is one such cultural example that promotes ties and bonding between individuals (Joy 2001). Gift giving binds personal relationships in daily life as well as harmonising and enhancing interpersonal social relationships (Tynan et al. 2010; Wong, Hogg & Vanharanta 2012). Craig and Douglas (2006) assert that each culture develops its own gift giving practices, consistent with the social network relationships within the culture.

Traditional gift giving in Cambodia can be viewed as a contemporary practice for seeking economic opportunities and gaining protection by attaching themselves to political patrons or higher status individuals with influential power and respect (Ledgerwood 2012). Hence, gift receivers, as well as higher status individuals, gain personal merits through securing favours for the gift givers (Hughes 2006). Further, the gift givers continuously received a *khsae* network of favourable support or protection from these gift receivers (Hughes 2006).

However, the idea of gift giving for this research focuses on traditional festivals that involve meeting social obligations and maintaining or building resilient social networks that bind subsistence communities (Ledgerwood 2012). Further in using the example of Cambodia, gift giving is also considered an appropriate practice for a social gathering or celebration where the gifts do not have to be elaborate or expensive (North 2008) but play an important role in confirming and establishing social network relationships (Davis 2009). Many subsistence Cambodians have few material possessions within their own lifetimes and gifts in the form of cash are extremely important to enable asset-building (North 2008).

Despite an increased number of discourses within the broad social capital literature, the nature of marketing interactions remains under-researched in the context of subsistence marketplaces. Therefore, this is an important area for this research to further reflect the subsistence level and informal economy setting (Viswanathan et al. 2012). This research also builds on the knowledge around cultural values and social norms within social networks to conceptualise how mobile money services subsequently affect the various cultural meanings, practices and obligations, including gift giving and other cultural practices, consistent within these social networks.
2.3 Subsistence Entrepreneurship

While the research on CWB focuses on transaction exchanges in the context of marketing exchanges and interactions in relation to consumer wellbeing, there is also a need for research on the nature of business transaction exchange activities among micro-enterprises, referred to as subsistence entrepreneurship, in relation to their subsistence customers and business supplier/partners (Viswanathan et al. 2014).

Conceptualising Subsistence Entrepreneurship

Subsistence entrepreneurship has only recently been conceptualised within the subsistence marketplace literature (e.g., Sridharan et al. 2014a; Sridharan & Viswanathan 2008; Viswanathan 2007a; Viswanathan et al. 2014; Viswanathan et al. 2008; Viswanathan, Rosa et al. 2010; Viswanathan, Sridharan et al. 2010). SEs can be described as individuals having micro-entrepreneurial entities that are embedded within the poverty or subsistence marketplace contexts (Viswanathan et al. 2014). SEs rely heavily on the close social networks of communities with increased constant face-to-face meetings and social exchanges (Viswanathan et al. 2008). Principal actors within subsistence entrepreneurship conceptually consist of the SE, the subsistence customer and the business supplier/partner (Viswanathan et al. 2014; Viswanathan, Rosa et al. 2010).

Studying subsistence entrepreneurship from a social capital perspective, Viswanathan, et al. (2014) believed that SEs create value for their customers. They further suggest that this marketing exchange eventually develops into a unique and inimitable community-level exchange system that sustains the informal economy in subsistence marketplaces.

In an exploratory study conducted in Chennai, India, Viswanathan, Sridharan et al. (2010) examined the role that social networks play in the behaviours and business transactions among consumers and SEs within the subsistence marketplace settings. Using the theoretical lens of social networks, Viswanathan, Sridharan et al. (2010) confirmed the importance of one-to-one interactions and reliance on social networks in influencing subsistence consumption and subsistence entrepreneurship. They also
confirmed the reliance of both consumers and SEs on information from family and friends resulting from close and trusting relationships (Viswanathan, Sridharan et al. 2010). Indeed, extended trust among SEs and customers arising from one-to-one interactions and reliance on social networks determined the business success of SEs (Viswanathan, Sridharan et al. 2010).

In another study in Chennai, India, Viswanathan, Rosa et al. (2010) highlighted that SEs play a critical role in sustaining three interdependent relationship domains, namely the vendor, customer, and family. Through different role-based activities over a 24-hour business cycle, Viswanathan, Rosa et al. (2010) observed that these SEs changed their commitment levels to keep all three relationship domains viable while moving their scarce time, energy, and financial resources into the domain with the greatest need.

Sridharan et al. (2014a) observed that SEs possess the ability to thrive and grow their businesses. They conclude that SEs conduct essential marketing activities and services in their local vicinities, resulting in overcoming substantial life challenges and improving the economic capacities of their local communities (Sridharan et al. 2014a).

By building conceptually from previous research studies on subsistence entrepreneurship, predominantly from a social capital perspective, this research increases understanding of the nature of transaction exchanges. Specific focus is on the business transaction exchanges of SEs. Subsistence entrepreneurship transaction exchanges for this research takes reference from the Transaction Cost Economics Theory.
Transaction Exchanges

According to Transaction Cost Economics Theory, a transaction exchange occurs when a good or service is transferred across a technologically separable interface in the form of transaction costs (Williamson 1981). Transaction costs are defined as the costs of running a system (Williamson 1985), with their units of analysis according to their principal dimensions as ‘Asset Specificity’, ‘Uncertainty and Complexity’, and ‘Frequency’ (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680).

The transaction cost dimension of ‘Asset Specificity’ describes the condition of the transaction, which can take place in a variety of forms (Tadelis & Williamson 2012). There are six distinctive forms of assets specificity (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680), namely:

1) site specificity, where successive stations are located in relation to each other so as to economise on inventory and transportation expenses
2) physical asset specificity, such as specialised machine equipment required to produce a component
3) human asset specificity that arises in a learning-by-doing fashion
4) dedicated assets, which are discrete investments in general purpose plant that are made at the behest of a particular customer
5) brand name capital
6) episodic/temporal assets.

The transaction cost dimension of ‘Uncertainty and Complexity’ refers to disturbances or contingencies for which adaptations are needed to increase the transaction’s precision, linkages and compatibility (Tadelis & Williamson 2012). The transaction cost dimension of ‘Frequency’ refers to the recurrent and periodic characteristic of these transactions (Tadelis & Williamson 2012; Williamson 1981).

Transaction Cost Economics Theory has been commonly used as a theoretical lens for assessing the impacts of information and communication technologies (ICTs) on business or trading activities (e.g., Boateng 2011; Bunduchi 2005; Liang & Huang 1998; Subramani 2004). Bunduchi (2005) applied the Transaction Cost Economics framework to understand the effects of internet technologies for electronic commerce.
(electronic markets) on business organisations managing their transactional relationships with customers and suppliers. Bunduchi (2005) determined that a major outcome of using electronic markets was primarily intended for deploying electronic commerce functionalities to reduce transaction costs. This led to an improved bargaining position for the organisation developing the electronic markets and thus, decreased opportunity risks (Bunduchi 2005).

Subramani (2004) applied Transaction Cost Economics Theory to investigate the effects of a supply chain management system on the buyer-supplier relationships between the retailer firm and its 131 business suppliers. The results concluded that ICT use in buyer-supplier interactions provided a strategic advantage in influencing the asset specificity dimension of the transaction costs, most notably the relationship-specific assets in enabling value creation by suppliers (Subramani 2004). This in turn led to closer cooperative relationships (Subramani 2004).

In an empirical study involving a sample of 86 internet users to understand whether customers buying products electronically are determined by the channel’s transaction costs, Liang and Huang (1998) tested a model based on the Transaction Cost Economics Theory. It was concluded that customer acceptance is determined by the asset specificity and uncertainty dimensions of the transaction costs of the products during the electronic shopping experience (Liang & Huang 1998). Further, experienced customers are concerned more about the uncertainty dimension whereas inexperienced customers are concerned with both dimensions (Liang & Huang 1998).

The investigation on the impact of mobile phones on the micro-trading activities of 136 traders in Ghana by Boateng (2011) is closely relevant to this research. By extending the work on Transaction Cost Economics Theory in information systems and informing future research in mobile phones and micro-trading activities, Boateng (2011) found that mobile phones were used for monitoring goods and pricing strategies, scheduling deliveries, addressing inquiries and complaints in during-trade activities, and used as calculators in post-trade activities. Boateng (2011) proposed a conceptual framework to assess the impacts of mobile phones on pre-trade, during-trade and post-trade activities.
To date, Transaction Cost Economics Theory as a theoretical lens to understand the nature of subsistence entrepreneurship in the context of transaction exchanges has not yet been used. The research will utilise the concept of transaction exchanges to help facilitate a better understanding of the impacts of mobile money services for subsistence entrepreneurship transaction exchanges. Hence, this research builds on previous works on subsistence entrepreneurship and applies the principal dimensions of Transaction Cost Economics Theory to the use and impacts of mobile money services on subsistence entrepreneurship transaction exchanges.

### 2.4 Financial Capability in Subsistence Marketplaces

This research utilises the concept of financial capability, defined as an individual’s ability to act (due to financial literacy) with the opportunity to act (due to financial inclusion) (Sherraden 2013). Hence, both financial literacy and financial inclusion are the key building blocks of financial capability (Sherraden 2013). In relation to financial services, financial capability play a critical role in the conceptualisation of CWB, more specifically in regards to the access, literacy and consumer involvement dimensions of eudaimonic wellbeing (Anderson et al. 2013) within subsistence marketplaces.

Financial capability can also be associated with the transaction exchanges, specifically money transfer transactions, among consumers and entrepreneurs within subsistence marketplaces. Hence, understanding the role of mobile money services in relation to the two building blocks of financial capability will be useful in complementing and deepening the understanding of CWB and transaction exchanges in subsistence marketplaces.
Financial Inclusion – The Opportunity to Act

Being financially included is a critical component of developing financial capability. To a low-income individual, this social reality equates to financial inclusion, defined by Sherraden (2013) as having the opportunity of convenient access to a secured place to deposit money, to store precautionary savings, and a means for generating savings and investments, appropriately priced credit and insurance products.

Over recent years, there have been fierce campaigns in developing countries to convert large numbers of the unbanked to being banked by having unbanked individuals open bank accounts. The disappointing outcome has been large numbers of bank accounts becoming dormant due to the inability of individuals to use them effectively. Sherraden (2013) argues that financially vulnerable (or financial excluded) households can be reached and provided opportunities to be socially and economically active if financial products and services are appropriate, accessible, affordable, financially attractive, flexible, secure and reliable (Sherraden 2013).

Enabling the opportunity to act by gaining access to financial services is one step to addressing financial exclusion in subsistence marketplaces. Hence it is helpful to have a picture of the financial services landscapes that characterise subsistence marketplaces.

Over the last decade, subsistence marketplaces have experienced a fast growth in microfinance institutions (MFIs) as a solution to financial exclusion in developing countries. Brau and Woller (2004) highlighted six areas defining the major research issues within the microfinance sector:

1) MFI sustainability
2) products and services
3) MFI management practices
4) client targeting
5) MFI regulation and policy
6) impact assessment/evaluation.
Microfinance has evolved from ‘microcredit’, indicating the realisation that subsistence marketplace consumers require a range of financial services, not just credit. These diverse needs are usually met by a variety of providers through multiple financial services (Ledgerwood, Earne & Nelson 2013). Microfinance now encompasses a range of essential basic financial services, such as credit, insurance, transactional payment services, remittance and savings (Barr 2005; Ledgerwood et al. 2013).

The term ‘microfinance’ is now appropriately linked with providing access to basic financial services in poor rural households in an effort to reduce poverty and financial exclusion. Westover (2008) describes microfinance as a means of basic financial services offered to individuals excluded from the traditional financial system, also considered ‘unbankable’—lacking collateral, steady employment, and/or a verifiable credit history. Karlan and Goldberg (2007) listed at least nine traditional features of microfinance services, namely:

1) small transactions and minimum balances (whether loans, savings, or insurance)
2) loans for entrepreneurial activity
3) collateral-free loans
4) group lending
5) targeting poor clients
6) targeting female clients
7) simple application processes
8) provision of services in underserved communities
9) market-level interest rates.

In recent times, financial services providers have become more inclusive to encompass both informal (referred to as Community-based providers) or formal (referred to as Institutional Providers) providers (Ledgerwood 2013; Nelson 2013). The level of formalisation offered by financial services providers is shown in Table 2.1.
It is further noted that the impact of basic financial services goes beyond business loans to also affect business investment, investment in health and education, household emergencies management and other cash needs. The typical range of basic financial services to enable the opportunity to act due to financial inclusion includes loans, savings facilities, insurance, transfer payments, and even micro-pensions to increase the incomes of poor households, build assets, and reduce vulnerability to crises in their daily lives (Murdoch 2003).
Financial Literacy – The Ability to Act

Having the opportunity to gain access to financial services as part of financial inclusion is important but having the knowledge and skills to use financial products and services is equally critical. The current research literature on conceptualising the ability to act due to financial literacy within financial capability focuses on four key financial behaviour domains (Atkinson et al. 2007):

1) Money Management
2) Planning Ahead
3) Choosing Products
4) Getting Information, Advice and Help.

Financial literacy was originally defined as the ability to make informed judgements and take effective decisions regarding the use and management of money (Noctor, Stoney & Stradling 1992). Remund (2010) organised the financial literacy definition according to its conceptual and operational definition. In a review of research studies since 2000, Remund (2010) consolidated the many conceptual definitions of financial literacy into five categories:

1) knowledge of financial concepts
2) ability to communicate about financial concepts
3) aptitude in managing personal finances
4) skill in making appropriate financial decisions
5) confidence in planning effectively for future financial needs.

Hence financial literacy is conceptually synthesised as ‘a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic condition’ (Remund 2010, p. 284). Remund (2010) further suggests budgeting, saving, borrowing and investing as the four most common operational definitions of financial literacy.
In examining past literature to standardise the definition of financial literacy measurement, Huston (2010) suggests financial literacy as having two dimensions, namely, understanding (personal finance knowledge) and use (personal finance application). In conclusion, Huston (2010) then defined financial literacy as a measurement of how well an individual can understand and use personal finance-related information, combined with the ability and confidence to use his/her financial knowledge to make financial decisions.

Since acknowledging that financial literacy was more of a process leading to desired outcomes, Atkinson et al. (2007) contended that financial literacy is far more than basic skills, making the term ‘capability’ more appropriate than ‘literacy’. More recently, financial capability through the ability to act due to financial literacy has been redefined as an individual’s knowledge of financial matters, their money management abilities, and taking control of their finances (Taylor 2011).

However, the above definitions are based on a current state of one’s financial literacy level, purely from an ability, knowledge and skill perspective with less emphasis on external factors. Indeed, Sherraden (2013) further argues that financial literacy refers to the individual’s qualities and the ability to act with less emphasis on the external environment context. In other words, it is determining or understanding an individual’s financial literacy level within their social reality or ‘realms of possibility’ (Sherraden 2013).

One of the most significant seminal studies on measuring levels of financial capability through the ability to act due to financial literacy was conducted by Atkinson et al. (2007). Using a mixed-method approach of interviews, focus groups and a national survey of about 5,000 participants, they identified four key financial behaviour domains (Atkinson et al. 2007):

1) Money Management
2) Planning Ahead
3) Choosing Products
4) Getting Information, Advice and Help.
These four key financial behaviour domains subsequently led to further development of an internationally recognised framework and operational resource toolkit for measuring levels of financial capability, and evaluating the impact of financial education programmes on raising the skills and financial capacity of target groups and inducing positive changes in behaviour (Yoong et al. 2013).

Money Management

The ‘Money Management’ financial behaviour can be defined as adequate day-to-day management of available financial resources to make ends meet (von Stumm, Fenton O’Creevy & Furnham 2013; Yoong et al. 2013). In the pioneering book *Portfolios of The Poor*, Collins et al. (2009) discovered that money management activities of poor households were driven by three needs in relation to:

1) managing basics: managing cash flow to transform regular income flows into a dependable means to meet daily needs
2) coping with risk: dealing with emergencies that can derail families with low reserves
3) raising lump sums: grabbing opportunities and paying for big expenses by accumulating usefully large amounts of money

Indeed, low-income subsistence consumers typically faced daily expenditure needs and cultural and lifecycle obligations (such as ceremonies, births, deaths and marriages), emergencies (such as floods, cyclones, fires and personal emergencies) and opportunities (such as starting businesses, buying productive assets and acquiring basic life enhancing consumer household appliances) (Rutherford 2002; Rutherford & Arora 2009).

Robinson (2001) also asserted security was a major money management factor for subsistence consumers not wanting to keep too much cash at their homes, but needing sufficient reserves for emergencies or unexpected business opportunities.
Planning Ahead

The ‘Planning Ahead’ financial behaviour can be defined as financial precautionary measures or actions taken for the immediate future (von Stumm, Fenton O’Creery & Furnham 2013). In addition, planning ahead also balances present and future needs through saving, spending, and borrowing decisions (Yoong et al. 2013).

Urquizo (2012) conducted a study with rural residents in five Latin American countries: Colombia, Dominican Republic, Ecuador, Nicaragua, and Peru. She concluded that rural residents planned ahead using static savings as backup funds for emergencies, particularly health crises. Planning ahead through goal-oriented savings was often incremental and related to family needs (Urquizo 2012). Informal savings by subsistence consumers can be in the form of cash, grain and (not easily perishable) cash crops, gold and other valuables, animals, land, raw materials and finished goods, construction materials, lending to others in cash or in kind, deposits with savings collectors, labour obligations and other expected reciprocation for past contributions, savings groups or societies like ROSCA, ASCAs and RESCAs (Robinson 2001).

Choosing Products

The ‘Choosing Products’ financial behaviour wisely involves being able to select the best valued financial products and services available and use them appropriately (Atkinson et al. 2007; Yoong et al. 2013). Sherraden (2013) argued that financial products and services that are appropriate, accessible, affordable, financially attractive, easy to use, flexible, secure and reliable will enable subsistence consumers to have full social and economic participation in life.

Existing savings mechanisms offered through formal institutions like rural banks and MFI s could be deemed unsuitable and inconvenient for subsistence consumers. First, formal financial institutions’ opening hours may not suit subsistence consumers’ lifestyles (Sherraden 2013). Further, the costs associated with opening an account and maintaining a minimum balance in order to keep the account open were too high for low-income households (Rutherford et al. 2009; Sherraden 2013). Similarly, in the context of choosing products, Urquizo (2012) emphasised that the most significant
barriers were the inconvenience in operating savings accounts, subsistence consumers’ perception of amounts being too small to deposit in a financial institution, and unaffordable bank charges applied to savings accounts.

Existing or new financial products and services can be confusing, daunting and difficult to use for low-literate subsistence consumers (Sherraden 2013). However, the trial and error method of choosing products can possibly help alleviate this problem and reach out to more subsistence consumers. This was supported by Viswanathan (2007), who observed that subsistence consumers formed primary economic relationships with neighbourhood retail stores. These retailers were known to be responsive to subsistence consumers’ needs and have very detailed knowledge of individual customers who might often resort to trial and error by trying out their products and provide regular feedback to the retailers (Viswanathan 2007).

For example, Viswanathan (2007) noted that buyers bought small quantities of rice to try out the quality taste before buying in larger amounts. If they were bad products, subsistence consumers could return the products (Viswanathan 2007). Subsistence retailers tend to accept product returns and allow exchanges in order maintain customer loyalty (Viswanathan 2007). However, subsistence consumers’ difficulty in choosing products was exacerbated by the fact that they lacked opportunities to engage in a process of trial and error of new products (Chikweche & Fletcher 2010).

Getting Information, Advice and Help

The ‘Getting Information, Advice and Help’ financial behaviour can be defined as staying informed on economic developments likely to affect finances, understanding the financial products’ key features to make informed decisions and knowing how to deal with problems or complaints should they arise (Atkinson et al. 2007). Atkinson et al. (2007) conducted a UK study of individual financial capability including a sample of 5,328 people. They argued that the consumer’s financial behaviour of ‘Getting Information, Advice and Help’ was the greatest area of concern due to the consumers’ apparent inabilities to make informed choices on purchasing financial products.
Consumers require guidance to assess the advantages and disadvantages of different financial products and services (Sherraden 2013). Similarly, for subsistence consumers or low-income rural households, reliable information sources, such as service providers, family members and friends/relatives, play an important role in developing a perceived trust and confidence in financial products, which helps develop financial capability (Tiwari et al. 2013).

Urquizo (2012) asserted the importance of diverse media use through radio and television to connect subsistence consumers to the outside world. Urquizo (2012) also highlighted that, for daily life, rural residents often acquire information through non-traditional media such as local radio, speakers in the main square, mobile advertisements in motorcycle taxis, leaflets and loudspeakers. In addition, key individuals, such as shop owners, as well as social, economic, and religious community gatherings are key sources of information exchanges (Urquizo 2012). These information sources proved critical in addressing existing product information asymmetries (Atkinson et al. 2007). This was because these information sources provided detailed information about product and services, the benefits experienced and also their personal recommendation or referrals of products and services (Tiwari et al. 2013).

Importantly, Anong and Kunovskaya (2013) also determined that subsistence consumers demonstrate low levels of awareness about consumer rights, particularly when products or services they adopt fail. Indeed, Atkinson et al. (2007) emphasised the need for appropriate regulatory protection of consumers in the context of their behaviour patterns.

Subsistence consumers are from different cultures and hold varying degrees of sophistication (knowledge and skill) concerning consumer protection and redress (Donoghue & de Klerk 2009). Hence, in establishing and managing a redress environment for subsistence consumers as well as effective complaint behaviour handling, Donoghue and de Klerk (2009) argued the need for a holistic consumer protection approach that deals with interactions, product performance expectations, actual product performance, and psychological processes and consumer dissatisfaction from product experience. Taking into account the significantly less experienced and resourceful subsistence consumers, it is therefore critical to provide suitable education
about financial products and services, and accessible channels for consumers’ rights to seek redress/resolutions from product/service dissatisfaction (Anong & Kunovskaya 2013).

Research studies relating to financial capability are geographically focused in economies like the USA, UK, Australia, New Zealand, Latin America and Canada. There are opportunities to build on existing knowledge to advance research relating to financial capability within subsistence marketplaces. There are also opportunities to conceptualise and increase understanding of the effects of innovative financial service offerings using mobile phones on financial capability—a key motivation for this research. This is done through identifying the impacts and their effects on subsistence consumers.

2.5 Evolution of Mobile Money Services

Mobile Phones in Subsistence Marketplaces

The development of the mobile phone has become a remarkable technological story in the last decade and is regarded as a universally accessible device regardless of gender, race, age or income status. Global mobile phone subscriptions almost tripled from about 2.2 billion in 2005 to about 6.6 billion in 2013, of which about 5.1 billion (or about 78 per cent of the global mobile phone subscriptions) came from emerging economy regions (ITU 2014).

A developing country with a low gross domestic product (GDP) per capita can have high mobile phone penetration. Bhavnani et al. (2008) highlighted that economists traditionally believed there was a strong correlation or linkage between high GDP per capita and mobile phone penetration. On further re-analysis, Bhavnani et al. (2008) concluded that a low GDP per capita is not necessarily an indication of levels of mobile phone penetration. On the contrary, the presence of mobile phones also affects overall economic development in developing countries. Using information from the World Bank’s World Development Indicators as variables, Waverman, Meschi and Fuss (2005) developed a model to estimate the impact of mobile phones in over 100
developing countries and reported that an increase of 10 mobile phones per 100 people in a typical developing country boosts GDP growth by six per cent.

Another recent study of econometric analysis of India, Kathuria, Uppal and Mamta (2009) reported a 1.2 per cent increase in economic growth for every 10 per cent increase in mobile phone penetration. This supports the proposition that mobile phones play an increasingly important role for development efforts in developing countries, particularly in low-income countries (Duncombe 2011). It advocates the push for investment in mobiles for development (m-development) led by the mobile phone industry together with donors and development partners across a wide range of development sectors (Duncombe 2011).

Srivastava (2005) contended that a significant qualitative evolution accompanied the quantitative growth of mobile phones as the mobile phone moved beyond being a mere technical device to becoming a key ‘social object’ present in every aspect of a user’s life (Srivastava 2005). Due to the increasingly personalised nature of the mobile device, Srivastava (2005) further argued that the mobile phone phenomenon also has human identity and social interaction implications. Similarly, Trujillo et al. (2010) suggested that consumers in subsistence marketplaces display great interest and capacities in adopting technological products and services to empower themselves, and these significantly influence their daily lives.

Recent research confirms that mobile phones are predominantly used for communications, accessing or processing information data. Smith and Spence (2011) contend that mobile phones provide the infrastructure platform for a new level of connectedness between individuals, and also between individuals and institutions. Using the lens of the Sustainable Livelihood Framework (DFID 1999) to study mobile phone usage among rural residents in Tanzania, Said Sife, Kiondo and Lyimo Macha (2010) concluded that using mobile phones provided faster and easier communications, thereby increasing residents’ abilities to access livelihood assets, undertake diverse livelihoods strategies, and overcome their vulnerabilities.
Said Sife et al. (2010) established that mobile phones reduce poverty and improve rural livelihoods through:

- expanding and strengthening social networks
- increasing people’s ability to handle emergencies
- reducing costs and increasing productivity
- enabling rural people to cut down travel costs and minimise physical risks
- maximising the outcomes of necessary journeys
- increasing temporal accessibility
- amplifying activity efficiencies
- sending and receiving money.

However, Said Sife et al. (2010) highlighted that mobile phones did not improve the incomes of rural households.

**Mobile Phones and Micro-Enterprises**

Micro-enterprises in subsistence marketplaces, also referred to as subsistence enterprises (Viswanathan et al. 2014) in this thesis, are typically tiny businesses with mostly one employee—the owner (Schreiner & Woller 2003). A micro-enterprise is defined as ‘an informal sector business with five workers or less, and fixed assets valued at less than US$10,000’ (World Bank 1999).

Vong et al. (2012) also notes that micro-enterprise owners are self-employed and usually have little or no capital to form their business and will hire family members or have few employees. Additionally, the majority of micro-enterprises are regarded as informal in that they may not strictly comply with legal requirements in operating their micro-enterprise (Vong et al. 2012). It is likely that the micro-enterprise business operates from home and the business income is a supplement to the total household income, while only basic knowledge or technology is needed to run the enterprise (Vong et al. 2012). Tokman (2007) observed that micro-entrepreneurs could actually be bypassed by the employment market and these ‘unemployed workers’ start running small enterprises while waiting to be employed in the formal sector.
In a research study among small, medium and micro-enterprises in Botswana Africa, Duncombe and Boateng (2001) found that access to phone services, such as mobile phones, for communication and information-gathering purposes, has contributed significantly to reducing business costs, increasing income, reducing uncertainty/risk and cost of travel, and extending social and business networks. It also substitutes for brokers, traders and other business intermediaries. Phones also meet the priority information needed for communication rather than information processing (Duncombe and Boateng 2001). Similarly, Said Sife et al. (2010) acknowledged that mobile phones enabled rural Tanzanian traders and farmers to acquire better markets and prices, save time and money, and communicate business-related information without delay.

There are an estimated 70 to 90 million formal micro-enterprises globally, including those in high-income Organisation for Economic Cooperation and Development (OECD) countries (IFC 2013). About 78 to 85 per cent (60–70 million) of these are in developing economies or subsistence marketplace regions (IFC 2013). About 52 to 64 per cent of these micro-enterprises (31.2–44.8 million) are unserved or underserved in getting access to basic financial services like credit and use of deposit accounts (IFC 2013). This further demonstrates the potential of subsistence micro-entrepreneurs gaining accessing to basic financial services through mobile phone technology and the need for this research to build knowledge on the role and impact of mobile money services.

**Mobile Money Services**

The mobile phone is increasingly becoming a channel for accessing basic financial services in subsistence marketplaces. The mobile money phenomenon has also been given a range of terminologies, such as mobile money, mobile banking, mobile payments, mobile transfers, mobile finance, mobile wallets, electronic money, mobile cash, and mobile transactions (Albuquerque, Diniz & Cernev 2014; Dahlberg et al. 2008; Dewan 2010; Donner & Tellez 2008; Duncombe & Boateng 2009; Singh & Shelly 2010).
Although mobile phone usage remains high globally, it is estimated that less than three per cent of the global adult population use a mobile phone to pay bills, send money and receive money (World Bank 2012). The mobile phone is progressively changing the way consumers in developed and developing countries access financial services. For example, the use of mobile phones to access financial services in the USA is growing. In a recent 2013 survey, it is estimated that 87 per cent of the USA adult population has a mobile phone (Federal Reserve Board 2014). Out of this, about 93 per cent use mobile phones to check their bank account balances or recent bank transactions and about 57 per cent have used mobile phones to transfer money (Federal Reserve Board 2014).

The mobile money services landscape in developing economies and emerging markets is also progressing. By the end of 2013, mobile money services were available in most developing and emerging markets, with 219 mobile money services implemented in 84 countries compared to 179 services in 75 countries at the end of 2012 (Pénicaud & Katakam 2014). By June 2013, there were over 60 million active mobile money accounts globally and still growing rapidly with 13 mobile money services, each having over one million active users (Pénicaud & Katakam 2014). The Philippines was the first country to roll out the first known sustainable mobile money service (Smart Money) and Kenya’s M-PESA is currently the most well-known mobile money service (Donavan 2012; Heyer & Mas 2010; Morawczynski 2009). In January 2009, a mobile money service provider named WING Money Cambodia (WING) rolled out mobile money services to provide Cambodians with access to basic financial services through mobile phones (IFC 2011).

Mobile money utilises the branchless banking concept, whereby customers without bank accounts can access financial services through technology and local non-bank retail agents called mobile money agents (Singh & Shelly 2010). Mobile money services in the subsistence marketplace context generally include:

- person-to-person funds transfer (domestic and international remittances)
- person-to-business or business-to-business payments
- mobile banking through which customers can access their bank accounts, pay bills, or deposit and withdraw funds
- mobile phone credits top up and mobile phone credit airtime transfers (Morawczynski 2009; Tobbin 2011).
Jack and Suri (2011) estimated that in 2009, more than two-thirds of Kenyan households had at least one member accessing M-PESA’s service. One possible reason for this phenomenal growth was the latent demand for money transfer services, driven by the urban-rural linkages, and the lack of technology-enabled or reliable retail-based alternatives with a broad network of service points for making domestic money transfers (Mas & Morawczynski 2009). Due to Kenya’s uneven economic structure, it was common for rural households to seek employment in urban areas (Mas & Morawczynski 2009). Morawczynski (2009) concluded that M-PESA was used for the solicitation of financial assets as urban migrants used M-PESA as a safer, easier and more convenient way of mobilising financial assets and sending money back to rural families to cope with and recover from stresses and shocks, especially during periods of ethnic violence (Morawczynski 2009).

Morawczynski (2011) asserts that poor people learn to associate individual savings instruments with particular savings needs for which they have a relative advantage and hence, utilise different portfolios to meet their unique savings needs. M-PESA then becomes a platform where poor people can easily and conveniently access and mobilise these various savings instruments (or portfolios) from banks, MFI's and informal savings groups through a single mobile phone (Morawczynski 2011).

There were also some negative aspects to the mobile money phenomenon. The mobile money service application proved too difficult for technically illiterate rural residents in Kenya and hence they stopped using the service (Morawczynski 2009). Morawczynski (2009) further observed that while the money transfer transactions symbolised an act of the sender’s social obligation to send money home and maintain social links with rural family members/relatives, M-PESA interestingly weakened social network relations between the sender (urban migrants) and the receiver (rural family members/relatives) due to urban migrants making fewer visits back home. The increased potential remitter and lender networks resulted in new problems for Kenyan urban migrants as they were receiving more demands for their limited income from extended or distant friends and relatives (Morawczynski 2009). These new demands made it unaffordable for urban migrants to support and maintain relational ties and hence created new tensions between the urban migrants and their rural friends and relatives (Morawczynski 2009).
A strong reliance on a mobile money agent network to perform the cash-in/cash-out transactions presents a potential cash liquidity problem as mobile money agents must keep enough cash on hand to meet withdrawal demands and maintain an adequate electronic money float to facilitate cash-in/cash-out transfers (Maurer et al. 2013). At its core, branchless banking is about having cash when and where customers want it. Flaming et al. (2011) argue that mobile money agents must maintain sufficient stocks of both cash and electronic value (e-float) to enable clients to transact. If they cannot do so, customers may deem the mobile money service as unreliable and hence quickly tarnish the provider’s reputation (Flaming et al. 2011).

Nevertheless, Maurer (2012) asserts that mobile money services were not just being used by consumers. Instead, consumers continued to utilise mobile money services to innovate, disrupt and change (Maurer 2012). Change occurred to the extent that the assemblage of subsistence consumers, payment industries, trade groups, business industries, international aid donor agencies and new entrepreneurial start-ups began to collectively transform through a process of ‘creative re-purposing’ (Maurer 2012).

This can similarly be exemplified by Roger Layton’s extensive work of marketing systems within the field of macromarketing (eg. Layton 2014; Layton 2007; Layton 2009). Drawing from a wide-ranging literature, Layton (2007) defines a marketing system as “a network of individuals, groups, and/or entities linked directly or indirectly through sequential or shared participation in economic exchange that creates, assembles, transforms, and makes available assortments of products, both tangible and intangible, provided in response to customer demand”. Layton (2009) further argues that changes to a marketing system lead to improvements in either or both market effectiveness and efficiency with a significant impact on the well-being of the community.

Building on previous mobile money studies, this research will conceptualise and increase knowledge of the impacts and ‘creative re-purposing’ (Maurer 2012) nature of mobile money services within the marketing system flow (Layton 2007).
2.6 Impact Evaluation

A comprehensive evaluation is defined as an evaluation that includes monitoring, process evaluation, cost-benefit evaluation, and impact evaluation. Further, evaluation ultimately seeks to measure the extent to which project benefits reach the poor and the impact that these benefits have on their welfare (Baker 2000). Karlan and Goldberg (2008) defined the impact of programmes as the difference between the outcomes of the participants and the counterfactual situation (‘How would the participants’ lives have changed had the programme not existed?’).

Hulme (2000) emphasised that the optimal impact evaluation mechanism should be a mixture of the different methods for a fit between assessment objectives, programme context, human resources, and timing. Hulme (2000) further categorised the impact evaluation methods as three types:

- scientific methods—principally control-group surveys
- humanities tradition—ethnography and other qualitative methods
- participatory learning and action (participatory qualitative methods).

Baker (2000) highlighted key sample questions of impact evaluations:

- How did the project affect the beneficiaries?
- Were any improvements a direct result of the project, or would they have occurred anyway?
- Could programme design be modified to improve impact?
- Were the costs justified?

Russell (2009) pointed out that while notably growing exponentially in numerous efforts to reduce poverty, there has been much debate about evaluating the costs, impacts and sustainability of financial services related programmes. Further, Russell (2009) explained that the impact evaluation of financial services related programmes can be assessed using two broad themes:

- social inclusion: having the ability to participate fully as a citizen (economically, politically and socially)
• social capital: the norms and relations embedded in the societies’ social structures enabling people to coordinate action to achieved desired goals (Woolcock 1998; Woolcock & Narayan 2000) and normally associated with CWB.

This research context will focus on the humanities tradition of impact evaluation, which is to explore and understand how mobile money services have affected the subsistence marketplaces.

2.7 The Value of this Research

Increased opportunities to access formal financial services can help subsistence consumers grow their household income, accumulate their asset base, smooth expenditure in the event of erratic cash inflows, manage family wellbeing, and improve their resilience by protecting against circumstantial emergency shocks and vulnerabilities (Chopra et al. 2013; Morawczynski 2009). Hence, examining how mobile phones are used to access financial services and the impacts of using mobile phones on financial capabilities are important to increasing understanding of how subsistence marketplaces can build financial sustainability. Dahlberg et al. (2008) described the mobile money phenomenon as an emerging research area. In an extensive literature review effort by scanning online academic journal and conference databases, they searched through both academic journal papers from various disciplines and conference proceedings to identify any required literature contributions for future research in mobile money services.

From the results, Dahlberg et al. (2008) continued to review other work of the identified authors as well as citations in the papers. Excluded in the search were non peer-reviewed book chapters and papers where mobile payments were just a minor section of a research on mobile commerce or e-payments. As shown in Figure 2.3, Dahlberg et al. (2008) further classified the findings as presented in the following two tables:

1) Mobile Payment Papers by Conference/Journal Publication
Research into the social and cultural aspects of mobile money services is deemed the most under-represented, but is an important area of research to increase understanding of subsistence consumers’ experiences with mobile money services. However, this also presents significant challenges to researchers. Most notably, subsistence marketplaces do not comprise one huge homogenous entity but are made up of different social and cultural segments with unique needs and system requirements (Chikweche & Fletcher 2012). Each country has unique social and cultural contexts that make data gathering and research fieldwork operations difficult. It is also costly and time consuming for researchers to collect data on social variables, especially in the early exploratory stages.

When describing the costly and time consuming nature of doing social research in subsistence marketplaces, Chikweche and Fletcher (2012) explained that there are both information/data gathering challenges and operational challenges. The information/data gathering challenges are:

- obtaining reliable data from credible sources with limited resources
- availability and ample selection of respondents
- gaining access and trust among the respondents
- researcher’s personal character and credibility in the community

*Figure 2.3: Graphical Representation of Mobile Payment Papers by Publication and Approach*

availability of relevant and rich responses from interviews (Chikweche & Fletcher 2012).

The operational challenges are:

- cultural issues that researchers may not be aware of or have difficulties adapting
- language and translation where data collection instruments need to be designed in the local language without compromising the actual meaning
- the gender divide where local community and social demographics may affect female participation in research
- availability of adequate and reliable infrastructure to conduct sound research (Chikweche & Fletcher 2012).

Donner (2008) commented in another literature review of mobile phone usage in the developing world about the need for increased understanding on how the mobile phone acts as ‘an incredibly powerful tool for exchanging ideas at a distance and for managing daily life’ (Donner 2008, p. 146). Further, the impact of mobile phones on the rural community, such as small enterprises, farmers, and the self-employed, is not clear-cut and there are still relatively few detailed research studies to increase understanding of how rural residents or subsistence consumers use the mobile phones (Donner 2008). Further to this, Donner and Escobari (2010) also acknowledged a growing body of work confirming the value of mobile phones in improving communication between micro-enterprises, customers and suppliers. However, they also mentioned the need to build knowledge on theory-inspired impact evaluations of technology-based application services using mobile phones on micro-enterprises, specifically mobile money services.

Similarly, in the context of subsistence marketplaces, studies by Viswanathan et al. (2014) and Sridharan et al. (2014a) also highlighted the lack of knowledge and attention focusing on the nature of micro-enterprise activities. Hence, there is still increasing justification to examine how technologies innovate products and processes to enable emerging economy markets (Tarafdar, Singh & Anekal 2013) and specifically how micro-enterprises within an informal setting or subsistence entrepreneurs leverage the advantages of various technological innovations (Viswanathan et al. 2014; Donner & Escobari 2010).
As shown in Figure 2.4, Duncombe and Boateng (2009) noted that numerous academic and professional studies were conducted on this mobile phone banking phenomenon within developing countries, but the majority of the literature was predominantly focused on consumer-driven perspectives, technology design improvements and business-driven models.

![Figure 2.4: Matrix Representation of Academic and Professional Studies Conducted on Mobile Money Services](source: Duncombe & Boateng 2009, pp. 1237–1258.)

It is also evident from Figure 2.4 that there is further need for building knowledge to link technical solutions to the requirements of unbanked users in developing countries, especially from within developing countries relating to the development of appropriate user interfaces, and user environments. The knowledge typologies with their corresponding research importance and value are explained in Table 2.2 according to the key areas of geographical areas of research, conceptual approach and methodological approach.
Table 2.2: Knowledge Typology and Research Importance and Value Explained

<table>
<thead>
<tr>
<th>Knowledge Typology</th>
<th>Research Importance and Value Explained</th>
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<tbody>
<tr>
<td>Geographical areas of research</td>
<td>Research and professional studies tend to focus on, and draw examples from, existing mobile phone banking initiatives located in Africa and South and East Asia. For this reason, the need for increased understanding in the geographical region for Latin America, China and Southeast Asia are also significant to better understand the unique social and cultural contexts.</td>
</tr>
<tr>
<td>Conceptual approach</td>
<td>Research relating to design and adoption has been fairly well conceptualised, drawing more strongly on approaches borrowed from innovation research. However, needs and impact research is lagging behind and consequently appears not to be following a well-defined and thought out research trajectory. Hence, knowledge building through a strong conceptual approach is required.</td>
</tr>
<tr>
<td>Methodological approach</td>
<td>Significant research required for in-depth qualitative studies analysing primary data in contrast to the mixed method approaches, which has dominated the area of study. Lack of depth of qualitative data may explain the lack of conceptualisation, as such studies have played an important role in other avenues of research concerning the application of ICTs to development.</td>
</tr>
</tbody>
</table>


Interestingly, building from the work of Duncombe and Boateng (2009), more recent research also highlighted that the impacts of the mobile money service innovation on consumers remain an important area to explore. Albuquerque et al. (2014) carried out a review of 94 peer-reviewed academic research articles (published in the period 2001–2011). Similar to Duncombe and Boateng (2009), they also highlighted the need for increased understanding of the geographical regions and the economic or social impact of mobile money services (Albuquerque et al. 2014).
To increase current knowledge of mobile money services, Dewan (2010) emphasised the need for more theory-based empirical research (qualitative and quantitative). To enhance the current understanding of mobile money services, there is a need for increased cultural perspective studies in adopting mobile money services between predominantly cash culture and electronic banking culture to study its impacts on various business sectors (Albuquerque et al. 2014; Dewan 2010). Increased understanding is particularly required on how financial services offered to subsistence consumers can help enhance CWB (Anderson et al. 2013).

2.8 Conclusion

This research responds to the call for rich, qualitative research that can build knowledge and increase our conceptual understanding of the impacts of mobile money services on the lives of those living in subsistence marketplaces. This research extends on previous mobile money impact studies and draws upon studies of subsistence marketplaces, CWB, subsistence entrepreneurship and financial capability literature. Hence, this research seeks to explore the impacts of mobile money services on subsistence marketplaces.
Chapter 3: Methodology

3.1 Introduction

This chapter describes the research methodology used to identify and understand the impacts of mobile money services on financial capability, consumer wellbeing and subsistence entrepreneurship. Hulme (2000) describes this type of impact evaluation from the humanities tradition, which does not ‘prove’ impact within statistically definable limits of probability but rather interprets the processes involved in the intervention or phenomena.

This chapter begins by explaining the theoretical foundations of the research, the research design and the methodological framework. Details of the data collection steps and analysis techniques are also provided. The chapter concludes by commenting on the challenges and limitations of this research.

The research question is:

**What are the impacts of mobile money services (accessing basic financial services using mobile phone technology) on subsistence marketplaces?**

To answer the research question, the three proposed research objectives are:

- to explore the impacts of mobile money services on the financial capability of subsistence consumer and entrepreneur communities
- to explore the impacts of mobile money services on the consumer wellbeing of subsistence consumer and entrepreneur communities
- to explore the impacts of mobile money services on subsistence micro-entrepreneurs.
3.2 Theoretical Foundations and Research Design

Diverse ways of seeking knowledge for consumer research exist depending on the approach to the theoretical foundations and research design (Hudson & Ozanne 1988). Following certain theoretical traditions will have implications for selecting the research design, methodology, data collection methods and data analysis techniques (Deshpande 1983). A research methodology is built on the theoretical foundations of epistemology, ontology and axiology (Hudson & Ozanne 1988). Epistemology deals with how one views the world and is concerned with the question of what is (or should be) regarded as acceptable or valid knowledge in a discipline (Bryman & Bell 2007; Neuman 2011). Ontology is concerned with the theoretical development of emerging social phenomena independent of social actors or including the social actors’ perceptions and actions (Bryman & Bell 2007; Neuman 2011). Axiology is concerned with the view of the fundamental overriding goal - the relative weighting of a goal and what counts as achieving the goal (Hudson & Ozanne 1988).

The research question requires a qualitative approach. An analysis of the fundamental differences between a qualitative and quantitative research design strategy according to the connection between theory and research, epistemological orientation, ontological orientation and axiological orientation is highlighted in Table 3.1.
### Table 3.1: Fundamental Differences in Research Design Strategies

<table>
<thead>
<tr>
<th>Classifications</th>
<th>Quantitative Research Design</th>
<th>Qualitative Research Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection between theory and research</td>
<td>Deductive research—Testing of theory</td>
<td>Inductive research—Generation or confirmation of theory</td>
</tr>
<tr>
<td>Epistemological orientation</td>
<td>Positivism—An epistemological position that is time-free and context-independent with a view that advocates the application of the scientific methods to the study of social reality and beyond. The research relationship is separation with a privileged point of observation.</td>
<td>Interpretivism—An epistemological position that is time-bound and context-dependent with a view that a strategy is required that respects the difference between people and the objects of natural science and therefore needs to grasp the subjective meaning of social action. The research relationship is interactive and cooperative with no privileged point of observation.</td>
</tr>
<tr>
<td>Ontological orientation</td>
<td>Objectivism—An ontological position (in which the nature of reality is objective, tangible, single, fragmentable and divisible) that asserts that social phenomena and their meanings have an existence that is independent of social actors</td>
<td>Constructionism—An ontological position (in which the nature of reality is socially constructed, multiple, holistic and contextual) that asserts that social phenomena and their meanings are continually being accomplished by social actors</td>
</tr>
<tr>
<td>Axiological orientation</td>
<td>The overriding goal is to explain and demonstrate the systematic association of variables underlying a phenomenon.</td>
<td>The overriding goal is to understand as more of a process than an end product where interpretation enters into current interpretations which will in turn influence future interpretations.</td>
</tr>
</tbody>
</table>

Qualitative research facilitates:

- thick, detailed descriptions of actual actions in real-life contexts that actors ascribe to these actions and settings
- understanding social processes that underlie the phenomena
- the identification of noteworthy examples of important issues and concepts that enrich the research discipline (Gephart Jr 2004).

Hence, a qualitative research design strategy was adopted for the following reasons:

- The impacts of mobile money services in Cambodia lack existing theory or data to test and this research seeks to build knowledge by generating theory (inductive nature) on a social phenomenon that is relatively new to society and to research.
- The research adopts the epistemological position of interpretivism to facilitate the understanding of the social meaning of mobile money services through people’s behaviours and societal interactions.
- The research takes the ontological position of constructionism as the impacts of mobile money services are highly dependent on social actors, such as the rural people with mobile phones that can access basic financial services. Further, the mobile money services phenomena and their meanings exist because of the highly-dependent accomplishment of these rural customers who are using the services.
- The research takes the axiological position of understanding what the impacts of mobile money services are and understand its underlying processes within the subsistence marketplace setting among consumers and entrepreneurs.

Marshall and Rossman (1999) also justify the strengths of qualitative research design that can add value to the following types of research studies:

1) research on little-known phenomena or innovative systems
2) research that delves in depth into complexities and processes
3) research that seeks to explore where and why policy and local knowledge and practice are at odds
4) research on informal and unstructured linkages and processes in organisations
5) research on real, as opposed to stated, organisational goals
6) research that cannot be done experimentally for practical or ethical reasons
7) research for which relevant variables have yet to be identified.

The qualitative research design suited this research due to its qualification of at least four to five of the above types, especially categories 1, 2, 6 and 7 where:

- Little theoretical conceptualisations or empirical research has been conducted on mobile money services in Cambodia, specifically on consumer wellbeing, subsistence entrepreneurship transaction exchanges and financial capability (as stated in Chapter 2).
- Understanding how the daily processes of individual, community and/or business life interact with mobile money services is complex, which requires an in-depth study in the context of customer experiences on payment delivery, the ease of use, impacts on livelihood, and socio-cultural changes in transitioning from physical to electronic cash.
- This research focused on the meaningful experiences of the participants and their perceptions of the significant impacts that mobile money services have on their lives.

Three qualitative research methodological traditions that have seen a steady growth in their applications within marketing, most notably consumer research, are grounded theory, ethnography, and phenomenology (Goulding 2011). This research follows the phenomenology tradition. Its philosophy and methodological approach are suited to developing an understanding of complex issues that may not be immediately understood in surface responses (Goulding 1999) and to increase and deepen understanding of the immediate experiences (Goulding 1999; Spiegelberg 1981). This approach is best suited for this research as it investigates customer experiences of the mobile money services to explain how it affects the personal, communal, business and daily complexities and activities within subsistence marketplaces.

**Research Methodological Framework**

The design of this research draws upon the MSC methodology. The MSC methodology can be described as constructivist ontology due to its focus on the process of increasing understanding on the programme/project and the way people view or experience it (Davis & Dart 2005). The MSC methodology essentially involves the collection of
significant change stories emanating from the field level and systematic selection of the most significant of these stories by direct beneficiaries (Davis & Dart 2005). In the case of this research, the direct beneficiaries are the mobile money users. The MSC methodology suits evaluation of programmes or projects that are participatory in ethos and/or focused on social change (Davis & Dart 2005).

The MSC methodology is also useful in this research context because its approach helps identify and gives value to unintended or unexpected changes that were significant impacts for those involved (Wrigley 2006). The MSC methodology also has the capacity to act as an interface between academic research, professional practice, and the participants involved in the research (McDonald, Bammer & Deane 2009).

Sridharan et al. (2014b) advocate a bottom-up approach that is rooted in close and careful study of the micro circumstances of individual behaviour. Hence the MSC methodology was chosen because of its bottom-up approach to generate thick descriptions collected directly from the field-level stories, experiences and changes encountered by the mobile money users on a systematic, transparent and accountable basis (Davis & Dart 2005).

The MSC methodology was developed in 1995, with the aim of addressing developmental challenges associated with monitoring and evaluating a complex participatory rural development programme in Bangladesh that was diverse in both implementation and outcomes (Davis & Dart 2005).

Over the last 19 years, the MSC methodology has been useful in evaluating numerous international development programmes/projects around the world in Africa, Asia, the Pacific and Australia. The approach represents a radical departure from the conventional monitoring against quantitative indicators that is commonly seen in the international development sector (Dart & Davies 2003; Lennie e. al. 2011; Wrigley 2006). Figure 3.1 gives a diagrammatical representation of the PhD research methodology incorporating the MSC framework and integrating with the research methods as shown below.
Figure 3.1: Diagrammatical Representation of the PhD Research Methodology

Table 3.2 shows how the MSC implementation steps have guided the procedural steps undertaken in this research.
### Table 3.2: MSC Implementation Steps

<table>
<thead>
<tr>
<th>MSC Implementation Steps</th>
<th>Explanation/Interpretation</th>
<th>Adapting to this PhD Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establishing champions and getting familiar with the MSC approach</td>
<td>Engaging key actors/stakeholders in the research process and introducing them to the MSC approach.</td>
<td>This PhD research involved a collaboration with and support from WING Money Cambodia, a leading mobile money service provider in Cambodia.</td>
</tr>
</tbody>
</table>
| 2. Establishing ‘domains of change’ | Guidance for the research allowing different interpretations of change from interviewees and then grouping the collected data to help monitor the changes in that particular area. | Three domains of change were identified as follows:  
  - changes to financial capability  
  - changes to consumer wellbeing  
  - changes to subsistence entrepreneurship. |
| 3. Defining the reporting period | The research is to nominate the period to commence the MSC methodology (i.e., conduct the interviews). | The research fieldwork was conducted between July and September 2011. |
| 4. Collecting stories of change | The research is to determine how the stories (or interview data) can be identified, collected and documented. | Face-to-face interviews and observational research were conducted in 15 district towns within six rural provinces to identify customer perceptions/experiences on payment delivery, ease of use and socio-cultural changes in transitioning from physical to electronic cash. Each interview was audio-recorded, translated and transcribed. |
## CHAPTER 3: METHODOLOGY

<table>
<thead>
<tr>
<th>MSC Implementation Steps</th>
<th>Explanation/ Interpretation</th>
<th>Adapting to this PhD Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Reviewing the stories</td>
<td>This is a guidance to review all collected data and select from the large volume of data the stories significant to the research.</td>
<td>The PhD research adapted this step by transcribing all interview data collected. The interview data were then analysed using a qualitative research analysis software called NVivo. During the data analysis stage, the collected data were reviewed and selected according to the emerging themes identified (MSC Implementation Step 9). The review process was data-driven rather than select-driven as the evidence of data strength within each theme helped determine which aspects of change were the most significant.</td>
</tr>
<tr>
<td>6. Providing stakeholders with regular feedback about the review process</td>
<td>This involves the research and its partnering stakeholders in reviewing the quality of the data collected.</td>
<td>Upon completion of the fieldwork in each province, a progress report was produced for WING Money Cambodia and there were informal progress update sessions with the senior management before commencing the research in another province.</td>
</tr>
<tr>
<td>7. Setting in place a process to verify the stories if necessary</td>
<td>This is necessary to allow the participating stakeholder to validate and approve the collected data, giving greater confidence in the significance of the findings.</td>
<td>One half-day feedback workshop was organised with senior management staff of WING Money Cambodia to summarise the preliminary findings from the stories collected.</td>
</tr>
<tr>
<td>8. Quantification</td>
<td>This benefits the research to draw meaningful results from a large body of qualitative data with a greater degree of confidence.</td>
<td>The research involved synthesising of qualitative data into themes. In presenting and visualising the themes, an adapted thematic conceptual matrix framework using symbols to visually represent the strength of data evidence was used (Henderson &amp; Segal 2013; Miles &amp; Huberman 1994). The synthesis of qualitative data then provided the basis to further develop conceptual frameworks/models for future quantification.</td>
</tr>
<tr>
<td>MSC Implementation Steps</td>
<td>Explanation/ Interpretation</td>
<td>Adapting to this PhD Research</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>9. Conducting secondary analysis of the stories <em>en masse</em></td>
<td>This allows the research data to have greater legitimacy, validity and rigour as part of the process.</td>
<td>The contents of the collected data were examined, classified and analysed for any emerging themes or attributions, which relates back to the PhD research question. The collected data/stories were analysed using a computer-assisted qualitative data analysis software (CAQDAS) called NVivo. By using NVivo, the most prominent areas of change could be identified. For each domain of change, a discussion on the following could then be provided: (1) What was the nature of the change (2) The most significant change (3) The significance of the change.</td>
</tr>
<tr>
<td>10. Revising the MSC methodology</td>
<td>Due to the evolving nature of the MSC methodology, the research shall also contribute to improving the process for future research work done elsewhere.</td>
<td>At the end of the data collection and data analysis stage, an internal review of the entire MSC was undertaken and any strengths, research challenges/issues faced and recommendations for improvements to the MSC methodology for future academic research or professional work could be noted.</td>
</tr>
</tbody>
</table>
CHAPTER 3: METHODOLOGY

Data Collection
Step 1: Planning and Working with WING

The fieldwork was conducted in Cambodia in collaboration with WING Money Cambodia (WING). Incorporated in Cambodia with a local presence and employing local staff, WING is a leading mobile payments service provider in Cambodia. Launched in 2009, WING targets Cambodian customers who are generally unbanked, but have important financial service needs (IFC 2011; WING 2010). By the end of 2012, WING had over 400,000 registered mobile money account users with services available in all of Cambodia’s 24 provinces. By 2012, more than 22 million mobile financial transactions had been processed, with a total transaction volume of about US$287 million (WING 2013a, 2013b).

The data collection activities were guided by the ethical principles listed in the Australian National Statement on Ethical Conduct in Human Research (NHMRC 2014). These recommended ethical principles comprise research merit and integrity, justice, beneficence and respect. The data collection commenced after approval was granted from the RMIT Business College Human Ethics Advisory Network.

In considering these four ethical principles, extensive communications were held with WING’s senior management team in early 2010 to propose collecting data from selected WING customers. Subsequently in September 2010, WING agreed and wrote an official letter of endorsement to support this PhD research.

In March 2011, the first induction trip was made to Cambodia’s capital city of Phnom Penh to meet and brief key WING staff on the PhD research objectives, process and expected outcomes. Planning and logistical arrangements with WING were also discussed. I participated in an induction programme on WING’s business operations to become familiar with the Cambodian mobile money service environment, its customer profiles in different provinces, as well as its network of appointed mobile money service agents. WING saw the merits of the research and the intent to contribute to the wellbeing of mobile money customers.
To further strengthen the values of beneficence and respect, I travelled with WING staff during my induction trip on short field visits to two rural provinces to familiarise myself with the rural settings, as well as to understand how mobile money services were operating in this specific context. I observed how WING staff members communicated with rural communities and showed respect to their cultural practices. As a result, several ethical issues/concerns were identified and appropriate responses were developed, as shown in Table 3.3.

### Table 3.3: Ethical Issues Response

<table>
<thead>
<tr>
<th>Ethical Issues/Concerns Raised</th>
<th>PhD Research Ethical Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial sensitive data/information released for the PhD research</td>
<td>It was agreed that the research focused only on primary data collected from interviews with the customers. The research would not require WING’s commercially sensitive financial, technology or business model data.</td>
</tr>
<tr>
<td></td>
<td>It was agreed that WING be allowed to first review the research data or paper before publication to ensure that commercially sensitive information was not compromised.</td>
</tr>
<tr>
<td></td>
<td>As an added step, it was agreed that WING would be consulted first should any commercially sensitive data be required for secondary analysis or validation purposes. I signed a confidentiality agreement with WING on 7 March 2011 during the induction trip to Cambodia to ensure this.</td>
</tr>
<tr>
<td>Engaging the rural consumers from various provinces/villages</td>
<td>Potential participants were assured that their participation was on a voluntary basis and they could withdraw their consent to be involved at any time.</td>
</tr>
<tr>
<td></td>
<td>Before starting the interview, the participants were reminded of consent given for the interview recording and the option of anonymity. A small financial token of appreciation was given to participants for their time given for the interview.</td>
</tr>
<tr>
<td></td>
<td>The interviews were conducted in the native Cambodian language. Suitable translators/interpreters were engaged to assist in conducting the narrative interviews with the local customers.</td>
</tr>
</tbody>
</table>
As per RMIT University research ethics requirements, a plain language statement, which included the consent form and interview questions, was submitted to the RMIT Business College Human Ethics Advisory Network (BCHEAN) for approval (approved in June 2011). During the actual data collection trip, this plain language statement information pack was submitted to WING for endorsement and then translated into the Cambodian Khmer language. I also gave WING staff the opportunity to review the data collection process before actually inviting the participants.

WING gave approval for me to make contact with their regional sales supervisors and mobile money agents to identify potential respondents and invite them through word-of-mouth referrals for an interview session. It was agreed that every effort be made to establish contact with the WING regional sales supervisor when visiting the rural provinces to maintain accountability and keep track of my location in the rural areas.

Following the MSC implementation steps, a progress reporting procedure was also developed to continuously update WING on the data collection progress. Six progress reports were prepared followed by a completion presentation to the WING senior management at the end of the data collection stage.

Four local translators were recruited over the entire research fieldwork period to assist in translating and/or transcribing of the interview data. The research translators went through four half-day induction training organised jointly by WING staff and me prior to the data collection. The training included:

- WING product knowledge
- WING cash express merchant agent operations
- WING customer registration process
- primer course on doing interviews and observational research
- introduction to the PhD research team’s field work equipment
- field trip with WING community sales pilots.
During the research fieldwork, the research translators were rotated according to their period of availability. One research translator travelled with me to the rural provinces while the remaining translators stayed back in the capital city of Phnom Penh to translate the interview data collected. The research translators played a key role in inducting me into the Cambodian culture when visiting the research sites and this became valuable information during the interview sessions and the interview data analysis stage.

**Step 2: Sampling Frame**

The limited knowledge and use of mobile money services in the region made identifying a sampling frame difficult. In such circumstances, the purposeful sampling strategy was used. Neuman (2011, p. 267) describes this sampling strategy as a ‘non-random sample in which the researchers use a wide range of methods to locate all possible cases of a highly specific and difficult-to-reach population’. Seidman (2006) also referred to this as ‘maximum variation sampling’ to analyse the potential population by assessing the maximum number of sites and people that composed this population.

After reviewing various documentation, engaging in a number of consultations with WING managers and undertaking two scoping field visits (without collecting data) to the rural provinces, 15 district towns within six rural provinces were identified as suitable sites. The six rural provinces were Kampong Speu Province, Koh Kong Province, Sihanukville Province, Pursat Province, Banteay Meanchey Province and Takeo Province. Figure 3.2 shows the locations of these provinces in relation to Phnom Penh City, Cambodia’s capital city.
The actual data collection was conducted between July and September 2011. Initially, I was targeting consumers in subsistence marketplaces. During the course of the data collection, new information began to emerge from the interviews regarding the importance of other types of consumers. I was able to further build knowledge by looking at different rural business sectors or types of customers using mobile money services. My interviewees included monks, micro-entrepreneurs and public servants like government officers, police officers and soldiers.

Due to the nature of this research, it was not possible to pre-determine the sample size of people to be interviewed. It was more important to conduct a sufficient number of interviews to understand the impacts of mobile money services as experienced by rural users. In determining the research sample size, I took the position that the number of interviews done needed to be sufficient to understand or identify the impacts of mobile money services experienced by a range of customers.
Quantitative sampling deals with a mathematically accurate reproduction of the entire population and the number of cases that would be represented in various categories within the population (Neuman 2011). Qualitative sampling on the other hand, deals with sampling aspects/features of the social world to provide clarity, valuable insights and deeper understanding about a process, relationship or social setting (Neuman 2011). Flick (2009, p. 121) emphasised that sampling in qualitative research ‘proceeds according to the relevance of cases instead of their representativeness’ in determining how the people to be studied are selected. Hence, two criteria were used to gauge how many interview participants were needed (Seidman 2006):

1) Sufficiency: are there enough numbers to reflect the range of participants and sites making up the population so that others outside the sample can connect their experiences to those in it?

2) Saturation of Information: a point in study where the interviewer begins to hear the same information repeatedly.

Step 3: Participant Recruitment

The interview process did not commence immediately upon arrival at the research sites. The first two days of each research site visit were spent becoming accustomed to the surroundings of the main provincial town. Contact was made with the WING regional sales supervisor or one of WING’s appointed mobile money service agent/merchant leaders (normally referred to as a WING Master WING Cash Express or MWCX) to further determine the best way to identify and invite potential WING customers to participate in the research. Participant recruitment was mainly through word-of-mouth referrals and informal introductions by local communities during the research field visits in the rural district towns.

No hard copy letters of invitations were sent due to the localised culture of the rural towns and the lack of a local postal service. Through word-of-mouth referrals by WING regional sales supervisors and mobile money agents, a brief introduction and the purpose of the interview was given by the translators and the customer could then decide if he or she wished to participate in the interview. Once agreed, the interviewee and I would agree on a meeting place at a suitable time. In arranging the meeting place for the interview, Seidman (2006) highlighted that the appointed venues should be
convenient to the participant, private and familiar to him or her and where the participant feels comfortable and secure. The interview sessions were conducted in one of the following venues:

- the interviewees’ workplace if he or she was self-employed or had their own small business
- the interviewees’ own home or agreed meeting location for conducting the interview sessions
- the open spaces in the hotel guesthouse lobby where I stayed
- cafes or small restaurants during off-peak hours.

As a prerequisite, each interviewee was first provided with a plain language statement information pack (translated into the Cambodian Khmer language) and the interviewee signed the consent form before commencing the interview. This process ensured confidentiality and the right to withdraw from participation at any time. The participant was further verbally advised through translation that the interviews would be audio-recorded and interview transcripts were to be stored in a secure area with access only by me. After assuring that the participants’ privacy was protected and that the participant fully understood the research interview intent, both the participant and I signed the accompanying consent form to acknowledge understanding of the process.

A pilot interview stage was conducted to check if the interviewees could understand the questions and that the interview process was conducted in a satisfactory manner (refer to Appendix A for list of pilot interviewees). The pilot interviews were also audio-recorded to enable learning opportunities for me. As a token of my appreciation for participation, each of the interviewees (including those in the pilot interview stage) was given US$5 or a gift pack equivalent to US$5 for taking the time to participate in the interview. All interviewees agreed to the interview without knowing that a small compensation would be given to them as a token of appreciation. The plain language statement briefly stated that there would not be any direct benefits to the participant, but a small compensation amount would be given at the end of the interview. However, most participants were pleasantly surprised to receive it, as they were happy to share their experiences about mobile money services.
Step 4: Semi-Structured Interviews

Interviews in the context of this PhD research can be described as being motivated by a keen interest in understanding the experiences of people using mobile money services. The interviews aimed to obtain a glimpse into the interviewees’ world to capture the essence, meaning or significance of their experiences with mobile money services (Seidman 2006). Kvale (2007) highlighted that this can be through personal interactions and semi-structured conversations to learn about the participant’s experiences, feelings, hopes, views and opinions expressed in their own words.

In conducting the interviews, I also sought to create knowledge through the interactions between the interviewer and the interviewee (Kvale 2007) to understand and identify the impacts of mobile money services on financial capability, consumer wellbeing, and subsistence entrepreneurship. An interview guide was created to maintain the consistencies of the interview sessions. To facilitate a theory-based approach to the interview process, the interview schedule was based upon the Three-Interview Series model (Schuman 1982; Seidman 2006). This model focuses on three themes:

1) life history: establishes the context of the interviewee
2) details of the experience: reconstruct details of the experience within the context of the occurrence
3) meaning of the experience: reflects on the meaning or significance that the experience holds for the interviewee.

In addition, the interview questions were also guided by the MSC methodological framework’s three domain areas of change. Hence, a typical interview guide would cover all of the following areas as shown in Table 3.4.
### Table 3.4: Interview Guide

<table>
<thead>
<tr>
<th>Interview Schedule Areas</th>
<th>Adaptation of the Three-Interview Series Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>General background information on the interviewee</td>
<td>Life History</td>
</tr>
<tr>
<td>General background information on the interviewee’s family</td>
<td>Life History</td>
</tr>
<tr>
<td>The interviewee’s experience and use of the mobile phone</td>
<td>Details of Experience</td>
</tr>
<tr>
<td>The interviewee’s experience with WING</td>
<td>Details of Experience</td>
</tr>
<tr>
<td>Any changes to consumer wellbeing</td>
<td>Meaning of Experience</td>
</tr>
<tr>
<td>Any changes to subsistence entrepreneurship</td>
<td>Meaning of Experience</td>
</tr>
<tr>
<td>Any changes to financial capability</td>
<td>Meaning of Experience</td>
</tr>
<tr>
<td>Any recommendations and/or feedback</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

As the interview session was meant to be less formal, open-minded and conversational, the order of sequence for the interview questions was flexible and additional follow-up questions were incorporated for clarification purposes. This research had a total sample size of 35 interviewees who were current mobile money users with WING. Of these, there were 20 males and 15 females. A range of relatively young to middle-aged groups was represented in the sample. There were 15 interviewees aged 19–24, 16 aged 25–34 and four aged 35 and over. In terms of employment status, 18 interviewees were self-employed subsistence enterprise owners, of which 12 were also appointed as mobile money agents. Eight were public and private sector employees, five were full-time students, one was a monk and three were casual salespeople. In terms of marital status, 16 interviewees were single, one was divorced and 18 were married. In terms of education level, one interviewee completed university studies, one had no formal education and 33 listed high school as their highest education level. Full details of the interviewees’ backgrounds are included in Appendix A.

The research sample had been constructed to include current mobile money users with less focus on non/former mobile money users. On other numerous occasions, I was able to talk informally with other customers using WING mobile money services. However, audio recording was deemed unsuitable and I made observation notes. For example, in one rural district town, I met with several customers who were informal money transfer agents. They used the mobile money platform as a business solution for their informal cross-border money transfer services and international call services between Thailand and Cambodia (to be further discussed in chapter 7). Audio recording was not possible
due to the highly sensitive nature of the transaction and these customers were not comfortable sharing when audio-recorded.

**Step 5: Observational Research**

Observational research techniques are derived from the qualitative research method called ethnography, first used by anthropologists in the late 19th and 20th centuries. Ethnography has since become an essential tool in qualitative research for many disciplines including sociology, psychology, education, business and health (Angrosino 2007).

The term ‘ethnography’ can be defined as the practice of writing (graphy) about people and cultures (ethno) pertaining to what the people truly experience and what the experience means to them internally (Bryman & Bell 2007; Neuman 2011). Angrosino (2007) described it as ‘the art and science of describing a human group and their way of life – its institutions, interpersonal behaviours, material productions and beliefs’ (p. 14) and further defined observational research as ‘the act of noting a phenomenon, often with instruments and recording it for scientific purposes’ (p. 54).

During the data collection phase between July and September 2011, I used observational research to better understand, in context, the impacts of mobile money services experienced by the participants. Due to the constant travelling involved in the data collection stage, the following instruments were used for recording observations:

- research journal: to note specific observations, views and/or comments, and also those of the local translators, research informants (not officially interviewed but who provided valuable insights about the environment and context) and interviewees
- digital camera: to capture photos and videos as part of recording the context of the interviews and observations
- audio recorder: to record the interview sessions for translation and transcription purposes as well as informal comments observed by me to capture specific observations made at that moment in time.
The following guidelines were used to ‘operationalise’ observational research (Angrosino 2007):

- specific acts, behaviours (what people do or say)
- events—usually brief, one-off or things someone has done
- activities—often take place in a setting and may have other people involved
- strategies, practices or tactics—activities aimed towards some goal
- states—general conditions experienced by people or found in organisations
- meaning—a wide range of phenomena at the core of what directs people’s actions and behaviours
- participation—people’s involvement or adaptation to a setting
- relationships or interactions—between people, considered simultaneously
- conditions or constraints—the precursor to or cause of events or actions, things that restrict behaviour or actions
- consequences—what happens if...
- settings—the entire context of the events under study
- reflexive—the researcher’s role in the process, how intervention generated the data.

Observational research complemented the primary interview data. It provided context on the different heterogeneous settings (understanding a cluster of groups or categories) rather than just one homogeneous setting (focusing on a one group or category like farmers or small business owners). It allowed full immersion into the world of mobile money services to see how it fitted in with different people in different social settings in their daily life processes as an individual, family, community or business (Angrosino 2007). During the course of observational research, new themes or understanding of the potential impacts as well as other applications of mobile money services in rural areas emerged. These were subsequently followed up with conversations and queries with informants and interviewees to obtain a better understanding of the interactions and processes involved.
3.3 Data Analysis

Davis and Dart (2005) emphasised the need for qualitative reporting of change as well as quantitative information to be collected and analysed. Hence, the MSC methodology involved the following data analysis features:

- Secondary Analysis: the examination, classification and analysis of the content (or themes) across a set of collected interview data
- Meta-Monitoring: an analysis of the attributes of the stories like the origins and fate of the collected data, including who identified them, who selected them, and so on.

As the raw interview data was predominantly in Cambodian Khmer language, the strategy was to orally record the interview translation from Cambodian Khmer to English followed by transcription. The following steps were taken:

1) I passed the original interview audio data file to a Research Translator.
2) The Research Translator(s) listened to original interview audio data file recorded in Cambodia Khmer Language.
3) The Research Translator used an audio recorder to translate each block interval of the original interview audio file from Khmer to English to retain the content and context as much as possible.
4) Original interview data file in Cambodia Khmer Language was converted fully into a new interview audio file in English by a research translator. Another research translator would check separately to verify the translation accuracy of the fellow research translator.
5) Research translator passed new interview audio data file back to me.
6) I then listened to new interview audio data file and transcribed for data analysis.

Due to the numerous data collected and the process of tracking the translation and transcribing progress, I developed an Interview Data Register to systematically track the progress of the collected raw interview data. A sample of the Interview Data Register is shown below in Table 3.5.
### Table 3.5: Interview Data Register

<table>
<thead>
<tr>
<th>Data ID</th>
<th>Province</th>
<th>District/Village</th>
<th>Description</th>
<th>Type</th>
<th>Category</th>
<th>Nickname</th>
<th>Translated By</th>
<th>Translated into English</th>
<th>Transcribed into English</th>
</tr>
</thead>
</table>

- Data ID: a unique identifier number provided by the audio recording equipment
- Province: in which Cambodian province did this interview take place in?
- District/Village: which Cambodian province did this interview take place?
- Description: the descriptive filename of the interview data
- Type: is it interview data, interview summary data, interview translation data or observation data?
- Category: is it a community sales pilot, customer or a WING cash express agent?
- Nickname: a unique code only known to me and the translator
- Translated By: who is the assigned translator?
- Translated into English: YES or NO
- Transcribed into English: YES or NO.

To facilitate analysis of the collected transcribed data, a computer-assisted qualitative data analysis software (CAQDAS) called NVivo was used. NVivo acts as an electronic file manager that enables researchers to sort data into categories, make additional notes, store transcripts or field notes electronically. NVivo also helps researchers to change and edit categories without affecting assigned codes to the data.

The interview scripts were translated from the Cambodian Khmer language to English. Data analysis was done through documentation, categorisation and interpretation (Flick 2009; Gibbs 2007; Marshall & Rossman 1999):

1) Documentation involves transcribing the data and recording the data key attributes like the interview date, location and some key information on the participant (Flick 2009; Gibbs 2007; Marshall & Rossman 1999).
2) Categorisation involves data coding in a structured way to identify or record one or more data items, text or passages that exemplify similar phenomena, ideas, explanations or activities (Flick 2009; Gibbs 2007; Marshall & Rossman 1999).
3) Interpretation involves linking the coded data back to a point of reference in the literature in order to test the emergent understanding or search for alternative explanations (Flick 2009; Gibbs 2007; Marshall & Rossman 1999).

In presenting and visualising the themes in this thesis, an adapted thematic conceptual matrix framework containing symbols to visually represent the level or strength of data evidence was used (Henderson & Segal 2013; Miles & Huberman 1994). The framework uses the construct of a conceptually clustered matrix to display data items that are theoretically, thematically, or empirically similar to generate meaning more easily (Miles & Huberman 1994). The thematic conceptual matrix framework is especially useful for conceptual coherence in qualitative research and highlighting the complexities of the research findings in a succinct way (Henderson & Segal 2013; Miles & Huberman 1994). An example of an adapted thematic conceptual matrix framework used in this research is shown in Table 3.6 which will be used to represent the data findings on the impact on financial capability (refer to Chapter 5 page 100-102, 110-111, 120, 124, 127-128), consumer wellbeing (refer to Chapter 6 page 133-135) and subsistence entrepreneurship (refer to Chapter 7 page 146-147, 157-158 and 163).

Table 3.6: Thematic Conceptual Matrix Framework (Template Example)

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of intermediation</td>
<td>![Symbol]</td>
<td>‘It is very easy now because sending money by mobile money services is safe….’</td>
</tr>
<tr>
<td>Improved Money Security</td>
<td>![Symbol]</td>
<td>‘Since I used mobile money services….’</td>
</tr>
</tbody>
</table>

In the adapted thematic conceptual matrix framework, the first column represents the key themes identified from the findings. The second column represents the thematic analysis of the evidence in the form of symbols. These symbols visually indicate the level or strength of data evidence, based solely on the interviewees’ data that make up the particular theme (Henderson & Segal 2013). The range of levels of interviewee data
evidence used is shown in Table 3.7 which will be used to represent the data findings on the impact on financial capability (refer to Chapter 5 page 100-102, 110-111, 120, 124, 127-128), consumer wellbeing (refer to Chapter 6 page 133-135) and subsistence entrepreneurship (refer to Chapter 7 page 146-147, 157-158 and 163). The third column further substantiates the thematic analysis of the data evidence by listing selected interviewee quotes that are representative of the emerging themes identified. This helped to synthesise the qualitative data information, which then provided the basis to develop conceptual frameworks/models for this thesis.

Table 3.7: Range of Level of Interviewee Data Evidence

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Level of Interviewee Data Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Symbol" /></td>
<td>Low: Evident in fewer than 11 out of 35 interviewees</td>
</tr>
<tr>
<td><img src="image" alt="Symbol" /></td>
<td>Medium: Evident in between 11 and 17 out of 35 interviewees</td>
</tr>
<tr>
<td><img src="image" alt="Symbol" /></td>
<td>Strong: Evident in between 18 and 24 out of 35 interviewees</td>
</tr>
<tr>
<td><img src="image" alt="Symbol" /></td>
<td>Very Strong: Evident in more than 24 out of 35 interviewees</td>
</tr>
</tbody>
</table>

This thesis also furthers existing theoretical constructs within consumer wellbeing, subsistence entrepreneurship, transaction cost economics and financial capability to support, strengthen, modify and/or increase the knowledge and understanding of theoretical findings and conceptual frameworks from previous research (Saldana 2010). Hence the Elaborative Coding method was utilised to further analyse the relevant data with the appropriate theoretical constructs in mind (Auerbach & Silverstein 2003). Finally, the coded data was converged into categories or meaningful units that build on or increase knowledge and understanding from previous research and investigations (Saldana 2010).
3.4 Challenges Faced

In the early stages of formulating the research proposal, it was evident that sourcing primary data was going to be challenging. However, through contact with ANZ Banking Group in Australia, WING Money Cambodia (WING) was identified as a suitable source to access users of mobile money services. Although WING provided valuable assistance in recruiting the potential interviewees, regional sales supervisors and mobile money agents devoted extensive time and effort to identify and locate these potential interviewees in rural areas. This eventuated in 35 customers agreeing to participate.

The pilot interview stage revealed that some of the interview questions, specifically questions relating to wellbeing and social/cultural norms were difficult for local translators and pilot interviewees to understand. The interview questions were then broken down into sub-questions and some of the words and sentences were re-phrased or paraphrased to help both the local translators and the interviewees better understand the interview questions.

3.5 Limitations of this Research

In this PhD research, the sampling size could be considered relatively small (only 35 interviewees) but generalisation to the larger population was not the aim of this qualitative study. Due to the scope of this PhD research, there were no comparisons with similar research work being done on mobile money services in other country jurisdictions like Kenya, Thailand or Philippines. Unlike other similar studies on mobile money services conducted in Africa over a longer period due to strong funding support from philanthropic organisations, universities and international aid agencies, this PhD research could only perform a summative evaluation due to limited available resources.
3.6 Conclusion

This chapter describes the methodological framework and data collection activities used in this research. This approach responds to the call for rich, qualitative research to increase our conceptual understanding of the impacts of mobile money services on the lives of those living in subsistence marketplaces. Using the MSC as the research methodological framework enables the qualitative research process to focus on the deeper issues of how mobile money services affect the daily processes of individual, community and business life. Ultimately, the value of this research seeks to contribute to improving the lives of people in subsistence marketplaces.

The following chapters explore in detail the data that identify the impacts of mobile money services on financial capability (Chapter 5), consumer wellbeing (Chapter 6) and subsistence entrepreneurship (Chapter 7). In line with the MSC methodological framework, Chapter 8 discusses the nature of the changes, the most significant change in the research, the significance of the changes and the limitations of the mobile money services.
Chapter 4: Cambodia and the Mobile Money Environment

4.1 Introduction

In order to explore the impact of mobile money services on subsistence marketplaces, it is important to provide insights into the intent of mobile money services and how they operate in subsistence settings using the example of rural Cambodia.

Cambodia is regarded as a ‘low-income’ country in the East Asia and Pacific region with a per capita gross national income (GNI) of US$820, compared to an average GNI of US$4,200 in the East Asia and Pacific region, US$1,530 in ‘lower middle income’ India and US$48,000 in ‘high income’ USA (World Bank 2014). In 2012, Cambodia had a population of about 14.8 million, with approximately 20 per cent (about three million) living in urban areas and 80 per cent (about 11.8 million) living in rural areas or subsistence marketplace regions (World Bank 2014).

Cambodia’s 2011 Economic Census indicated that 95 per cent of the listed business establishments have five or fewer employees, with 65 per cent of the listed business establishments owned by females (NIS 2012a). Shultz and Rahtz (2005) described Cambodia as an important emerging or developing economy with viable marketing opportunities, as local consumers are increasingly participating in the consumer culture. Cambodia has introduced economic policies to increase sustainable growth and make investment opportunities available to businesses (Kantha & Ghebreab 2012). In 2010, poverty levels in Cambodia remained at 26 per cent, calling for a concerted effort to ensure economic growth is shared and available to all (Kantha & Ghebreab 2012).

In January 2009, a mobile money service provider called WING Money Cambodia (WING) was officially launched in Cambodia to provide access to basic financial services through mobile phones (IFC 2011). By the end of 2012, WING had over 400,000 registered mobile money account users with services available in all of Cambodia’s 24 provinces (WING 2013a, 2013b). By 2012, more than 22 million mobile financial transactions had been processed, with a total transaction volume of about US$287 million (WING 2013a, 2013b).
Cambodia is thus a suitable example to increase understanding of the role and impact of mobile money services as a financial service offering in subsistence marketplaces.

This chapter gives an overview of Cambodia’s social demographics and the financial services landscape. This chapter will also discuss external factors like the telecommunications sector, microfinance regulations and the dual currency environment, which influenced and shaped the mobile money ecosystem in Cambodia. This chapter also provides an overview of the mobile money environment in Cambodia and how mobile money services fit into this landscape. It also includes the relevant information of the rollout of WING Money Cambodia’s (WING) mobile money services. The implications of this unique environment to the marketing systems are also discussed. This chapter draws from a variety of sources, including academic literature, industry reports, a review of key internal documentation provided by WING and the research fieldwork observations from the 15 district towns in six rural Cambodian provinces.

4.2 Social Demographics in Cambodia

The World Bank Group estimates Cambodia’s population has, in recent years, grown at an annual average rate of around two per cent (World Bank 2014). The population reached an estimated 13.5 million people in 2006, up from about 13.1 million in 2003, and was at about 14.8 million people in 2012, as shown in Figure 4.1.
The Economist Intelligence Unit further reported that in 2005, around 38 per cent of the population was under the age of 15, and a severe gender imbalance was evident (EIU 2008). Women outnumber men, particularly in the over-40 age group due to a legacy of years of conflict (EIU 2008). Around 90 per cent of the population are of Khmer ethnic origin with a sizeable Vietnamese and Chinese population (EIU 2008). The World Bank (2014) estimates that about 20 per cent of the population (about three million people) live in urban areas while about 80 per cent (about 11.8 million) live in the rural areas as shown in Figure 4.2.

For more details on Cambodia’s household and population distribution by province and gender, refer to Appendix F and G.
CHAPTER 4: CAMBODIA AND THE MOBILE MONEY ENVIRONMENT

The Cambodia National Institute of Statistics’ Labour Force Survey showed that in 2011, 0.2 per cent of the labour force (16,000 out of 7.9 million) remained unemployed, with the rate higher in urban areas than in rural areas. Labour force participation rate was higher in rural areas (91 per cent) than in urban areas (70 per cent in Phnom Penh and 83.4 per cent in other urban areas). Employment remained predominately agrarian-based, with around 73 per cent of workers engaged in agriculture, forestry and fisheries (NIS 2010, 2012b).

4.3 Regulatory Environment of Microfinance in Rural Cambodia

Cambodia’s central bank authority, the National Bank of Cambodia (NBC), oversees the regulation and supervision of the financial sector in Cambodia. The NBC ensures financial stability by monitoring the soundness and effectiveness of the banking sector as well as developing the interbank and foreign exchange markets (Asian Development Bank 2012).

The NBC also provides regulatory flexibility to encourage provision of financial services through mobile phones or other channels in Cambodia. Relevant laws on payments and transactions services were passed in 2005 and 2010 to allow third party processors acting on behalf of the financial institutions to provide the following services (NBC 2005, 2010):
- a communication facility
- an interbank clearing facility
- manage or operate bank customers’ accounts
- sending or receiving points for payment transactions
- a service provider of money transfer services by mobile phones
- a service provider of clearing and settlement of debit and credit card payments
- manage and operate payment systems for payment transactions and cash withdrawals as well as clearing and settlement for domestic and foreign currency payment.

The NBC recently implemented the Financial Sector Development Strategy (FSDS 2011–2020) with an overall objective to ‘develop a sound financial sector that can contribute to poverty reduction by supporting economic growth and increasing poor people’s access to finance’ (Asian Development Bank 2012, p. xiii). The NBC’s vision for microfinance was to ‘develop a strong and effective microfinance system and serve the interests of the poor by providing affordable financial services, increasing income, and alleviating poverty’ (Asian Development Bank 2012, p. 18).

### 4.4 Telecommunications Sector in Cambodia

Cambodia’s mobile phone subscriptions reached about 4.2 million in 2008, compared to about 862,000 mobile phone subscriptions in 2004. By 2012, mobile phone subscriptions reached about 19.1 million, as shown in Figure 4.3 (ITU 2014).
Mobile phone network penetration rate was about 96 per 100 people, with mobile phone network affordability estimated at about US$8 per month (World Bank 2013, p. 49). Local and foreign-invested telecommunications firms had taken steps to enter the Cambodian market. There are currently eight mobile phone operators in Cambodia, and their combined network coverage is readily accessible to about 99 per cent of the total population (GSMA 2013; World Bank 2013, p. 49). This shows the mobile phone network is readily available to a majority of subsistence consumers in Cambodia. It also demonstrates that mobile phones being more common in places where formal banking services are less available. The mobile phone penetration rate far exceeded that of access to financial services globally and also within Cambodia, inferring that subsistence consumers with few or no opportunities to access any formal financial services to save, borrow or transact, can possibly have better access to a mobile phone service.

There is also intense competition in the mobile phone sector as local and foreign-invested telecommunications (telco) firms have taken steps to enter the Cambodian market. There are currently eight mobile phone operators in Cambodia. Table 4.1 shows the mobile phone subscriptions market share from 2009–2011 (Q311).
Table 4.1: Cambodia Mobile Phone Subscriptions Market Share (Est ‘000), 2009–2011 (Q311)

<table>
<thead>
<tr>
<th>Telecommunications Operator</th>
<th>2009</th>
<th>2010</th>
<th>2011 (Q311)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metfone (Viettel)</td>
<td>1,432</td>
<td>4,010</td>
<td>6,466</td>
</tr>
<tr>
<td>Mobitel (CAMGSM)</td>
<td>2,864</td>
<td>2,607</td>
<td>2,889</td>
</tr>
<tr>
<td>Hello</td>
<td>859</td>
<td>902</td>
<td>1,513</td>
</tr>
<tr>
<td>Smart Mobile (Latelz)</td>
<td>286</td>
<td>501</td>
<td>1,513</td>
</tr>
<tr>
<td>Mfone (CamShin)</td>
<td>931</td>
<td>1,003</td>
<td>688</td>
</tr>
<tr>
<td>Beeline Cambodia (Sotelco)</td>
<td>286</td>
<td>501</td>
<td>550</td>
</tr>
<tr>
<td>CadComms</td>
<td>215</td>
<td>100</td>
<td>138</td>
</tr>
<tr>
<td>Excell (GT-Tell)**</td>
<td>72</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Star-Cell (Applifone)*</td>
<td>215</td>
<td>401</td>
<td>na</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7,160</td>
<td>10,026</td>
<td>13,757</td>
</tr>
</tbody>
</table>

*Star-Cell has been acquired by Smart Mobile.
**Excell’s subscriber figures are reported as zero due to rounding of market share by the MPTC.

4.5 The Dual Currency Environment in Cambodia

Cambodia generally utilises two types of currencies within its mostly cash-based monetary economy, namely the US dollar and the Cambodian riel. US currency has a long history in Cambodia. The US dollar in Cambodia became the direct legacy of economic and financial institutions being ruined in the 1970s, economic mismanagement in the 1980s and the large inflows of US dollars during the United Nations Transitional Authority in Cambodia (UNTAC) period in the early 1990s (Menon 2008).

All barter, private commercial activity, private ownership, means of exchange, and stores of value were prohibited and punishable by death during the Khmer Rouge era (1975–1979) (Duma 2010). As a result, savings and property were lost while cash holdings were all rendered worthless (Duma 2010). Without a monetary system and without money between 1975 and 1980, the Cambodian riel currency was reintroduced in 1980 but with low public acceptance due to the Khmer Rouge experience (Duma 2010). In the process of national restoration, public sectors were gradually re-established and developed in the 1980s in the process of national restoration. The central bank, called People’s Bank of Kampuchea, was then reopened but with limited services (Lay, Kakinaka & Kotani 2012). However, the banking system remained poor.
and almost all transactions were made under a barter trading system (Lay, Kakinaka & Kotani 2012).

Economic liberalisation in the early 1990s caused Cambodia to open its economy by building up diplomatic relations with neighbouring and Western countries through trade promotions, investment, and humanitarian relations (Lay, Kakinaka & Kotani 2012). As a result, foreign currencies inflow, particularly the US dollar, began to increase (Lay, Kakinaka & Kotani 2012).

US currency in Cambodia also began after the signing of the Paris Peace Agreement in 1991, when the UNTAC peacekeeping forces in Cambodia undertook the peace building operations, especially to organise the first democratic election (Lay, Kakinaka & Kotani 2012). However, the elections proved too costly and huge to be controlled because of the poor Cambodian banking system, resulting in the free circulation of the US dollar in the economy (Lay, Kakinaka & Kotani 2012).

The subsequent increase of the US dollar was also largely caused by a significant inflow of foreign aid, loans, remittances, and export earnings (Lay, Kakinaka & Kotani 2012). The Cambodian riel was more widely used than the US dollar in the rural areas. Duma (2010) explained this was due to Cambodian commercial banks providing microfinance services, such as loans to rural areas in Cambodian currency.

Presently in Cambodia, US currency is still widely used as a medium of exchange, store of wealth, and unit of account (Hill & Menon 2013). The Cambodian riel is also used for paying taxes, public sector wages and for small transactions usually less than US$1 (Hill & Menon 2013). Duma (2010) highlighted that even the Vietnamese dong and Thailand baht currencies are still being used but limited to the border areas with respective countries.

Essentially, Cambodia has two parallel worlds:

1) an urban economy that is mostly US dollar-based and has benefited from the buoyant garments sector, tourism, foreign direct investment, and aid
2) a rural economy that is largely agricultural and Cambodian riel-based (Duma 2010).
CHAPTER 4: CAMBODIA AND THE MOBILE MONEY ENVIRONMENT

4.6 Current Financial Services Landscape in Rural Cambodia

The Formal Banking System

Formal banking services offered by banks and MFIs in Cambodia are not widely available, with a penetration rate of only about 90 per 1,000 people (NBC 2010). In 2011, it was estimated that 96 per cent of the Cambodian adult population (about 9.4 million adults) lacked a bank account or access to formal financial services (Demirguc-Kunt & Klapper 2012; World Bank 2012, p. 40; 2014). Further, it was estimated that only 2.4 per cent of the Cambodian adult population living in rural areas had formal bank accounts, compared to 10.2 per cent of the Cambodian adult population living in urban areas (World Bank 2012, p. 40).

Sereivathana, Thy and Biallas (2008) reported that the Cambodian banking system experienced growth with the number of banks increasing from 17 in 2004 to 24 in 2007. By the end of 2011, the banking system in Cambodia comprised 31 commercial banks, seven specialised banks, and two bank representative offices (NBC 2011). There were also 31 MFIs, including seven deposit-taking MFIs, and 28 rural credit operators (NBC 2011). Local branches of financial institutions in the cities and provinces have increased steadily. In 2011, 28 new bank branches were opened, increasing to a total of 421 bank branches in Cambodia (NBC 2011).

The majority of these financial institutions provided services in Phnom Penh, the main capital city of Cambodia. Cambodia’s largest bank, Acleda Bank, had the largest branch network with around 240 bank offices serving all 24 provinces and their 171 main district towns in Cambodia (ACLEDA 2012, 2013b). Acleda Bank’s opening hours were from Mondays to Fridays from 7:30 am to 4:00 pm. Opening hours on Saturdays were from 7:30 am to 12:00 pm. The offices closed on Saturday afternoons, Sundays and the official public holidays (ACLEDA 2013a).

Unlike the bank branch offices in Phnom Penh City, which are spacious with well-equipped facilities, a typical rural bank branch is operated from a medium-sized shop with two automated teller machines (ATMs) outside. Inside, a typical rural bank branch consists of a help desk as the first point of contact for enquiries. There were also
different teller counters with specific banking services depending on customer requirements. Customers were given queue numbers and informed which teller counter to go to.

In addition, Acleda Bank offered the following money transfer services:

- transfer between two Acleda Bank customers
- transfer between an Acleda Bank customer and a person without a bank account
- transfer between two unbanked customers
- transfer between an Acleda Bank customer and another local Cambodia bank customer
- transfer between Cambodia and other countries around the world in partnership with Western Union, an international money transfer service provider.

**Transferring Funds through the Formal Banking System**

For local money transfer between district towns or provinces, Acleda Bank utilised its large network of bank branches. Transfer fee charges could range between US$2 to US$4, depending on the transfer amount and the receiver’s collection point location. Customers were not required to open an Acleda Bank account to use the money transfer service. Before transferring the money, Acleda Bank requires the sender to provide one identification document, the receiver’s name and receiver’s phone number. The receiver then had to travel to the nearest rural bank branch. Before receiving the money, Acleda Bank required the receiver to provide one identification document, confirmation of the transfer amount and the sender’s name.

**Saving Through the Formal Banking System**

Acleda Bank also provided savings accounts for rural customers (ACLEDA 2013c). However, there is a minimum initial deposit of US$10 or 10,000 Cambodian Khmer riels (riel) required. Further, a minimum balance US$10 or 10,000 riel was also required at all times to keep the account open. A fee for cash deposit was also charged, which was one per cent of the deposit amount equivalent or a minimum of US$1. Fixed-term deposits were also available for rural customers but required a minimum principal amount of US$500 or two million riel (ACLEDA 2013d).
Microfinance Institutions

As of December 2012, there were 39 MFIs operating across Cambodia’s 24 provinces, serving about 1.6 million customers (CMA 2013). The majority of these MFIs usually offered subsistence marketplace customers the following financial products and services (CMA 2011):

- micro-loans: group lending and individual lending
- micro-saving: voluntary saving and fixed-term deposits
- money transfer: (local money transfer service, remittance and mobile banking)
- micro-insurance: guarantees the loan in the event of a death or accidental injury, so that relatives or group guarantors are not left with the responsibility to pay the loan.

Chandararot and Dannet (2011) further categorised these MFIs as Large, Medium and Small. Large MFIs represented 94 per cent of the market share in terms of clients and 91 per cent in terms of loan portfolio. Large MFIs provided deposit savings and their geographic span ranged between 28 per cent and 71 per cent of Cambodian villages (Chandararot & Dannet 2011). Medium MFIs did not provide deposit savings and represented three per cent of the market share in terms of clients and six per cent in terms of loan portfolio (Chandararot & Dannet 2011). Small MFIs formed almost 30 per cent of the total MFIs in operations and made up three per cent of the market share, both in terms of clients and loan portfolio. Small MFIs did not provide deposit savings with the bulk of loan disbursement currently limited to Phnom Penh City (Chandararot & Dannet 2011).

Informal Financial Services

Gold/Jewellery Shops

Gold or jewellery shops were known to be popular among rural residents who wished to turn physical cash into another form of saving, such as investing in a valuable asset like gold or jewellery. Chandararot and Dannet (2007) highlighted that the conversion of money into gold or jewellery increased the value of rural residents’ savings. It was likened to putting money into a low-risk investment portfolio. Further, the price of gold and jewellery fluctuates, allowing subsistence residents to sell it at a higher price and
receive a higher return on investment. The transaction costs and the attractive returns on investment made cash conversion to gold or jewellery a better proposition than putting money into a costly fixed-term deposit in a rural bank branch.

Unlike rural bank branches, it was more convenient for a rural resident to visit gold or jewellery shops. First, the opening hours of gold or jewellery shops were more convenient for subsistence customers. Second, the shops were located inside or just around the district markets where most subsistence consumers usually purchased their daily necessities and groceries, went to work, set up their small businesses or even sold their products/produce.

Gold/jewellery shop owners were local residents who knew other local residents frequently coming to the markets. Price rates were attractive to the local residents. Due to the high liquidity of cash and their networks in other district towns, some of these gold/jewellery shops offered extra services, such as money currency exchange or money transfer services at competitive fees.

**Informal Savings and Credit Schemes**

Informal loans or credits schemes were also available in Cambodia. Phlong (2009) determined that the informal credit systems function in a wide array of forms like *khchey*, *changka*, and *bancham* (which are loans made to individuals) and large-scale business transactions at the market in the form of *mao*, *provas*, *chhok mun*, *cheu*, *bandak* and *bol* and *tontine* as described below.
Table 4.2: Types of Informal Credit Systems in Rural Cambodia

<table>
<thead>
<tr>
<th>Informal Credit System in Rural Cambodia</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Khchey</em> (individual borrowing/lending)</td>
<td>Informal lending and borrowing of cash and objects among family members, neighbours and traders, that follows generalised and balanced reciprocity as one is obliged to return back what was borrowed, but without a specified time or date</td>
</tr>
<tr>
<td><em>Changkar, changkar prak</em> or <em>changkar luy</em> (money lending)</td>
<td>Borrowing money from moneylenders who are beyond one's kin group, which requires collateral to secure the loans and includes paying high interest rates</td>
</tr>
<tr>
<td><em>Bandak, cheu</em> and <em>bol</em> (advance borrowing or owing)</td>
<td>Borrowing of objects or money from close friends or neighbours without using collateral</td>
</tr>
<tr>
<td><em>Bancham</em> (pawning)</td>
<td>Loans of cash from moneylenders or gold shops that require putting objects as collateral</td>
</tr>
<tr>
<td><em>Provas</em></td>
<td>Exchange of farm labour or animal raising: exchanges of farm labour or animal raising between kinsmen or neighbours, which carry with them the concept of reciprocity and mutual help during times of need</td>
</tr>
<tr>
<td><em>Mao</em> (collective buying)</td>
<td>Advanced collective buying of products between buyers and sellers based on trust and risk sharing in trading transactions</td>
</tr>
<tr>
<td><em>Tontine</em></td>
<td>An informal rotating group lending and/or saving system</td>
</tr>
</tbody>
</table>

Source: Phlong 2009.

Assadi and Hudson (2011) grouped *tontine* as a ubiquitous practice under the name ‘Rotating Savings and Credit Association’ (ROSCA). Viewed as a modern economic concept, ROSCA essentially means a gathering of individuals who agree to get together in order to save and borrow within the group to satisfy both consumption and production needs (Assadi & Hudson 2011). Liev (1997) provided a more detailed explanation of *tontine* as an alternative financial instrument for Cambodian communities:
‘Tontines are neither legal nor illegal, and are often simply outside the terms of reference and normative practices of the mainstream or dominant society. Since tontines are practised within a closed socio-cultural system which is well understood by participants, Cambodians would rather use tontines than bank loans. Although tontines may seem insecure, they continue to enjoy support because they provide people from Cambodia with a comfortable and flexible means of accumulating savings and access to credit impossible through other formal means. Participants in Cambodian tontines believe that the returns from tontines are higher than those available from other saving methods. To them a tontine is a familiar financial instrument within their ethnic communities.

Informal savings and credit arrangements in Cambodian communities are influenced by a multitude of factors that include culture, the nature of the economy, education level of the population, and lack of access to institutional sources of finance and credit. Participants in these tontines have limited access to, and knowledge of, mainstream financial institutions. They based their tontine operations on common practices and without any collateral, conducted them entirely on the basis of trust and the good will of the organiser and participants.’

**Informal Money Transfer Services**

There were variations of domestic informal money transfer services in Cambodia depending on the location. The common ones were 2-way radio transmission-cum- phone services (ICOM), vehicle transport services (cars, vans, buses and trucks), local money transfer shops and mobile private operators acting as informal money transfer agents.

The ICOM service worked like a phone system that used a hand-held radio transmitter system when the mobile phone network coverage was not optimal. Essentially, the sender visited the ICOM service shop and provided the address and name of the money receiver. The ICOM shop operator then called the corresponding ICOM shop nearest to the recipient’s home and a motorcycle taxi (‘motodop’) driver was dispatched to locate the recipient. The recipient was asked to come to the ICOM shop and discuss with the sender the payment of the transfer fee. ICOM services were usually located in main provincial or larger rural district towns.
There were also vehicle transport services available in every main provincial or large rural district towns. They could be taxis, vans, buses and trucks. Rural residents generally called them taxi services and used them for travelling or goods transportation. Different taxi services had different specific destinations to go. For example, there were taxi services that only provided local travel services between district towns within the same province. Other taxi services only travelled to and from Phnom Penh City. Taxi services were usually found in the district town or provincial markets where most rural residents would go to purchase or sell their goods. Due to the easy access and convenience, subsistence residents could also approach these taxi services for money transfer services. Essentially, the sender placed the money in a sealed envelope and passed it together with the receiver’s name and phone number to a waiting driver. The sender would also have to agree on a transfer fee charge as a price list was not available and was subject to the driver’s discretion. Most of the time, these drivers also had scheduling priorities. They also tended to wait until their vehicles were fully loaded with passengers and/or goods before making the trips.

Money transfer shops were located in the district markets. These money transfer shops had registered signboards to display their services and were openly visible to subsistence residents who could come in to inquire about their services. These money transfer shops did not operate alone as they partnered with different money transfer shops in other locations within their group network. Unlike the bank branches and MFIs, these money transfer shops opened every day and their opening hours were longer, from early morning before the sunrise until late at night. Rural residents were more attracted to these money transfer services than rural banks or MFIs because of low transfer fees, speed of transfers and minimal paperwork. Similar to the ICOM services, the sender visited the shop and provided the address and name of the receiver. The shop operator then called the corresponding money transfer partner in the location nearest to the receiver’s home and they would call the recipient. The recipient was asked to come to the money transfer shop and discuss transfer fees with the sender. There were generally more money transfer shops than ICOM services and they could also be found in both main provincial and rural district towns.
Mobile private operators acting as informal money transfer agents were usually individuals without registered services or visible shop fronts for subsistence residents to visit. They were less visible and tended to be mobile using motorcycles. Alternatively, they were located in remote locations and they offered the money transfer transactions through word-of-mouth referrals. Due to their mobility, these private operators could go directly to the sender’s village to offer money transfer services. These private operators also worked in partnership with other private operators, such as a family member or a trusted friend located in other villages that could offer the services and/or complete the money transfer transactions. Subsistence residents using these services had to develop absolute trust in these private operators before using them. This system was similar to the ICOM services except there would be one operator staying in the ‘phone centre’ while the partners acting as brokers provided the money to be paid. The money transfer fee was estimated to cost around 10 per cent of the amount transferred. At times, relatives, family members or friends would visit the senders. If they lived in the same village or close proximity with the recipients, the senders would pass them the money to send it to the recipients.

Cambodians also crossed over to border towns in Thailand as migrants looking for employment opportunities. It is estimated only eight per cent of Cambodian migrants had bank accounts in Thailand (IOM 2010). Hence, the two most common informal money transfer services used by migrants to send money back to their family members in Cambodia were ICOM service and mobile private operators (IOM 2010).

The money transfer processes were similar except that the migrants required payment of extra fees for international phone costs incurred by ICOM services. Further, mobile private operators usually dispatched brokers to cross over to Thailand to personally collect the money from the migrants and return to Cambodia to send the money.

Alternatively, private operators would request the sender to deposit the money together with the transfer fee into a nominated Thai bank account. The dispatched broker would travel across to withdraw the money at the border Thailand town bank branch and then bring the money back to Cambodia. It was estimated that the transfer fee for the money transfer service from Thailand to Cambodia could be up to 25 per cent of the amount sent (IOM 2010).
4.7 Elements of WING Mobile Money System in Cambodia

The WING Agent Distribution Network

Mobile money services in Cambodia relied on a key distribution network of over 800 agents to roll out the service offerings throughout the country. The agents were officially appointed by WING Money Cambodia (WING) to provide the mobile money services directly to the customers. As the front line ‘ambassadors’ for WING, they were also expected to register new customers and provide customer support. The majority of these agents were local SEs and mostly located in district and provincial markets where most subsistence residents gathered during the day. There were two types of mobile money agents, namely WING Cash Xpress (WCX) or Master WING Cash Xpress (MWCX). While WCX agents provided all the mobile money services, MWCX agents were similar to WCX agents with additional responsibilities of looking after their assigned team of WCX agents and balancing their physical cash and e-money float requirements.

The WING Pilots

To promote mobile money services at the local level, WING employs young men and women as salespeople called WING Pilots. The WING Pilots’ roles were to market and explain the mobile money services to potential customers. When the customers were interested, the WING Pilots would register new mobile money accounts for them, inclusive of creating a four-digit pin code. They would also distribute the WING mobile money starter kit, which included the mobile money account card and an instruction leaflet.

During the research fieldwork period, there were close to 300 WING Pilots spread across the country’s 24 provinces and many of them were from their own provinces as they were expected to better understand the local needs. WING Pilots were typically high school students or youth entrepreneurs who could earn money from commission by opening new mobile money accounts for customers throughout the country.
Before becoming WING Pilots, these young men and women would undergo induction training at the WING Head Office in Phnom Penh City. Part of the induction included comprehensive training in the use of mobile money products and services, basic selling techniques and learning how to register a new mobile money account for an interested customer.

**WING Mobile Money Products and Services**

WING’s mobile money products and services were generally developed for two types of customers. The first was for normal retail customers, as shown in Table 4.3.

**Table 4.3: WING Mobile Money Retail Products and Services List**

<table>
<thead>
<tr>
<th>Retail Services</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WING Bill Payment</td>
<td>Only available in Phnom Penh City and using the mobile phone to pay bills for selected service providers</td>
</tr>
<tr>
<td>WING-to-WING</td>
<td>Funds transfer between two mobile money accounts</td>
</tr>
<tr>
<td>Cash In (Deposit)</td>
<td>Deposit money into a mobile money account</td>
</tr>
<tr>
<td>WING Tinh Card</td>
<td>Using mobile money account to top up mobile phone credits</td>
</tr>
<tr>
<td>Cash Out (Withdrawal)</td>
<td>Withdraw money from a mobile money account</td>
</tr>
<tr>
<td>Cash Out (Withdrawal) via ANZ ATM</td>
<td>Withdraw money from an ANZ ATM</td>
</tr>
<tr>
<td>WING Wei Luy</td>
<td>Money transfer services: only sender has a mobile money account</td>
</tr>
<tr>
<td>Wei Luy Express (Over The Counter)</td>
<td>Money transfer services via mobile money agents; both sender and receiver have no mobile money account</td>
</tr>
<tr>
<td>Account Balance Check</td>
<td>Check current mobile money account balance</td>
</tr>
<tr>
<td>Change Mobile Phone Number</td>
<td>To update linking of customer’s mobile phone number to mobile money account</td>
</tr>
<tr>
<td>Change Mobile Money Account Currency</td>
<td>To change current mobile money account currency from US dollar to Cambodian riel or vice versa</td>
</tr>
</tbody>
</table>

Source: http://www.wingmoney.com/services-fees
CHAPTER 4: CAMBODIA AND THE MOBILE MONEY ENVIRONMENT

WING also provided customised mobile money solutions for corporate business customers’ payments and payrolls, as shown in Table 4.4.

Table 4.4: WING Corporate Payments and Payroll Solutions

<table>
<thead>
<tr>
<th>Corporate Solutions</th>
<th>Description</th>
</tr>
</thead>
</table>
| Payroll and Disbursements | Pay staff salaries all at once  
  • instant payment to receiver, no matter where they are  
  • no cash handling risk  
  • fast and effort  
  • regular statement and report  
  • flexible payment dates and frequencies  
  • benefit for staff  
  • 100 per cent safe |
| Electronic Money Collection (Billing) | • receive an instant payment from customers regardless of where they are located  
  • no cash handling risk or risk of receiving counterfeit money  
  • save time and effort  
  • receive fast and convenient payment  
  • receive regular statements and reports |
| Petty Cash | • no cash handling risk  
  • make payment to payee or supplier no matter where they are from mobile phone, fast and safe  
  • corporate balances and transactions are recorded systematically  
  • deposit balance at any WING Cash Express agent (over 800 locations, nation-wide) |

Source: http://www.wingmoney.com/payroll-and-payment-0

WING Mobile Money System Rollout

WING’s mobile money services were officially launched in January 2009 with the aim of providing affordable and accessible basic financial services through the mobile phone for the country’s unbanked population (IFC 2011). A key feature of WING’s mobile money services was that its system platform was designed as ‘operator-agnostic’, independent of any mobile phone operator or bank, which meant that any Cambodian with a mobile phone could access the services (IFC 2011).
WING currently partners with all major Cambodian mobile phone network operators covering 99 per cent of the Cambodian mobile phone market share (BMI 2012) to provide electronic mobile phone credit top up as part of the mobile money services. Mobile money customers could also choose to have either a US dollar or Cambodian riel mobile money account. Upon registration, customers would be issued a mobile money account card with the account number and a personal four-digit passcode to access the mobile money account. To access the services, customers would need to perform a dial-up session on their mobile phones to initiate a transaction via the system menu. Listed below are step-by-step details on some of the service offerings more commonly used by subsistence consumers in rural Cambodia.

1. Send Money To Another Mobile Money Account (WING-to-WING)

The money is instantly transferred from the sender’s account to the receiver’s account. A receipt is sent by short message service (SMS) text to both parties, indicating the amount of money transferred, the transaction reference identity (ID), and the new balance.

The step-by-step procedure to send money to another mobile money account:

1) dial *989#
2) enter sender’s mobile money account number xxxxxxxx
3) enter ‘2’ to choose WING-2-WING
4) enter ‘1’ to enter receiver’s mobile phone contact number
5) enter receiver’s mobile money account number xxxxxxxx
6) enter amount xxxx
7) enter personal identification number (PIN) xxxx.

When done, both sender and receiver will instantly receive a notification by SMS.

(Source: http://www.wingmoney.com/service-transfer-money)
2. Send Money To Someone Without A Mobile Money Account (WING Wei Luy)

With WING Wei Luy, customers can send money, up to US$50 per transaction, from their mobile money account to anyone in the 24 provinces of Cambodia. The mobile money system generates an eight-digit passcode, which will be communicated to the receiver to withdraw the money in any WING Cash Xpress agent.

The step-by-step procedure to send money via WING Wei Luy number (eight-digit passcode):

1) dial *989#
2) enter sender’s mobile money account number xxxxxxxx
3) enter ‘4’ to choose WING Wei Luy
4) enter amount xxxx
5) enter PIN xxxx
6) communicate your passcode to the receiver (by phone/SMS).

(Source: http://www.wingmoney.com/service-transfer-money)

3. Wei Luy Xpress (Send Money at WING Cash Xpress)

The Wei Luy Xpress service allows customers to send money to anyone across the country, even if both the sender and receiver have no mobile money account. The provided eight-digit passcode will be communicated to the receiver to withdraw the money in any WCX agent outlets in 24 provinces of Cambodia. The sender has to find the nearest WCX agent and give the amount of money that he or she wants to send and there is no phone number or name of recipient required.

(Source: http://www.wingmoney.com/service-transfer-money)
4. WING Tinh Card (Top Up Via Mobile Phone)

Customers can top up airtime on any of the mobile phone networks in Cambodia.

The step-by-step procedure to top up via mobile phone:

1) call *989#
2) enter mobile money account number: xxxxxxxx
3) press ‘3’ to choose WING TINH CARD
4) enter the mobile phone number you want to top up xxxxxxxx
5) choose the amount
6) enter your PIN code to validate: xxxx.

The receiver of the top up instantly receives a notification by SMS.
(Source: http://www.wingmoney.com/services-phone-top)

4.8 Comparison with Other Mobile Money Services in Cambodia

The only other known mobile money service available for subsistence marketplaces in rural Cambodia was the Acleda Unity service offered by Acleda Bank. Similar to WING, Acleda Bank partnered with all of Cambodia’s mobile phone networks to offer the mobile phone top up service.

As Acleda Bank is regarded as a formal financial institution with around 240 branch offices in all of Cambodia’s 24 provinces and their 170 main district towns (ACLEDA 2012, 2013b), a rural resident is required to open an Acleda Bank account in order to access the Acleda Unity mobile money service (ACLEDA 2013c, 2014). A registration fee of US$5 is required to open an Acleda Bank account and a monthly fee of US$0.50 is required (ACLEDA 2013c, 2014). In addition, a separate registration fee of US$3.50 is required to open an Acleda Unity account and link it with the Acleda Bank account (ACLEDA 2013c, 2014). Transaction services like cash in, cash out and money transfer collection can only be performed at these 240 rural bank branches within the official business opening hours (ACLEDA 2013c, 2014).
The Acleda Unity mobile money account charges US$1 per transaction to transfer funds to another Acleda Unity mobile money account (ACLEDA 2014). The Acleda Unity mobile money account also charges US$0.25 for each bill payment transaction (ACLEDA 2014). The Acleda Unity user is also required to pay additional fees (ACLEDA 2014). For example, it cost US$1 to transfer money to a non-Acleda Unity or non-Acleda Bank account customer, but an additional US$1 for funds transfers between different bank branches.

WING mobile money services are currently available in more than 880 mobile money agent locations in all of Cambodia’s 24 provinces (WING 2014a). A one-time registration fee of US$2 is required and no monthly fee or minimum amount is required to maintain the mobile money account (WING 2014b). WING mobile money services charges two different fees for fund transfers between mobile money accounts. It costs US$0.25 for transferring US$25 or less and US$0.50 for transferring more than US$25 (WING 2014b). There is no fee charge for each bill payment transactions. WING also provides over the counter money transfer services (WING Wei Luy) at all mobile money agent locations if both the sender and receiver have no mobile money account (WING 2014b). WING Wei Luy charges a flat rate fee of US$1.50 and customers can only send up to US$50 per transaction (WING 2014b). Full details of the price structure for Acleda Unity and WING mobile money services are shown in Appendix B.

**4.9 Implications to the Marketing System**

Layton (2007) defined a marketing system as “a network of individuals, groups and/or entities, embedded in a social matrix, linked directly or indirectly through sequential or shared participation in economic exchange, which jointly and/or collectively creates economic value with and for customers, through the offer of assortments of goods, services, experiences and ideas, that emerge in response to or anticipation of customer demand.”
In developed economies, marketing systems in developed economies already have established formal institutional structures such as goods and packaging producers, transportation providers, wholesalers, retailers, credit card companies, shopping mall operators and other entities that contribute significantly to the marketing exchange (Upadhyaya et al. 2014). However such established marketing systems hardly exist in subsistence marketplaces as Cambodia’s social demographics characterise a marketing system whose network of individuals, groups and entities are embedded in social structures or activities (Layton 2014; Layton 2007) that directly or indirectly support a more informal and agrarian-based subsistence marketing exchange.

The formal banking system landscape in rural Cambodia exemplifies the ineffectiveness and inefficiency of marketing system which poorly adapted to the subsistence environments in which they operate and resulted in low responsiveness (Layton 2009). On the other hand, informal financial services through intermediaries such as the local gold/jewellery shops, informal savings and credit schemes, informal money transfer services enables a marketing system with a “constructive engagement” that deliver value to subsistence customers and managing societal relationships in ways that benefit the subsistence marketplace environment (Shultz 2007). The emergence of the mobile phone technology in a subsistence setting enabled greater connectivity of marketing systems between close, proximate and distant networks of individual, groups and entities. As mobile phones are easily available and accessible to subsistence marketplace actors, offering assortments of goods, services, experiences and ideas through the mobile phone technology such as mobile money services provide another “constructive engagement” (Shultz 2007) pathway that potentially leads to the growth and adaptation of marketing systems (Layton 2014) within subsistence marketplaces.
4.10 Conclusion

This chapter has provided an overview of the financial services landscape in rural Cambodia within the regulatory environment as well as the current formal and informal financial services available. It has also explained the key elements of WING’s mobile money services and its coverage across Cambodia. Linkages of the implications of this environment to the marketing systems have also been discussed. A bottom-up approach to understanding marketing systems, their emergence, and their role in influencing economic growth is a necessary first step toward the ‘‘constructive engagement’’ of marketing with society (Layton 2009; Shultz 2007). It is therefore important to understand the local environment within the marketing system in order to explore how any new financial service offerings can affect the lives of rural people. The subsequent three chapters utilise the collected empirical data to present the research findings on the impacts of mobile money services on financial capability, consumer wellbeing and subsistence entrepreneurship.
Chapter 5: Impact on Financial Capability

5.1 Introduction

Chapter 4 described the financial services landscape in rural Cambodia, the development and rollout of the mobile money initiatives, particularly the money transfer services, the mobile phone top up services and the mobile money account utilised as a secured savings mechanism. This chapter focuses on how mobile money services have made significant changes to rural customers’ levels of financial capability. Financial capability is conceptualised as the ability to act (due to enhanced financial literacy) and opportunity (due to financial inclusion through increased access to financial services and products) to act (Sherraden 2013). The pre-specified dimensions of the financial capability in the literature did not previously include in detail the effects of the mobile money services and did not consider the context of the subsistence marketplaces environment.

In the context of enabling the opportunity to act, this chapter demonstrates that mobile money services enabled subsistence consumers to be financially included due to increased opportunities within marketing exchanges to access basic financial services. The themes identified are enhancing accessibility, reducing task complexity and elimination of intermediation. In the context of enabling the ability to act, this chapter also shows that having access to mobile money services helps subsistence consumers build financial capabilities and confidence through using the products and services. The ability to act consists of four core financial behaviours, namely ‘Money Management’, ‘Planning Ahead’, ‘Choosing Products’ and ‘Getting Information, Advice and Help’ (Atkinson et al. 2007; Yoong et al. 2013). The themes identified within ‘Money Management’ are improved money security, enabling joint family/communal money management and monitoring savings and spending. The themes identified within ‘Planning Ahead’ are reduced costs of saving money and complementary/transitional savings mechanisms. The theme identified within ‘Choosing Products’ is increased low-cost opportunities for product comparison. The themes identified within ‘Getting Information, Advice and Help’ are increased opportunities for obtaining product information and multiple touch points to access advice and help services.
5.2 Impacts of Mobile Money Services on Financial Inclusion—Marketing Exchanges

The focus of this section is on the impacts on financial inclusion involving marketing exchanges, more specifically around the overall accessibility (safety, convenience and speed) of the money transactions. Thematic analysis of the evidence and representative quotes illustrating the emerging themes are displayed in Table 5.1.

Table 5.1: Impacts of Mobile Money Services On Financial Inclusion Levels:
Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing accessibility - Easy access and increased convenience to basic financial services and other consumer-related products and services</td>
<td>‘It is better because now it is easy. I don’t have to travel far. Because for me it is much easy for me that I don’t have to travel to other places. Like before if I want to buy phone card, the scratch card, I have to go to other places to buy. But now I can top up through my phone using mobile money services.’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘So I asked them to go there to buy new clothes for me. And I used mobile money services to transfer the money to them.’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘In the past, we maybe do all the (bank) transaction and transfer money by phone (ICOM), by bank. Then we need to spend more time. We take long time ... (now) we look at mobile money services ... fast, easy and satisfied ... anywhere anyplace ... mobile money (is) with me.’</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘Mostly it’s more than half an hour (to wait). I only take money to deposit or cash in and not to borrow the money. Why do I need to wait for them? So I felt uncomfortable and not happy. So boring. And one more thing. When I go to cash out I have to wait the same. It’s my money. I want my money but I have to wait as well. So I don’t like it ... (now after using mobile money services) ... it’s quite easy ... very fast.’</td>
<td></td>
</tr>
</tbody>
</table>
**CHAPTER 5: IMPACT ON FINANCIAL CAPABILITY**

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing task complexity - Faster process and less complicated procedure (compared to rural bank branch) to complete a financial service transaction</td>
<td></td>
<td>‘I can now transfer my money very quickly to my family in case they need money and now I don’t have to wait like before. Then I have to wait and queue at the bank to fill up documents. I took a long time.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘It is very easy. Very convenient. Before mobile money services it was very hard to transfer money. But with mobile money services I can transfer money anytime I like.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘For banks it’s not easy because I am so bored to queue up waiting for cash in or cash out. It takes a long time for me. I am so bored to wait. Even I just go there to transfer money to my relative. I still have to wait in the queue … I don’t want to waste time to wait.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘But if they send money by Acleda (rural bank services), they have to wait more than 30 minutes at the bank and they have to fill application forms. They (the banks) need identification from the sender and the receiver. So it takes a long time and very complicated … (after using mobile money services) it is easy for me to transfer money and save money.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘It depends on the customer. If the bank has a lot of customers I have to wait for long time. Mostly it’s more than half an hour. I only take money to deposit or cash in and not to borrow the money. Why do I need to wait for them? So I felt uncomfortable and not happy. So boring. And one more thing. When I go to cash out I have to wait the same. It’s my money. I want my money but I have to wait as well. So I don’t like it.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Yes it is very easy. when I give the money to them (mobile money agents), they can help me to send money quickly. And sometimes when I want to transfer money, I just call to them and said that could you transfer the money for me. And they said yes and then the next day I bring cash to pay them. It is easier than going to the money exchanger.’</td>
</tr>
</tbody>
</table>
### Key Themes Identified

| Elimination of intermediation - Bypassing or avoiding informal, risky and unsecured intermediary services to complete a financial service transaction |

### Thematic Analysis of Evidence

- ‘It is very easy now because sending money by mobile money services is safe … now I am not afraid of loss (by taxi drivers) as I can know clearly the status of my transaction from the mobile phone.’
- ‘When I send money to them by taxi I am afraid of loss. And it is difficult for them (my family members) to receive the money. But with mobile money services I send money without being afraid of losing.’
- ‘Yes it is very difficult for me because sometimes I cannot get up to reach the taxi and then they leave. So I cannot transfer money. They leave before I meet them.’

### Enhancing Accessibility

Before mobile money services, subsistence consumers in Cambodia found it difficult and inconvenient to travel to local rural bank branches and they also did not meet the minimum balance required to open a savings account. Subsistence consumers also found it difficult to visit rural bank branches during lunch hours. The presence of Cambodian bank branches is limited in rural areas and they typically open only between 7.30 am to 4.00 pm on weekdays. Some bank branches also opened between 7.30 am and 12.00 pm on Saturdays. On the contrary, subsistence consumers (both employees and SEs) would typically work every day, including weekends. They would usually start work early, before sunrise at 6.30 am, and finish work just before sunset at 7.00 pm. Hence, they could not conveniently visit the rural bank branches due to their service unavailability after working hours and during the weekends.

For example, Ms PS runs a market stall selling meat in a rural district market seven days a week, from sunrise until the evening. She explained that rural bank branches closed daily at 4.00 pm and they did not open during the weekends. Hence, the rural banks’ business hours were unsuitable for her, as she could not close her business due to loss of potential income concerns. Similarly, Mr PM highlighted that the banks’ standard
opening hours meant that he had to close his shop and also wait a long time in the bank branch. Even the banks’ closing hours were unsuitable and inconvenient for Mr PM, a mobile phone shop owner, as his business opened before sunrise and closed just after sunset.

‘Sometimes banks close at 4.00 pm so I don’t have enough time to go there.’

Using mobile money services meant that customers could access basic financial services through their mobile phones at their own convenience. If customers required to ‘cash in’ or ‘cash out’ the money, they could approach any mobile money agents whose longer opening hours, inclusive of weekends, and faster service made it more accessible for them. The mobile money account also did not require a minimum deposit amount and did not require a minimum balance to maintain the account.

Case 5.1: Mr HT, Locksmith Shop Owner

Mr HT is a 26-year-old rural locksmith and sole financial provider to his family, including his 22-year-old younger brother, Mr HM, a university student. Mr HT did try to open a rural bank account. Although there was no service charge incurred for opening a bank account, he was informed that an initial deposit of US$10 dollar was required and a daily minimum balance of US$10 dollars was required to maintain the bank account (ACLEDA 2013c, 2013d). This made Mr HT feel like he was charged US$10 dollars for it.

‘Recently I just transferred some amount to my brother and I have just topped up my (mobile) phone (credits). So it (bank account balance) remains less than US$2.’

After using mobile money services, Mr HT found it faster and a more convenient place to put his money, without worrying about the minimum account balance and hence, resulting in enhanced accessibility. Indeed, mobile money services helped reduce Mr HT’s costs of opening and maintaining a bank account.
Even with increased access to basic financial services, the location of the rural Cambodian districts included in the research meant that many consumer-related products and services that were taken for granted in urban areas were not conveniently accessible or available to those living in these rural districts. Respondents identified a lack of products/materials available in their local districts, which affects their physiological and personal wellbeing, as well as business needs. For example, rural students did not have access to relevant textbooks and had to rely on family or friends living in Phnom Penh to purchase these for them.

Other materials required by rural residents included farming materials (like special seeds) or business supply materials, traditional or special food ingredients, and personal items such as clothes, bags, books and stationery. Before mobile money was available, the respondents had to use existing money transfer services like buses or taxis to send cash to family or friends to purchase these products. This process was lengthy and very inconvenient. Mobile money services enabled them to transfer money safely and quickly to family members or friends in distant localities to purchase the required products.

Case 5.2: Ms CL, Student

Ms CL, a rural student, found the selection of appropriate clothes and bags were limited in her rural district town. Ms CL was also unable to purchase study materials such as textbooks. Hence, she had to transfer money via bus or taxi to her cousin living in Phnom Penh City to help purchase the required materials, which proved time consuming and inconvenient. However, mobile money services allowed Ms CL to send the money immediately to her cousin in Phnom Penh City to purchase the required materials fast.

‘I send money (using mobile money services) to Phnom Penh for my cousin to buy new clothes for me and materials such as books and bags, something that I cannot find in Sihanukville.’
Reducing Task Complexity

Accessing financial services in rural bank branches often incurred complex service fees and involved long waiting queues for customers. Informants described the frustration of travelling long distances to the nearest rural bank branch and spending time queuing and completing complicated money transfer service forms. The process required proof of identity for both the sender and receiver to complete the transaction. After using mobile money services, informants could immediately transfer their own available money quickly. This was done through a simplified and less complex procedure by initiating the money transfer service on their mobile phones and providing receivers with an eight-digit code to collect the money at the nearest mobile money agent acting as the collection point. Some examples of mobile money service collection points included a village mobile phone shop, a small village grocery shop or a village money transfer/money exchange shop.

Case 5.3: Mr RI, Soldier

Mr RI, a soldier, described the complexities faced when wanting to access a rural bank branch to transfer money. First, Mr RI was required to travel about 100km to the nearest rural bank branch to transfer money to his poor family. Second, Mr RI found the fee charges complex, as they were expensive and differed from different locations.

‘It costs US$3 from a rural district town to a rural main town and US$2 from a rural main town to a rural main town.’

Third, Mr RI had to wait for a long time in the rural bank branch, as there were many customers. Further, rural bank branches required Mr RI to fill in money transfer service documents, which were complicated and tedious to fill in.

After using mobile money services, Mr RI found the money transfer process less complicated, more convenient and cheaper. Mr RI did not have to fill in any complicated documents and the mobile money agent was nearby—about 10 minutes’ drive from his current location to use the services.

‘I just spend a very little short time to cash in and transfer money.’
Case 5.4: Mrs SB, Hairdresser

Mrs SB works as a hairdresser in a rural main town. In further describing the tedious and inconvenient process to access rural bank branch services, Mrs SB took a very long time to wait when there were many bank customers being served. At times, it took more than an hour to complete the complicated money transfer service documents. Mrs SB also had to call her siblings to let them know to go down to the nearest rural bank branch to collect the money. Similarly, Mrs SB’s siblings also had to queue at the rural bank branch to be served and had to complete complicated documents before collecting the money. Receivers and senders were required to show a form of identification for verification before completing the actual money transfer service.

‘I have to spend a lot of time on my side and on the other side they have to spend a lot time.’

Alternatively, Mrs SB also transferred money through money exchangers, which was faster and simpler than rural bank services. Besides informing the intended destination of the money, only the mobile phone numbers of the sender and receiver were required as verification. However, Mrs SB still had to wait for half an hour for the money to be available and transferred to the receiver side. Money exchangers charged higher transfer fees than rural banks and their location was considered inconvenient by Mrs SB. Privacy concerns were highlighted by Mrs SB when using money exchangers as people around her could hear her mobile phone number and the amount of money to be transferred.

‘On the other (receiver) side, the (other) people can just tell the phone number and the money amount and they might take the money.’

Mrs SB found the mobile money services easier, simpler and more convenient. She could transfer money quickly to her siblings, who needed money urgently and did not wait like previously in the rural bank branch. The eight-digit code generated by the mobile money service added security benefits for verification purposes to collect the money without additional proof of identification.
Further, only Mrs SB and her siblings would know this eight-digit code. Alternatively, they could just transfer money securely to each other’s mobile money account. Best of all, the transfer service was immediate and available anywhere and anytime:

‘Now I don’t even have to worry that if it is a Saturday or Sunday or weekdays that the bank’s open or not. I can use mobile money services all the time anytime.’

Elimination of Intermediation

Due to the challenges and complexities of accessing financial services via rural bank branches to transfer money, subsistence consumers often resorted to alternative modes like informal intermediary services (bus, truck and taxi drivers) in the vicinity to transfer the funds. They tended to choose a particular taxi driver or boat driver they knew personally or trust to transfer the money.

However, informal intermediaries take a long time, sometimes one to two days, for the sender’s funds to reach the receiver. Further, these services had other scheduling priorities and respondents faced the uncertainty of guessing when the transport services would be readily available and where to find them. Respondents also reported incidents of their money being stolen or ‘missing’ through intermediary transactions. Further, respondents living in ‘floating villages’ had to pay for transport fuel costs or hiring of boat drivers to transfer money to taxi drivers waiting at seaports on land. Payment through these intermediary money transfer services often required negotiations, as prices were not displayed and not always fixed. Hence, these intermediaries held greater power or influence in the transaction exchange cycle, while the senders had decreased economic or social value.
CHAPTER 5: IMPACT ON FINANCIAL CAPABILITY

After using mobile money services, no such inconveniences and difficulties occurred as they could immediately transfer their own available money quickly to one another without these informal intermediaries. Respondents experienced a simplified and less complex procedure by initiating the money transfer service on their mobile phones and providing receivers with an eight-digit code to collect the money at the nearest mobile money service collection point. Respondents and their corresponding receivers could now better control their timing and scheduling priorities.

Hence, a dis-intermediation effect occurred where ‘middlemen’ or intermediaries were bypassed or avoided (Boateng 2011). Within the transaction exchange cycle, the power and influence once held by the intermediaries were returned to the senders. As a result, the senders experienced greater economic and social value while the intermediaries experienced less economic and social value due to their once ‘lucrative’ intermediary services being replaced by mobile money services.

Case 5.5: Mr GM, Grocery Shop Owner (Floating Village)

Mr GM lives in a floating village community and runs a small grocery store on his boathouse. He described his negative experience of losing money when using intermediaries like taxi drivers. Mr GM had grown afraid of sending money by taxi. Mr GM was grateful for the mobile money services that prevented a repeat of his negative experiences with taxi drivers by providing money transfer services when ordering his grocery supplies on land. It proved easy and, most importantly, safe for Mr GM to transfer funds using mobile money services:

‘After experiencing losses through taxis, I was afraid of losing money. Now I am not afraid of loss, as I can know clearly the status of my transaction from the mobile phone.’
Case 5.6: Ms ST, Student

Ms ST, a rural district town student, received money from her sister who was working at another province town. As a recipient of the money transferred, she recounted her experience of collecting money from taxis. Ms ST explained that taxi drivers’ would wait from early morning until early afternoon or evening for passengers, and would only start travelling when their taxis reached maximum capacities. This was because taxi drivers wanted to earn maximum income by ensuring the taxi was fully loaded with passengers or goods before making the travel.

‘So it's only till the early evening or late afternoon I can receive my money. It’s too late for me.’

With mobile money services, the respondents described the mobile money service process as easier, simpler, more secure and more convenient than previously used processes. Mr CY praised mobile money services for saving time and ensuring receipt of the correct amount of goods sent by the supplier, as no money was lost during the transfer. Transferring money to his supplier using mobile money services proved more secure for Mr CY. Further, his supplier could receive the money faster and conveniently collect the money at the nearest mobile money agent.

‘If I transfer money with the actual amount the suppliers get all of the money that I sent. And they also send the correct amount of supplies.’

The introduction of mobile money services made an impact on financial inclusion levels in subsistence marketplaces, the first building block of financial capability. This was possible through increased opportunities for subsistence consumers to access basic financial services not easily and conveniently available previously. Using the theoretical concept of financial behaviours (the second building block of financial capability), the next sections will focus on how mobile money services enabled subsistence consumers to increase their financial literacy abilities and confidence in using financial products and services.
5.3 Impact of Mobile Money Services on ‘Money Management’ Financial Behaviour

The focus of this section is the effects of mobile money services on ‘Money Management’ financial behaviour. Thematic analysis of the evidence and representative quotes illustrating the themes are displayed in Table 5.2.

Table 5.2: Impact of Mobile Money Services on ‘Money Management’ Financial Behaviour: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence Within ‘Money Management’</th>
<th>Representative Quotes</th>
</tr>
</thead>
</table>
| Improved Money Security | ![Diagram](image) | ‘Since I used mobile money services I never put money at home. I never leave money at home. So now if I have money, I just put into my mobile money account.’

’It is easy for me to store money and in the future it’s easy to transfer money and store money in secret place. No one knows I have much money because even if I lost my mobile money card my money still remains intact.’

’I keep in my mobile money account because it is safer … yes. I think now it is easier for me. No need to keep the money in my wallet. I just bring mobile money account card to go anywhere. And I cash out the money there. It’s easy for me.’

’It’s easy. For example, I am not afraid of losing (money). Even if I lose my mobile money card, my money is still in my mobile money account. If I keep my money in my pocket, sometimes the thief or burglar will take it from me. So I have no money. If I keep money in my mobile money account, if they steal my mobile money card, my money is still in my mobile money account.’ |
### Key Themes Identified

<table>
<thead>
<tr>
<th>Theme</th>
<th>Evidence Within</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling Joint Family/Communal Money Management</td>
<td></td>
<td>‘I don’t use the bank service because it is not my habit to use it. But then I saw mobile money services have a lot of benefits for me to transfer money and also do the mobile phone top up. So I decided to use mobile money services instead of banks.’</td>
</tr>
</tbody>
</table>
| Monitoring Savings and Spending | | ‘I think it would be very difficult … but when I have mobile money services I feel very happy. I am delighted. I can transfer money immediately to my mother. I don’t have to worry if my money arrived safely to my family. With mobile money services, I am sure that my money will be received by my siblings. I don’t have to worry if my money will arrive or not and I don’t have to worry what time the money will arrive.’  

‘It is easy to transfer money to my villagers or relatives at the rural areas because for example when I send money to them by taxi I am afraid of losing my money. And it is difficult for them to receive the money. But by mobile money services I send money without being afraid of losing it. I just inform them the money amount I sent and the eight-digit number passcode. And then they can go to cash out immediately.’ |
CHAPTER 5: IMPACT ON FINANCIAL CAPABILITY

**Improved Money Security**

In a survey of 801 households conducted in eight Cambodian rural provinces, Chandararot and Dannet (2007) found that rural Cambodians mostly put their savings either in the form of in-kind like livestock animals or gold, jewellery and/or cash. In this research, respondents recalled how they usually kept their money in their pockets, cupboards or safe deposit boxes (which respondents called ‘piggy banks’). This practice was not very secure and money could potentially be stolen or lost. Further, keeping money in safe deposit boxes proved costly and impractical.

Ms CL kept her money in a safe deposit ‘piggy bank’ box. However, she found it difficult to use because she had to break open her safe deposit box for urgent emergency uses. This was also hard for her because the safe deposit box did not allow the flexibility to access or withdraw the money conveniently for emergency use. Interestingly, Ms CL highlighted another disadvantage of using safe deposit boxes:

> ‘When I need it I have to break it. Then I also have to spend the money to buy a new piggy bank to replace the broken one. So it is not easy for me.’

Due to the unsecured method of storing money, Mrs SB worried about the safety of her money stored at her rented room accommodation. Mrs SB worked from 7.30 am until 7.30 pm and was away from her home. This made Mrs SB very concerned and worried that her rented room accommodation might be burgled and her money stolen.

> ‘I have neighbours who experienced this and their money was stolen.’

For those living in floating villages in the Tonle Sap Lake, there was a high chance of physical cash being accidentally dropped into the seawaters. During wet and rainy conditions, local Cambodians would carry currency notes around in their pockets. Without any protection, these currency notes could become wet and damaged to the extent that they could not be used for cash transactions. The Cambodian and US currencies used by rural Cambodians were old and made of paper. Hence, these currency notes were not weatherproof. Further, money could accidentally drop out of their pockets or worse, be stolen by pickpockets.
Mr CY asserted that living in the floating village on waters made it difficult to keep money, as there were times that the notes could accidentally drop into the waters. Further, his usual habit of carrying money in his pocket increased the chances of getting the notes wet and damaged during the rainy monsoon season:

‘When I put them (money notes) into my pocket, it will get wet when the rain comes. And also I am afraid of losing the money (dropping into the waters).’

Informal but unsecure money management mechanisms by intermediaries were mostly used by subsistence consumers because of their flexibility, close service proximity, lower transaction costs, fast and easy access and friendly service (Chigara & Mutesasira 2001). When transferring money in rural Cambodia, common informal mechanisms included ICOM radio services, money exchangers, buses or taxis. However, respondents reported that transferring money by bus and taxi could also be a security concern.

Ms CL expressed security concerns when transferring money by bus and taxi. She usually put the money in a sealed envelope and passed it to the drivers. When thinking about the security of her money using intermediaries, Ms CL had a fear of not knowing where they would take the money. At times when the intermediaries asked how much money was to be transferred, Ms CL would not reveal the actual amount to prevent the intermediaries from being tempted to take her money. Alternatively, she would only use taxi drivers she personally knew.

‘If I send money by taxi, I have to know the taxi driver personally. Because if I don’t know him personally I am afraid of losing my money.’

Using mobile money services improved the security of money management and provided respondents with a greater level of security for their personal money. Further, it was safer to use mobile money services regardless of time, place and weather conditions.
Case 5.7: Ms ML, Youth Salesgirl

Ms ML found the mobile money services acted as a more secure wallet for her money. This was because a password was required to access her money via the mobile phone in the mobile money account. Ms ML was also not afraid of her money being lost if she forgot or lost her password as she could easily change it through her mobile phone free of charge. Ms ML further highlighted one security feature of mobile money services was that her money was safe, even though her mobile phone was stolen. This was because Ms ML could simply purchase another SIM card and obtain another mobile phone number. She could then request to the mobile money service provider for her mobile money account to be transferred to her new mobile phone number. Hence, her money remained safe and secured.

‘So this is the way mobile money services build confidence in us.’

Interestingly, the user felt more emotionally attached to the traditional way of keeping money in ‘piggy banks’ than a virtual mobile money account.

Case 5.8: Ms SS, Youth Salesgirl

Ms SS highlighted how she tried to convince her fellow village neighbour to keep his money in the mobile money account. However, her neighbour thought that the virtual mobile money account did not have that same closeness and emotional attachment that he had with his ‘piggy bank’. Hence, he decided to continue keeping his money in the less secured ‘piggy bank’ deposit box than in more secured mobile money account.

‘Mobile money services did not have the value (closeness and emotional attachment) like his piggy bank which he could sleep and hug his piggy bank to sleep.’

However, someone broke the ‘piggy bank’ and stole all his money. This incident made him realise his mistake of satisfying his own personal pleasure rather than using the more secured mobile money account. He decided to listen to Ms SS’s advice and eventually kept his money in the mobile money account.

‘So now he has opened a new mobile money account and he tries to remember the security pin to use it.’
Case 5.9: Ms PK, Student

Ms PK previously kept money in her pockets when going out and would experience two problems. First, the extended periods of wet and rainy conditions in the village district meant that all the money in the pocket would get wet. Second, keeping the money in the pocket was deemed unsecure, and Ms PK was afraid she might lose her money. However, Ms PK found mobile money services to be a practical solution for her two problems. This was because mobile money services helped to ‘weatherproof’ her money and keep it in a secure place. Ms PK was not afraid of losing her money like before.

‘If I lost the card (mobile money account card), I still have my money to cash out or send the money out from my mobile money account.’

There were times when Ms PK’s mobile phone ran out of credits but she was afraid to go out at night by herself to purchase top up scratch cards. Further, Ms PK was forced to spend unnecessary time going to the nearest village shop to purchase mobile phone credit top up scratch cards. Ms PK believed that mobile money services provided a better and more secure way of topping up her mobile phone credits immediately without the need to go out at night by herself.

Enabling Joint Family/Communal Money Management

Before using mobile money services, respondents found themselves limited by the existing money transferring services when transferring money to family members who lived in other locations. Respondents found it inconvenient and time consuming to use existing money transferring services. Further, their family members found it inconvenient to receive money.

Ms ST receives money from her sister, who is working in another province. As the receiver of the transferred money, she recounted the inconvenient experience of collecting money from taxis. To earn maximum income, taxi drivers normally wait for passengers at the main rural district town from early morning until early evening and only start making the road travel when their taxi reaches maximum capacity with full of passengers.
‘So it's only till the early evening or late afternoon I can receive my money. It’s too late for me.’

Respondents also described the difficulty of topping up mobile phone credits because of the need to spend money on transport to travel to local shops to purchase top up scratch cards. Sometimes scratch cards were not available or it was not convenient to travel to local shops. The complicated procedure of topping up mobile phone credits proved difficult for respondents’ senior family members.

Using mobile money services helped respondents enable their own money management transactions with their family/communal contacts, anytime and anywhere. This was done by easily reaching out to their mobile phones to perform money transfers and mobile phone top up services.

Case 5.10: Mr KK, Government Officer

Mr KK used to send money to his mother using the rural bank branch services but found it inconvenient and difficult. Mr KK’s busy work schedule would make it difficult to take time off from work to travel to the bank branch. The bank branch would have closed for the day by the time Mr KK finished his work. If he were to do it during lunchtime, Mr KK would be inconvenienced by the long waiting queue.

‘I was very bored waiting at the bank.’

This showed that Mr KK’s existing money management habit of sending money conveniently and topping up his mobile phone credit immediately was not adequately met by rural bank services, even though the bank branch was located about five minutes away from his workplace. However, mobile money services made it easy for him to transfer money to his mother instead of using the inconvenient rural bank branches. There was no need to wait in the queue, fill out complex forms or rearrange his schedule to visit the bank branch during opening hours. At his own convenience, he would cash in his money at the nearest mobile money agent and transfer it using his mobile phone. The mobile money services generated an eight-digit code, which Mr KK could send to his mother. His mother could then collect the money immediately or, at her own convenience, at the nearest mobile money agent collection point.
Case 5.10: Mr KK, Government Officer (Continued)

When asked if his mother had any problem in cashing out her money from the mobile money agent, Mr KK replied,

‘No she never had any problem. She just passed the eight-digit number code to the mobile money agent and then they performed the transaction immediately for her.’

Mr KK acknowledged a significant positive change in developing a savings habit after using mobile money services. Previously, Mr KK would keep his money in his pocket and simply wanted to spend it. He believed that mobile money services became a good mechanism to help him save more money.

‘When I keep it in my mobile money account, I rarely withdraw the cash out.’

Further, Mr KK also shared the same mobile money account with his wife. This was because the mobile money account served as a good mechanism and an appropriate way to ensure family money management. This helped them to save money together in a shared mobile money account.

‘I told her how to use it (mobile money services) and she also went to withdraw cash out a few times.’

The experience from Mr KK showed that mobile money services made a significant change to existing money management habits. The bank services could not jointly enable his current money management habits with that of his mother. However, mobile money services were clearly able to help enhance his money transferring and mobile phone top up habits jointly with his mother’s money management habits.
Case 5.11: Mr KM, Phone Operator Salesman

Mr KM explained how having mobile money services helped him assist a family member manage money more effectively, regardless of the family member’s location and the time of the day. This was especially the case when his elderly parents wanted him to top up their phone, as they did not know how. As he was elsewhere and not with his parents, he used the mobile money services to help top his parents’ mobile phone credits. Facilitating their family mobile phone top up habits made it easier and safer, regardless of whether it was late at night or if the nearest mobile money agent was available to assist in topping up the mobile phone credits. It was never certain when one became too busy for money to be mobilised or transferred. However, enabling joint family money management habits using mobile money services meant Mr KM experienced a more effective process of mobilising money anytime and anywhere when urgently required by his family members.

‘Sometimes when my family needed money in the night time, I cannot go to anywhere other than using mobile money services ... all my five family members have mobile money accounts.’
Monitoring Savings and Spending

Respondents revealed that mobile money services provided the benefit of using the SMS message alert to check their money balances and to ensure that money was transferred safely to the intended destination and receiver. These capabilities were previously not available to them.

Case 5.12: Mr PM, Mobile Phone Shop Owner

Mr PM explained that mobile money services provided an advantage over other traditional money transfer services when paying his phone suppliers, who were eight hours away from his location. This was because of the SMS receipt message sent to the receiver to collect the transferred money. Traditional money transfer services often needed the sender to communicate with the receiver, which took a long time. This was because whenever money was transferred, Mr PM had to spend money calling his supplier to inform him that money was transferred and to check whether his supplier was able to collect the money. However, mobile money services removed this inconvenience and time consuming process:

‘We will be alerted by the SMS (phone) message (money successfully transferred) and pass it to the customer (supplier). They know ... okay the money is coming. So I don’t need to waste time to talk on the phone and SMS.’
5.4 Impact of Mobile Money Services on ‘Planning Ahead’ Financial Behaviour

The focus of this section is on the impacts on the ‘Planning Ahead’ financial behaviour. Thematic analysis of the evidence and representative quotes illustrating the themes are displayed in Table 5.3.

Table 5.3: Impact of Mobile Money Services on ‘Planning Ahead’ Financial Behaviour: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence Within ‘Planning Ahead’</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Costs of Saving Money</td>
<td><img src="image" alt="Thematic Analysis" /></td>
<td>‘The good thing about using mobile money services to top up the (mobile phone) balance is that I can save more petrol (on motorbike). I don’t need to go to the store and I can save more money.’</td>
</tr>
<tr>
<td>Complementary/Transitional Savings Mechanisms</td>
<td><img src="image" alt="Thematic Analysis" /></td>
<td>‘Before mobile money services, we kept our money in a piggy (safe deposit box). But we didn’t think it is safe enough to keep the money in the piggy bank … I saved my money in Acleda (rural bank) instead. But later on I found that using Acleda (rural bank) was hard for me to transfer money. When I knew about mobile money services, I decided to stop using Acleda and I started using mobile money services immediately.’</td>
</tr>
</tbody>
</table>

‘I can save much more money (with mobile money services) than before to pay for books, food and some other study-related materials.’
**Reduced Costs of Saving Money**

As mentioned previously, respondents adopted habits of storing their money in their own pockets, wallets, ‘piggybanks’ or small safe deposit boxes. These safe-keeping/storing habits were deemed not only less safe but also more costly. Respondents described the lengthy time required to travel to intermediary services to transfer money. Provision of products and services by rural banking services proved a mismatch for the subsistence consumers’ needs and circumstances. These included different fee charges between different rural bank branch locations, high bank account opening fees and a minimum balance required to maintain the bank account, which proved expensive for subsistence consumers.

Alternatively, subsistence consumers could instead convert money into jewellery and/or gold as a form of securing the savings’ value (Chandrarot & Danet 2007). Before mobile money services, Mrs SB felt worried when storing her money at home so she converted her cash into jewellery and gold:

‘I just save personally. When I save some money, I put some at home and I keep some with me little by little. When I have a bit more money, I buy jewellery or gold.’

Mobile money services resulted in respondents saving their money in a faster, cheaper and safer way. Respondents felt the cost of saving money in the mobile money account was much lower than saving money in ‘piggy banks’ or small safe deposit boxes. Saving money in the mobile money account is also more convenient. Interestingly, it increased the respondents’ frequencies of transferring money in smaller amounts. Money management became more mobile and could be done when moving around or ‘on the go’.
Case 5.13: Mr RI, Soldier

Mr RI is a young soldier based in a rural town. He believed that mobile money services provided a reliable mechanism to improving his saving and money management habits. Without a secured place to keep his money and the nearest rural bank branch about 100 kilometres away, Mr RI had very little opportunity to save.

Mr RI also found the fee charges complex and expensive as they could differ between different locations. Mr RI had to pay the US$3 fee charges to save money in the rural bank branch. The lack of opportunity and the high cost of saving money discouraged Mr RI, who would instead spend immediately on social and entertainment activities.

With mobile money services, Mr RI had easy access to the mobile money agent about 10 minutes’ drive from his location and it only cost him US$1 to use the mobile money service. It also increased opportunities for more convenient savings for Mr RI.

Complementary/Transitional Savings Mechanisms

Interestingly, mobile money services provided a value-added mechanism for respondents to plan for the future by saving their money in small increments in a safe and secure place. Over time, respondents would accumulate enough money to withdraw from their mobile money account and open a fixed-term deposit account in a rural bank branch. Respondents also highlighted that the benefits of having a virtual savings account mechanism on a mobile phone made them feel more secure and gave them hope for the future ahead. Even though respondents had very little income, they reported that having a mobile money account made them feel more secure.
Case 5.14: Mr CD, Border Immigration Policeman

While previously having greater tendencies to spend money immediately, Mr CD found mobile money services to be a valuable tool to save and plan for his future. He would simply save money in his secured mobile money account, even though he could not earn any interest on his savings. After using the mobile money account as a transition mechanism to save money, Mr CD would eventually accumulate enough savings to open a term deposit in the rural bank branch to earn interest.

‘When I get enough money I can cash out (from my mobile money account) to open a fixed deposit in the bank to get the interest.’

Case 5.15: Mrs SB, Hairdresser

Without mobile money services, Mrs SB would have money readily accessible on hand and would be tempted to spend. However, when Mrs SB put her money in a mobile money account, she did not withdraw money and hence, saved for the future. Mrs SB created a savings plan by first accumulating her money little by little in her mobile money account. When she saved enough money, she would transfer her money from the mobile money account to her bank account to earn deposit interest:

‘Mostly I put my savings in the bank account because the bank provides interest to my savings … so when I have accumulated enough money, I can withdraw from the mobile money account and put it in the bank account.’
5.5 Impact of Mobile Money Services on ‘Choosing Products’ Financial Behaviour

The focus of this section is on the impacts on ‘Choosing Products’ financial behaviour. Thematic analysis of the evidence and representative quotes illustrating the themes are displayed in Table 5.4.

Table 5.4: Impact of Mobile Money Services on ‘Choosing Products’ Financial Behaviour: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence Within ‘Choosing Products’</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Low-Cost Opportunities for Product Comparison</td>
<td></td>
<td>‘I open the (mobile money) account and try the services by putting in some money. I want to test the (mobile money) services so I put some money and want to know if my money is lost.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Because I need to transfer money often. I start to test the (mobile money) service in transferring money.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Because I never use the (mobile money) service. It is new. After I use the (mobile money) service, I trust more. Now I feel trust in WING. At first, I just cash in. But now I increase more.’</td>
</tr>
</tbody>
</table>

Increased Low-Cost Opportunities for Product Comparison

Before using mobile money services, subsistence consumers lacked awareness and knowledge about financial products and services. Not fully understanding the concept, as well as not having witnessed a real-life demonstration of the service, created an initial lack of trust and confidence in mobile money services among potential users. For example, Ms PK was initially not interested in mobile money services when her friend introduced it to her.

‘At the first time I was not willing to use it because I did not know what to use it for. Use it for what purpose?’
With mobile money services, respondents had the opportunity to compare between formal, informal, and modern products and services. With mobile money services, respondents had a transparent price and feature list of products and services to help them compare and choose products that suited their needs. Step-by-step procedures in the localised Cambodian Khmer language and English were also available in print form to help the respondents use the mobile money service functions more effectively. The mobile money services also provided a cheap and transparent way for respondents to trial the product features. This helped convince respondents of the benefits that mobile money services could offer to meet their daily needs.

Case 5.16: Mr KM, Phone Operator Salesman

Mr KM first thought the mobile money services were strange and he initially doubted the functionalities, as he had never seen such innovations in the past. He was not aware that money could be transferred via mobile phone networks. As a result, Mr KM initially did not completely trust mobile money services. Mr KM was sceptical that the money deposited into the mobile money account could be received through an SMS message and he did not know if he really had the money in the account:

‘I did not know if I received the money in my account actually or was it only SMS. For example, in the SMS message it says ‘received US$50’ but I did not know if I could withdraw or cash out the money.’

However, the benefits made him want to test out the mobile money services at minimal cost. Hence, after registering for the mobile money services, he deposited a small amount into the mobile money account and later withdrew the money from a bank ATM. After testing it out, Mr KM was convinced that the mobile money service standards were reliable and could be fully trusted. Indeed the mobile money services benefit him and he did not have to travel long distances to transfer money at a rural bank branch or money exchange shop.

‘I could see that it is very reliable and it is very fast as advertised and explained through their promotion ... so I (now) have trust in the services.’
Case 5.17: Mr CD, Border Immigration Policeman

Mr CD initially could not comprehend or imagine that a mobile phone could be perceived as a secure way to keep money and allow easy withdrawal. Mr CD also did not know what to use mobile money services for and thought that it would be difficult to withdraw money using mobile phone technology. However, sales staff from the mobile money service provider explained how mobile money services worked and Mr CD became interested. After registering for the mobile money account and depositing a small amount of money to test out the service, he received an SMS message to confirm the amount deposited. After travelling back to his hometown, Mr CD decided to withdraw the money from the nearest mobile money agent. Mr CD became convinced that mobile money services were right for him:

‘After I tested it (deposit the money into mobile money account), I went to my hometown. I went to withdraw (money) at my hometown and it was very easy for me. So I felt very happy.’
5.6 Impact of Mobile Money Services on ‘Getting Information, Help and Advice’ Financial Behaviour

The focus of this section is on the impacts on the ‘Getting Information, Help and Advice’ financial behaviour. Thematic analysis of the evidence and representative quotes illustrating the themes are displayed in Table 5.5.

Table 5.5: Impact of Mobile Money Services on ‘Getting Information, Advice and Help’ Financial Behaviour: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence Within ‘Getting Information, Advice and Help’</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Opportunities of Obtaining Product Information</td>
<td><img src="image.png" alt="Diagram" /></td>
<td>‘Yes I saw it (advertisement). But after my friend started using mobile money services, I saw it was very convenient for us living in rural or remote areas.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘I knew mobile money services through the television advertisement. And in that time I remembered that there was a promotion. But at that time I did not know how to use mobile money services at all. But later on when there was more promotion and the mobile money service sales team came to explain, I could understand how to use it ... like transfer money through mobile phone.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘I thought it was good to have mobile money services as an alternative to the money transfer service. Yes, it is money transfer service through the money exchange shop. As a business owner myself, the more services we can provide to our customers the more customers we will get. So I always readily accept any kind of money transfer services.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘I went to ask the mobile money agent. And then I registered and I started using it. I registered my mobile money account here at the mobile money agent.’</td>
</tr>
</tbody>
</table>
### Key Themes Identified

<table>
<thead>
<tr>
<th>Increased Opportunities of Obtaining Product Information (Continued)</th>
<th>Thematic Analysis of Evidence Within ‘Getting Information, Advice and Help’</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>‘At the first time I did not trust but I just want to know if it’s really easy. Then one day I drove my motorbike across a mobile money agent. So I took some time to ask about the information and then they tell me very detailed information about mobile money services. About mobile phone top up, transfer money, cash in, cash out. It is very easy so I decided to use it.’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multiple Touch Points To Access Advice and Help Services</th>
<th></th>
<th>‘At first, a few WING Pilots (sales staff) came here to introduce mobile money services to us. And I had never known what mobile money service was. They also suggested my family to use mobile money services.’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>‘(For) around five minutes they pass me the leaflet with instruction on how to use mobile money services. So I try by myself. Because they (mobile money agent) just told me the main point and then I understand quickly.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘No it’s not difficult because my friend introduce me very clearly on the steps (procedures). Very very detailed (information). She told me that I should go to mobile money agent.’</td>
</tr>
</tbody>
</table>
Increased Opportunities of Obtaining Product Information

Before using mobile money services, subsistence consumers highlighted the lack of trust and confidence in financial product information. Even though they received product information through television advertisements, newspapers and radio promotions on mobile money services, respondents remained sceptical and unsure of the usefulness of the features. For example, Mr GM was initially sceptical about the concept of mobile money. He did not trust the fact that after depositing money into a mobile money account, an SMS phone message would be sent to his phone to inform him that money had been deposited.

‘But if one day if the SMS is erased from my mobile phone, so where is my money? How can I find my money?’

Respondents pointed out that they first knew about mobile money services through a combination of multiple sources for product information. Customers received product and service information through television advertisements, newspapers, radio promotions, local mobile money agents or mobile money rural sales staff (WING Pilots). Further, many respondents also highlighted that family members or friends’ referrals of mobile money services convinced them to use the services. It was observed that many respondents were only convinced of mobile money services after hearing about it from two or more reliable sources. This was complemented by a price list, which displays the actual fixed fees for all services.

Case 5.18: Mr HM, Student

Mr HM was first introduced to mobile money services by his brother (Mr HT) who was a mobile money user. He saw the promotion of mobile money services on television. However, he was not interested until his first time experience of withdrawing money from his brother’s mobile money account. When his brother introduced mobile money services, Mr HM did not feel anything and thought of it as just being simple like opening a bank account. It was only after using mobile money services to withdraw cash that he felt this service was very special.

‘It was not difficult when my brother told me. It was easy.’
Multiple Touch Points to Access Advice and Help Services

Respondents also commented that help and advice were available if they needed it to operate the mobile money service on a mobile phone. After registering for the mobile money services, a simplified step-by-step instruction leaflet in both the local Khmer language and English were provided to help the user. Help and assistance were also available from local mobile money agents and mobile money rural sales teams. The mobile money services had a customer call centre for customers to receive information, help and advice if they had any problems with or queries about the products and services.

Case 5.19: Mrs VS, Vegetable Seller

Although currently a mobile money service user, Mrs VS, a vegetable seller at a rural district town market near the Cambodian/Thailand border, could not perform mobile money transactions by herself. She instead sought help from the district’s mobile money agent or her children would help her perform the transaction with her mobile money account. When using the mobile money services to send money to her relatives, and sometimes her vegetable supplier, Mrs VS again sought help from the district mobile money agent or her children to transfer the money via the mobile phone. Fortunately, the mobile money agent was very helpful and did not charge any extra fee for helping with her transaction, other than the usual money transfer fee, which is automatically deducted from her mobile money account:

‘I always send money every two days … yes I take the money to the mobile money agent and they help me send money to them. But sometimes my children will also go to the mobile money agent to help me transfer the money.’
Case 5.20: Mrs SH, Mobile Phone/Stationery Shop Owner

Mrs SH first knew about mobile money services through the mobile money sales team. They came to her location to introduce mobile money services to her. Initially, Mrs SH did not know much about mobile money and her fellow rural residents had no knowledge of mobile money services. Further, many people in Mrs SH’s district town did not use mobile money services as it did not gain much popularity. Hence, she did not trust the services. However, Mrs SH learnt from her family members living in Phnom Penh City that mobile money services are frequently used in Phnom Penh City. Hence, she was only convinced after speaking with her family members who knew of the growing popularity of mobile money services in Phnom Penh City.

‘They told me about mobile money services. Then I gained more trust.’

Mrs SH initially found it difficult to use the mobile money services and appeared doubtful of their functional capabilities. Even after reading the brochure and step-by-step instructions, Mrs SH could not grasp the concept of how her money can be stored on her mobile phone. However, after further reading the instructions and practice using it, Mrs SH finally understood the mobile money concept and found the services easy and useful:

‘I realised that it was easy to use the mobile money services on the mobile phone … that the money would be kept in the mobile phone. It only shows the mobile money account balance. But when you lose your phone, you will not lose your money.’

Case 5.21: Mr GM, Grocery Shop Owner

Although provided with step-by-step instructions in local Khmer language to use the mobile money services, Mr GM still required further assistance, even after the sales staff left his floating village. The service procedures were still unfamiliar for Mr GM when he first sent money through mobile money services. He used one mobile phone to contact the mobile money customer centre for advice while he used another mobile phone to perform the transaction:

‘The customer centre service was very helpful. She (customer service officer) always asked me what step do I arrive … was I okay to do the transaction … I felt very warm.’
5.7 Conclusion

This chapter provides insights into how mobile money services have made a significant change to the existing financial services landscape and to the theoretical building blocks of financial capability. In relation to financial inclusion, mobile money services have provided opportunities for subsistence consumers to access financial products and services more easily, securely and effectively than previously. In relation to financial literacy, mobile money services have also given subsistence consumers opportunities to build financial skills and knowledge, thus improving their abilities to act and make better financial decisions.
Chapter 6: Impact on Consumer Wellbeing

6.1 Introduction

Chapter 5 focused on understanding how mobile money services provided subsistence consumers the opportunity to access financial products and services, and the ability to make better financial decisions through increased knowledge, skills and confidence in financial products and services. This leads to increased opportunities to act (financial inclusion) and enhanced financial behaviours (financial literacy).

We know that financial capability is closely linked with social inclusion and wellbeing, so it is important to understand how mobile money services affect the consumer wellbeing of subsistence users, defined in this research as CWB. This chapter discusses the impacts of mobile money services on users’ wellbeing as a result of being included into the financial system. This component of the research draws upon the concept of social network relationships. The three themes identified are interpersonal level, social group level and cultural level. Thematic analysis of the evidence and representative quotes illustrating the themes of the second level effects are displayed in Table 6.1.

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Thematic Analysis of Evidence</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal level</td>
<td></td>
<td>‘When I go everywhere, my friend would always say oh where did you go ... now I need your help to do mobile phone top up for me with mobile money services. So after I help them we are very happy together.’</td>
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<tr>
<td></td>
<td></td>
<td>‘During the school holidays, I would top up the phone credits for my villagers (using mobile money services) because I don’t go to school. But when the school resumed, I top up phone credits for the students in school. So now I am very popular ... yes now I have a lot of friends.’</td>
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<td></td>
<td></td>
<td>‘It’s different from the past … he transfers money (using mobile money services) to me to support my living and support my studies.’</td>
</tr>
<tr>
<td>Key Themes Identified</td>
<td>Thematic Analysis of Evidence</td>
<td>Representative Quotes</td>
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<tr>
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<td>------------------------</td>
</tr>
<tr>
<td>Interpersonal level (Continued)</td>
<td></td>
<td>‘They send me a phone message and say thank you brother. And I feel very happy because they sent me an SMS to say thank you even though I top up his phone with very little money (using mobile money services). So I feel very proud.’</td>
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<tr>
<td></td>
<td></td>
<td>‘It is easy because it is fast and new technology make my life easier than before. Yes I get closer (relationship) with my (business) supplier and my brother.’</td>
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<td></td>
<td></td>
<td>‘Previously when using rural banks service, we do not transfer to each other quite often. But currently (using mobile money services) even in small amounts, we can transfer. So we can say we get closer (relationship) than before. We are happier than before.’</td>
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<tr>
<td></td>
<td></td>
<td>‘Yes. It (using mobile money services) means we (my business supplier and I) are closer than before. Because after I transfer money to them, they transfer goods to me immediately.’</td>
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<tr>
<td></td>
<td></td>
<td>‘Yes. We were very happy (after using mobile money services). When they get the money in their phone account, they also call me and we can also talk together more and we grew closer than before.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Yes it’s a closer relationship (between my siblings and I) because now we talk more often (after using mobile money services to top up mobile phone credit balance). I top up phone for them.’</td>
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<tr>
<td></td>
<td></td>
<td>‘It is closer (relationship) because (it is) now easy to contact with my parents when they need money (transferring money using mobile money services).’</td>
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<tr>
<td></td>
<td></td>
<td>‘Yes they send money to me a lot of times than before. I feel happy and close with them because they live so far from me. But when I needed money I can ask her (my sister) and I can receive money immediately. She is far away from me but it seems the same nearby.’</td>
</tr>
</tbody>
</table>
### Key Themes Identified

<table>
<thead>
<tr>
<th>Social group level</th>
<th>Thematic Analysis of Evidence</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>‘I can still get to bet in World Cup Soccer in Phnom Penh City by sending my betting money through mobile money services.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Around 10–15 minutes later I received money (from my sister using mobile money services) to pay for my school fees.’</td>
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<tr>
<td></td>
<td></td>
<td>‘The transferring of money services through mobile phone has a lot of benefits. Firstly, it is easy to transfer money to relatives. I only cash in so that I can transfer money to my relatives easily.’</td>
</tr>
</tbody>
</table>

| Cultural level    |                               | ‘It depends on my work. If I have a lot of work, it means I am very busy and I cannot go (back to the hometown). If I am free, I will visit them and celebrate together. But for Khmer New Year I cannot go but I send money to them (using mobile money services) instead of my presence.’ |
|                   |                               | ‘I also send to them (using mobile money services) for the special occasions like Khmer New Year or Chum Ben.’ |
|                   |                               | ‘I transferred money to my younger siblings before Khmer New Year for them to buy new clothes for the festival. They could buy the new stuff before Khmer New Year.’ |
6.2 Impact of Mobile Money Services at Interpersonal Level

As a result of using mobile money services, respondents experienced stronger relationships within their personal or business social networks. When money was urgently required but not received on time, there were physical and emotional frustrations experienced in collecting the money through other intermediaries. Unmet needs and miscommunications were significantly reduced after using mobile money services to transfer money instantly and conveniently.

Case 6.1: Mr RI, Soldier

The easy and convenient money transfer through mobile money services improved relationships between Mr RI and his family. Before using mobile money services, travelling approximately 100 kilometres to the nearest rural bank branch to transfer money and having to wait for a long time to be served in the rural bank branch discouraged Mr RI:

‘When I use banks, I just don’t want to transfer money and going to town. I feel very discouraged. I (also) had to spend a lot of time to wait … I felt that I didn’t want to transfer money.’

With mobile money services, Mr RI had easy access to transfer money at the mobile money agent about 10 minutes’ drive from his location. Mr RI found it easier and more convenient to transfer money to his family. His feelings became different after using mobile money services. Mr RI wanted to transfer money more often and he thought a lot more about his family.

‘(My relationship with my family is) closer and I feel love when transferring money (using mobile money services) to my family. My family and I feel very close.’
Case 6.2: Mr HT, Locksmith Shop Owner, and Mr HM, Student

It was a frustrating experience for Mr HM when his brother, Mr HT, transferred him money to buy locks using taxi services. First, it typically took about two hours for the taxi driver to arrive at Mr HM’s location in Phnom Penh City. However, the frustration and inconvenience only worsened for Mr HM when using taxi services to transfer money. First, Mr HM had to rely on the taxi driver to call him to inform of his location and then wait for him at the agreed location. Mr HM found taxi drivers unreliable as they actually did not wait for him but wanted him to wait for them.

‘So there I was waiting but the taxi driver was not there yet, so I had to wait for a long time.’

At times Mr HM also had to skip classes in order to meet the taxi driver. Further, the feeling of standing to wait in the heat and the rain when transferring money using taxi services made Mr HM angry. Subsequently, he would call and complain to Mr HT on the many inconveniences and frustration of waiting in hot and wet weather to collect the money from the taxi driver to purchase the locks. The frequent complaints from Mr HM also made Mr HT frustrated and angry with Mr HM, hence affecting the brothers’ relationship.

Eventually, Mr HM also found it more convenient and less frustrating when using mobile money services as it was easier to cash out his brother’s money from the mobile money account to pay for the locks. Mr HM believed that mobile money services improved his relationship with his brother, Mr HT. The relationship between the brothers was happier because having mobile money services eliminated the wasted time waiting taxi drivers to collect money and Mr HM did not have to vent his frustration and anger at Mr HT:

‘Yes, it is happier. In the past when I didn’t have mobile money services I felt angry with my brother (Mr HT) because I have to waste time waiting for the taxi to collect the money.’
CHAPTER 6: IMPACT ON CONSUMER WELLBEING

Case 6.2: Mr HT, Locksmith Shop Owner, and Mr HM, Student (Continued)

When asked what the difference was before and after using mobile money services, Mr HM highlighted that their relationship was better than before. Now Mr HM would just call Mr HT and he would transfer money via mobile phone to Mr HM immediately to support his living and study expenses. Mr HT also agreed and found that his relationship with his brother, Mr HM, became much closer after using mobile money services and not separated from one another.

‘And I feel as if we were living together in the same house,’

Respondents expressed how mobile money services improved their overall self-esteem. This was especially evident among the rural teenagers who felt more modern-minded and used the mobile money services to top up phone credits for friends. This helped in strengthening interpersonal relationships in their social networks as previously mentioned.

Case 6.3: Ms ST, Student

Mobile money services made a difference to Ms ST’s social network at an interpersonal level. This was because many of her social network friends were located in places where no mobile phone top up services or scratch cards were available. Ms ST’s friends would call and ask her to help top up their mobile phone credits using her mobile money account. As a friend, Ms ST would help them and this increased opportunities to interact and socialise at an interpersonal level. Ms ST acknowledged that using mobile money services to top up mobile phone credits for her friends actually improved their friendships and their interpersonal relationships were much closer than before:

‘And when we meet together they give the money to me and also say thank you to me … if talking about my relationship between me and my friend, it is much closer now.’
6.3 Impact of Mobile Money Services at Social Group Level

As a result of mobile money services, there were increased opportunities for informants to participate remotely in social groups located in distant places.

Case 6.4: Ms ST, Student

Ms ST said her sister, Mrs SB, who lives about an eight-hour drive away, used mobile money services to send money to join an informal rotational savings group, also known as Tontine in Cambodia:

‘Yes. I helped my sister to pay the money to play with tontine … she had to pay the group leader every week. So the money is urgently required (by transfer).’

Participants expressed satisfaction at being able to better support family group members as part of their social obligations. With mobile money services, they could transfer extra money faster and more cheaply to family group members to support their living expenses and other circumstantial needs. Typical examples included respondents living away from home and sending money to support a young family member or retired senior family member’s living expenses.

Case 6.5: Mr NS, Farmer

Mr NS, a farmer, was busy working about half an hour’s drive from the rural district bank office. He did not have time to travel and wait in the rural district bank office to transfer money. Hence, Mr NS clearly took advantage of mobile money services to transfer money faster and cheaper to his daughters to support their studies in Phnom Penh.

‘I send money to my daughters when I have money and when my daughters needed the money. They are students so they need to spend money for their studies.’
Respondents recounted how mobile money services actually provided a fast and effective way of transferring money to their family members or friends living far away for emergencies or important expenses, such as school fees and emergency medical treatment.

**Case 6.6: Mr KM, Phone Operator Salesman**

Mr KM described continuous communications during emergencies as vital. He believed that mobile money services effectively sustained continuous communications in times of emergencies. Having many siblings and family members, mishaps and crises were commonplace. Mr KM told of an incident when his brother had a road accident and all family members needed to communicate frequently with one another to be updated on his brother’s condition. As a result, all their mobile phones ran out of credits. In this emergency, Mr KM was able to use mobile money services to top up all his family members’ mobile phone credit balances to ensure continued communication.

‘With mobile money services it is good because we can top up mobile phones anytime for ourselves and continue calling.’

**Case 6.7: Ms ST, Student, and Mrs SB, Hairdresser**

Ms ST depended on her older sister, Mrs SB who worked as a hairdresser in another rural main town about eight hours’ drive away. Ms ST explained how mobile money services became a lifeline for her financial needs as Mrs SB used mobile money services to transfer money and help her out. As a rural student, Ms ST had to pay her school fees and other daily expenses. However, there were times when Ms ST had an unexpected extra expense to be paid urgently and felt at a loss to pay for it. Indeed, mobile money services enabled Ms ST to receive immediate financial support from her sister Mrs SB, who was located at another town about eight hours’ drive away.

‘I called my sister (Mrs SB) for help and she transferred money to me immediately (through mobile money services).’
Mrs SB also agreed and believed that mobile money services helped her family in emergency times without worrying whether her money reached them or not. Mrs SB found it very difficult to support them without mobile money services. Using mobile money services to support her family’s wellbeing made Mrs SB feel relieved, as she did not have to worry and was confident that her money would arrive safely and be received by her mother and sister.

‘I don’t have to worry what time the money will arrive as my money will arrive there immediately with mobile money services.’

6.4 Impact of Mobile Money Services at Cultural Level

Buddhism has a long history in Cambodia and its religious traditions and practices remain dominant to date (Harris 2012). Every year, Cambodians celebrate two big traditional festivals, namely Khmer New Year and Chum Ben Festival. Cambodians working in rural towns will make every effort to return to their hometown for family reunions and celebrations. They celebrate by buying new clothes, buying food for family reunion meals, visiting Buddhist temples and giving family members ‘gift’ money to show love and respect as well as to wish them a prosperous New Year ahead.

Resulting from the first level impacts of mobile money services on the actual physical money transfer transaction, informants increased their opportunities to send traditional ‘gift’ money through mobile phones to family members, even before making the long trip back to their hometowns as part of their cultural obligations. Further, informants also transferred money faster through the mobile phones to their families to purchase new traditional festival clothes and food ingredients as part of pre-festival preparation activities.
Case 6.8: Mrs SH, Mobile Phone/Stationery Shop Owner

As a filial daughter-in-law, Mrs SH needed to send money to her low-income parents-in-law to buy food ingredients. During these national festivals, Mrs SH’s parents-in-law travelled to Buddhist temples and offered the purchased food ingredients to the monks as offerings to pray for good health and a good life. Previously using traditional money transfer services, such as rural bank branches and money exchangers, Mrs SH’s parents-in-law had to arrange for a boat to travel to the mainland to collect the money as soon as possible within a timeframe that suited the money exchangers. If they did not make the time, the money exchange might be forfeited and another transfer service had to be arranged. Mobile money services allowed them to conveniently collect the money anytime without worrying about this limited collection period.

Case 6.9: Mrs WY, Liquor Distributor

Mrs WY’s work commitments did not allow her to visit her father-in-law during these national festivals as he lived about six to seven hours’ drive away. In continuing her obligations as a filial daughter-in-law, Mrs WY waited for relatives coming to visit her and then passed them the money to give to her father-in-law. However, sometimes the relatives did not visit her, so sending money to her father-in-law proved difficult. Mobile money services made it easier and faster as she could regularly send money to her father-in-law during Khmer New Year or other festive seasons without relying on others:

‘I cannot or do not have time to visit him but I transfer money to him very often (using mobile money services) like Khmer New Year, Chinese New Year, Chum Ben Festival and the rainy season festival which is the Buddhist celebration for the rainy season.’
Rather than traditional ‘gift’ money, some respondents used mobile money services to top up phone credits for their friends or business partners. Using mobile money services became a modern way to bless one another for the New Year or on other special occasions. Topping up their friends’ mobile phones became a festive gift to affirm their friendship. Practically, this gave them more airtime to chat socially with one another, which in itself helped to maintain and build stronger relationships.

Case 6.10: Ms PK, Student

Ms PK explained that she never gave gift money to her friends during Chinese Year. Instead, she would use mobile money services to top up her close friends’ mobile phone credit balances as a festive gift. Ms PK found it easy and practical to use mobile money services during festive seasons like Chinese New Year:

‘Because if I provide the gift money to my friend I don’t know what they would use it for. But if I do the phone top up for them they can use extra phone credit gifts to call me.’

Case 6.11: Mr KM, Phone Operator Salesman

Mr KM worked as a phone operator salesman in a rural district town. His role was to cooperate and supply mobile phone SIM cards and equipment to his vast network of rural mobile phone shop owners. While some mobile phone shops were easily located in the rural district towns, other mobile phone shops were located in remote rural district town areas. Mr KM found mobile money services an effective way of blessing his network of rural phone shop dealers during Chinese New Year and Khmer New Year, especially the dealers who lived in the remote rural district towns.

‘I used mobile money services to top up their mobile phone credits during Khmer New Year and Chinese New Year.’

Mr KM described it as a good gesture wishing them well for the New Year and to build stronger relationships with his dealers. It was also an excellent way of encouraging them and letting them know that he sincerely cared about them.
Another interesting cultural observation involved Buddhist monks who travelled outside of their monastery temples every morning to approach the public for monetary or food donations. On some occasions, they might purchase phone top up scratch cards at mobile phone shops or grocery shops. However, if Buddhist monks were seen too often near shops, the public might think they were contradicting their religious beliefs of abstaining from worldly entertainments and pleasures. With mobile money services, Buddhist monks could now top up phone credits inside their temple compounds without being seen buying the scratch cards and being misunderstood by the public. Buddhist monks also used mobile money accounts to safe-keep their ‘hard-earned’ monetary donations.

6.5 Conclusion

This chapter examined how mobile money services have affected users’ consumer wellbeing at interpersonal, social group and cultural levels. Increased knowledge about the effects of mobile money services on social network relationships informs the need to enable an environment whereby the design of financial products and services incorporates social group dynamics, rather than just individual behaviours.
Chapter 7: Impact on Subsistence Entrepreneurship

7.1 Introduction

Chapter 5 demonstrated how the introduction of mobile money services on financial capability led to increased financial inclusion levels and increased financial literacy abilities and confidence towards financial products and services. Chapter 6 focused on understanding the impact of mobile money services on interpersonal level, social group level and cultural level. This leads to enhanced consumer wellbeing in subsistence marketplaces.

There is a growing body of work confirming the value of mobile phones in improving communication between SEs, customers and business suppliers. However, theoretical evaluations of the impacts of technology-based application services using mobile phones on SEs, specifically mobile money services, are less prevalent. Donner and Escobari (2010) called for a greater understanding of how SEs within an informal setting or subsistence marketplaces leverage the advantages of various technological-based application services.

SEs are individuals with small entrepreneurial entities that are embedded within the subsistence marketplace contexts (Viswanathan et al. 2014). Principal actors within subsistence entrepreneurship conceptually consist of the SE, the subsistence customer and the business supplier/partner (Viswanathan et al. 2014; Viswanathan, Rosa & Ruth 2010).

This research also utilises the concept of transaction costs, as defined in the Transaction Cost Economics Theory (Williamson 1985), and their units of analysis according to their principal dimensions, namely:

- ‘Asset Specificity’, which is the condition of the transaction which can take place in a variety of forms (Tadelis & Williamson 2012)
- ‘Uncertainty and Complexity’, which refers to disturbances or contingencies for which adaptations are needed to increase the transaction’s precision, linkages, compatibility (Tadelis & Williamson 2012)
‘Frequency’, which is the recurrent and periodic characteristic of these transactions (Tadelis & Williamson 2012; Williamson 1981).

This research found the impacts fell into five themes. Three themes are relevant to the ‘Asset Specificity’ transaction exchange dimension such as subsistence entrepreneurial working assets, location proximity (between subsistence entrepreneur, customers and business partners), and subsistence entrepreneurial incentives. These are discussed in Section 7.2. The identified theme within the ‘Uncertainty and Complexity’ transaction exchange dimension is business supply management, which is discussed in Section 7.3. One identified theme within the ‘Frequency’ transaction exchange dimension is entrepreneurial transaction process and duration which is discussed in Section 7.4.

7.2 Impact of Mobile Money Services on Subsistence Entrepreneurship ‘Asset Specificity’ Transaction Exchange Dimension

The focus of this section is on the impacts on the subsistence entrepreneurship ‘Asset Specificity’ transaction exchange dimension. Thematic analysis of the evidence and representative quotes illustrating the themes are displayed in Table 7.1.

Table 7.1: Impacts of Mobile Money Services on Subsistence Entrepreneurship ‘Asset Specificity’ Transaction Exchange Dimension: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Theoretically-Based Principle/Thematic Analysis of Evidence</th>
<th>Key Themes Identified</th>
<th>Representative Quotes</th>
</tr>
</thead>
</table>
| ‘Asset Specificity’                                        | Subsistence Entrepreneurial Working Assets | ‘For example Metphone (one of the Cambodian mobile phone network operators) has no US$1 scratch cards but some customers want to top up US$1 balance. So we can top up US$1 balance through mobile money services.’

‘I decided to use mobile money services for transferring the funds between me and my relatives. I used mobile money services to receive the funds (to purchase working assets) from my relatives.’ |
<table>
<thead>
<tr>
<th>Theoretically-Based Principle/Thematic Analysis of Evidence</th>
<th>Key Themes Identified</th>
<th>Representative Quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Asset Specificity’ (Continued)</td>
<td>Location Proximity (Between Subsistence Entrepreneur, Customers and Business Partners)</td>
<td>‘When in urgency even at night time, we can top up phone through mobile money services. So we don't need to go find the scratch cards when shops are closed.’</td>
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<tr>
<td></td>
<td></td>
<td>‘At that time, one customer need to order a new mobile phone model and it was not currently in my stock. I need to order from Phnom Penh City. I need to pay (supplier) immediately. And then I transfer money from my mobile money account to my brother's mobile money account and he cash out the money to pay directly to my supplier and transferred phone to me.’</td>
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<tr>
<td></td>
<td></td>
<td>‘I explained to them (customers) how to top up and they will come to look for it again once they used this service. Because it is faster and they don't need to scratch the cards. When scratching these cards, they may accidentally tear the cards. So they just tell me their phone number correctly (anywhere regardless of location). Then I can top up their phone balance.’</td>
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<td></td>
<td>Subsistence Entrepreneurial Incentives</td>
<td>‘Previously before mobile money services I could only sell about 60 per cent or 70 per cent of the target. Since I had mobile money services, I can increase my sales above 90 per cent.’</td>
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<td></td>
<td></td>
<td>‘Like now mobile money services bring more customers to my shop. So my shop is more crowded with customers so it is not quiet like before. A lot of people know my shop now.’</td>
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<tr>
<td></td>
<td></td>
<td>‘Before mobile money services, most customers came to my phone shop only when they needed to buy things. But after mobile money services, the customers came here to cash out. And they spend some time seeing around my phone shop and other phone accessories that I sell here. So sometimes they are interested. Then they will buy some stuff.’</td>
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</table>
**Subsistence Entrepreneurial Working Assets**

SEs providing localised pre-paid mobile phone top up services had to pre-invest in physical working assets called mobile phone top up scratch cards in order to continue using the mobile phone network call services. There were three types of mobile phone networks available in the rural areas. Hence, SEs would have to purchase three different types of scratch cards with different top up values to suit the diverse consumer preferences.

For those officially appointed as mobile money agents, SEs significantly reduced the costs of investing in additional physical working assets. This was done by using their own existing working asset, their own mobile phones, to electronically top up pre-paid mobile phone credits for customers and for themselves. Using mobile money services gave them access to all mobile phone networks available in Cambodia for mobile phone credit top up. SEs did not have to worry about whether they had available working assets in stock for any mobile phone network. This reduced the pre-investments required, such as stocking up on mobile phone top up scratch cards.

**Case 7.1: Mrs TN, Book and Stationery Shop Owner**

Mrs TN, as a mobile money agent, also believed that mobile money services provided flexibility in topping up mobile phone credits without worrying which mobile phone network scratch card was required by the customer. This was because through mobile money services Mrs TN was now able to top up mobile phone credit balances in all networks for her customers.

‘Nowadays I can top up phone balance more than I sell scratch cards’

Mrs TN further explained that mobile money services gave customers the option to top up one US dollar to their mobile phones. This option was previously unavailable with the scratch card, as it was not cost effective:

‘Another difference is that there is no US$1 scratch card for a few phone companies. But we can now top up US$1 for all mobile phone networks thru mobile money services.’
Mobile money services also benefited non-mobile money agent SEs at various rural district towns, bordering Thailand and Cambodia. Due to the sensitive nature of the business services, the SEs were provided total anonymity by the research but were happy to provide a description of the services provided.

These SEs ran informal micro-business services for low-income Cambodian migrant workers who worked across the Thailand border towns. One such service was a phone service between Thailand and Cambodia for low-income Cambodian migrant workers and their family members.

Working long distances from home made these low-income migrant workers in Thailand miss family members in Cambodia and increased the desire to communicate frequently with them. It was difficult to purchase mobile phone scratch cards and very expensive to make international calls between Thailand and Cambodia. The SEs took this opportunity to create an alternative and cheaper phone service for these low-income migrant workers using Thailand and Cambodian mobile phone network services. However, sustaining this service required frequent topping up of Cambodian mobile phone credits. Before mobile money services, they could only pre-invest in mobile phone scratch cards. After using mobile money services, these SEs were not required to purchase or pre-invest in any physical working assets, such as scratch cards.

Interestingly, they were only required to register one mobile phone for each mobile phone network. It was common that each SE would own more than one mobile phone, depending on which of the seven mobile phone networks was being utilised for the call services. Using mobile money services, they could top up all their mobile phone credits with their mobile phones without worrying about whether they would run out of scratch cards or where to find them.

Though only a minor observation of this research, SEs could also utilise mobile money services to raise or mobilise capital to purchase working assets, regardless of location. The example of Mr NS, a rural farmer, illustrated such a possibility.
Case 7.2: Mr NS, Farmer

Mr NS was a farmer in a rural district town and his major farm activities included rearing pigs and chickens to sell at a profit at the nearby district market. Growing rice was a minor activity in Mr NS’s farm and his annual rice harvest for selling depended on the weather and the environment. If it was good weather, Mr NS would harvest and sell plenty of rice each year. However, if it was not good weather Mr NS would harvest very little rice and just keep it for himself. Mr NS did highlight that due to the erratic weather patterns, sometimes it did not rain or there would be severe flooding. That made it difficult to continue only with rice farming.

Mr NS decided to expand his farming activity by growing mushrooms. As such, extra capital was required to build a small farmhouse to grow the mushrooms and to purchase mushroom seeds from another rural district town, which was about eight hours’ drive from his home.

With mobile money services, Mr NS was able to mobilise enough funds for his mushroom farming as well as animal rearing activities from friends and relatives who lived far away. Previously, his distance from friends and relatives made it more difficult and time consuming to transfer money. Having mobile money services meant that distance was no longer a critical factor as the transaction of the funds to invest in Mr NS’s farming activities could now be done instantly via relatives’ mobile phones:

‘Currently I have small plans to open a small farm to grow the mushrooms and raise the animals so I contacted my relatives, my nephew and my cousins to support me. So I decided to use mobile money services for transferring the funds between me and my relatives. I used mobile money services to receive the funds (to purchase working assets) from my relatives.’
Location Proximity

SEs, who were mobile money agents or non-mobile money agents, explained how mobile money services became a business solution to resolving the location proximity issues between themselves, their customers and business partners. Before mobile money services, business transactions were often challenging and inconvenient as SEs’ business locations were mostly far away from their customers and/or business partners. There were times when it was inconvenient to perform business transactions with one another. SEs also lacked opportunities to explore new markets and lacked investments in marketing or branding to promote their services to new customers.

For example, the Tonle Sap Lake is a major freshwater river system that stretches across nine Cambodian provinces. The Tonle Sap Lake is also a home to many Cambodian communities living in floating villages. In floating villages, residents live permanently on a boathouse, from which they also run their own small business. While the majority of floating village communities thrives on fishing activities, others provide ancillary support services like fish wholesalers, boat schools, boat repair garages, mobile phone shops and grocery shops. As grid electricity from the main land is not available in floating villages, villagers rely on diesel generators or rechargeable batteries. Residents also use smaller boats to provide transportation services to and from the main land, and to serve meals to other residents (mobile food stalls). Inflow and outflow trading activities between land and water, especially transporting of fish supply, remain vital to the sustainability of floating villages. Despite the lack of bank branches located within the floating villages, business transactions and money transfers using physical cash still happen on a daily basis.

After using mobile money services, mobile phones were used as a channel to capture new markets or enhance existing business transactions outside of local geographical boundaries. Location proximities between SEs, customers and/or business partners were no longer an issue as the transactions could still be made virtually through the mobile phone. Improved business transactions via mobile money services translated into increased sales opportunities and hence resulted in new revenue transactions and higher profitability. Cases 7.3, 7.4 and 7.5 illustrate how mobile money services created solutions to enable business transactions across waters, waters and land, and land.
Case 7.3: Mr CY, Mobile Phone Shop Owner in Floating Village (Transactions Across Waters)

Living in the floating village community on Tonle Sap Lake, Mr CY runs a mobile phone shop on his boathouse to provide mobile phone sales and repair services to the village. Although not appointed as a mobile money agent, he believed that mobile money services positively affected his mobile phone business, especially in facilitating topping up customers’ mobile phone credits. In the past, Mr CY could provide services only to customers going directly into his shop. With mobile money services, even customers who were constantly on the move at sea and far away from his boathouse could just call him to request the mobile phone credit top up service. This meant that Mr CY could provide business services to customers who went directly to his shop and customers located a long distance from his shop. For regular customers located far away from his shop, Mr CY recorded the regular customers’ mobile phone numbers and used mobile money services to perform the mobile phone top up transaction. These regular customers pay Mr CY for his services when they next meet:

‘Because (before mobile money services) if I sell the mobile phone top up scratch cards, I can only sell to customers who come directly into my shop. But by mobile money services I can serve both types of customers, the ones who do not come to my shop and the ones who come to my shop.’

Case 7.4: Mr GM, Grocery Shop Owner (Transactions Across Waters and Land)

Mr GM lives in one of the district floating villages at the Tonle Sap Lake. Mr GM currently runs a grocery shop from his boathouse. Previously, he used to be a fish wholesaler by purchasing fish supply from the village fishermen and transporting the fish to provinces on the main land. Mr GM described the challenges and high transaction costs across waters and land. Other than spending on costly transfer fee charges by boat drivers (transfer on waters) and taxi drivers (transfers on land) depending on the amount to be transferred, Mr GM also had to wake up earlier than normal, like 4.00 am or 5.00 am, to ensure that the taxi driver received the money before his travelling schedule commenced:
Case 7.4: Mr GM, Grocery Shop Owner (Transactions Across Waters and Land)
(Continued)

‘I don’t need to take a lot of time. I just contact them (taxi drivers) and I have to get up early to reach them. But if I cannot reach them on time, I will miss the time to transfer because the taxi (waiting at the seaports on land) has to leave for Phnom Penh City.’

As for his payments to business suppliers, located in Phnom Penh City) for his grocery business, Mr GM explained that the process of transferring money from water to land required a significant amount of time to complete. First Mr GM had to wake up early at 4.00 am to transfer money to a boat driver. The boat driver would take about 30 minutes to reach the seaport on land, where a taxi driver would collect the money and transfer to Mr GM’s business suppliers. Mr GM would receive his business supply goods at around 7.00 pm to 8.00 pm and sell the goods the next day:

‘I have to arrange to pick up the goods back to my house. So only next morning I can sell the goods. But the supplier does not send the goods directly to my house. They drop them off at another house nearby. It takes too long time to reach my house.’

Mr GM also mentioned the need to call the supplier to confirm receipt of the money, as he had previously experienced money stolen when sending funds with taxi drivers. Hence, Mr GM still felt afraid of sending money by taxi. After using mobile money services, Mr GM believed his business transaction costs with business suppliers had significantly reduced. This was because he did not have to rely on paying boat drivers and taxi drivers for their money transfer services. Previously, the location distances between Mr GM and his business suppliers spanned across the vast land and waters. Using mobile money services significantly reduced the problems caused by long distance as the virtual business transactions via mobile money services was practically instantaneous. Moreover, Mr GM’s business suppliers could receive the payments faster by collecting the money at the nearest mobile money agent collection point. In addition, Mr GM did not have to waste time calling his business supplier to confirm if he had received the payment:

‘I think it is very easy because sending money by mobile money services is safe. I am not afraid of money lost because I have experienced that with taxi drivers.’
Case 7.5: Mr HS, Soldier (Transactions Across Lands)

Mr HS is a 36-year-old non-combatant soldier in a rural district town near the Thailand/Cambodia border. However, a soldier’s salary is not enough to support his family for food and daily living. Hence, Mr HS and his wife set up a stall in the rural district town markets selling miscellaneous non-perishable goods.

Mr HS purchases his goods from his business supplier in another rural town approximately 500 kilometres from his current location but found it difficult to transfer money by taxi drivers to pay his business supplier. First, he had difficulties getting up early to pass the money to the taxi driver at 7.00 am. He also had to travel around 10 minutes from his location to the district bus station to meet the taxi driver. If unable to reach them on time, the taxi drivers would leave before Mr HS could meet them.

Mr HS had also tried using money exchangers and rural district banks to transfer money. Mr HS found using rural bank services too long and complicated. He had to wait more than 30 minutes at the bank. They also had to complete money transfer forms and show proof of identification from both the sender and the receiver. Money exchangers, although faster, simpler and cheaper than rural banks, still could be unsecured, as they required the phone numbers of the sender and receiver, which users may not be able to recall.

After using mobile money services, Mr HS found it more suitable and cheaper to transfer money to his business suppliers. He did not have to travel far, as he could simply transfer the money using his mobile phone. Further, Mr HS was able to avoid expensive money transfer fees and save time by not having to travel to transfer money.

‘It is easy for me to transfer money (to business suppliers) and save money (on transfer fees).’
CHAPTER 7: IMPACT ON SUBSISTENCE ENTREPRENEURSHIP

Subsistence Entrepreneurial Incentives

SEs, particularly those appointed as mobile money agents, also benefited from cross-selling opportunities for their own goods and services when new or existing customers, through word-of-mouth referrals, patronised or even called their shops for mobile money services. Offering mobile money services in their local vicinities enabled SEs to capture new markets or business partnerships and increase sales opportunities, hence resulting in new revenue transactions and higher profitability.

Case 7.6: Mrs WY, Liquor and Drinks Shop Owner

As a subsistence marketplace wholesaler, Mrs WY sold a variety of drinks and liquor to her rural district town. However, customers would normally not patronise her business as her shop was located a fair distance from the rural market area. However, since becoming a mobile money agent, Mrs WY can provide additional mobile money services to top up mobile phone credits and transfer money for customers. Customers can also come to her shop to cash in or cash out money. An added incentive was customers coming to Mrs WY for mobile money services also became interested in buying her business products.

‘Mobile money services bring more customers to my shop … they are interested and can buy other products as well. It is good.’
Mr VM had no prior knowledge of mobile money services. Nor did he hear of any mobile money service promotion and product information from television and radio. Although not a mobile money agent, Mr VM’s drink stall business was next to a mobile money agent. Upon seeing the actual mobile phone transactions and hearing the mobile money agent explaining the benefits to other customers, Mr VM finally understood and was convinced of its benefits.

For personal use, Mr VM used mobile money services to transfer money to his family and keep his money safely in his mobile money account. As for his business, Mr VM only recently opened his new drink stall in the rural district town. Initially, not many customers would patronise his shop since he had to compete with other well-established drink stalls in the vicinity. However, having a mobile money agent set up business next to his drink stall proved an additional incentive. Due to the popularity of the mobile money services, the mobile money agent usually had to serve many customers. At times when the mobile money agent was busy serving a customer, the other waiting customers would sit at Mr VM’s drink stall to have drinks. Since then, Mr VM’s business revenue has increased by about 10 to 20 per cent:

‘The customer comes to perform transaction with mobile money agent (use the mobile money services). But the mobile money agent is busy selling mobile phones to customers or he is busy with another customer. So they (customers) have to wait for the mobile money agent. So they can sit at my drink shop and they can order soft drinks.’
7.3 Impact of Mobile Money Services on Subsistence Entrepreneurship

‘Uncertainty and Complexity’ Transaction Exchange Dimension

The focus of this section is the impacts on the subsistence entrepreneurship ‘Uncertainty and Complexity’ transaction exchange dimension. Thematic analysis of the evidence and representative quotes illustrating the emerging themes are displayed in Table 7.2.

Table 7.2: Impacts of Mobile Money Services on Subsistence Entrepreneurship

‘Uncertainty and Complexity’ Transaction Exchange Dimension: Thematic Analysis and Additional Evidence

<table>
<thead>
<tr>
<th>Theoretically-Based Principle/Thematic Analysis of Evidence</th>
<th>Key Themes Identified</th>
<th>Representative Quotes</th>
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</thead>
<tbody>
<tr>
<td>‘Uncertainty and Complexity’</td>
<td>Business Supply Management</td>
<td>‘Before mobile money services, I could sell only scratch cards. But now I can top up phone balance for almost all phones networks for my customers through mobile money services. And nowadays I can top up the mobile phone balance more than I sell scratch cards’</td>
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<td></td>
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<td>‘After I have become a mobile money agent I can earn a little more profit than ever. Many customers come here to collect their money sent by their relatives or friends through mobile money services. So I can earn (better) sales commission through this, especially phone top up service (using mobile money services).’</td>
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<td></td>
<td></td>
<td>‘It is very easy now because sending money (to supplier by mobile money services is safe … I am not afraid of loss (by taxi drivers) as I can know clearly the status of my (business) transaction from the mobile phone.’</td>
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<tr>
<td></td>
<td></td>
<td>‘I used mobile money services to transfer (payments) to my (business) supplier. And then I call my supplier to tell him that I have transferred the money to him. Then he checks and sees that he has received the money.’</td>
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</table>
CHAPTER 7: IMPACT ON SUBSISTENCE ENTREPRENEURSHIP

<table>
<thead>
<tr>
<th>Theoretically-Based Principle/Thematic Analysis of Evidence</th>
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</tr>
</thead>
<tbody>
<tr>
<td>‘Uncertainty and Complexity’ (Continued)</td>
<td>Business Supply Management (Continued)</td>
<td>‘I transfer from my mobile money account to them (business suppliers). Sometimes banks close at 4.00 pm, so I don’t have enough time to go there. So (with mobile money services) I can transfer anywhere anyplace ... I can send the money fast.’</td>
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Business Supply Management

For SEs, having large stocks of mobile phone scratch cards in their unsecured shops presented high levels of risk. It would be hard to predict in rural areas how long the stock would last before it needed replenishment. Having an excessive stockpile of scratch cards meant less cash on hand to invest in other useful products for SEs to sell. These scratch cards could also potentially lose their asset value from environmental damage or if they became lost. There were times when mobile phone scratch cards were not available in the smaller district towns due to lower levels of demand and perceived delays in resupply from the network wholesalers based in main district towns.

The process of topping up mobile phones using scratch cards was complicated and tedious for rural users. After purchasing the scratch card, the customer had to use his or her fingernail or a small object like keys or coins to scratch over the protective layer to determine the numeric code. This number could include up to 20 digits. Next, they would have to spend airtime to call a special number and use this code to top up their mobile phone credits. Using mobile money services, SEs went through a simplified and less complex procedure by initiating the mobile money transfer service to top up mobile phone credits. Other than the mobile money account number and four-digit PIN required to activate the service, there was no need to key in an excessive amount of digits for the top up service. In the event of an error during the transaction, the mobile money service provider’s customer service centre could help resolve any issues.
Initially, SEs were typically given a five per cent commission by mobile phone network operators for selling pre-paid scratch cards. However, they would first have to invest in scratch cards. Physical tracking of scratch cards sales made it difficult to measure sales commission, resulting in a less effective incentive scheme. Through mobile money services, SEs appointed as mobile phone service retailers do not have to invest in scratch cards due to the ability to electronically perform the top up services via mobile phones. Moreover, commission for phone service retailers also appointed as mobile money service agents was about seven per cent (sometimes this could be as high as 10 per cent on special events or promotional campaigns). The electronic tracking of mobile phone credit top up sales and mobile money service performance provides better and additional incentives for mobile money agents.

Case 7.8: Ms DD, Mobile Phone Shop Owner

Ms DD, a 22-year-old entrepreneur, opened a small mobile phone shop in a remote rural town. Besides selling mobile phones to subsistence consumers, Ms DD also sold scratch cards for credit top up services. Being located far away from the main rural district town proved difficult when ordering scratch cards and people in her town found it difficult to find scratch cards after shops closed for the day. Now with mobile money services, Ms DD described how technologically advanced and advantageous one mobile phone, her existing asset, became in resolving the uncertainty of scratch card supply. Even during the night, Ms DD was able to perform mobile phone credit top up through mobile money services without the need to find scratch cards when most shops were closed:

‘When we are in emergency even in the nighttime, we can top up phone credits through mobile money services. Yes, and so we do not need to go and find the scratch cards when most shops are closed.’

For existing arrangements with network operators, mobile phone shop owners earn a five per cent commission fee for each mobile phone scratch card sold. However, after being appointed as a mobile money agent, Ms DD could now provide a better service for her customers wanting to top up mobile phone credits. She could now utilise the mobile money service to top up any mobile phone networks for customers. Most importantly, Ms DD received her higher commission fee of seven per cent for every mobile phone top up transaction via mobile money services, hence earning more profit.
SEs in rural areas often took orders from business suppliers based in other provinces or in Phnom Penh City. To make payments in order to confirm the orders, SEs had to rely on local intermediary money transfer services. In doing so, SEs also had to temporarily close their businesses and possibly miss revenue opportunities. In addition, SEs incurred travelling costs like transport fuel costs, additional third party transport costs and freeway/bridge toll costs. At times, the journey could involve travelling long distances to physically hand over the payments plus service fees to some of these intermediary money transfer services.

With mobile money services, travelling times were significantly reduced as business payment transactions were processed instantly through the respondents’ mobile phones. Additionally, payment to the business supplier would be made almost instantly into their own mobile money account or could be collected at their nearest designated mobile money service collection point.

**Case 7.9: Mr HT, Locksmith Shop Owner**

As a locksmith in a rural district town, Mr HT’s business supplier was located in Phnom Penh City (about two hours’ drive from his location). The distant location between Mr HT and his business supplier created challenges and inconveniences. Mr HT had to close his business for half a day to travel by motorcycle to Phnom Penh City. As a result, he also found it physically exhausting and time consuming to spend at least four hours travelling to and from Phnom Penh City to buy locks from his business supplier.

Mr HT also had to spend money on transport and food for the journey. Eventually, Mr HT tried to transfer money through a local district bank, but it was too expensive (US$2 for the bank transfer transaction and another US$1 to hire a taxi to transport the purchased locks).

Another cheaper alternative was to use his local district’s taxi services (costing about US$1) to transfer money to his brother, Mr HM, who studied in Phnom Penh City. His brother would ideally collect the money from the taxi driver and then make the payment to the lock suppliers on Mr HT’s behalf. Another US$1 was spent on a taxi driver to transport the purchased locks back to Mr HT. However, this alternative relied on two
Case 7.9: Mr HT, Locksmith Shop Owner (Continued)

connected ‘assets’, his brother Mr HT and the taxi driver. (The disadvantages and challenges of using taxi services as informal intermediary services for transferring money were discussed in Chapter 5, Section 5.2, of this thesis.)

Mobile money services provided a cost effective solution for Mr HT’s business supply management. There was no need to close his business and travel to Phnom Penh City. The challenges and inconveniences due to the physical distance between Mr HT and his business supplier were no longer an issue. Using the mobile phone as a virtual channel, Mr HT instantaneously transferred the required payment to his brother Mr HM. Mr HM would then go to the nearest mobile money agent to withdraw the funds, and proceed to the supplier to complete the business payment transactions on behalf of Mr HT. There was no fee incurred for money transfers between mobile money accounts. The mobile money solution was to be a valuable service to Mr HT’s business. With reduced travelling time, Mr HT could now save time and did not have to close his business. Hence, he can effectively earn more money:

‘Now I have never been to Phnom Penh since I started using mobile money services. When I want to buy something, I just call the supplier in Phnom Penh to prepare what I need and I transfer money to my brother's mobile money account. Then my brother takes the money to the supplier who then sends me those locks through taxi.’

When asked how mobile money services benefited him in terms of transaction costs in the context of business supply management, Mr HT reported he spent less than before using mobile money services. Mr HT did not need to spend money on transporation and food when travelling to buy more locks:

‘I spend only US$0.50 on mobile money services (the transfer fee cost for his brother Mr HM cashing out at a mobile money agent) and another US$0.75 for taxi driver services (to transport the lock supplies from Phnom Penh City).’
Case 7.10: Mr CY, Mobile Phone Shop Owner (Floating Village)

To purchase mobile phones and other accessories, Mr CY had to rely on boat and taxi services for the business payments transactions, as his business supplier was located in Phnom Penh City, about 150 kilometres away:

‘I transfer money by taxi. First, we have to transfer money by boat and the boat driver takes it to the taxi on land. Then the taxi travel from the port to Phnom Penh. I have to pay the boat driver US$0.50 and US$0.75 to the taxi driver.’

When asked if he ever gone directly to the taxi driver or contacted the boat driver to collect the money at his location, Mr CY explained that he had gone directly to taxi driver direct but not so often, as he had to to close the shop. This was not feasible as customers would come to his shop and Mr CY would lose potential business if he was not present at the shop to serve the customers:

‘I have ever gone to transfer directly to taxi driver (taking a trip to land) but it’s the same fee charge. And I also waste my time (around one hour to go there and then return back).’

Mr CY also experienced theft when using taxi services. Hence, an incorrect number of product goods was sent by the supplier. However, since using mobile money to transfer the payment, Mr CY can transfer the money to his suppliers safely and quickly, without any loss of money:

‘If I transfer money to my supplier with the actual amount, they get all of the money that I send. And they also send the correct amount of goods with the money I sent.’
7.4 Impact of Mobile Money Services on Subsistence Entrepreneurship

‘Frequency’ Transaction Exchange Dimension

The focus of this section is the impacts on the subsistence entrepreneurship ‘Frequency’ transaction exchange dimension. Thematic analysis of the evidence and representative quotes illustrating the emerging themes are displayed in Table 7.3.

**Table 7.3: Impacts of Mobile Money Services on Subsistence Entrepreneurship

‘Frequency’ Transaction Exchange Dimension: Thematic Analysis and Additional Evidence**

<table>
<thead>
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<tr>
<td>‘Frequency’ Entrepreneurial Transaction Process and Duration</td>
<td>‘It (mobile money services) makes it easier than before because I can save much time. And (the process is) easy to do the phone top up and I can save cost in transferring money. And it (the process and duration) is very fast for performing transaction to transfer money.’</td>
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<td>‘Yes it (mobile money services) is very easy. When I get there (mobile money agent location) and present the (mobile money account) card and give the money to them (mobile money agents), they can help me to send money (to business supplier) quickly. And sometimes when I want to transfer money, I just call to them and ask if they could transfer the money for me. And they said yes and then the next day I bring cash to pay them. It is easier than going to the money exchanger.’</td>
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<td>‘Sometimes I close (my business for) 15 minutes ... 10 minutes ... 20 minutes ... to go there (rural banks). If the bank has many customers, I will wait 30 minutes. We take more time. If we do it by mobile money services, only one minute is enough.’</td>
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Entrepreneurial Transaction Process and Duration

Chapter 5 provided insights into how mobile money services improved the safety, convenience and speed of transactions. This was applicable to both subsistence consumers and entrepreneurs in rural Cambodia. Specific to SEs operating domestically (only within Cambodia), the mobile money platform improved the entrepreneurial transaction process and duration due to enhanced accessibility, reducing task complexity and elimination of intermediation (detailed findings are already explained in Chapter 5, Section 5.2).

In addition to this, another interesting observation pertained to subsistence entrepreneurial transaction process and duration across neighbouring countries’ borders. Rural district towns at the Cambodia/Thailand borders offered better job prospects than in rural Cambodia. Higher income opportunities in Thailand motivated many poor and low-income Cambodians to leave their family homes and cross to border towns in Thailand to find better-paid work.

Cambodian migrants working in Thailand often sent money back to support their families in Cambodia. The most common method for Cambodian migrants sending money from Thailand to Cambodia was through informal money transfer operators (as described in detail in chapter 4). Buencamino and Gorbunov (2002) acknowledged that informal money transfer systems exist and operate outside of (or parallel to) conventional regulated banking and financial channels. The informal money transfer systems were the migrant communities’ preferred remittance channel over formal/regulated remittance systems (Buencamino & Gorbunov 2002).

Most recently, the International Organisation for Migration (IOM) conducted a survey to study the impacts of remittances from Cambodian migrant workers in Thailand on local communities in Cambodia. The findings also revealed informal money transfer systems as the preferred remittance channel for Cambodian migrant workers in Thailand (IOM 2010).

Informal money transfer operators along the Cambodia/Thailand borders also encountered existing location proximity challenges in their money transfer services.
However, the mobile money services provided a business solution to the challenges encountered in their businesses. In observing two rural district towns near the Cambodia/Thailand border, cross-border trade and business activities were noted to be extremely high due to a well-known tourist marketplace just across the Thailand border. Cambodians set up food stalls across the Thailand border in this tourist marketplace and brought across Cambodian produce to sell, such as groceries, fisheries, clothes, and souvenirs.

High levels of economic activities and opportunities made many rural Cambodians migrate to the border district towns to earn a living. Hence, similar informal money transfer operators were available for these migrant workers to send money back to their families. In fact, the high economic environment made money transfer services an extremely lucrative business for money transfer service providers like banks, money exchangers and ICOM services in subsistence marketplaces.

Seeing this as a lucrative opportunity, SEs would use their existing social networks to discreetly set up informal money transfer operators for Cambodian migrants. Their value proposition would be a money transfer service that was more convenient than formal money transfer services. Instead of Cambodian migrants in Thailand taking time off to return to Cambodia to transfer the money at existing formal money transfer services, the informal money transfer operators would implement a simple money transfer system process for the migrant workers:

1) Call money transfer agent and deposit the required amount and transfer fee into a nominated Thai bank account. Money transfer recipient’s contact details are also given.

2) Money transfer agent travels across to the Thailand border district town and withdraws the money from the Thai district bank branch office.

3) Money transfer agent travels back to Cambodia and converts the money from Thailand's baht currency to Cambodian Khmer currency.

4) Money transfer agent transfers the money via existing formal money transfer services.

5) Using the contact details, money transfer agent informs the migrant workers’ family members to collect the money in their district towns.
When mobile money services were introduced, these informal money transfer operators did not hesitate to register for the services as it significantly reduced transaction costs and made the money transfer process more efficient. Extra transfer fees were not incurred as they stopped using existing formal money transfer services. They also did not have to spend time travelling to existing formal money transfer services. At least five such informal money transfer agents were discovered during the data collection phase. However, due to the sensitive and competitive nature of the money transfer business, they requested total anonymity and non-recording of their short interview chat sessions.

**Case 7.11: Mr MT, Money Transfer Agent**

Mr MT is an informal money transfer operator based near the Cambodian/Thai border in a rural Cambodian district town. Mr MT provides remittance services for Cambodian migrant workers in the Thailand border district town. Sometimes, when migrant workers experienced delays in receiving their incomes, Mr MT would use his own money first for the money transfer. He would then note down in his credit logbook the details of the customer and the credit amount. The migrant workers would later pay Mr MT the required amount after receiving their pay. Mr MT described the high transaction costs incurred during the money transfer transaction. For one trip, Mr MT had to travel about 20 minutes by motorcycle to the nearest district bank branch. There was an additional cost of a toll bridge, which was the only road leading to the district bank branch. After visiting the district bank branch, Mr MT again had to pay to cross the toll bridge and travel about 20 minutes back to his money transfer shop.

‘For motorbike petrol cost and the bridge tolls, in total I have to spend US$4 to US$5.’

As a result of having to close his shop to travel to the rural district bank branch, Mr MT would lose potential revenue for his money transfer business. However, after using mobile money services, Mr MT found that his business improved, as he did not have to spend time and money to travel across the bridge to the bank branch. Reducing the location proximity challenges meant his business transaction costs reduced significantly. Since using mobile money services, Mr MT has significantly reduced his
Case 7.11: Mr MT, Money Transfer Agent (Continued)

business transaction costs by saving on transport and fuel fees and bridge tolls, as he did not need to transfer money through the bank branch. Further, Mr MT did not have to incur costly bank transfer fees. Mr MT could still stay in his shop and the money could be transferred immediately through his mobile phone. The customer’s family could also collect the money at the nearest mobile money agent. Mr MT could now transfer money in small amounts and still make small profits.

Implementing the mobile money solution meant that Mr MT only spent US$1 on transfer fees compared to US$3 on bank transfer fees. Using mobile money services to transfer money virtually and instantaneously translated into Mr MT’s business revenue improving by about 50 per cent:

‘Using mobile money services we just send the money through mobile phones and provide the eight-digit code to the customer to withdraw their money at the nearest mobile money agent. Through banks, I spend much more and the fee is high. So I get less profit.’

Further, Mr MT believes customers were also happier with the money transfer service due to better currency exchange rates. Before mobile money services, Mr MT highlighted that in ensuring that his business profits were not affected by the currency exchange rates, he had to charge customers more in order to cover his business services and bank transfer fees. This made the exchange rate unfavourable for Mr MT’s customers.

‘The customers would ask why the exchange rate is so low. Hence they have less trust on us.’

After using mobile money services, Mr MT explained that his business service fees could be reduced and still be profitable. Further, he could still earn some profit, even if regular customers change currencies in small amounts.

‘The more customers transfer, the more we earn in profit … now my customers feel happy. Now my customer base increased.’
7.5 Conclusion

Subsistence enterprises, although micro in size, have significant and varied transaction costs for their goods and/or services within subsistence marketplaces. This chapter has provided insights into the nature of their transaction costs and transaction attributes. Finally, this chapter has demonstrated how mobile money services act as a business solution to minimise transaction costs and maximise the value of subsistence entrepreneurial activities and processes.
8.1 Introduction

Chapters 5, 6 and 7 provide details of the findings of this research, that is, identifying the impacts of mobile money services on financial capability, consumer wellbeing and subsistence entrepreneurship. This chapter includes the nature of the change and the most significant change. This chapter, in line with the MSC framework, will also focus on the significance of the changes induced by mobile money services. It is important to bring to the fore what the changes have meant to the lives of consumers and entrepreneurs living in subsistence marketplaces. The MSC framework provides a valuable path to interpreting the findings to illustrate the meaning and significance of the changes brought about by the intervention (mobile money). This chapter also highlights the limitations of mobile money services.

8.2 The Nature of The Change

This was a qualitative research study that sought to explore the impacts of mobile money services experienced by consumers and entrepreneurs in subsistence marketplaces. The impacts have been categorised into three domains: financial capability, consumer wellbeing and subsistence entrepreneurship. The effects were created through mobile phone services providing increased safety, convenience and speed of the money transactions.

Most people living in subsistence marketplaces are unbanked or face enormous challenges in accessing financial products and services. The barriers involve high costs of opening and maintaining bank accounts as well as inconvenient bank branch locations and opening hours. The ability to access money through a mobile phone, anytime and anywhere, at a low cost has changed the lives of many subsistence consumers. Subsistence consumers went from financial exclusion to financial inclusion due to mobile money services. To be financially included via mobile money services also provided subsistence consumers with increased opportunities to participate in economic activities, thereby enabling them to build their personal/household assets and become more financially resilient.
Through learning-by-doing, subsistence consumers—many of them accessing financial services for the first time—helped develop or enhance their financial capabilities. Mobile money services have changed the way subsistence consumers manage money and their abilities to incrementally save in small amounts and plan for the future. Importantly, for the first time, they had access to information about products and services, which enabled them to be better informed and choose products that suited their needs. Assistance provided by local mobile money agents and the customer help centre increased the rural users’ opportunities to receive adequate consumer protection and help for underperforming financial products or services. This also shows that technology-based services, like mobile money services, can serve as channels for creating appropriate products and services to further promote financial inclusion.

Each society and culture is unique with varied needs. Mobile money services improve consumer wellbeing by tightening the security of subsistence consumers’ money and enhancing their ability to transfer money to friends and family, easily and conveniently. Mobile money services have the potential to gain greater market acceptance and penetration when used effectively to improve the wellbeing and daily activity processes of individual, community or business life when they are congruent with societal and cultural norms. Hence, the provision of mobile money services also strengthens the social fabric of the lives of subsistence consumers through enhanced family, business and social ties. This is especially evident during cultural festive activities.

Mobile money services also had a range of effects on micro-enterprise owners in subsistence marketplaces, also known as SEs. SEs operating in remote areas face significant costs for transacting their goods and services within subsistence marketplaces. The provision of mobile money services reduced or minimised business transaction costs relating to working assets and business supply managements. Mobile money services also help SEs reduce their reliance on informal intermediaries. This maximises the value of micro-entrepreneurial activities and processes via reduced transaction costs due to informal intermediaries. Mobile money services, as a value-added service, enable subsistence entrepreneurs to increase profit margins and have greater access to market opportunities, regardless of locations. This translates to creating sustainable opportunities for the unbanked and poor within the subsistence marketplaces to increase participation in the formal economy.
8.3 The Most Significant Change

The most significant change from the introduction of mobile money as a financial service offering is reduced disparities within the marketing exchange activities (Viswanathan 2007) due to increased accessibility, ease of use, safety, speed and convenience of the money transactions.

Significance to Enhancing Accessibility

The findings build from previous research (e.g. Chikweche & Fletcher 2010) noting that subsistence marketplaces experience a shortage or unavailability of general consumer-related products. While previous studies show the mobile money platform as a convenient single point of access to mobilise various savings instruments from banks, MFIs and informal savings groups (Morawczynski 2011), this research illustrates how mobile money services can also be used to create enhanced accessibility opportunities to purchase products previously not available in the location of subsistence consumers.

Mobile money services provide a transaction channel to enhance accessibility opportunities to basic financial services anytime and anywhere. Mobile money services also leverage on existing social networks to enable product purchase, irrespective of location. This significantly reduces the lengthy time and inconvenience of having to rely on families or friends to purchase the required products. Building on social resources theory, mobile money is hence established as a service offering for subsistence marketplaces. It adds to the current understanding of how mobile money services increase the accessibility of resources through direct and indirect social networks, and increase mobilisation of resources among social networks (Lin 1999; Viswanathan, Sridharan & Ritchie 2010).

Significance to Reducing Task Complexity

The findings extend previous studies describing transaction exchanges, for subsistence consumers, as an uncertain and complex aspect of day-to-day life, of which they often lack control when examining the marketing exchange activities in marketing
interactions (Viswanathan 2007). These transaction exchanges specifically relate to the safety, speed and convenience of money transfer transactions between the sender and receiver. There were illustrations of frustrations with and inconvenience of existing money transfer services within subsistence contexts prior to the introduction of mobile money services. For example to fully complete the transaction exchanges, subsistence consumers rely heavily on rural bank branch networks which are time-consuming, requiring completion of complex forms and having complicated identification procedures for the sender and receiver.

Indeed, the use of mobile money services brought the immense benefit of convenience to subsistence consumers by removing the lengthy queuing and service time, simplifying the process with minimal documentation requirements, and reducing the long distance travelling to access the service. Instead of using rural bank branch networks, subsistence consumers bypassed them, using their own mobile phones as alternative channels to transfer money in a more secured and convenient way.

**Significance to Elimination of Intermediation**

Due to the increased accessibility, ease of use, safety, convenience and speed of the transaction exchange via mobile money services, the findings suggest that the MSC, as experienced by the mobile money users, is the elimination of intermediation due to increased efficiency and speed in the transactions. To fully complete the transaction, subsistence consumers also traditionally relied heavily on intermediary channels across land and/or water with limited flexibility and inconvenient delivery/scheduling times for the transaction sender and receiver. Such transaction exchanges are also unpredictable with prices not displayed and subject to negotiations.

Building from previous studies of examining the marketing exchange activities within marketing interactions in subsistence marketplaces (Viswanathan, 2007), this research adds to the marketing exchange nuances highlighting mobile money services changing subsistence marketplaces transaction exchange activity. It shows mobile money services eliminating the associated inconveniences and security risks through informal intermediaries, while increasing the transaction exchange predictability, timing and flexibility back to the convenience and control of the transaction sender and receiver.
This means that users and their corresponding receivers experienced greater ownership, enhanced accessibility and control over their money transfer transactions without being influenced or controlled by other informal intermediaries’ timing and scheduling priorities.

**Mobile Money Services and Marketing Exchanges**

Mobile money services increase the accessibility, ease of use, safety, speed and convenience of the money transactions within the marketing exchanges as a first level impact. This impact is then observed to be a common element that then connects to a corresponding flow on the impact on users’ financial capability levels, consumer wellbeing and subsistence entrepreneurship.

Hence, Figure 8.1 shows how the common impacts of having faster, easier and more secured transactions connects to the corresponding impacts on consumer wellbeing, financial capability and subsistence entrepreneurship. The common impact element, together with three corresponding impacts, is not mutually exclusive to one subsistence marketplace actor. These impacts are all interlinked and affect the consumers, entrepreneurs and business partners within subsistence marketplaces. The three coloured interlinks between the common element impact and each corresponding impact are informed by three conceptual models. The subsequent sections will discuss each of these corresponding impacts and their respective conceptual models in greater detail.
Figure 8.1: Connection between Mobile Money, Financial Capability, Consumer Wellbeing and Subsistence Entrepreneurship
8.4 The Significance of the Change

Financial Capability

While rural consumers already had easy access to mobile phones, they had limited access to financial products and services. This in turn contributes to high rates of financial exclusion in subsistence marketplaces. The findings show that the addition of financial services offered via existing mobile phone technology increased their levels of financial inclusion by giving ready access to banking and payment systems. This was also achieved by increasing their capacity to have more control over their financial interests, given the socio-environmental conditions like long distance service locations, inconvenient service availability and complicated service procedures that hindered rural consumers from accessing basic financial services. Hence, mobile technology can best be utilised to create access to appropriate products and services, promoting financial inclusion and enabling financial behaviours. Figure 8.2 shows a conceptual model illustrating how mobile money as a service offering positively impacts societal and environmental factors (increased opportunity to act due to financial inclusion) and leads to significant changes in financial behaviours (increased ability to act due to financial literacy).

Figure 8.2: Mobile Money—Financial Capability Change Conceptual Model
The findings are significant, indicating that the addition of a service offering via existing mobile phone technology has the potential to increase the users’ capacity to act in their own best financial interests.

Significance to Money Management

Russell et al. (2010) demonstrated that financial capabilities have the most value when enhancing the availability of fair and affordable financial products. This research contributes to this knowledge by identifying the mobile phone as having a critical role in money management and increasing financial capability for subsistence marketplaces like Cambodia. It is illustrated, through mobile money services, that consumers gain more opportunities to access products and services through the ‘opportunistic’ convenience of a portable device. In this way, they can increase consumer abilities to better manage their money and enable joint family money management anytime and anywhere through mobile phone technology.

Mobile phone platforms are portals, using technology to increase money management opportunities. This research shows how mobile phones can create further opportunities for developing inclusive financial solutions that are characterised as appropriate, accessible, affordable, financially attractive, available, improved awareness, easy to use, flexible, secure and reliable (Sherraden 2013).

Significance to Planning Ahead

Subsistence consumers, before the introduction of mobile money services, were denied the opportunity to develop a savings plan due to under-representation of financial services and the lack of appropriate savings mechanisms (Morawczynski 2011). This research reveals mobile money services as a cost effective mechanism providing subsistence consumers an opportunity to develop a savings habit. Accumulating funds in their mobile money account enabled them to save enough to open a formal savings account with a mainstream financial services provider.
By acting as a mechanism to access other informal savings instruments, like a reliable or trusted informal rotational savings group, mobile money services provided a complementary transition, rather than a substitute mechanism, that can work in conjunction with existing savings instruments (Morawczynski 2011). Technology platforms such as mobile phones can be intuitively utilised to develop suitable asset-building interventions and provide increased opportunities for subsistence consumers to access them. This illustrates the notion of increased opportunities to plan ahead, which is an important component of financial capability (Russell et al. 2012).

**Significance to Choosing Products**

As in the example of rural Cambodia, existing formal financial services in subsistence settings require minimum balances and/or charge high monthly fees to maintain the savings account. This is a significant deterrent to financial capability (Rutherford et al. 2009; Sherraden 2013). Besides mobile money services being easily, cheaply and conveniently accessible, subsistence consumers in Cambodia are also attracted to the service offering’s zero-cost monthly maintenance (with the exception of spending on a one-time registration fee to open an account). Extending previous studies illustrating that subsistence consumers tend to trial new products before choosing them (Viswanathan 2007) but lack opportunities to engage in a process of trial and error of new products (Chikweche and Fletcher 2010), this research conceptualises how subsistence consumers leverage the low cost of mobile money accounts to test the effectiveness and usefulness for daily usage. Therefore, this research tests the notion that subsistence consumers are prepared to test the product through trial and error if the cost of doing so is minimal.

**Significance to Getting Information, Advice and Help**

An interesting finding from the mobile money experience in rural Cambodia is the importance of subsistence consumers obtaining product information orally from at least two reliable or trustworthy information sources to establish credibility. This improves the users’ prospects of being better informed before purchasing or using the services. After registering to use the mobile money services (post purchase scenario), mobile money users can also easily access advice and help from local mobile money agents,
local communities and the service provider’s customer call centre. This demonstrates the importance of a consumer education platform that must be readily and orally available for the user during the product’s pre and post purchase phases. This enables the users to make better financial decisions and provides increased opportunities to access financial products and services.

The findings also suggest that the MSC for financial behaviours as experienced by the mobile money users is being able to ‘Get Information, Advice and Help’. This confirms a previous study by Atkinson et al. (2007), emphasising the consumers’ inability to make informed decisions when purchasing financial products (‘Getting Information, Advice and Help’ financial capability behaviour) as the area of greatest concern. In order to address this concern, Sherraden (2013) further contends that addressing the levels of financial capabilities requires interventions to enable both the ability to act and the opportunity to act.

This research adds to this understanding by highlighting the effective use of multiple-source information channels for obtaining product information on mobile money services illustrates and extends the oral-verbal transmission nature of product information rather than a reading-writing transmission. This research also extends the pervasive orality theory (Viswanathan et al. 2012) by conceptualising that subsistence consumers in rural Cambodia, when understanding the products and services, are better informed and convinced through the oral-verbal literacy mode rather than reading-writing mode. Using the oral-verbal mode of communication enables the required opportunity for the subsistence consumers to act and eventually test the services in very small amounts.

This research also establishes the importance of mobile money as a service offering with adequate channels and mechanisms for consumer protection and redress, as illustrated by Anong and Kunovskaya (2013) and Atkinson et al. (2007). Mobile money services in Cambodia are bound by Cambodian financial laws and regulations. As affirmed by respondents, the reliability and availability of a call centre for resolving customer issues, together with WING’s imposed service standards and policies, ensure that consumers’ rights are well protected, with a process for consumer redress/recourse in the event of incomplete transactions.
Consumer Wellbeing

This research extends from previous mobile money impact studies, along with the extant social capital and subsistence marketplaces literature, to identify the impacts of mobile money services on marketing interactions in relation to CWB. In relation to consumer wellbeing, the impacts of mobile money services appear to be at two distinct levels. The first level impact, already discussed extensively in Chapter 5 and in the previous Section 8.3, focused on mobile money as a financial service offering with financial inclusion attributes that impact transaction exchange disparities within the marketing exchange activities (Viswanathan 2007). This subsequently leads to a second level impact, resulting in increased opportunities to access resources, support, involvement and social networks as part of CWB (Anderson et al. 2013).

Figure 8.3 illustrates the mobile money consumer wellbeing change process conceptual model that shows the first level impacts on financial inclusion (marketing exchanges), more specifically around the accessibility, ease of use, safety, convenience and speed of the money transfer transactions, and subsequently the second level impacts on the social network relationships. Service offerings with these attributes can potentially contribute towards enhancing consumer wellbeing in subsistence marketplaces.
Mobile money services have had a direct effect on the social network relationships of users embedded within subsistence marketplaces (Sridharan & Viswanathan 2008), which is an important feature in subsistence marketplaces. The findings also go beyond previous studies of social networks’ role in navigating subsistence marketplaces (Viswanathan et al. 2010) and understanding the importance of product performance and social networks in influencing subsistence consumers to purchase products or services (Chikweche & Fletcher 2010).

**Figure 8.3: Mobile Money—Consumer Wellbeing Change Process Conceptual Model**
CHAPTER 8: DISCUSSION

Significance to Interpersonal Relationships

The findings suggest that the MSC brought about by this impact, as experienced by the mobile money users, is at the interpersonal level. The relationships of consumers using mobile money services with their corresponding receivers were strengthened due to increased opportunity to send and receive money, more safely, cheaply and conveniently. Common examples of corresponding receivers include business supply partners, family members and school friends. Before mobile money services, subsistence consumers encountered relational frictions and tensions due to existing service offerings that did not adequately address the challenges of the physical money transfer transaction. Indeed, mobile money services serve as a tool in reducing the transaction exchange challenges experienced by subsistence consumers and help to overcome the physical separation and distance between the sender and receiver.

Interestingly, this research also reveals that mobile money services act as a bridge to enable opportunities (previously not available) to participate in social groups. Hence, enhancing the access and social network dimensions of consumer wellbeing (Anderson et al. 2013) eventually leads to enhanced family, business and social ties as well as interpersonal relationships.

Significance for Supporting Family Members

By further illustrating the role of the subsistence consumers in supporting other family group members’ living expenses and other circumstantial/emergency needs, this research is consistent with previous findings that subsistence consumers focus on satisfying family rather than individual needs (Ruth & Hsiung 2007). However, further conceptualisations and insights were added into the physical separation challenges and inconveniences faced by subsistence consumers who send money back home to support family members. It then shows how mobile money services overcome physical separation challenges and inconveniences by increasing access/opportunities for subsistence consumers to support family group wellbeing.
Mobile money services also enable family members to send extra money due to savings from reduced transfer fees. Hence, this establishes the concept of mobile money services acting as an innovative ‘emergent solution’ (Viswanathan et al. 2012) to help subsistence consumers spend less and free up resources to increase individual, family and social group wellbeing in subsistence marketplaces (Ruth & Hsiung 2007).

**Significance for Cultural Traditions**

This research emphasises the important role of gift giving within subsistence marketplaces. The importance of Cambodian gift giving practices is consistent with previous studies showing how gift giving offered traditionally through festival seasons maintains family obligations and enhances social network relationships (Joy 2001; Tynan et al. 2010). It also confirms previous findings on maintaining cultural and religious traditions/practices from the centrality of one-on-one social interactions in any circumstances (Viswanathan 2007). Mobile money services facilitate gift giving among subsistence consumers in cultural and religious traditions, hence helping to maintain and strengthen social network relationships.

There is a need to better understand cultural distinctions and oral traditions (Viswanathan & Rosa 2007) when shaping subsistence consumers’ responsiveness within marketing interactions. Cultural and religious activities for subsistence consumers in Cambodia encompass pre-activity preparations (like purchasing cultural clothes and preparing culture-special food ingredients) and practices (like ‘gift’ money, Buddhist monks, religious site visits or food offerings).

In helping subsistence consumers reduce/remove inconveniences, as seen from the first level impacts on physical money transactions, mobile money services increase opportunities to accomplish these cultural preparations and practices. This also reinforces the need to incorporate within marketing interactions the layering of beliefs and value systems (Craig & Douglas 2006), centred around the social and cultural contexts (Singh 2004). This increases the effects of a service offering by contributing towards consumer wellbeing in subsistence marketplaces. A combined composition of both level impacts illustrating how both levels work together and the flow on from one level to another can be illustrated by case example 8.1.
Case 8.1: Ms ST, Student, and Mrs SB, Hairdresser (Two Sisters)

*First Level Impact—Financial Inclusion (Marketing Exchanges)*

Using mobile money services made the money transfer process easier, simpler and more convenient. Mrs SB could transfer money quickly to her siblings in case they needed money urgently, and they did not have to wait long at rural bank branches or rely on informal intermediaries, such as money exchangers or taxi drivers. The eight-digit code generated by the mobile money service was also sufficient for verification purposes to collect the money, without the need for additional identification. Best of all, the transfer service was immediate and available anywhere and anytime.

*Second Level Impact—Social Network Relationships*

Using mobile money services, Mrs SB also sends money to her younger sister, Ms ST, to join an informal rotational savings group in a distant location. As a recipient of the money transferred by Mrs SB, Ms ST received immediate access to financial support for her school fees and daily expenses through mobile money services. Mobile money services had improved and strengthened the relationship between Mrs SB and Ms ST. Ms ST also used mobile money services to help top up her friends’ mobile phone credits and hence improved their interpersonal relationships. Mrs SB also used mobile money services to send money immediately to her siblings prior to cultural celebrations to buy new clothes and food ingredients as part of pre-festival preparation activities.


**Subsistence Entrepreneurship**

One similarity among SEs in this research was the need for minimising costs to effectively run micro-enterprises and increase revenue income. While SEs already had easy access to mobile phones for communication and social purposes, the addition of financial services offered via existing mobile phone technology provided a business solution to enhance and complement existing business service offerings.

Indeed, this research contributes conceptualisations demonstrating how mobile money services improved the efficiency and speed of the business supply management and hence, increased the transaction’s precision, linkages, and compatibility (Tadelis & Williamson 2012). This translates to fewer transaction costs and more security for SEs’ management of business supplies, while business suppliers also receive payments faster.

By extending the idea of ‘creative re-purposing’ (Maurer 2012) within the subsistence marketplace environment, mobile money services are conceptualised as an innovative re-purposed solution for the SEs’ business constraints and challenges, rather than just being a service within the subsistence marketing system (Layton 2007). Indeed, mobile money services can be seen to transform the way subsistence enterprises serve both their customers and their business partners within subsistence marketplaces. Figure 8.4 shows a model illustrating the impact of mobile money services on the subsistence entrepreneurship transaction exchanges.
Figur 8.4: Mobile Money—Subsistence Entrepreneurship Transaction Exchange Conceptual Model

The findings are significant as they increase our understanding of the impacts of mobile money services for subsistence marketplace entrepreneurs living in rural areas. The findings also suggest that the MSC from this impact, as experienced by SEs, are at the ‘Asset Specificity’ transaction exchange dimension. This means that the SEs experienced reduced transaction costs to make the running of their business activities more efficient and potentially more profitable.

Significance to Entrepreneurial Working Assets

The findings also add further insights on how SEs leveraged the advantages of various technological-based application services via mobile phones to enhance their existing services to subsistence consumers (Donner & Escobari 2010). Physical inventory stock pre-purchased as working assets (mobile phone scratch cards) is theoretically referred to as a ‘physical asset specificity’ type (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680) required by SEs for their mobile phone top up services.

Previous studies have highlighted how subsistence entrepreneurship can be a working life circumstance constraint within the informal economy exchange system (Viswanathan et al. 2014). The nature of these SE working assets are further examined,
as the difficulties faced by SEs are in obtaining the working assets required (such as working capital and start-up equipment). This research found that mobile money services provide the solution to increase the access and availability of working assets for SEs. Using mobile money services allows SEs to mobilise capital funds, regardless of locations for starting new businesses or expanding existing businesses. Specifically to investing in physical stock assets, mobile money services reduce the need for physical mobile phone scratch cards by converting them into virtual electronic assets, which are available at all times without pre-investment. This therefore improved and resulted in increased efficiency of the SEs’ business transaction exchanges.

**Significance to Location Proximity**

This research theoretically conceptualised how the mobile phone, utilising the mobile money application, acts as a solution for SEs. This phenomenon adds to understanding the nuances of the unique subsistence entrepreneurial process and its value creation (Viswanathan et al. 2014). It also extends on previous studies demonstrating that mobile phones improve communication between micro-entrepreneurs, customers and suppliers (Boateng 2011; Donner & Escobari 2010). Indeed, the mobile money services are identified in this research as an enabler for SEs to better serve their customers, business partners and ultimately the rural community at large, regardless of their location proximities.

From a transaction exchange theoretical perspective and taking reference from the asset specificity dimension, location proximities between SEs, customers and business partners incur inventory and transportation expenses (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680). Insights show how the mobile money platform removed the challenges and inconveniences due to the location proximities between the SEs, subsistence customers and business partners. While previous research emphasised the dominant urban-rural linkages of the transaction exchanges due to mobile money services (Mas & Morawczynski 2009; Morawczynski 2009), this research adds conceptualisations that the mobile money platform complements and enhances existing transaction exchange platforms across lands, across waters and across lands and waters.
Significance to Entrepreneurial Incentives

The buyer-seller responsiveness characteristics, an element of exchange between the SEs and their subsistence customers as part of marketing interactions (Viswanathan et al. 2012) were also closely studied. From a transaction exchange perspective, the mobile money service characterises an improved transaction asset specificity dimension in a form of a ‘brand name capital’ (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680) due to the attraction of new customers for SEs. It adds to the theoretical understanding of the marketing exchange nuances by highlighting mobile money services as an enabler for SEs (the seller) to respond more effectively to the customers’ (the buyer) priority needs. This initial interaction incentivises SEs to cross-sell and offer other products-and-services mixes that are new and highly relevant to the local subsistence customers.

Significance to Business Supply Management

There are ongoing social network interactions between SEs and their business partners (Viswanathan, Rosa et al. 2010; Viswanathan, Sridharan & Ritchie 2010). This research adds to this understanding by identifying the business supply management as one aspect of day-to-day life having uncertainty, lack of control and complexity when examining the marketing exchange activities in marketing interactions among SEs, subsistence customers and business partners (Viswanathan 2007; Viswanathan et al. 2014). However, this research increases further insights into the challenges, high costs and inconveniences of the business supply management as part of the transaction’s ‘uncertainty and complexity’ dimension (Tadelis & Williamson 2012; Williamson 1989, p. 143; 2010, p. 680). This research establishes mobile money services becoming a solution by enabling a more cost effective and more efficient business supply management for SEs.

Significance to Entrepreneurial Transaction Process and Duration

Similar to the findings on ‘Elimination of Intermediation’ in Chapter 5 Section 5.2, mobile money services also increase the convenience and speed of the actual transaction exchanges for SEs. From a transaction exchange perspective, further insights were
providing into the transaction’s ‘frequency’ dimension, or the transaction’s recurrent and periodic nature (Tadelis & Williamson 2012; Williamson 1981), experienced by the SEs. This adds to the understanding of the nature of subsistence entrepreneurship exchanges in subsistence marketplaces by specifically relating to money transfer transactions between the SE, the subsistence customer and/or the business partner (Sridharan et al. 2014a; Viswanathan et al. 2014; Viswanathan, Rosa et al. 2010; Viswanathan, Sridharan et al. 2010). This specifically relates to money transfer transactions between the SE, the subsistence customer and/or the business partner.

Building from research emphasising the operational benefits of mobile phones in reducing transaction costs and improving time efficiency (Boateng 2011), mobile money services mitigate the associated inconveniences and improve the transaction exchange speed. This subsequently increases the transaction exchange predictability, timing and flexibility back to the convenience and control of the SE.

Interestingly, the significance of this research also contributes insights to the understanding of informal money transfer systems (Buencamino & Gorbunov 2002) and the nature of informal money transfer services (domestic and cross-border) in Cambodia (IOM 2010; Jampaklay & Kittisuksathit 2009). It then theoretically conceptualises the importance of informal money transfer services by SEs and their critical role in facilitating economic and social value for the proximate community exchange as part of maintaining the ‘informal economy’ (Viswanathan et al. 2014). More importantly, this research conceptualises the innovation and ‘repurposing’ of mobile phone technology as a facilitating system type within the multi-layered marketing systems (Layton 2014). It demonstrates how mobile money services enhance the valuable remittance industry, an embedded marketing structure of significant importance in the social life of a subsistence marketplace community (Layton 2014).

Previous studies have focused on trends and opportunities for designing suitable business models to facilitate the role of mobile money for international remittances as part of increasing financial inclusion (Bouwman & Sandy 2008; CGAP 2012; Daly 2010). However, this research has found that SEs have already set the trend for developing unique business capabilities for international remittance services within the context of subsistence marketplaces between two neighbouring country borders. The example of rural Cambodia illustrated how the mobile money platform is embedded
within the existing SEs’ money transfer service procedures across two neighbouring country borders. Hence, this helps enhance the SEs’ business service offerings to fellow subsistence consumers requiring a cheaper and faster alternative for sending money across country borders.

Hence, this research adds to the understanding of the benefits of mobile phone usage for amplifying existing material and informational flows (Donner 2006; Donner & Escobari 2010) by conceptualising the transformational impact of mobile money services in response to the needs of both SEs and their community network of subsistence customers.

8.5 Limitations of Mobile Money Services As Offered by WING (2009–2011)

Non-Localised Mobile Money System Language Settings

It was observed that the current mobile money services offered in Cambodia were only available in English. Mobile phone sets in Cambodia offered English as the default language setting and could not be changed to the local Cambodian Khmer language. The majority of Cambodians in subsistence marketplaces or rural areas communicated mostly in the Khmer language. While step-by-step instructions in Khmer language and local assistance by mobile money agents were provided, this might still prove difficult to use for extremely low-literate or visually handicapped subsistence consumers.

For example in one rural district located in the seaport area, workers were mostly illiterate and could only communicate in the local Khmer language. While they were familiar with simple mobile phone functions like making and receiving calls, they found it difficult to perform the mobile money services when using the mobile phones to transfer money. Instead, they visited the nearest mobile money agent to ask for assistance to transfer money. Some mobile money agents provided the assistance service free of charge while some mobile money agents charged a small service fee.
Inconsistent Service Quality and Standards

There were also inconsistencies in being able to obtain information, advice or help on mobile money services for subsistence consumers. Mr HM described his mixed experiences with mobile money agents when using mobile money services. Mr HM regularly visited two mobile money agents. Sometimes he visited other mobile money agents. Mr HM found that some mobile money services were fast and efficient while others were not:

‘Some mobile money agents provided fast service and some provided slow service. And you know sometimes when it is slow it makes us angry with them. To cash out only a little money, they had to make us wait up to 10 minutes. These mobile money agents work slowly so it makes us angry.’

Mobile money services were not always perfect transaction exchanges, as interviewees reported experiencing system errors while using the mobile money system. These system errors often resulted in incomplete transaction exchanges using mobile money services. Some interviewees claimed it would sometimes require four to five attempts before a successful transaction was completed. At other times, the transaction was still incomplete after multiple attempts. Although using mobile money services made a positive difference to him, Mr HT still had his fair share of frustrations when using the mobile money services:

‘Sometimes there is an error with the (mobile money) system. When I want to transfer money to my brother, my operations (mobile money service) is not successful. I need to operate it again and again. Then after three or four times of the operations, the system does not allow me to access mobile money services anymore.’

In rural areas, there could at times be network connectivity problems due to poor mobile phone signal receptions. This predominantly happened in extremely remote rural areas like forests and near mountainous regions, where mobile phone signals were likely to be very poor. Mobile phone signal receptions in Cambodia could also become weak due to adverse weather conditions, especially during severe rainy days. Hence, the users could not access the mobile money system with their mobile phones. Mr PM added the mobile money system might not be at fault and that the connectivity problems could sometimes be caused by the mobile network operators:
‘Of course, normally the technology is not perfect and sometimes the mobile money system or another mobile (system cannot) not run perfectly. That’s why sometimes mobile money services cooperate with other mobile network operators in Cambodia. But once the mobile network operators have system errors, mobile money services (also) cannot function well.’

Many interviewees highlighted the difficulties in cashing out money from mobile money agents. One common reason was the mobile money agent’s lack of physical cash or liquidity as well as the perceived low sales commission for ‘cash out’ types of transactions. When a customer went to a mobile money agent to withdraw physical money for use, a mobile money agent typically needs to have physical money or liquidity available in their location. When they ran out of liquidity due to numerous ‘cash out’ transactions earlier in the day, mobile money agents could possibly decline the services. Due to low sales commission per transaction, mobile money agents were also less keen to perform cash out transactions if large amounts of cash were required. Mr VM highlighted his difficulty with mobile money agents when cashing out his money. He felt that sometimes when a customer wished to withdraw larger amounts, the mobile money agent would be reluctant to perform the transaction:

‘Because it is a lot of money to provide to the customers and the mobile money agent also earned very low commission. If customers want to cash out with big amounts, the mobile money agent did not want to perform transaction. If it is a small cash out amount, it is okay.’

An interesting point was raised by Mrs PP, an SE and mobile money agent, who believed that the sales commission only suited mobile money agents who owned (rather than rented) the shop premises. The sales commission was considered very little, but acceptable since the mobile money service provider also charged customers low services fee. Mrs PP highlighted that mobile money agents who rent the premises for their businesses might not sustain the mobile money services with very little commission income. Hence, they might focus on promoting their own business services rather than promoting mobile money services:

‘They do not care for the customers. But for me it is okay as I opened my own shop. This is my own house so I do not spend on renting the house.’
The lack of interoperability between mobile money services and banks further exacerbated the liquidity problem and hence became more frustrating for mobile money customers. The current mobile money services in Cambodia did not totally interoperate with the banks or MFIs’ products and services. Mrs PP believed that things would change for the better if mobile money services and banks interoperated together:

‘If mobile money services use (cooperate with) banks, I think that we will have more transactions and it will be easier (better liquidity) … it’s easier for me to cash in and cash out for my mobile money account.’

**Limited Business-To-Business Transaction Benefits**

This research provided evidence that mobile money services played a significant role for incentivising SEs through reduced transaction costs and increased business opportunities. However, this research also identified two potential limitations of the role of mobile money services on subsistence entrepreneurship transaction exchanges.

The first limitation was the dual currency environment in Cambodia, which could possibly deter the use of mobile money services in business-to-business transactions for SEs. This was especially so if the exchange rate between the US dollar and the Cambodian Khmer riel proved unfavourable. Business suppliers, based in urban/capital cities, preferred to transact in US currency, whereas SEs in rural areas preferred to transact in Cambodian currency. In some cases, the SE ordered the goods and paid the business supplier in Khmer riel using mobile money services. The business supplier preferred to cash out the money in Khmer riel currency at the mobile money agent near the main market. The mobile money agent performing the transaction

For example, Mr GM purchased his goods from a supplier in Phnom Penh City and used mobile money services to transfer the payments, sometimes directly to their mobile money account or sometimes through cashing out using the eight-digit passcode. One of his suppliers in Phnom Penh City was an older aged woman and he found it difficult to transfer money to her. Mr GM managed to convince her to open a mobile money account for easier business-to-business payment transactions. However, the older business supplier wanted to cash out the money in Khmer riel currency at the mobile money agent near the main market. The mobile money agent performing the transaction
service could only give her US dollars and charged her a high US dollar/Khmer riel exchange rate. This made Mr GM’s business supplier unhappy with the service provided, as she made a loss in revenue money through a low exchange rate.

‘So she goes to another mobile money agent to cash out all her money. And she did not use mobile money services since then.’

The second limitation was the perceived minimal benefits rendered to the business supplier as the receiver of the mobile money services. This is a likely reason why mobile money services may not be widely accepted as an incentive among SEs. In an example scenario, the business supplier still needed to pay cash to hire taxi drivers to transport the goods ordered. Upon receiving the notification that money had been transferred, the business supplier was still required to collect the money from the nearest mobile money agent. If the business supplier did not have a mobile money account, the money would then be deposited in a facility of their choice like a bank account or simply their storage cupboards. Bank branches in Cambodia leveraged this opportunity to provide tangible cost benefits to these business suppliers based on their transaction volume.

In another example, Ms PH sold mobile phones as well as providing money transfer and money exchange services in a rural district town. Her business supplier, who also opened a mobile money account, was located in Phnom Penh City, which was about 285 kilometres or 6 hours’ drive away. Ms PH explained the mobile money service did not fully benefit her business supplier, who delivered Nokia mobile phone sets to her. Previously it was easy to use mobile money services to transfer money to her business supplier’s mobile money account. However, recently the business supplier stopped using mobile money services. Ms PH further explained that the business supplier decided to use the bank services, which provided better transaction cost discount benefits for large payment volumes. For example, the business supplier had to pay mobile money service provider an additional US$2 for any amount they sent via the mobile money services each time, and the extended service request to transfer the money to a nominated bank account (business bank account):

‘Now they (the business supplier) send money directly to Acleda Bank (business bank account) and the transfer fee will be paid by the Nokia (phone supplier) company. The company found it beneficial to cooperate with Acleda Bank because they charge one per cent for over US$2,000 regardless on the number of times the Nokia (phone supplier) company transfer money.’
8.6 Conclusion

Due to financial exclusion, subsistence individuals and their households often faced the realities of irregular money income from informal sources like small farms, micro-enterprises, informal employment, and odd-job day labour (Kilara & Rhyne, 2014). The daily unpredictable, complex and uncertain life circumstances experienced by subsistence individuals (Viswanathan 2007; Viswanathan et al. 2014) often require them to collectively accumulate multiple financial resources from business and family finances (Kilara & Rhyne 2014) to help overcome resource scarcities. Mobile money enhances financial inclusion (Donavan 2012) by having a faster, secured and more accessible connection between family members and friends for mobilising financial resources collectively in times of crisis, emergency and cultural needs.

Mobile money services provide an efficient low-cost infrastructure for appropriate financial products and services to be made available to subsistence households. The lower transaction costs attained through mobile money services also translate into higher savings and assets (Donavan 2012) that subsistence households can potentially keep and utilise for the future. Hence, to those previously unbanked, mobile money services add value to the daily collective needs and aspirations of subsistence consumers and their family households.

Mobile money services increase opportunities for users to fulfil their cultural obligations and enhance the celebrative nature of cultural and religious activities in subsistence marketplaces. Hence, subsistence consumers can potentially build financial resilience and strengthen social, family and community ties due to increased abilities to resist against vulnerable shocks like family ill health, household emergencies and thefts (Kilara & Rhyne 2014).
The strong presence of micro-enterprises in subsistence marketplaces suggests that addressing subsistence entrepreneurial needs is critical to inclusive economic participation within subsistence marketplaces. Previously, the lack of information and financial resources, with poorly developed infrastructures, limited most SEs to doing business within their localities (Tarafdar, Singh & Anekal 2013). Consequently, they were not able to provide products and services to more remote or far-distant customers. This resulted in limited business income generating opportunities.

The mobile money platform enables SEs to do business outside their localities and removes barriers to reaching distant customers. Hence, besides extending financial services, mobile money has shown to improve subsistence entrepreneurship productivity because of increased business process efficiencies, lower associated business transaction costs and improved business transaction security (Donavan 2012). Mobile money services also created a ‘creative re-purposing’ (Maurer 2012) platform on which other innovative micro-enterprise businesses can be created for market development and growth (Donavan 2012). The mobile money platform also potentially increases opportunities for SEs to mobilise investments from family members and/or friends to expand their businesses.

The use of mobile money in micro-enterprises potentially empowers subsistence entrepreneurs to move from a ‘survival and maintenance’ mode to a ‘thriving and growing’ one (Sridharan et al. 2014a). Therefore, mobile money services can become the catalyst towards transformational subsistence entrepreneurship through improved personal, social and economic wellbeing of subsistence entrepreneurs, and increased economic capacities of their own communities (Sridharan et al. 2014a).

The widespread availability of product and pricing information on mobile money services potentially provides better consumer protection through improved product disclosure, increased product choice and enhanced customer complaints handling and recourse channels (Mazer, McKee & Fiorillo 2014). Therefore, this possibly results in increased subsistence consumers’ financial confidence and better decision-making abilities towards achieving individual goals and aspirations of a better life.
Chapter 9: Final Conclusions

The development of mobile money services has progressed rapidly over the last five years. However, the impacts of these services on the lives of subsistence consumers and entrepreneurs have not been well understood. This research has identified the impacts of mobile money services on subsistence marketplaces. This chapter provides the final conclusions of this research. An overview of the thesis contributions is provided, bringing together the main themes and final thoughts on the findings. Finally, theoretical and industry implications of this research are addressed, followed by the proposed future research agenda and directions.

9.1 Thesis Contributions

The thesis’ central theme was to explore and understand the impacts that occur when financial services can be readily and conveniently accessed through mobile phones in subsistence marketplaces. The primary research question for this research was:

**What are the impacts of mobile money services (accessing basic financial services using mobile phone technology) on subsistence marketplaces?**

The key contributions can be summarised as follows:

1) Mobile money services have increased financial inclusion for subsistence consumers and entrepreneurs by providing access to financial products and services via mobile phone technology.

2) This research contributes to knowledge on the nature of marketing interaction disparities, specifically on marketing exchange activities through money transfer transactions, social network relationships and subsistence entrepreneurship.

3) The introduction of mobile money services enhances the financial behaviours of consumers and entrepreneurs in subsistence marketplaces. This facilitates improved financial management habits, behaviours and practices.
9.2 Theoretical Implications

Before the introduction of mobile money services to subsistence marketplaces, there were transaction costs associated with accessibility to rural bank branches and the use of informal intermediaries like boat drivers and taxi drivers. When making transactions before mobile money services, both senders and receivers had to spend a long time queuing at rural bank branches and completing complicated documentation as well as providing proof of identification to complete the transaction. The inconvenient location, limited opening hours and high service fees deterred and discouraged subsistence consumers from accessing rural bank branch services. Alternatively, informal intermediaries were used. However, transaction costs in terms of money and time were still high due to the presence of multiple intermediaries and the long duration required to transfer money through these rural bank branches and informal intermediaries.

In the old transactional marketing system structure, rural bank branches and informal intermediaries charge a fee for each money transaction. Hence they are perceived to have gained social and economic values. By doing so the wellbeing of rural bank branches and informal intermediaries also increased due to increased transaction opportunities within this old transactional marketing system structure.

To the sender, the old transactional marketing system structure will bring perceived negative social and economic value. Transaction costs in terms of money and time become high due to the presence of multiple intermediaries and it takes a long time to transfer money through these intermediaries. There is greater unpredictability for the sender due to reliance on the punctuality, availability and schedule of the intermediaries. The sender faces high risks of intermediaries losing their money, having their money stolen or having it given to the wrong person. The sender also faces added complications or interruptions to their daily routines by having to close businesses and spend time visiting rural bank branches or contacting informal intermediaries. There is also an element of uncertainty around a complete transaction in the event of adverse weather or the breakdown of informal intermediaries’ vehicles (boats or cars).
Hence this thesis puts forward the following proposition:

**Proposition 1:** Before the introduction of mobile money services into the marketing system structure, the transactional marketing system structure added social and economic benefits to rural bank branches and informal intermediaries while reducing social and economic benefits to the subsistence money sender and receiver.

After the introduction of mobile money services, money transaction flows have significantly changed, as transactions need not take place in a rural bank branch location. Without relying on informal intermediaries, these transactions are also perceived to be dis-intermediated. The money sender now relies on an existing asset in their hands, the mobile phone, to access the required services and carry out the transactions. The nature of this change contributes to deepening the understanding of access to finance flows in marketing systems (Layton 2007). It also demonstrates how mobile money services can resolve the money transaction inefficiencies and ineffectiveness within the subsistence marketing systems, resulting in enhanced growth and quality of life (Layton 2014).

Subsistence entrepreneurs locally appointed as mobile money agents are more reliable and equipped to provide a faster and cheaper money transfer service for the sender. The presence of a more effective money transfer service through mobile phones has also increased availability and competitiveness of private agents who are not officially appointed mobile money agents but leverage on mobile money services to enhance their own transactional marketing system structure.

Mobile money services bring added or increased social, economic and financial capability value to the sender. To the sender, added value means increased predictability of the transaction and increased certainty of the transaction being completed. There is perceived less risk to the sender as money is assured of being successfully transferred assuming the network system for transacting is working efficiently. Transaction costs in terms of time will not be an issue as control and certainty is now back under the senders’ power rather than the rural bank branches or informal intermediaries. Information on financial services is more transparent and readily available for
subsistence consumers. This enables consumers to make more informed financial decisions when managing their own money, choose financial products wisely, plan ahead more effectively and access adequate consumer protection, advice and help when needed.

Previously deemed as just a means of communicating or transmitting information, the sender gains an additional money transaction (money) dimension to the economic and social value of the mobile phone. There is a new transaction developed (transaction fee via the mobile phone service) but overall transaction costs are lower than that of using rural bank branches and informal intermediaries.

In this new transactional marketing system structure, the informal intermediaries will lose some of their economic and social values since mobile money services have now taken over their money transfer services. Although these intermediaries are still needed for transporting passengers and goods, there is a possibility that this new transactional marketing system structure will lead to less income and hence lower levels of well-being for the informal intermediaries.

Hence this thesis puts forward the following proposition:

**Proposition 2:** After the introduction of mobile money services into the marketing system structure, the transactional marketing system structure added social and economic benefits to the subsistence money senders and receivers while reducing social and economic benefits to the rural bank branches and informal intermediaries.

The thesis has increased knowledge and understanding on the impacts of mobile money services for subsistence consumers and entrepreneurs on financial capabilities and consumer wellbeing. However, this thesis did not undertake comparisons between the subsistence consumer and entrepreneurs as well as their levels of financial capabilities and consumer wellbeing. Hence there is also scope for further theory development and testing in the form of a 2-by-2 matrix representation with consumer versus entrepreneurs in one axis and financial capability versus consumer wellbeing in another axis. Four distinct substantive domains of phenomena have been developed to generate
insights for future theory development. Hence the thesis puts forward the following proposition in the form of a matrix (see Figure 9.1):

**Proposition 3:** A 2-by-2 matrix representation with subsistence consumer versus entrepreneurs in one axis and financial capability versus consumer wellbeing presents four distinct substantive domains of phenomena for comparison.

![Figure 9.1: 2-by-2 Matrix Representation—Subsistence Consumer versus Entrepreneur / Financial Capability versus Consumer Wellbeing](image)

It is most apparent that the research propositions produced here need to be tested. While these propositions are developed as a result of the empirical qualitative data, formal testing through quantitative methods such as survey methods will be useful to assess the propositions’ robustness and generalisability. This will then determine to what extent these posited relationships hold over time within the subsistence marketplace settings.
9.3 Implications for Industry

This research contributes valuable insights to the broader work of researchers, practitioners and policymakers seeking to improve people’s livelihoods in subsistence marketplaces through technology. Financial products and services must be designed appropriately in the context of subsistence marketplaces. It is already established that the financial lives of the poor and low-income are complex. Before the introduction of formal financial services, subsistence consumers already had existing financial behaviours and social norm tendencies. Access to financial services using mobile phone technology lowers the cost of using financial products and services for subsistence consumers. In addition, mobile money services help formalise and enhance existing financial behaviours and social norm tendencies due to perceived ease of use, speed and convenience.

There is a need for effective policy implementation to enable an inclusive digital platform using mobile phones for subsistence entrepreneurs, customers and business partners in commerce or business trading activities. Extending from the impact on social network relationships, policymakers can enable an environment whereby the design of financial products and services incorporates social group dynamics, rather than just individual behaviours. As such, this research proposes four scenarios of products and services through mobile money services to better serve the needs of subsistence consumers and entrepreneurs.

1) ‘Business’ Version of Mobile Money Accounts for Subsistence Entrepreneurs

Current mobile money service offerings predominantly meet the needs of the subsistence consumers at large. There has yet to be a product and service mix that fits the needs of micro-enterprise businesses within subsistence marketplaces.

The needs of subsistence entrepreneurs are unique. Given their limited resources, they face considerable constraints and challenges in doing business in subsistence marketplaces. Presently, this research has demonstrated that SEs rely
on the current mobile money services that are customised for their subsistence consumers.

More emphasis should be placed on creating a ‘business’ version of mobile money services for the cash flow management needs of subsistence entrepreneurs and their business partners. Business solutions using mobile money platforms should be designed to help them better manage their cash flow, increase access to credit finance and improve the efficiency of their business-to-business transactions.

2) **Mobile Interest-Bearing Savings Group Accounts**

Although similar to what mainstream banks would offer as an interest-bearing savings account, a mobile savings group account or a trust fund would typically involve a group rather than an individual. In a subsistence marketplace setting, an individual may not have adequate savings to open and maintain a mainstream savings account. However, a group of individuals coming together with accumulated savings will be a viable alternative and this already exists in traditional rotational savings group, or *Tontine* in Cambodia.

Using mobile money services to activate these group trust fund accounts will have similar characteristics as rotational savings group (*tontine*) but reduce the risks commonly associated with it. This includes keeping the trust fund money safely secured and being able to conveniently access the trust fund money when the need arises. Enabling joint holders and group trust funds for mobile money accounts can better facilitate existing social self-help group participation and family/communal group support.

As current financial laws do not allow a third party service provider (that is not a bank or MFI) to be a deposit savings institution, it requires partnerships with local Cambodian financial institutions. Such a service could possibly serve to increase financial inclusion collectively by opening joint or group accounts with financial institutions.
3) **Mobile Micro-Insurance Products Suite**

There are already emerging developments on micro-insurance products being offered through mobile phone technology as part of the suite of microfinance products, especially to rural areas and subsistence marketplaces. Micro-insurance products must be designed to suit the social and cultural contexts and needs of consumers in subsistence marketplaces. The commonly low levels of financial capabilities of subsistence consumers may hinder them from fully understanding the perceived complexities of a micro-insurance product and the need to pay a monthly premium fee to insure for a yet-to-occur event or future.

Tailored financial education can help to inform subsistence consumers and entrepreneurs of the value of having appropriate and affordable micro-insurance products in their social and cultural contexts to protect them against adverse financial shocks. Such scenarios can include insuring their small businesses or livestock, taking out personal life/medical insurance and investing in children’s long-term education. Taking up micro-insurance products is only the initial part of the process. It is just as important that subsistence consumers and entrepreneurs are able to receive adequate assistance in learning how to manage the micro-insurance premium payments. More importantly, policy regulations around consumer protection need to ensure that micro-insurance payouts are executed in a timely and professional manner so as not to add extra financial burdens and inconveniences on subsistence consumers and entrepreneurs.

4) **Mobile Self-Improvement Education Micro Modules**

This service offering is similar to a mobile phone application. Short learning micro modules in a form of an electronic video or audio file can be downloaded and can help build financial literacy knowledge such as managing money, saving and spending. Cambodians in subsistence marketplaces highly value the importance of education as a path to a brighter future, if they can afford it.

Other examples of short learning micro modules could be as basic as learning a new language or performing simple arithmetic. They could be more advanced, such as learning how to run a small business or improving financial literacy. The literacy needs of subsistence marketplaces are not exhaustive and the service
offerings would only be limited by the capabilities and creativity of the service provider.

Policymakers, financial institutions and technology service providers can draw from these insights to formulate inclusive growth strategies and develop innovative service offerings through mobile phone technology in subsistence marketplaces.

As previously highlighted, locations or incidences of BOP or Tier 4 marketplaces are situated within the Asia, Latin America and Africa regions where the population live on less than US$2.00 a day at 2005 international prices (refer to Figure 2.2, page 12). Most notably, the majority of Tier 4 marketplaces are found within the Asia region. Possible locations characterising Tier 4 type marketplaces include the rural areas of Laos, Myanmar, Vietnam, Thailand, Indonesia, China and India.

There will be differences in habits and needs in using mobile money services in different locations. Therefore a bottom-up understanding in these specific locations will be crucial for designing market and policy initiatives to enable the development of a culture-sensitised and gender-sensitised mobile money service.

9.4 Future Research Agenda and Directions

This study can be viewed as an initial investigation into the range of impacts experienced by subsistence consumers from the introduction of mobile money services. Further studies could construct suitable CWB, subsistence entrepreneurship transaction exchange and financial capability behaviour measures for technology-based service offerings like mobile money services and test it on a larger sample size within subsistence marketplaces.

Some important questions emerged as a result of this research:

1) How will interoperability between the mobile network operators and financial institutions affect financial inclusion?

2) In what ways can mobile money services evolve to further drive financial inclusion?
3) In what ways can mobile money services be promoted to achieve wider use in subsistence marketplaces?

4) What gender differences are there in the usages of mobile money services?

5) How can the marketing exchange and interaction needs of subsistence marketplace micro-enterprise owners be better served through technology-based service offerings like mobile money services?

6) What are suitable financial education interventions that can promote the mobile money platform to enhance subsistence consumers’ and entrepreneurs’ financial capabilities (such as financial management habits, behaviours, literacy and practices)?

Survey based studies that address these important questions could also be conducted in other countries within the same region, like Myanmar, Thailand and Vietnam. This will initiate cross-country comparison and bring immense benefits in the rolling out of value-added products and services through mobile phones to other subsistence marketplaces.

This research has illustrated the extensive challenges faced by consumers and entrepreneurs in subsistence marketplaces. The lack of access to mainstream financial products and services creates barriers to inclusive economic growth and participation. The introduction of mobile money services has opened the door to opportunities for individuals, families and entrepreneurs living in subsistence marketplaces by facilitating financial capability, consumer wellbeing and micro-entrepreneurship. While there are limitations that can be overcome with further research and development, this thesis has shown that mobile phone technology has the potential to improve the lives of those living in subsistence marketplaces.
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## Appendix A Interviewees Background Information

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<th>Informant</th>
<th>Occupation/Type of Business Activity</th>
<th>Gender</th>
<th>Age</th>
<th>Marital Status</th>
<th>Education Level</th>
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<tbody>
<tr>
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<td>Youth Salesgirl</td>
<td>Female</td>
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<tr>
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<tr>
<td>Mr MT</td>
<td>Money Transfer Agent</td>
<td>Male</td>
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<td>Ms KL*</td>
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<td>Divorced</td>
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<td>Mrs SH</td>
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<td>25</td>
<td>Married</td>
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<tr>
<td>Mrs VS</td>
<td>Vegetable Seller</td>
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<td>Mrs PP</td>
<td>Photoshop Owner</td>
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<td>Mr CD</td>
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<td>Mr GM</td>
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<td>Single</td>
<td>High School</td>
</tr>
<tr>
<td>Mr MK</td>
<td>Monk</td>
<td>Male</td>
<td>19</td>
<td>Single</td>
<td>High School</td>
</tr>
<tr>
<td>Mr PM</td>
<td>Mobile Phone Shop Owner</td>
<td>Male</td>
<td>31</td>
<td>Single</td>
<td>University</td>
</tr>
<tr>
<td>Informant</td>
<td>Occupation/Type of Business Activity</td>
<td>Gender</td>
<td>Age</td>
<td>Marital Status</td>
<td>Education Level</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------</td>
<td>--------</td>
<td>-----</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Mr RI</td>
<td>Soldier</td>
<td>Male</td>
<td>24</td>
<td>Single</td>
<td>High School</td>
</tr>
<tr>
<td>Mr HM</td>
<td>Student</td>
<td>Male</td>
<td>22</td>
<td>Single</td>
<td>High School</td>
</tr>
</tbody>
</table>

* Interviewees during the pilot interview stage
Appendix B Mobile Money Price Structure and Service Fees

WING Mobile Money Service Fees (As of 11 July 2013)

<table>
<thead>
<tr>
<th>Services</th>
<th>Amount (US Dollar)</th>
<th>Fees (US Dollars)</th>
<th>Amount (Cambodia Riel)</th>
<th>Fees (Cambodia Riel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WING Bill Payment (electricity services)</td>
<td>US Dollar</td>
<td>US Dollar</td>
<td>0 – 100,000 Riel</td>
<td>1,000 Riel</td>
</tr>
<tr>
<td></td>
<td>Account can be used with actual exchange rates applied</td>
<td>Account can be used with actual exchange rates applied</td>
<td>100,001 Riel and above</td>
<td>2,000 Riel</td>
</tr>
<tr>
<td>WING-to-WING (funds transfer between two mobile money accounts)</td>
<td>0 - $25</td>
<td>$0.25</td>
<td>0 – 100,000 Riel</td>
<td>1,000 Riel</td>
</tr>
<tr>
<td></td>
<td>$25.01 and above</td>
<td>$0.50</td>
<td>100,001 Riel and above</td>
<td>2,000 Riel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Fees (US Dollars)</th>
<th>Fees (Cambodia Riel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash In (Deposit)</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>WING Tinh Card (Mobile Phone Credit Top Up)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WING Bill Payment (for selected service providers in Cambodia like DIGI, First Finance, KLD, OneTV, PPP, KTH)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Out (Withdrawal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Out (Withdrawal) via ANZ Bank ATM</td>
<td>$0.50</td>
<td>2,000 Riel</td>
</tr>
<tr>
<td>WING Bill Payment (for selected service providers in Cambodia like AEON and GOODHILL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WING Wei Luy (Money Transfer Services; only sender has a mobile money account)</td>
<td>$1.50</td>
<td>6,000 Riel</td>
</tr>
<tr>
<td>Wei Luy Express (Money Transfer Over The Counter Services; both sender and receiver have no mobile money account)</td>
<td>$1.50</td>
<td>6,000 Riel</td>
</tr>
<tr>
<td>Account Balance Check</td>
<td>$0.02</td>
<td>100 Riel</td>
</tr>
<tr>
<td>Change Mobile Phone Number</td>
<td>$0.25</td>
<td>1,000 Riel</td>
</tr>
<tr>
<td>Change Mobile Money Account Currency</td>
<td>$1.25</td>
<td>5,000 Riel</td>
</tr>
</tbody>
</table>

Source: http://www.wingmoney.com/services-fees
## Acleda Unity Service Fees (As of 11 July 2013)

<table>
<thead>
<tr>
<th>Description</th>
<th>US$</th>
<th>Cambodia Riel</th>
<th>Thai Baht</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Having a Savings Account, Current Account, or Demand Deposit Account</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Registration</td>
<td>5.00</td>
<td>20,000</td>
<td>200</td>
</tr>
<tr>
<td>2. Monthly fee</td>
<td>0.50</td>
<td>2,000</td>
<td>20</td>
</tr>
<tr>
<td>4. View exchange rates</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>5. Mobile phone top up</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>6. Bill payment per transaction</td>
<td>0.25</td>
<td>1,000</td>
<td>10</td>
</tr>
<tr>
<td>7. Own account transfer (in the same branch) per transaction</td>
<td>0.10</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>8. Own account transfer (in different branches) per transaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>1.00</td>
<td>4,000</td>
<td>40</td>
</tr>
<tr>
<td>VIP customer</td>
<td>2.00</td>
<td>8,000</td>
<td>80</td>
</tr>
<tr>
<td>9. Funds transfers between accounts (in the same branch) per transaction</td>
<td>0.50</td>
<td>2,000</td>
<td>20</td>
</tr>
<tr>
<td>10. Funds transfers between accounts (in different branches) per transaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td>1.00</td>
<td>4,000</td>
<td>40</td>
</tr>
<tr>
<td>VIP customer</td>
<td>2.00</td>
<td>8,000</td>
<td>80</td>
</tr>
<tr>
<td>11. Funds transfers (from account to mobile phone number) per transaction</td>
<td>1.00</td>
<td>4,000</td>
<td>40</td>
</tr>
<tr>
<td><strong>Having an ACLEDA Unity's Account</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registration</td>
<td>3.50</td>
<td>14,000</td>
<td>140</td>
</tr>
<tr>
<td>Monthly fee</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Balance enquiry &amp; mini-statement</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>View exchange rates</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Mobile phone top up</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Bill payment per transaction</td>
<td>0.25</td>
<td>1,000</td>
<td>10</td>
</tr>
<tr>
<td>Own account transfer per transaction</td>
<td>0.10</td>
<td>400</td>
<td>4</td>
</tr>
<tr>
<td>Funds transfers per transaction</td>
<td>1.00</td>
<td>4,000</td>
<td>40</td>
</tr>
<tr>
<td>Deposit (in own account in ACLEDA Unity system)</td>
<td>Free</td>
<td>Free</td>
<td>Free</td>
</tr>
<tr>
<td>Deposit (in another account in ACLEDA Unity system)</td>
<td>1.00</td>
<td>4,000</td>
<td>40</td>
</tr>
</tbody>
</table>

Appendix C Interview Questions

1. Background On Yourself
   a. Could you share with us on your past and current education and work experience
   b. Are you from this province and you were from another hometown

2. Background On Your Family
   a. Could you share with us a little a bit on your family background ie parents, siblings, your wife and children
   b. What are they currently doing now

3. Mobile Phone
   a. Please share with us how you got your first mobile phone and why you need the mobile phone then
   b. Could you share with us how you initially thought about using a mobile phone to store, transfer and receive money as well as phone top ups and bill payments
   c. Could you share your present thoughts or opinions after using the mobile phone to store, transfer and receive money as well as phone top ups and bill payments

4. WING
   a. How did you first come to know about WING
   b. Share with us your first experience with WING as a money transfer service provider using the mobile phone
   c. Could you tell us in what ways have WING products and services brought benefits or problems to you as an individual person

For the next 4 topics, we wish to talk about 4 areas that WING may have made a change (improve or worsen) your life:

1. Social and Cultural Norms
   a. Share with us on how you, your family, your friends and others in your province/district/village/family celebrate different festivals like Khmer New Year, Weddings, Water Festival, Halloween Festival, Rainy Season Monk Festival
   b. Share with us on any special events/gatherings that occurs only in your province/district/village
   c. Are there any special traditions or customs or practices that occurs only in your province/district/village/family
   d. If you are not working, how would you and your family normally spend your time or what social activities would you do?
2. Small Business Activities and Management (For WCX, MWCX and Wing customers who are small business owners)
   a. Could you share with us what does your business do
   b. Without giving exact numbers and figure, could you share with us what your business expenses are
   c. Could you share with us how your business is like before WING and how your business is like after using Wing ie. could you tell us in what ways have WING products and services brought benefits or problems to your business
   d. Has WING changed the way you run or operate your business ie. Has WING make it easier or harder for you to manage your cash flow or Money In/Money Out with business partners and suppliers

3. Your Income, Saving and Spending Habits
   a. Share with us in what are the different ways you and your family (1) Transfer money, (2) Save/store money, (3) Receive money, (4) Spend money, (5) Top up phone credits, (6) Pay bills like electricity & water
   b. Share with us in what are the different ways your friends or others in your province, district or village (1) Transfer money, (2) Save/store money, (3) Receive money, (4) Spend money, (5) Top up phone credits, (6) Pay bills like electricity & water
   c. In your opinion, do you think WING has made any changes to any of the above we have talked about
   d. Could you share with us your income if possible
   e. As a person or maybe also in your own family, how do you store or save extra money if any
   f. As a person or maybe also in your own family, what items or activities do you mostly spend on
   g. Could you describe to us if there are any changes to your income, saving and spending habits before and after using WING ie Were there any benefits or problems

4. Quality of Life and Personality (Character and Behaviour)
   a. Could you share if your life has become better or worse or the same after using WING ie are you happier or more sad, are you more independent or more dependent, are you less worried or more worried, are you more hopeful or less hopeful for the future
   b. Could you share if there has been any changes in your character and behaviour after using WING
   c. Could you share if there has been any changes in your relationship with your family members, your colleagues, your business partners/suppliers after using WING ie is it better or worse, is it closer or not closer
Appendix D Plain Language Statement

RMIT University
College of Business
School of Economics, Finance & Marketing

Plain Language Statement to be used in a research project involving human participation. It must be printed on RMIT letterhead and be written in language appropriate to the audience and any technical terms need to be explained.

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT
PROJECT INFORMATION STATEMENT

Project Title:
- Social Impact Evaluation of Mobile Money Services in Cambodia

Investigators:
- Mr Jeff Fang - PhD (Economics & Finance) Doctoral Candidate
Dear ...

You are invited to participate in a research project being conducted by RMIT University, in collaboration with Wing Money Cambodia.

This information sheet describes the project in straightforward language, or ‘plain English’. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate.

If you have any questions about the project, please ask the investigator.

**Who is involved in this research project? Why is it being conducted?**

This research project is conducted by Mr Jeff Fang to complete the requirements for the Doctor of Philosophy (Economics & Finance) program offered by RMIT University School of Economics, Finance & Marketing. My PhD supervisor is Professor Roslyn Russell, School of Economics, Finance & Marketing, RMIT University. The research primary aims are:

- To understand the social impact of mobile money services and its effects on the lives of a Cambodian rural community
- To understand and identify the impacts of financial services, made available through the mobile phone, on the economic and entrepreneurial activities of a rural population.

This research project will be led by Mr Jeff Fang, a PhD Doctoral Scholar, and assisted by the project language/cultural Cambodian interpreters, Mr Kagna THAN, Ms Munirath LONG Ms Kimsrann Neak and/or Mr Kalvorn Kao.

The research project has been approved by the RMIT Business College Human Ethics Advisory Network and fully supported by Wing Money Cambodia as part of ongoing efforts to develop suitable products and services to serve your needs.

**Why have you been approached?**

Between 28 February to 26 March 2011, the PhD Researcher was in Cambodia to work with Wing Money Cambodia. After reviewing various documentation, consulting with Wing managers and doing field visits to various villages and towns, the PhD Researcher and wing management has identified a few research sites to recruit interviewee participants.

Interviewees are only recruited if consent is given to participate in the research work. As such, you have been identified as a potential participant because you use mobile money services through your mobile phone and we would appreciate your help by agreeing to be interviewed for the research project.
**What is the project about? What are the questions being addressed?**

It is expected that the research project will have between 50-100 interviewee.

These are the research project aims –
- To understand the social impact of mobile money services and its effects on the lives of a Cambodian rural community
- To understand and identify the impacts of financial services, made available through the mobile phone, on the economic and entrepreneurial activities of a rural population

This is the primary research question –

**What are the social impacts of mobile money services and its effects on the lives of a rural community?**

These are the research objectives –

1. To investigate any changes in rural micro-entrepreneurial activities
2. To study any changes on rural income and spending habits
3. To analyse any changes on dependents’ livelihoods and quality of life
4. To determine any changes to the rural community social or cultural norms

**If I agree to participate, what will I be required to do?**

You will first be introduced to the researcher and given information about the purpose of the interview session. You will be asked if its ok for the interview session to be audio recorded. Your identity and any identifying information will be kept confidential and your privacy will be protected.

The interviews will take approximately 1 - 2 hours. The main topics that we will discuss are:

- Some background information about yourself, your work and your family
- Your use of mobile phone for sending and receiving money
- Your thoughts about using your mobile phone to send and receive money
- Your experiences with the service provider
- The ways mobile phone money transfer has affected your business / enterprise
- The effects on your family life and how you live

After the interview session is done, you will be verbally provided with a summary of the key points made and be given a contact number if you seek to inquire further or wish to have any concerns addressed.
**What are the risks or disadvantages associated with participation?**
There should be no risks or disadvantages to you by participating in the research.

If for any reason you are unduly concerned about your responses to any of the questions or if you find participation in the interview distressing, you should inform the researcher as soon as possible to discuss your concerns with them. You are welcome to suggest appropriate follow-up, if necessary.

**What are the benefits associated with participation?**
There will not be any direct benefits to your participation. But as a token of appreciation the researcher will provide a small compensation amount at the completion of the interview session.

**What will happen to the information I provide?**
The information you provide will be compiled and analysed as part of completing the PhD research. The project research information will also form the outcomes which are expected to be presented before a PhD Research Completion Seminar panel, PhD examiners as well as published in conference papers and academic journals.

The report / publication arising from this research project will not reveal the names of participants and their actual locations. Recorded interview sessions with the participants will not be presented publicly or revealed to any external parties.

Hence you can be well assured that this research project shall do its best to protect the privacy of participants like yourself.

**What are my rights as a participant?**
As a participant to this research project, you have:

- The right to withdraw their participation at any time, without prejudice.
- The right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and provided that so doing does not increase the risk for the participant.
- The right to have any questions answered at any time.
- The right to request that audio recording be terminated at any stage during the interview.
**Whom should I contact if I have any questions?**

Feel free to contact the following persons if you have any questions –

**Mr Jeff FANG**  
PhD Doctoral Candidate  
School of Economics, Finance and Marketing  
College of Business  
RMIT University Australia  
Email: jeff.fang@rmit.edu.au

**Professor Roslyn Russell**  
PhD Supervisor  
School of Economics, Finance and Marketing  
College of Business  
RMIT University, Australia  
Email: roslin.russell@rmit.edu.au

**Mr Viseth THIEV**  
Head of Merchant Sales (WCX/MWCX)  
Wing Money Cambodia  
# 30, Street 432,  
Sangkat Toul Tum Poung I  
Khan Chamkar Mon, Phnom Penh  
Kingdom of Cambodia  
Tel: +855 023 999 989  
Email: viseth.thiev@wingmoney.com

**What other issues should I be aware of before deciding whether to participate?**

The PhD Researcher has sought consultation and advice from Wing staff managers and Wing regional sales supervisors to understand the local culture and issues as well as how to approach and talk to local Cambodians like yourself.

The PhD Researcher shall make all efforts to respect the customs, traditions, practices and cultural sensitivities of Cambodians.

Yours Sincerely

Jeff Fang  
PhD Doctoral Candidate, MEngSc, BEng (Hons), Dip Elec Eng (Merit)  
School of Economics, Finance and Marketing  
College of Business  
RMIT University Australia
Appendix E Participant Consent Form

RMIT BUSINESS COLLEGE HUMAN ETHICS ADVISORY NETWORK

Prescribed Consent Form for Persons Participating In Research Projects Involving Interviews, Questionnaires, Focus Groups or Disclosure of Personal Information

COLLEGE OF Business
SCHOOL/CENTRE OF Economics, Finance & Marketing

Name of Participant: Social Impact Evaluation of Mobile Money Services
Project Title: In Cambodia

Name(s) of Investigators: (1) Jeff Fang
                  (2) Phone:  

1. I have received a statement explaining the interview/questionnaire involved in this project.
2. I consent to participate in the above project, the particulars of which - including details of the interviews or questionnaires - have been explained to me.
3. I authorise the investigator or his or her assistant to interview me or administer a questionnaire.
4. I give my permission to be audio taped:  Yes  No
5. I give my permission for my name or identity to be used:  Yes  No
6. I acknowledge that:
   (a) Having read the Plain Language Statement, I agree to the general purpose, methods and demands of the study.
   (b) I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied.
   (c) The project is for the purpose of research and/or teaching. It may not be of direct benefit to me.
   (d) The privacy of the information I provide will be safeguarded. However should information of a private nature need to be disclosed for moral, clinical or legal reasons, I will be given an opportunity to negotiate the terms of this disclosure.
   (e) The security of the research data is assured during and after completion of the study. The data collected during the study may be published, and a report of the project outcomes will be provided to ______________________ (researcher to specify). Any information which may be used to identify me will not be used unless I have given my permission (see point 5).

Participant’s Consent
Name: ___________________________ Date: ___________________________
       (Participant)

Name: ___________________________ Date: ___________________________
       (Witness to signature)

Where participant is under 18 years of age:
I consent to the participation of ______________________________________ in the above project.

Signature:  (1) ___________________________  (2) ___________________________ Date: ___________________________
       (Signatures of parents or guardians)

Name: ___________________________ Date: ___________________________
       (Witness to signature)

Participants should be given a photocopy of this consent form after it has been signed.

Any complaints about your participation in this project may be directed to the Chair, Business College Human Ethics Advisory Network, College of Business, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 5596 or email address bro@rmit.edu.au. Details of the complaints procedure are available from http://www.rmit.edu.au/browse;ID=2jgrnb7hnpyo
Appendix F Cambodia Population Distribution by Province

<table>
<thead>
<tr>
<th>Province</th>
<th>2008</th>
<th>1998</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia – Total</td>
<td>13,388,910</td>
<td>11,437,656</td>
<td>1.54</td>
</tr>
<tr>
<td>Banteay Meanchey</td>
<td>678,033</td>
<td>577,772</td>
<td>1.57</td>
</tr>
<tr>
<td>Battambang</td>
<td>1,024,663</td>
<td>793,129</td>
<td>2.28</td>
</tr>
<tr>
<td>Kampong Cham</td>
<td>1,680,694</td>
<td>1,608,914</td>
<td>0.44</td>
</tr>
<tr>
<td>Kampong Chhnang</td>
<td>471,616</td>
<td>417,693</td>
<td>1.21</td>
</tr>
<tr>
<td>Kampong Speu</td>
<td>716,517</td>
<td>598,882</td>
<td>1.79</td>
</tr>
<tr>
<td>Kampong Thom</td>
<td>630,803</td>
<td>569,060</td>
<td>1.03</td>
</tr>
<tr>
<td>Kampot</td>
<td>585,110</td>
<td>528,405</td>
<td>1.02</td>
</tr>
<tr>
<td>Kandal</td>
<td>1,265,085</td>
<td>1,075,125</td>
<td>1.63</td>
</tr>
<tr>
<td>Koh Kong</td>
<td>139,722</td>
<td>132,106</td>
<td>0.56</td>
</tr>
<tr>
<td>Kratie</td>
<td>318,523</td>
<td>263,175</td>
<td>1.91</td>
</tr>
<tr>
<td>Mondul Kiri</td>
<td>60,811</td>
<td>32,407</td>
<td>6.29</td>
</tr>
<tr>
<td>Phnom Penh</td>
<td>1,325,681</td>
<td>999,804</td>
<td>2.82</td>
</tr>
<tr>
<td>Preah Vihear</td>
<td>170,852</td>
<td>119,261</td>
<td>3.59</td>
</tr>
<tr>
<td>Prey Veng</td>
<td>947,357</td>
<td>946,042</td>
<td>0.01</td>
</tr>
<tr>
<td>Pursat</td>
<td>397,107</td>
<td>360,445</td>
<td>0.70</td>
</tr>
<tr>
<td>Ratanak Kiri</td>
<td>149,997</td>
<td>94,243</td>
<td>4.65</td>
</tr>
<tr>
<td>Siemreap</td>
<td>896,309</td>
<td>696,164</td>
<td>2.53</td>
</tr>
<tr>
<td>Sihanoukville</td>
<td>199,902</td>
<td>155,690</td>
<td>2.50</td>
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<tr>
<td>Stung Treng</td>
<td>111,734</td>
<td>81,074</td>
<td>3.21</td>
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<tr>
<td>Svay Rieng</td>
<td>482,785</td>
<td>478,252</td>
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</tr>
<tr>
<td>Takeo</td>
<td>843,931</td>
<td>790,168</td>
<td>0.66</td>
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<tr>
<td>Oddar Meanchey</td>
<td>185,443</td>
<td>68,279</td>
<td>8.62</td>
</tr>
<tr>
<td>Kep</td>
<td>35,753</td>
<td>28,660</td>
<td>2.21</td>
</tr>
<tr>
<td>Pailin</td>
<td>70,482</td>
<td>22,906</td>
<td>11.24</td>
</tr>
</tbody>
</table>

### Appendix G Cambodia Households and Population Distribution by Province and Gender

<table>
<thead>
<tr>
<th>Province</th>
<th>Number of Households</th>
<th>Population</th>
<th>Average Household Size (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Both Sexes</td>
<td>Males</td>
</tr>
<tr>
<td>Cambodia – Total</td>
<td>2,832,691</td>
<td>13,388,910</td>
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<td>Kampong Thom</td>
<td>134,123</td>
<td>630,803</td>
<td>306,547</td>
</tr>
<tr>
<td>Kampong Thom</td>
<td>134,123</td>
<td>630,803</td>
<td>306,547</td>
</tr>
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<td>1,325,681</td>
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<td>Pailin</td>
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</tr>
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</table>

(*) Based on Normal or Regular Households.

The provisional results published in this report are for advance information of stakeholders and the public until the final census results are available in mid 2009. The 2008 General Population Census of Cambodia was conducted on a de facto basis with 00:00 hours of March 3, 2008 as reference time.