



Mobile Value Added Services:

A Business Growth Opportunity for
Women Entrepreneurs

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ExxonMobil

Cherie Blair
FOUNDATION FOR WOMEN



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Mobile phones serve as one of the most exciting examples we have of the transformational benefits of technology today. As mobile phone technology is utilised within developed and emerging economies alike, the opportunities for improved communication, information-sharing and learning are tremendous. For women in particular, this enhanced ability to be better connected translates directly into enhanced opportunities to improve incomes, livelihoods and economic empowerment in general.

The Cherie Blair Foundation for Women works specifically with women entrepreneurs in developing markets throughout Africa, the Middle East and Asia, aiming to transform the lives of women entrepreneurs by building their confidence, capability and access to capital. I am delighted that my Foundation has partnered with the ExxonMobil Foundation and Booz & Company on this report to develop our understanding of how mobile value added services can substantially impact the efficiency of women-led businesses and increase household income.

Mobile value added services offer us a new portal through which to address an ever-increasing range of needs. These services take on an even greater significance in the developing world where infrastructure can be limited. Providing a particular capability over a mobile platform is driven not just by convenience but by necessity. We have already seen how an innovative mobile value added service – M-Pesa – developed a platform through which millions of people can today enjoy financial services on their mobile phones. Other services address healthcare, education, business needs and much more.

This report demonstrates the enormous commercial potential that exists for mobile value added services that are specifically designed to address the needs, challenges and desires of women entrepreneurs. My Foundation believes that the private sector is an integral partner in our effort to promote women's financial independence. With generous support from the ExxonMobil Foundation, this report will enable my Foundation to explore the many exciting mobile services that exist for women throughout the developing world, ultimately providing us with the necessary insight to tangibly address the various challenges to growth that many women entrepreneurs face.



Cherie Blair
Founder, Cherie Blair Foundation for Women



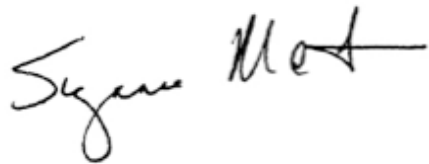
Women are one of society's most abundant untapped resources. They make up half of the world's population and are 40 percent of the global workforce, yet earn just 10 percent of the world's income. A mother's economic status is one of the best indicators of whether her children will complete their education and enjoy healthy, poverty-free adulthoods. This multi-generational return on investment creates benefits that reach all of society and can span decades.

In recent years, we have seen mobile phones evolve from a convenience to an essential business tool, enabling entrepreneurs to address pressing business challenges, increase access to new markets and operate more efficiently. Yet all too often, women entrepreneurs around the world lack access to the technology and resources needed to succeed. Expanding the effective uses of mobile technology can help women earn more income and lead to more prosperity for them, their families, their communities and their countries.

In 2005, ExxonMobil launched a global program focused on promoting women as catalysts for economic development. In the last seven years, we have invested more than \$53 million toward promoting women's economic opportunities. One important area of focus has been accelerating women's economic advancement through technology.

In this regard, we have undertaken a new collaboration with the Cherie Blair Foundation for Women to help improve our collective understanding of how mobile technology can best support women entrepreneurs. Past research shows there is a gender gap in women's access to mobile technology, but when women are able to utilize this powerful tool, it can be instrumental in improving their lives.

We look forward to strengthening our own program from this research and the results of the next phase of this project, as specific technologies are evaluated with women in Egypt, Indonesia and Nigeria. We hope others will find the report to be a useful resource in their work empowering women entrepreneurs with mobile technology.



Suzanne McCarron
President, ExxonMobil Foundation



It was a great pleasure and privilege for Booz & Company to have partnered with the Cherie Blair Foundation for Women on this initiative.

Given the relative pervasiveness of mobile, it perhaps seems intuitive that it should be more leverageable as a tool and channel to help enable entrepreneurial women. However, in order for any mobile-based service to be a *scalable* and *sustainable* solution, it is imperative to define the needs and profile of this segment, the business case for any potential commercial service provider and the optimal go-to-market partnering strategy for any non-profit organisation such as the Foundation.

Having gone through this process with the Foundation, I am convinced of the merits of mobile value added services as an enabling tool – to build business insight, skills and confidence – for women entrepreneurs. I am equally convinced that there can be a strong business case for commercial entities to support the creation and management of these services over and above any sense of corporate social responsibility.

Lastly, the support of ExxonMobil and the Cherie Blair Foundation throughout the duration of this research has been invaluable and we would like to offer our gratitude to both organisations for their insight and collaboration. We look forward to supporting the Foundation in the execution of the strategy we have jointly identified and hope that this report can provide insight for others who are looking for additional ways to support women to become successful small business owners so that they can contribute even more to their economies and have a stronger voice in their societies.



Michael Knott, Vice President
Booz & Company UK



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Abbreviations and Acronyms

ARPU	Average Revenue per User is a financial metric commonly used by the telecommunications industry. It is generally defined as the total revenue divided by the number of subscribers.	SMS	Short Message Service is a text messaging component of mobile communication. It is the most widely used data application globally ¹ .
CPM	Clicks per Million refers to the amount paid by advertisers for the exposure of their message to a specific audience.	UI	User Interface
CSR	Corporate Social Responsibility	USSD	Unstructured Supplementary Service Data, similar to SMS, allows for transmission of information; however, unlike SMS it offers a real-time connection with applications hosted by an MNO. USSD messages usually begin with a * and end with a #, e.g. *108#.
CTR	Click-through Rate is expressed as a percentage and is a measure of the success of an advertisement. It is calculated by the number of clicks on an advertisement divided by the number of times the advertisement is shown.	WAP	Wireless Application Protocol refers to the platform used to access information over a wireless mobile network; the most common use is for browsing the web.
GDP	Gross Domestic Product		
IVR	Interactive Voice Response is a telephony technology which allows a user to interact with and acquire relevant information from a digital database via voice commands.		
MNO	Mobile Network Operator refers to those mobile phone operators with the ability to provide voice and data services to mobile phone subscribers, e.g. Vodafone, Etisalat etc.		
Mobile VAS	Mobile Value Added Services refer to products/services (in addition to voice) offered via a mobile platform, e.g. Short Message Service (SMS) and Multimedia Message Services. It is a broad categorisation of products/services that add value through affording the user flexibility, convenience, assistance and other benefits from the product's use.		
NGO	Non-governmental Organisation.		
OTTP	Over-the-top Players refers to commercial entities with the ability to utilise their existing technology platforms to provide a wide range of services; such as Facebook, Google and Twitter.		



Photo by Kate Holt

1 Executive Summary

The extensive and ever-increasing penetration of mobile phones in developing and emerging markets presents a significant opportunity to women entrepreneurs who want to develop their micro businesses into flourishing small and growing enterprises. Existing research by organisations such as the Global Systems for Mobile Association (GSMA), Goldman Sachs, Vodafone, and Nokia suggests that mobile services are being utilised by women to empower their lives and improve their businesses. The objective of this study was to identify the most useful mobile value added services (VAS) solutions which would enable women entrepreneurs to advance their businesses in selected geographies. As a result of this identification exercise, this report serves as a valuable reminder that investment in mobile VAS presents promising and beneficial outcomes for commercial stakeholders, non-governmental organisations (NGOs), governments and women entrepreneurs alike.

“*In terms of both numbers and reach, mobile telephony is the dominant form of telephony, and micro-enterprise is the dominant form of enterprise in the ‘majority world’ of developing countries. Despite the global importance of both phenomena, few studies have so far investigated their intersection, partly because mobile phones have only recently penetrated micro-enterprise supply-chains in developing countries.*

Jagun, Heeks, and Whalley (2008)

Our analysis across three markets – Egypt, Nigeria and Indonesia – established that there are a number of mobile VAS solutions which, if tailored and scaled commercially, could address the priority needs of women entrepreneurs. This project consists of three phases: research, from which this report is the key outcome; assessment of the implementation and scale of mobile VAS solutions for women entrepreneurs in three specific markets; and a final impact assessment, which allows for comprehensive reflection on the findings from both the research and implementation phases.

We found that micro-entrepreneurs, representing 98% of entrepreneurial activity in the three markets, offer the biggest opportunity for mobile VAS adoption. This segment, representing companies with less than 10 employees, accounts for an average 38% of gross domestic product (GDP) and includes an estimated 32 million women across the three markets.

Women’s entrepreneurial activity in these markets is concentrated in four sectors, within which mobile VAS solutions would offer particularly transformational benefits: wholesale and retail, light manufacturing, hospitality and social services.

Eight business challenges, including access to digital channels, affordable resources and access to marketplaces, were prioritised as having the greatest potential impact (please see the following section for the full list).

On average, **94% of the respondents believed that addressing their most relevant business challenges would *increase the value of their business* and 50% believed that the increase in value to their businesses would be *significant*.**

Over **88% of women entrepreneurs were willing to use mobile VAS** to address the core challenges they face in their businesses.

More than **82% of women entrepreneurs indicated a willingness to pay for these services**, reinforcing the perceived value of mobile in their business lives.

The **average monthly mobile spend of women entrepreneurs surveyed was almost four times greater than the market average.** In using mobile as part of their everyday business activities, women entrepreneurs show strong potential value to a range of commercial market players such as mobile network operators (MNOs) and handset manufacturers.

There are existing mobile applications that address business challenges, but **few of these mobile applications have significant scale and none are specifically tailored to meet the needs of women entrepreneurs.**

Successful implementation and growth of mobile VAS requires collaboration between different stakeholders in order to ensure appropriate content creation and distribution.

1.1 Challenges Facing Women Entrepreneurs

There are many challenges that women entrepreneurs face in the course of doing business. These are driven by the nature and size of the business, the socio-demographic background of the entrepreneur, and the geographical location of the business. For this study, we have specifically focused on women micro-entrepreneurs because these represent the largest segment of women entrepreneurs in each of the three core markets. Additionally, the ability of mobile to impact these enterprises is especially acute because they do not often benefit from additional technology resources, such as computers and steady electricity, which are more common in bigger enterprises.

Importantly, these women entrepreneurs have the ability to become role models for a larger segment of women and girls. Mobile technology, and in particular, the advent of social media, offer a powerful channel for extending this aspirational impact to a wider audience. Through our survey analysis, we learned that, across the three markets, women entrepreneurs placed a strong emphasis on networking with other women.

“ *In their role as SME owners, [women] are increasingly becoming recognised for generating employment, driving exports, and contributing to local developments and innovations. Women entrepreneurs are more likely to employ women, resulting in higher labour force participation by women...* ”

MasterCard Worldwide (2010)

We identified the following challenges based on their relevance to women entrepreneurs and the relative ease with which mobile can address them:

1. **Access to digital channels**
2. **Access to affordable resources such as raw materials and labour**
3. **Access to new and existing marketplaces**
4. **Access to ability to utilise relevant market data to inform business decisions**
5. **Access to adequate marketing channels**
6. **Access to ability to utilise business tools to improve current processes**
7. **Access to functional training and mentorship**
8. **Access to ability to network with other entrepreneurs**

While these challenges may appear obvious to some, understanding the relevance of these challenges and the ability of mobile to address them is necessary to developing mobile solutions that have the greatest potential scalability in the market.

“ *The primary concerns of businesswomen throughout the world are similar. They comprise both day-to-day management issues such as maintaining profits, finding good employees and managing cash flow...* ”

Kitching and Woldie (2004)

Our survey analysis and interviews with external stakeholders reinforced the relevance of these challenges. In the surveys, women entrepreneurs indicated a high degree of significance for these challenges in each of the three markets. External stakeholders noted that these challenges reflected their experience and echoed the principal concerns of women entrepreneurs in these markets.

1.2 Benefits of Mobile Value Added Services

Mobile VAS can effectively address the challenges identified above. Through our research, we identified over 200 individual products that are currently available and address these challenges. These products are associated with different market stakeholders, including over-the-top players (OTTPs) such as Google, who have the ability to utilise existing technology platforms to provide a wide range of services, as well as handset manufacturers, MNOs, foundations, NGOs, and venture financing

entities, all of whom have deep institutional knowledge of the mobile space and a specific role to play in the advancement of women's entrepreneurship in the markets in which they function.

“ *Mobile services which can facilitate entrepreneurship and benefit small businesses will have broad appeal in a variety of markets.* ”

GSMA (2012)

Discussions with these stakeholders, together with our survey of women entrepreneurs, further emphasise that there is opportunity for mobile VAS. One finding derived from this analysis was that women expressed a high willingness to use mobile VAS to address their main business challenges. Additionally, on average, 82% of women entrepreneurs were willing to pay for mobile VAS applications that addressed these challenges. Taken together, the high willingness to use and pay for mobile VAS is an important validation of the overall appeal of these products to women entrepreneurs.

The opportunity associated with mobile VAS differs depending on the nature of the organisation and its position in the market. For foundations and NGOs, the opportunity is focused on delivering impact and understanding how to leverage the mobile channel to tangibly address the challenges impacting women entrepreneurs. Conversely, commercial stakeholders are generally focused on capturing direct as well as indirect value. Much of this value is centred on brand visibility and competitive differentiation.

Despite these differing interests, there is significant potential for both sets of stakeholders to deliver impact and capture value. This potential is best realised when different market stakeholders collaborate to develop, implement, and scale mobile VAS. Collaboration builds on the strengths of individual entities and drives more rapid market adoption. For NGOs, these strengths are centred on their ability to inform and integrate unique local content. They also provide brand support and can play a key role in facilitating stakeholder alignment.

For commercial stakeholders, collaboration can reinforce the direct and indirect benefits associated with offering mobile VAS. These include enhanced customer retention and acquisition, brand differentiation, additional revenue streams, and corporate social responsibility (CSR). Commercial actors also play a key role in the distribution and visibility of mobile VAS in the market. The involvement of commercial stakeholders, often representing some of the most widely recognised and trusted brands in the market, can reinforce the value proposition, drive adoption, and help scale a specific value added service.

Collaboration between commercial and non-profit actors creates a virtuous circle where increased adoption and usage of mobile VAS benefits all stakeholders in the market. Indeed, these interdependencies frame the unique opportunity posed by mobile VAS. This opportunity does not exclude any single stakeholder, rather it can provide benefits for a range of actors – ultimately delivering greater impact to our target segment: the woman entrepreneur.

2 Introduction

Today, millions of women in the world are operating independent businesses. These women entrepreneurs are not a monolithic group but span across geographies, age groups, education levels, and incomes. One such woman is Faith Afolabi. Faith runs a general trading and merchandise store in Lagos, Nigeria, where she currently employs one other person. Her primary reason for starting her business, Pristine Collection, was to provide a secondary source of income to support her family. Faith told us that the key challenges she faces are centred on marketing and access to quality raw materials.

Women such as Faith are not always entrepreneurs by choice but often by need. Confronted with an inability to find work and a desire to improve their economic conditions, they have started small businesses to generate income to support themselves and their families. The story Faith told us was retold in different variations, with different challenges and motivations, across the markets we examined. Many of the challenges these women face are focused on marketing, networking, market access, and distribution.

While these women encounter tremendous challenges in managing and growing their businesses, they often embrace technology in their everyday lives. This is particularly the case with mobile technology, with women throughout emerging markets using mobile as a means to access information and enhance their networks. Embodying this trend, Faith is not only an active mobile user but leverages Facebook for digital advertising and would like to use mobile applications to enhance her visibility in the market. Although not all women have the same access to or familiarity with mobile technology as Faith, her situation highlights the potential impact that mobile can have in potentially transforming the lives of women entrepreneurs.

2.1 Overview

The Cherie Blair Foundation for Women invests in women entrepreneurs so they can build and expand their businesses – and in doing so benefit not only themselves but also their families and communities. Working in partnership with local non-profit organisations, foundations, corporations and government bodies, the Foundation develops projects with sustainable solutions to the challenges women entrepreneurs face, providing the business skills, technology, networks and access to finance they need to be successful in the long term. In keeping with the method through which the Foundation measures its impact, these challenges are focused on three broad categories: *capability, confidence and capital*.

The Foundation's Mobile Technology Programme aims to identify ways in which mobile technology can improve the lives of women entrepreneurs globally. Through partnerships with organisations such as the GSMA mWomen Programme, USAID and others, the Foundation has undertaken advanced research and produced important market findings in this field. Publications, such as its report *Women Entrepreneurs in Mobile Retail Channels*, are illustrations of how the Foundation seeks to generate awareness amongst a broad array of market actors and facilitate the development of new programmes, inform existing efforts, and catalyse impact.

A key initiative of the Mobile Technology Programme is identifying how mobile VAS can address the business challenges faced by women entrepreneurs globally. In September 2011, in partnership with the ExxonMobil Foundation, the Foundation launched a project to explore ways in which mobile VAS can enhance economic opportunities and entrepreneurship in developing and emerging markets. This project consists of three phases: research, from which this report is the key outcome; project implementation; and impact assessment.

The aim of this project is not only to assess the potential impact of mobile VAS, but also to implement and scale these services in three specific markets: Egypt, Nigeria and Indonesia. In addition to generating social impact, the study also establishes how different stakeholders derive value from the creation and delivery of mobile VAS. These stakeholders include foundations and non-profit actors as well as a variety of commercial players.

2.2 Tailored Solutions

As stated above, the application of mobile technology to the challenges facing women entrepreneurs is not limited to a specific geography but looks at three markets: Egypt, Nigeria and Indonesia. These markets represent different technology and telecom profiles and feature different addressable markets and user segmentation. For instance, the needs of a woman entrepreneur in Cairo are different to the needs of an entrepreneur on the outskirts of Jakarta.

Similarly, the mobile environment in these countries will define the commercial and technical feasibility of launching specific mobile VAS applications in each market. At the core of this feasibility argument is the existing level of mobile penetration amongst women entrepreneurs. Many reports have examined the gender gap in mobile handset ownership, noting that there continues to be a disparity between male and female mobile usage. However, our survey analysis and discussions with market stakeholders suggest that women entrepreneurs enjoy, on average, higher mobile ownership than other women consumers in the market. Hence, we can acknowledge the importance of this gender gap while independently assessing the impact of mobile VAS on a specific subset of women within each market, namely entrepreneurs.

To ensure that the analysis and recommendations reflect specific market conditions it is necessary to establish both the technology and entrepreneurial context in each of these markets.

2.3 Methodology

The analytical approach taken in this study establishes the parameters that frame the likely impact and implementation of mobile VAS in each market. Potential impact was assessed by examining the relative importance of different entrepreneurial challenges. While many of these challenges are experienced by a broad cross-

section of entrepreneurs and business owners, we assessed the specific relevance of these challenges to women entrepreneurs.

To effectively scale these solutions in the market requires the active participation of different stakeholders in the mobile VAS ecosystem. These stakeholders include MNOs, third-party service and content providers, application developers, OTTPs, NGOs and marketing entities. To ensure impact and long-term sustainability requires these ecosystem players to collaborate in the development, delivery, and distribution of mobile VAS applications across the spectrum of women entrepreneurs. Ultimately, proactive engagement along the mobile VAS value chain can help drive a virtuous cycle, where industry players such as MNOs realise benefits centred on commercial growth and social impact, while non-profit actors generate tangible benefits for women entrepreneurs.

To determine the potential impact of mobile VAS on women entrepreneurs in the three target countries, we identified the core needs of women entrepreneurs as well as the principal technical and commercial factors that enable successful implementation and scaling in the local markets under study. This was achieved through three analytical inputs. The first of these was an extensive market assessment developed through secondary research and quantitative analysis. This covered a substantial body of existing literature in the entrepreneurial and development space, including recent work by organisations such as the GSMA, MasterCard, Goldman Sachs, the United Nations, and Vodafone. In total, we consulted more than 120 individual sources, which can be found in the bibliography.

The second analytical input was an in-country survey that was carried out in each market. These surveys were designed to validate the challenges that were identified through the secondary research on these markets, to understand how women were using mobile services, and identify their level of willingness to use mobile VAS to address their core business challenges. The sample size for these surveys was 100 women micro-entrepreneurs in both Indonesia and Nigeria, and 103 women micro-entrepreneurs in Egypt. The respondents were located in urban and peri-urban areas within 100 km of the urban centre. On average, survey respondents employed three individuals, had been in business for six years, and had some level of education. The sample size reflects both the timing and budget constraints of the project as well as the specific variables that we wanted to test through the survey. It is important to note that the survey was intended to provide further validation of the core findings but was not designed to produce conclusive findings in its own right.

Finally, the third input involved discussions with third-party commercial and non-commercial stakeholders that were undertaken to reinforce both the primary and secondary research. These discussions provided a holistic overview of the potential of mobile VAS to empower women entrepreneurs and added additional context to the go-to-market models that were established. This input further validated the potential for collaboration and reinforced a theme that emerged throughout the study, the ability of different actors to realise mutual benefit.

The results presented in this study are intended to provide a basis for organisations to understand where and how impact can be realised. It establishes a clear framework for implementing mobile solutions and identifies a set of core activities that organisations need to consider when launching mobile VAS products.

It is our hope that other organisations and market actors can take the analysis and recommendations contained herein and adapt them as necessary to catalyse *broader impact*. Ultimately, it is in sharing the information and lessons learned that we believe we can have some of our most *meaningful impact*.



3 Market Findings

In setting out to study women entrepreneurs in developing countries and how mobile technology can specifically address their needs, market analysis began with a national overview of employment and commercial, NGO, and company environments in order to best understand women's participation. Once female micro-entrepreneurs were identified as the significant segment of women in the workforce, we set out to identify the key challenges they face (Figure 3.1). For further information on our approach to market analysis, see Appendix A.

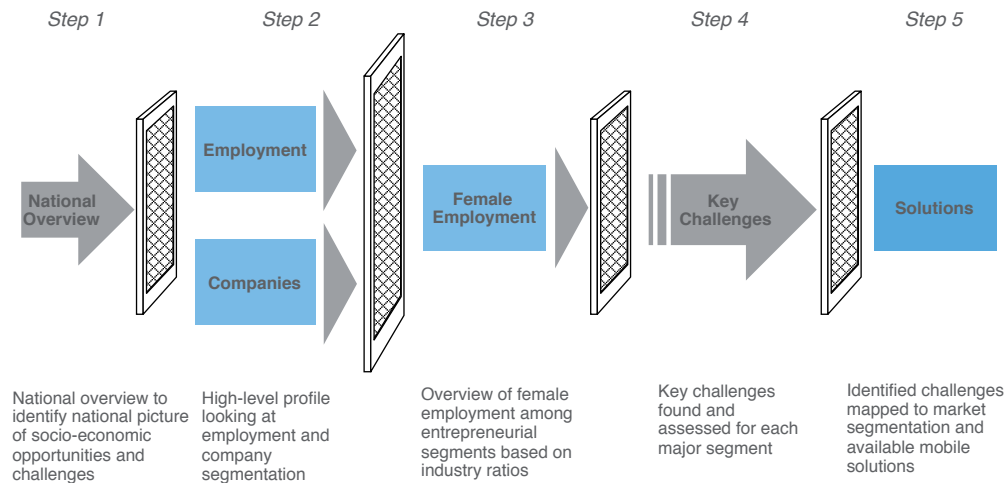


Figure 3.1: Market Findings Approach

3.1 Market Assessment

Next, we looked at the challenges faced by the women in the identified target group and determined areas where mobile programmes could impact those challenges as well as the types of services that could be easily implemented and have a significant impact on those challenges.

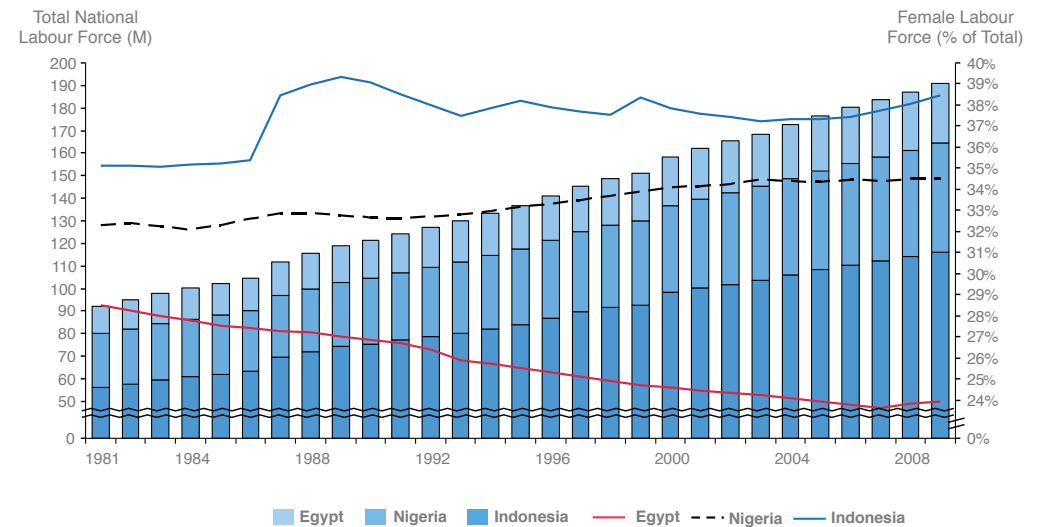


Figure 3.2: Female Labour Force Participation²

Labour Force Participation

Female labour force participation has undergone a dynamic change in each market in recent years. In Nigeria and Indonesia, there has been a gradual increase in the overall participation of women. Conversely, Egypt has seen a decrease over time. The roles that women take within these economies have broadly increased in importance. According to Tambunan (2006), this trend is rooted in the increasing recognition that women in entrepreneurial positions can substantially influence a reduction in poverty through their contribution to the creation of new enterprises, economic growth and social development.

The impact of female participation in the labour force is further supported by independent studies such as those by MasterCard Worldwide (2010) and Goldman Sachs (2012). These studies emphasise that “women’s involvement in economic development has been recognised as important, especially in the area of entrepreneurship” (Okafor and Mordi, 2010). Additionally, as noted by MasterCard Worldwide (2010), women entrepreneurs “are more likely to employ women, resulting in higher labour force participation by women...”.




Contribution to:			
	 Egypt	 Nigeria	 Indonesia
GDP	25%	37%	53%
National Employment	84%	>90%	90.98%
Private Sector	91.9%	>90%	98.85%

Figure 3.3: Economic Impact of Microenterprises⁴

The Importance of Microenterprises

Microenterprises represent a significant economic segment in all three markets, accounting for more than 90% of all private sector companies³. The significance of this segment is not just related to the absolute number of companies, but also to their relative contribution to GDP and national employment.

While the distribution of companies differs across the three countries, economic activity in each is clearly driven by microenterprises. The absolute number of employees associated with these enterprises demonstrates their importance as a source of employment within both the formal and informal markets.

In each market, businesses with fewer than five employees make up the bulk of the workforce (Figure 3.4). Growth in this segment, both in terms of the number of new entrepreneurs as well as the ability to expand existing businesses, can generate greater employment and has the potential to increase individual income.

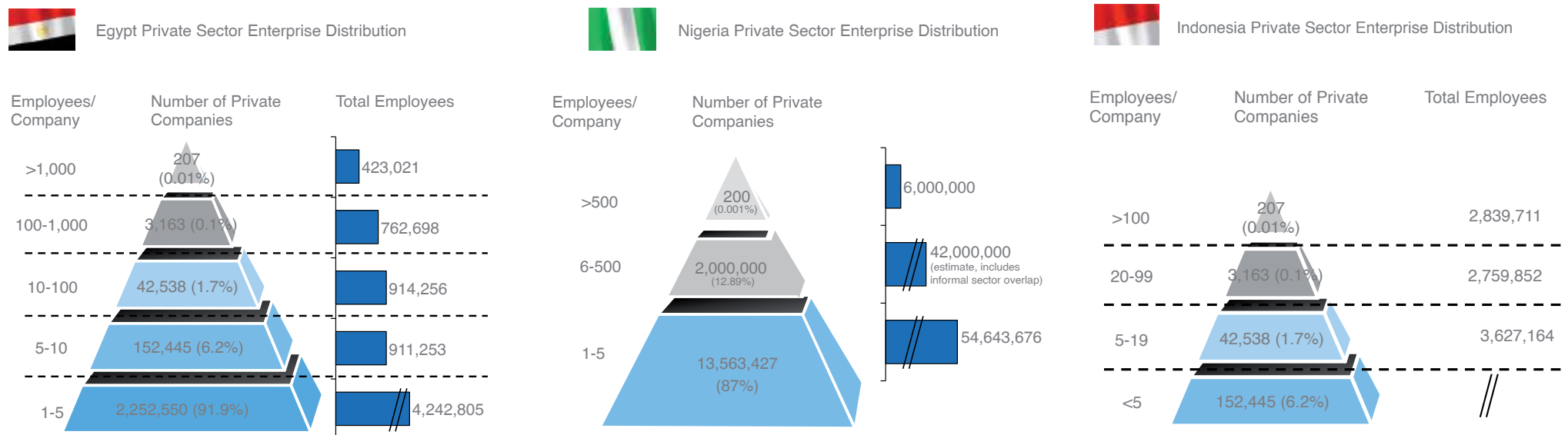


Figure 3.4: Private Sector Enterprise Distribution⁵

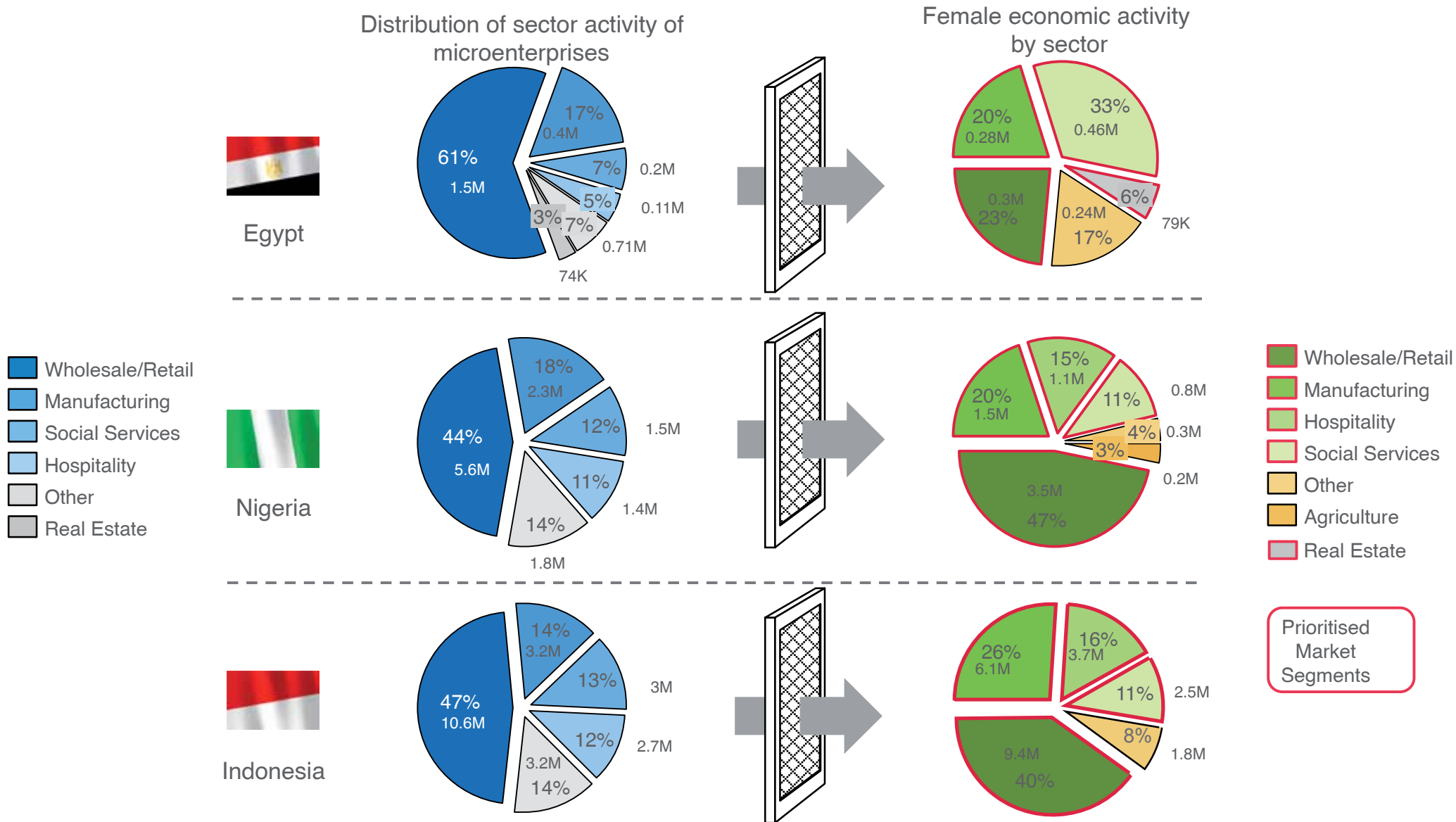


Figure 3.5: Activity of Women across Different Micro-entrepreneurial Sectors⁶

These quantitative findings are further supported by a substantial body of literature that highlights the importance of microenterprises to economic development in emerging markets. As noted by Sanusi (2003), Lingelbach, Viña and Asel (2005) and UNDP (2005), this segment is significant because of its size as well as its ability to effectively serve local markets.

Entrepreneurial Activity of Women

The activity of women within the micro-entrepreneurial segment is concentrated in four sectors: wholesale and retail, manufacturing, social services and hospitality. This pattern was exhibited in each of the three markets, with significant female economic activity in each of these sectors.

As noted by UNDP (2005), the concentration of micro-entrepreneurial activity suggests that it is possible to target a significant proportion of women entrepreneurs across a discrete number of business sectors. As illustrated above, in addition to agriculture and petroleum, these sectors constitute the primary sectors for female economic activity in each market⁷.

The position of women entrepreneurs across these sectors frames the challenges and opportunities for further growth and empowerment. An analysis by MasterCard Worldwide in 2010 illustrates that: “In their role as SME owners, [women] are increasingly becoming recognised for generating employment, driving exports, and contributing to local developments and innovations” (MasterCard Worldwide, 2010). This finding was further reinforced by a recent study carried out by the GSMA, which found that “73% of [women respondents] report an interest in entrepreneurship” (GSMA, 2012). Collectively, these findings suggest that female entrepreneurs represent a unique and growing market segment.

Challenges faced by women entrepreneurs

The challenges faced by women entrepreneurs are strongly aligned with the different market sectors identified above. Our analysis revealed that the nature of these challenges is not specific to any one sector but spans sectors. This finding was reinforced through additional secondary analysis and stakeholder interviews. Entities such as Nokia and studies by independent institutions such as the International Finance Corporation (IFC) and the Egyptian Ministry of Finance echo that there is a need “to ensure that women who already have their own enterprises have adequate access to the resources and supports needed for sustainability and growth, that is, financing, technical and business management training, information, business development assistance, business networks, and technology”⁸. While the specific form these challenges take differs depending on the local context, the nature of these challenges is broadly similar.

The results of the surveys that we conducted in each market further reinforce this finding. Across Indonesia, Egypt and Nigeria, the challenges expressed by individual women micro-entrepreneurs coalesced around common themes.

In Alexandria, Egypt, Leila Mustafa provides private tutoring in mathematics and science to high school students. Twenty-six years old and university-educated, Leila had difficulty finding a job and turned tutoring into a career. She has had a hard time launching her occupation as a business, however, saying that marketing is the central issue. Trying to target a middle-class population segment, Leila has found that she has had to develop innovative approaches to addressing the needs of her clients who come from more traditional backgrounds.

Marketing was a common concern across the markets. With many women becoming entrepreneurs out of necessity, they are constrained by limited skills in business development and do not know about or have access to the tools they need to grow their companies.

Much like Leila, Elizabeth Tinunbu in Lagos, Nigeria, needs a way to access a broader market for the traditional children’s toys she makes and sells. Like Leila, she got into business in order to earn money and help support her family. She started off as a sole-trader, demand for her products grew and she now employs three other people. While she has found a niche market and strong demand for the products she sells, her distribution is based on a limited number of person-to-person agreements with small stall and shop owners in her community.

Elizabeth wants to grow her business, but says she can neither find the proper distribution channels that allow for growth nor reliably source the materials she needs.

	Nigeria	Operations	Mobile Context
Name	Elizabeth Tinunbu	Based in Lagos, Elizabeth and three other employees make children's toys. She distributes her products via market stalls and small shops with which she has distribution agreements. She has been operational for four years and started making toys out of necessity to support her family. She initially began as a sole-trader but her profitability has slowly increased allowing the microenterprise to grow in terms of volume produced. This growth has been based on targeting a niche market that exists from demand for traditional Nigerian toys.	The main business challenges she has cited as hindering her company's growth include: difficult access to markets to promote and sell her products, thus she is confined to traditional distribution channels and lacks exposure to – and the ability to – fluctuating raw materials prices and sizing her competition. Access to a digital marketplace, accessible over either WAP or SMS, would help Elizabeth market her products to a wider audience and get a better understanding of the prices she should be charging to maximise her profit.
Location	Lagos, Nigeria		
Business	Children's Toys		
Type	Manufacturing/ Retail		
Source	Primary Research		

Case Study 1: Elizabeth Tinunbu

In Jakarta, Amisha Chalid has a hard time sourcing materials for her wedding dress boutique. Like many others, she also faces problems in finding qualified staff with experience in sewing and retail. While Amisha could benefit from the marketing tools that Leila and Elizabeth might use, her primary concerns relate to access to appropriate labour and materials.

The testimony of these women and hundreds of others reiterate both the relevance and the significance of the challenges that were identified through the market analysis.

	Indonesia	Operations	Mobile Context
Name	Amisha Chalid	Currently makes and sells made-to-measure wedding dresses. Based in Jakarta in a small shop, Amisha has been working in the industry for the last 13 years and opened her shop three years ago. Her clients are all based in Jakarta. Her shop has had a consistent revenue stream since opening. Marketing is a key business challenge to the problems she faces, but sourcing quality materials at an affordable price is considered an even bigger problem. Lesser problems include sourcing staff with previous retail experience and the need to lower prices substantially to compete with imports.	Marketing could be considerably eased and expanded beyond traditional channels such as local newspapers; the costs associated with marketing products using digital channels would also be lower. Mobile services identified in Indonesia, e.g. the Esia JoP service which allow employers to post opportunities and find employees with the right skill-sets, could address Amisha's lesser business challenges.
Location	Jakarta, Indonesia		
Business	Wedding Dresses		
Type	Manufacturing/ Retail		
Source	Primary Research		

Case Study 2: Amisha Chalid

Through surveys, stakeholder interviews and market analysis, we identified five core categories of challenges common across markets and industries:

- **Finance:** access to affordable and accessible credit to expand and grow sustainably
- **Information:** access to market information and data in local and wider markets
- **Distribution:** access to different distribution channels and logistics
- **Training:** access to adequate training and knowledge for business optimisation and growth
- **Business Development:** access to relevant sales networks both physical and digital, which is further inhibited by gender discrimination.

Within these general categories, we identified specific business challenges that reflect the nature of the particular constraints faced by women in the prioritised market sectors. Figure 3.6 illustrates these specific business challenges and how they relate to one another.

The impact of these challenges is not limited to one specific market sector or one specific group of women entrepreneurs, but extends across industries and demographics. With this in mind, business challenges were analysed with the intention of identifying where potential solutions could generate the greatest aggregate benefit¹⁰.

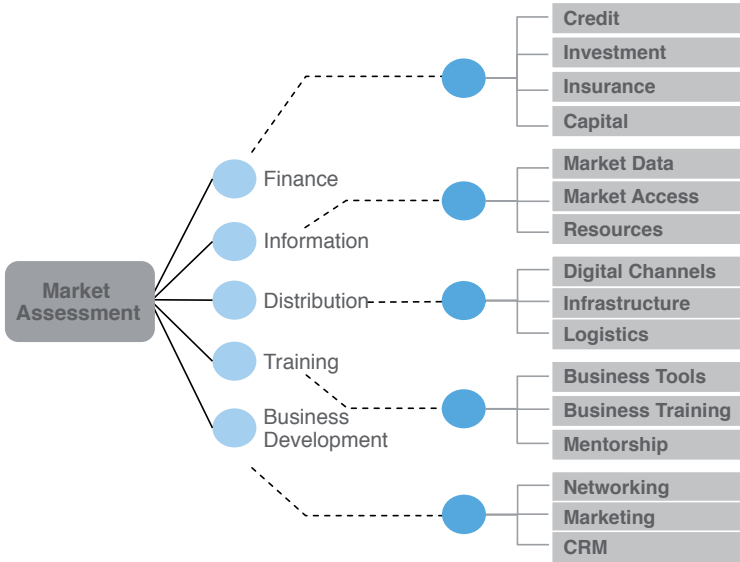


Figure 3.6: Identification of Business Challenges⁹

Finance	Credit	Affordable and easily accessible credit options to help fund and facilitate current operations and future growth
	Investment	Access to relevant investment channels and networks to fund growth
	Insurance	Awareness and access to affordable insurance and limited risk profiling
	Capital	General access to personal/business capital
Information	Market Data	Ability to access and utilise relevant market data to inform business-specific decisions; this can include access to information regarding market prices, competitors, customer demand, customer profiling etc.
	Market Access	Ability to better access new and existing marketplaces
	Resources	Ability to identify, target and engage with personnel and raw materials
Distribution	Digital Channels	Ability to leverage digital platforms to access relevant business content
	Infrastructure	Access to and quality of infrastructure supporting business activities
	Logistics	Access to and quality of sourcing, supply chain management and logistics

Training	Business Tools	Ability to use business-oriented tools to help in the running and growth of operations
	Business Training	Access to affordable business education and training
	Mentorship	Ability to receive functional training and receive industry-specific tips from either local business leaders or role models within the community
Business Development	Networking	Ability to engage and connect with other entrepreneurs engaged in the same activities to share skill-sets, tips and other information
	Marketing	Ability to advertise and raise business visibility, including customer engagement and retention
	Customer Relationship Management	System to help with customer retention through relationship management

Our analysis shows that the impact of these challenges is significant and spans different market sectors. While the nature of these challenges might not be surprising to some readers, we focused our analysis on determining which challenges impact the greatest number of women entrepreneurs so that we could understand the scale of potential solutions.

Similarities Across Markets

The above-mentioned finding established the nature of the challenges facing women entrepreneurs across different market sectors. As the different case studies illustrate, these similarities extend across market sectors as well as countries. We used the survey analysis for each country to further validate the relevance of these challenges and understand what issues particularly resonated with women entrepreneurs.

Figure 3.7 illustrates the challenges that have relevance and significance for women entrepreneurs in each country.



Figure 3.7: Mapping of Challenges Facing Women Entrepreneurs

While the relevance of these challenges varies by market, there is a group of core challenges that can be seen to resonate strongly with women entrepreneurs in all the markets studied. Irrespective of the issues of credit and capital, these challenges are centred on the ability of women entrepreneurs to market their products, obtain necessary resources and make more informed business decisions. The similarity of these challenges across the three markets was further reinforced through external stakeholder discussions. Entities that have researched the nature of these challenges, such as Nokia, Grameen, and GSMA, note that the primary business challenges facing women entrepreneurs are broadly similar throughout the world.

Figure 3.8 further reinforces this finding, with more than 80% of respondents across the three markets indicating that they believed that addressing the most significant business challenges identified by this study would yield an increase in the value of their business.

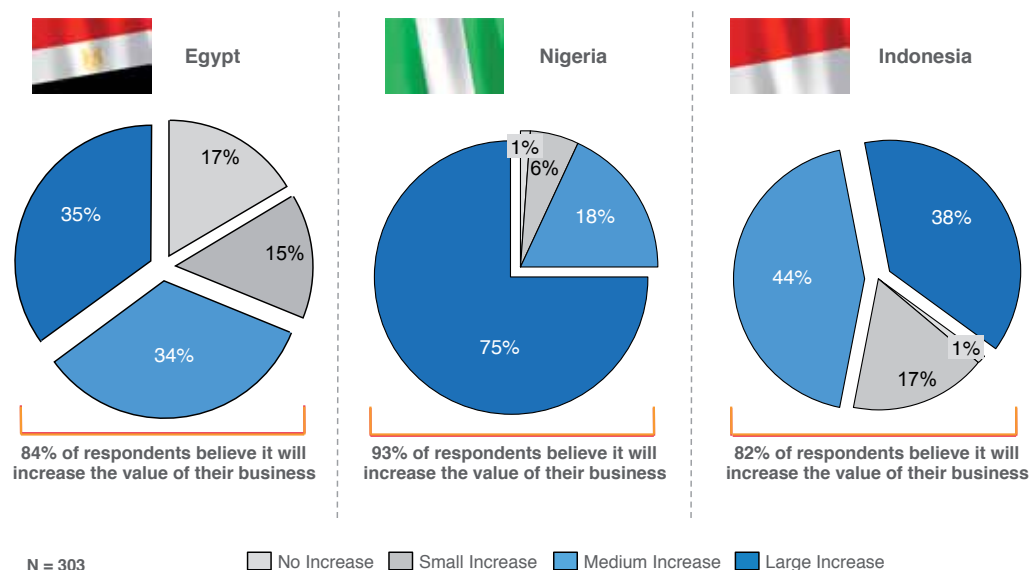


Figure 3.8: Perspectives of Women Entrepreneurs on the Potential Impact of Addressing Challenges

Sizing the Impact

Having determined that women micro-entrepreneurs in Egypt, Nigeria and Indonesia make up a sizable portion of these markets and face similar business challenges, we will now look at the impact that addressing these challenges could have.

In our study, we assessed these different challenges and scored the potential impact of addressing each one according to the following six parameters:

- **Availability** – The availability of resources to an entrepreneur in each market. An example of this would be the amount of market data available to an entrepreneur in a specific market in order to make an informed decision.
- **Affordability** – The cost associated with accessing and acquiring specific resources in each market. An example of this would be the cost associated with acquiring market data in order for an entrepreneur to make an informed business decision.
- **Social Stigma** – The level of constraint associated with socio-cultural stigmas. An example of this would be the social stigma associated with a woman entrepreneur negotiating prices with a male counterpart.
- **Quality** – The quality of the resources available to an entrepreneur in each market. An example of this would be market data that is available and reliable but which is not detailed enough to inform specific business decisions.
- **Latency** – The time and ease with which an entrepreneur can access relevant resources in each market. An example of this would be the abundant availability of market data but the high level of difficulty associated with accessing this data.
- **Reliability** – The degree of reliability of relevant resources accessible to an entrepreneur in each market. An example of this would be the reliability of the market data made available to an entrepreneur based on the frequency at which the data is updated.

The results of our analysis are shown in Figure 3.9. While the challenges are significant across all the markets, as demonstrated by the results of the survey analysis, the potential impact of addressing a specific business challenge varies across each of the three markets. In Figure 3.9, the 'marker' for each challenge depicts the degree of impact that would be made if that specific challenge were to be addressed for women entrepreneurs, for each of the three countries. The scores in Figure 3.9 are based on a quantitative model that is further explained in Appendix A.

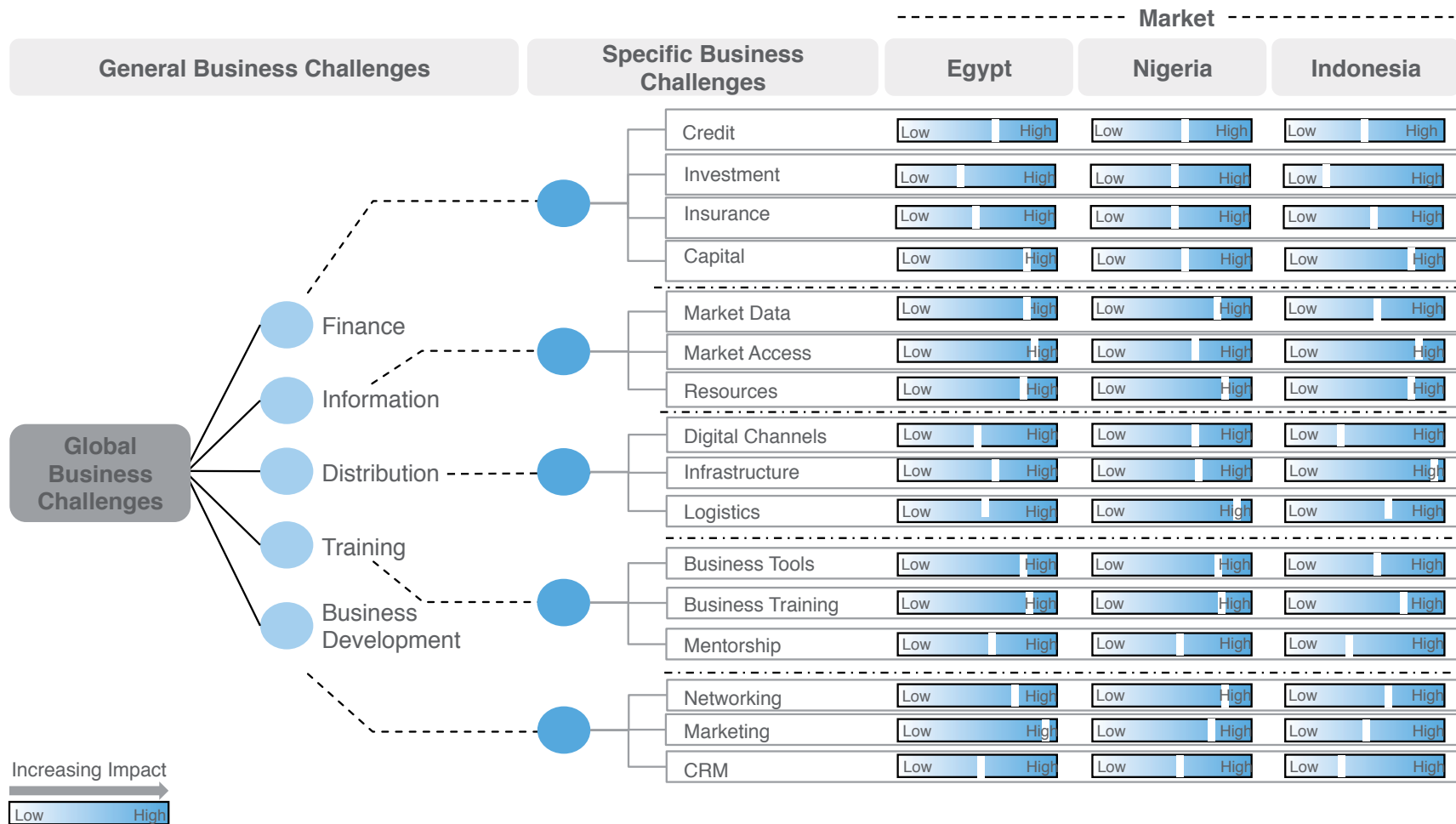


Figure 3.9: Scoring the Impact of Challenges

3.2 Mobile Context

Before applying what we have learned from the first part of our market analysis, we need to take into account the wider mobile environment in each market. Understanding the overall penetration and usage of mobile in each of the target countries is important in establishing the potential impact that mobile VAS could have on addressing key business challenges.

In this next phase of our analysis we assessed the mobile environment in each market for five key dimensions. These dimensions directly influence the implementation and uptake of mobile VAS in these markets.

VAS Drivers	Rationale	Assessment
Mobile Penetration	<ul style="list-style-type: none"> Determine broad scope of mobile usage Identify the potential ability for mobile to address different population segments 	<ul style="list-style-type: none"> Number of subscribers and overall market penetration 3G penetration
Competitiveness	<ul style="list-style-type: none"> Greater competition results in downward pressures on price Increased competition drives product innovation as mobile operators try to differentiate between one another 	<ul style="list-style-type: none"> Number of market players Market share over time Churn
Usage Patterns	<ul style="list-style-type: none"> Increased data usage reflects greater use of mobile beyond voice, particularly for mobile applications Greater data usage results in long-term downward pressures on price margins 	<ul style="list-style-type: none"> Data versus voice usage ARPU Handset sales
Social Drivers	<ul style="list-style-type: none"> Reflects comfort of population segments in using technology for social interaction and networking Underpins adoption of non-voice applications in the market 	<ul style="list-style-type: none"> Facebook penetration Split by gender and age
VAS Environment	<ul style="list-style-type: none"> Highlights different areas in which mobile VAS can fit Provides basis for assessing what technology channels are possible in the market environment 	<ul style="list-style-type: none"> VAS revenues VAS mapping

Figure 3.10: Dimensions for Mobile VAS Uptake

Mobile Penetration

One of the most important factors in determining whether new mobile VAS solutions are likely to be adopted in a given market is an understanding of how many people use mobile devices. If a population already uses mobile phones extensively and is comfortable with different types of mobile VAS, it will be easier to introduce new services targeted at women entrepreneurs.

Figure 3.11 shows that, while mobile penetration differs across the countries studied, there is a high degree of mobile usage in each of the three countries.

Even in Nigeria, which has the lowest penetration, indicators suggest that the population has a large degree of comfort in using mobile technologies. This is particularly the case in urban and peri-urban environments, where mobile penetration – particularly amongst women – is higher than in rural population segments. With such high penetration, the development of new mobile VAS has significant potential.

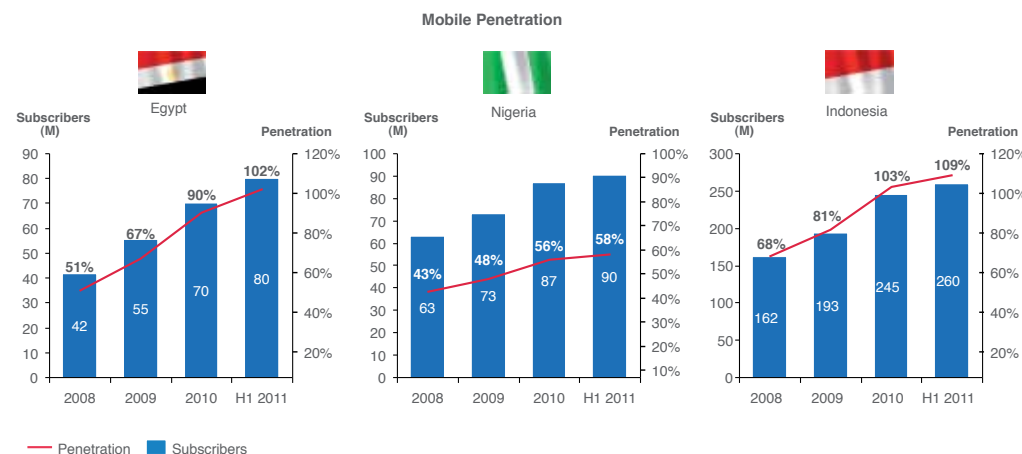


Figure 3.11: Mobile Penetration¹¹

Market Competition

Underscoring the development and uptake of VAS is the high growth rate in the mobile market in these three countries. This growth is fuelled by increasing competition in each of the three markets. A high level of competition is particularly apparent in Nigeria and Indonesia; there are six or more players in both of these markets.

This competition impacts the development and usage of VAS in two principal ways. The first is increasing investment in mobile infrastructure in order to meet greater network demands generated through additional subscribers. This increase in infrastructure development – particularly in 3G networks – enables faster data applications and more developed services at lower cost.

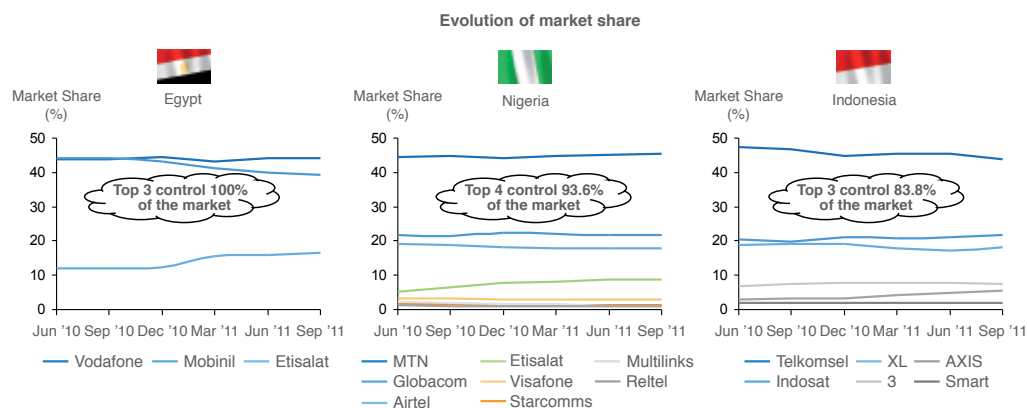


Figure 3.12: Mobile Competition¹²

The second is the benefit that MNOs derive from offering new services in addition to voice and short message service (SMS) communication. These VAS traditionally focus on entertainment and media such as ringtones, graphics and games. For MNOs, these services drive brand differentiation and reinforce the value proposition for subscribers.

Usage Patterns

In addition to market competition, the mobile environment in these countries is shifting away from voice towards increasing data usage. Combined with increasing competition and tighter price margins, these trends indicate a broader shift towards greater mobile penetration across lower income brackets. With handsets and services becoming increasingly affordable and operators competing for new users, lower income segments have become attractive customers.

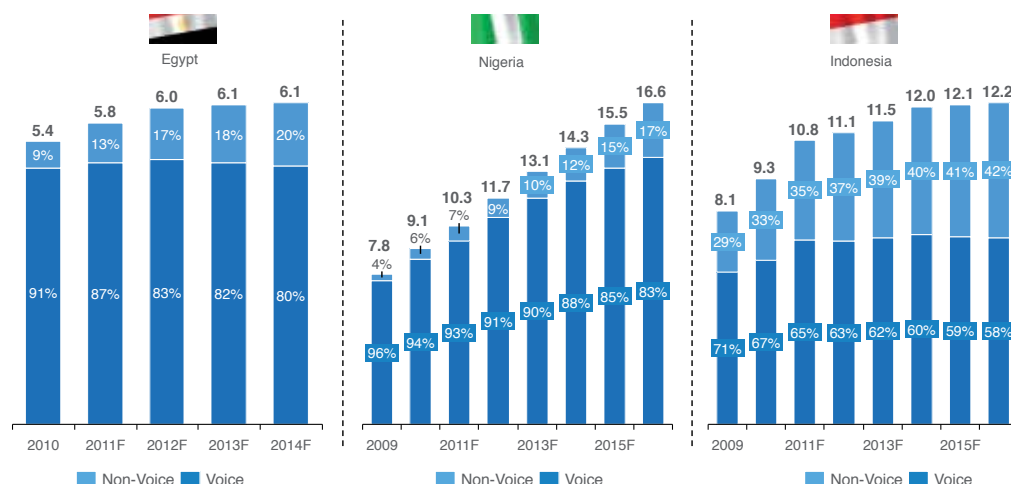


Figure 3.13: Data and Voice Usage and Revenue (US\$ BN)¹³

As a result, MNOs are designing strategies that are tailored to new subscriber segments, such as lower-income subscribers. These strategies include flexible pricing and new products that emphasise particular content and functionalities.

This trend underscores a broader shift by MNOs to develop and incorporate new functionalities into their core value proposition. Services such as M-Pesa in Kenya enable customers to pay for goods and services through their mobile phone, check on their balances and authorise transactions. Others, such as Nokia Life and Google SMS, deliver information services on topics ranging from agriculture to business training and health. These examples illustrate the potential impact of mobile VAS in developing markets and reflect the trend towards increasing integration of mobile VAS with traditional phone features¹⁴.

These trends suggest that MNOs see increasing benefit in introducing non-voice VAS as a way of generating new revenue. The impact of these trends is highlighted in Figure 3.14. As greater revenue is generated from non-voice mobile services, MNOs will likely look to new segments – such as women entrepreneurs – as the basis for developing new products and services.

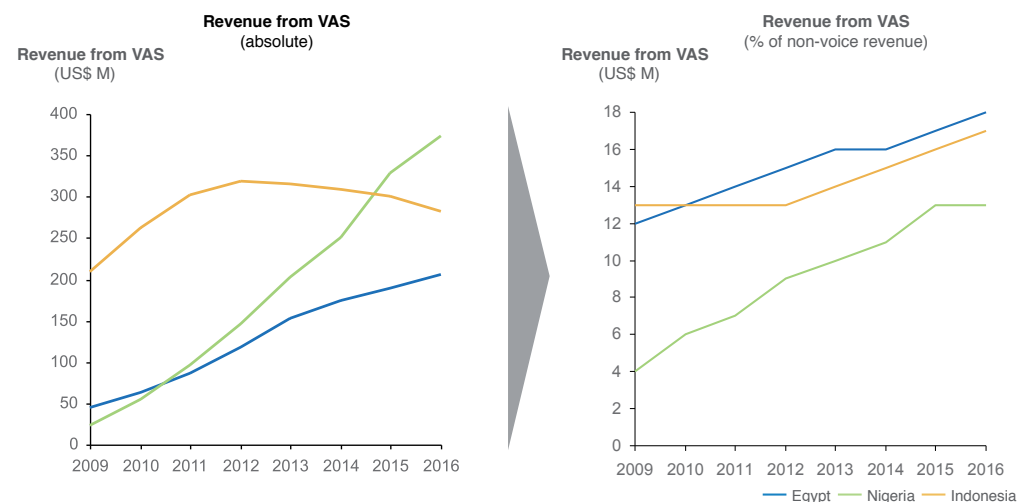


Figure 3.14: Mobile VAS as a Component of Revenue¹⁵

These market findings were further reinforced by the results of the country surveys, as demonstrated in Figure 3.15. The responses from women entrepreneurs revealed that mobile usage extended beyond voice to include social media, gaming, internet access and other media. These VAS were used on average four times per day – illustrating that women entrepreneurs are increasingly likely to use their mobile for more than voice and SMS communication.

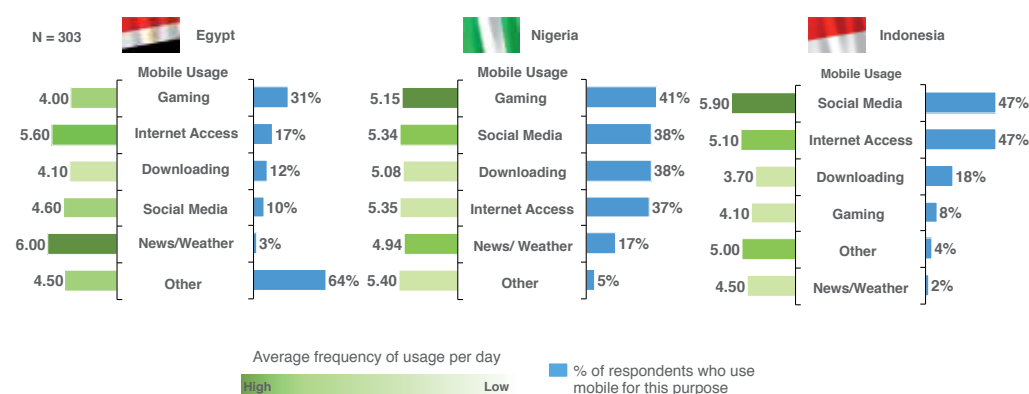


Figure 3.15: Mobile Usage by Women Entrepreneurs¹⁶

The market analysis and country surveys highlight that women entrepreneurs are not only an important market segment for MNOs, but are also active users of existing VAS.

These trends were further substantiated by the responses that women entrepreneurs provided through the surveys. A woman micro-entrepreneur in Egypt noted that addressing her challenges would *“really help me focus on running my business and growing, I don’t want to worry about my electricity”*¹⁷, while a woman in Nigeria said that: *“I have big visions for my company and I know I can make them come true if I have better access to marketing”*¹⁸.

Impact of Social Media

Social media is becoming an increasingly important channel for women and men to network, learn, and access information in many emerging markets. Within these markets, research has shown that Facebook is now accessed principally via mobile web (Social Bakers, 2011a, 2011b, 2011c). This underscores the potential impact of social media as a platform for offering entrepreneur-oriented VAS. Moreover, it illustrates the pervasiveness of mobile and its power in providing access to internet-based content. This is especially apparent in Indonesia, where Facebook is the most visited site through the Opera Mini mobile browser.

Looking at women’s usage across the three markets, Facebook statistics show that women make up on average 36% of the 53 million users (Figure 3.16). Of these women, an average of 69% are between the ages of 18 and 34. This is also the category with the highest average mobile ownership and usage within each of the markets.

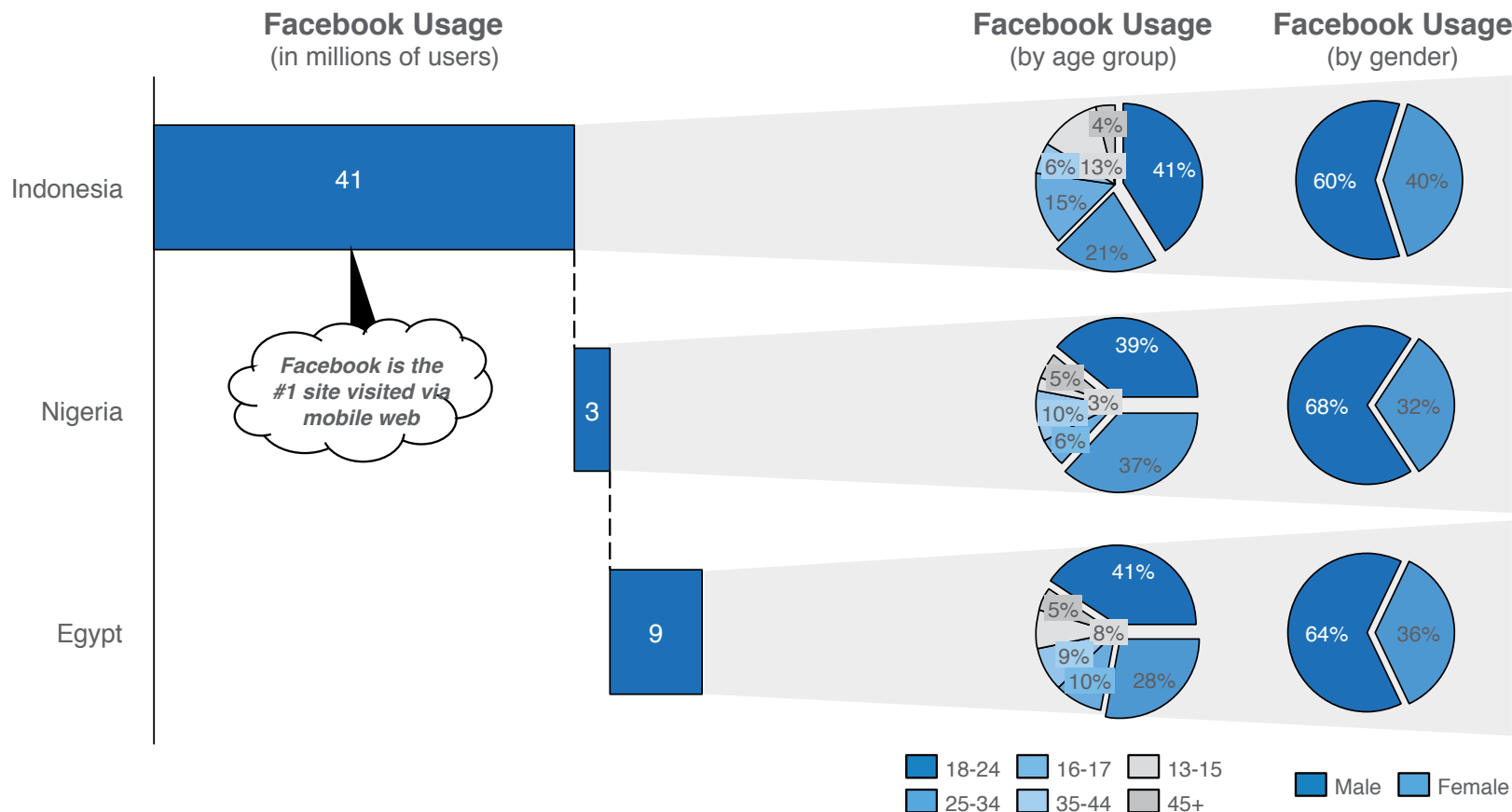


Figure 3.16: Social Media Usage¹⁹

While Facebook usage is disproportionately high in Indonesia, Nigeria and Egypt represent markets with some of the highest aggregate social media usage in Africa. Moreover, data suggests that strategies aimed at increasing the penetration of social media are being increasingly aimed at women.

While social media is not in itself a cure-all to bridge information deficits or promote socio-economic empowerment, it can be a useful indicator for understanding how population segments are engaging with digital content. The shift towards social media reflects increasing comfort with digital and mobile channels as well as an overall increase in the speed and availability of information. This latter effect could drive more connected networking and mentorship opportunities between women. It could also be effectively applied to distribute more transparent and efficient market data to target audiences.

Mobile VAS Environment

Mobile trends and social media use underpin the overall growth in the usage of mobile VAS. To assess the case for the development of mobile VAS applications that address business challenges facing women entrepreneurs, we looked at existing mobile VAS products in the market. These products can be broadly grouped into three categories: communication, commerce and transactions, and infotainment. Figure 3.17 shows how these categories include many different potential products, each of which can be tailored to a specific market or community.

Mobile VAS that address entrepreneurial challenges span these different categories. For instance, SoukTel is a mobile VAS provider that connects job-seekers with potential employers using SMS. This application falls under both the communication and infotainment categories. Other mobile VAS providers, such as CellBazaar in

Bangladesh, provide a mobile marketing and advertising platform using SMS. Such applications fall under the commerce and transactions category.

Assessing Ease of Implementation

This section examines the ease of implementing mobile-based solutions that address the challenges identified in the previous section. To do this, we weighed the technical and functional requirements associated with addressing each challenge. These two dimensions impact the level of effort required to address a specific business challenge using mobile VAS.

Functional Requirements	Technical Requirements
<i>Stakeholder participation requirement:</i> The amount and degree of participation required from external stakeholders in each market to implement a mobile VAS which addresses a specific business challenge.	<i>Social media:</i> Assessed on the basis of the dependence on and familiarity with social media platforms for the development and delivery of a mobile VAS which addresses a specific business challenge
<i>Coding requirement:</i> The level and scope of technical coding required in order to develop a mobile VAS which addresses a specific business challenge.	<i>Data:</i> Refers to the data usage requirement of a mobile VAS which addresses a specific business challenge and the subsequent degree of data penetration and coverage (e.g. national 3G coverage and the degree of advanced phone penetration)
<i>Implementation cost:</i> The costs associated with implementing a mobile VAS which addresses a specific business challenge.	<i>Existent Dominant Technology:</i> Assessed on the basis of the ability of the existent dominant technology in each market to cater to the technical requirements of a mobile VAS which addresses a specific business challenge
<i>Time to market:</i> The time required to implement a mobile VAS which addresses a specific business challenge based on the criteria above.	

Communication			Commerce & Transactions			Infotainment		
▪ Services creating additional channels for communication, which can be grouped into three categories: <ul style="list-style-type: none">– Synchronous (video call, voice call, chatting, etc.)– Asynchronous (SMS, MMS, email, etc.)– Advanced call services (call waiting, forwarding, etc.)			▪ Services allowing subscribers to conduct commercial transactions through mobile, which can be grouped into four categories: <ul style="list-style-type: none">– Shopping (m-commerce, auctions, etc.)– Transaction (mobile recharge, credit remittance, etc.)– Personal banking (money transfer, mobile banking, etc.)– Investment (portfolio management, banking, etc.)			▪ Information, educational and entertainment services that are viewed on mobile; they can be delivered through various channels including basic ones such as SMS and more advanced channels such as portal or application stores. They can be grouped into three main categories: <ul style="list-style-type: none">– Entertainment (games, sports, music, etc.)– Information and Education (news, finance, religious, etc.)– Social applications & user-generated content (blogging, social networking, etc.)		
SMS	International Call Me Back	Missed Call Alerts	Banking and Payments	Mobile Advertising	Credit Remittance	Games	Wallpaper	CRBT
Basic IN Services	Push Email	Data Roaming	e-top Up	International Recharge	Consumer Loyalty	SMS Contest	SMS Infoservices	Religious Channel
MMS	Voice SMS	Push to Talk	Deals & Couponing	Mobile Storefront (check-out)		WAP Portal	Social	Music Station
Advanced IN Services	VPN	SMS to Email/ Email to SMS				Music IVR	IVR Premium Services	IVR Contest
Call Collect	Friends & Family	Audio Conf.				Ringtones		
GPRS/EDGE	CUG	Credit Transfer						
Bulk SMS Engine	International MMS	Vehicle Tracking / Fleet Management						

Figure 3.18 illustrates that certain challenges are easier to address with mobile-based applications than others. As in Figure 3.9 (Scoring the Impact of Challenges), the ‘marker’ for each challenge depicts the degree of ease or difficulty in addressing that specific challenge using a mobile VAS platform, for each of the three countries. These results differ per market, depending on the mobile environment and the specific requirements for each challenge. The scores in Figure 3.18 are based on a quantitative model that is further explained in Appendix A.

The next section identifies which specific business challenges we have prioritised based on their impact and the ease of implementing a mobile solution to address them.

Figure 3.17: Mobile VAS Categorisation²⁰

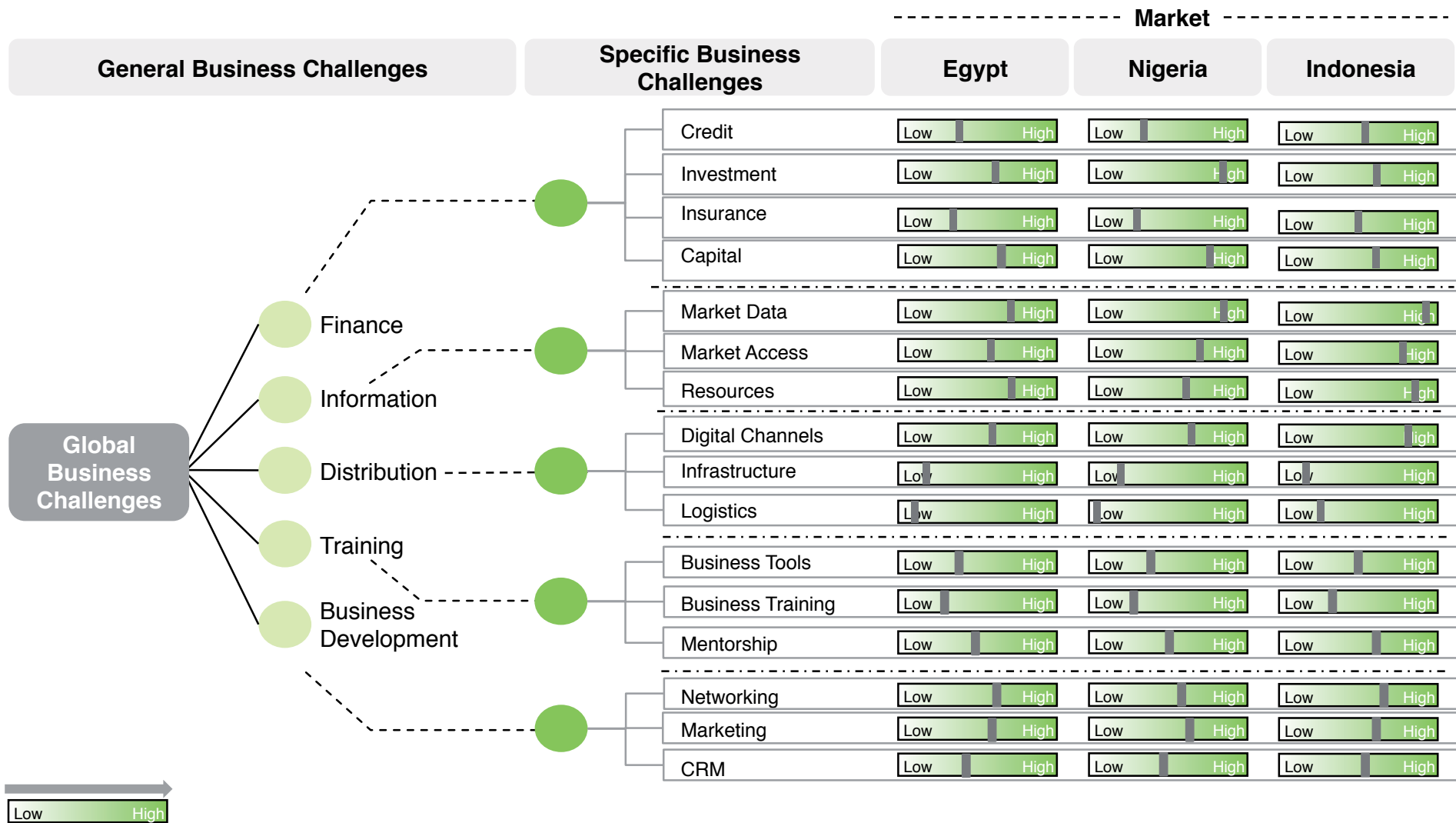


Figure 3.18: Ease of Implementation – Scoring of Challenges

3.3 Mapping Prioritised Business Challenges

In order to move forward and identify which mobile VAS products to develop in which markets, we mapped the *ease of implementation* against the *impact of challenges* identified in section 3.1. We were able to identify a set of prioritised challenges, which have the potential to have a significant impact and which face relatively low implementation barriers.

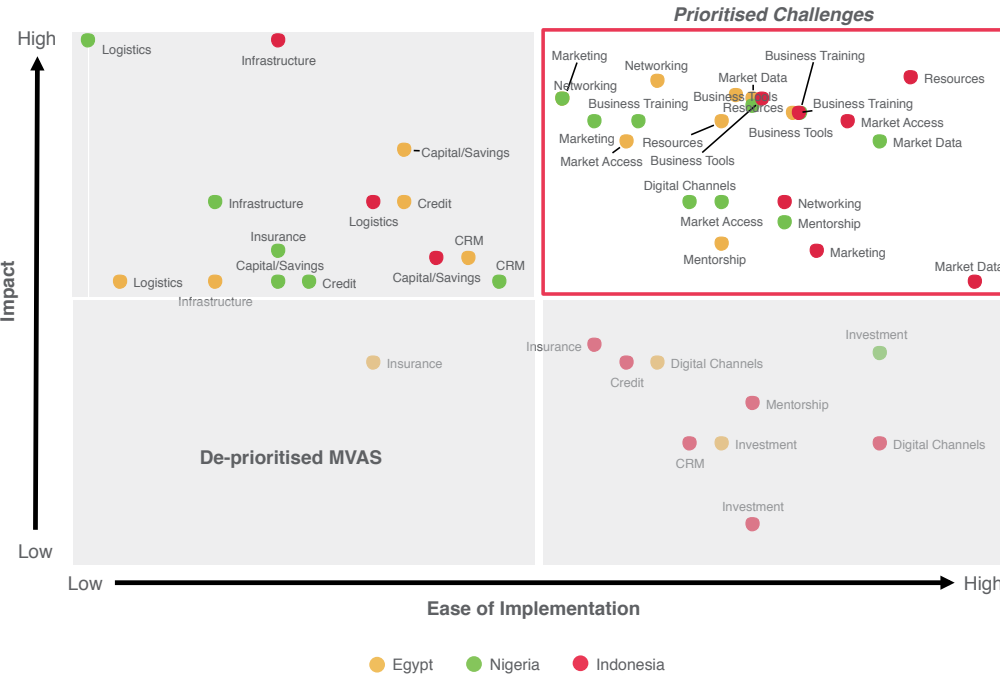



Figure 3.19: Mapping of Business Challenges

The prioritisation above was conducted with a view towards understanding where mobile VAS applications could potentially generate significant positive impact on women’s businesses. From Figure 3.19 above, we can see that mobile VAS associated with networking, providing market data and access to business training could be successfully implemented across the three markets. This mapping of mobile VAS illustrates that certain challenges could be addressed by mobile applications more quickly and easily than others.

This distinction is particularly important when considering the types of mobile services already implemented across different markets and the impact they can have. For instance, mobile money services, such as M-Pesa in Kenya and Smart Money in the Philippines, provide important avenues for affordable access to finance and savings. However, this type of service is often difficult to implement because it requires substantial consumer education, regulatory approval, and participation of multiple stakeholders in the market.

Realising the Impact

Case Study III – The Aso Oke or ‘Top Cloth’ Industry

	Nigeria	Operations	Mobile Context
Name	Aso Oke	Aso Oke refers to the ‘top cloth’ industry which produces clothing for ceremonial occasions associated with the Yorùbá people of southwest Nigeria. The challenges that the participants of this industry face include a general lack of access to information and the long lead times associated with the supply chains on which their businesses depend.	The digitisation of the supply chain through mobile telephony will impact the speed and quality of information communicated. In turn, this is predicted to improve business decision-making processes, diversify trading beyond immediate markets available, reduce the need for travel and therefore decrease the cost of trading.
Location	Southwest Nigeria		
Type	Manufacturing/ Retail		
Source	Jagun, Heeks, and Whalley (2008)		

Participants in the Aso Oke industry face a number of challenges in growing their businesses. One solution that could bring substantial commercial benefit is a mobile application that gives participants information on different types of suppliers so that they can ensure access to the necessary quantity of raw material to develop and grow their enterprises. In having access to a steady supply of material, participants can also make guarantees to their distributors to deliver a certain quantity of clothing and better respond to increases in consumer demand.

The business challenges we have prioritised are ones that can be directly addressed through mobile technology and that require minimal additional infrastructure. For organisations interested in engaging with mobile VAS to address business challenges, this mapping provides a useful guide to understanding the key areas where intervention can positively impact women entrepreneurs.

This prioritisation explicitly omits finance-related challenges. As discussed above, the principal reason for doing so is because of the complexity associated with addressing financial constraints through mobile. These constraints centre on regulatory requirements, the need for sophisticated technology platforms, the participation of multiple stakeholders, and an extensive understanding of risk and transaction processes. For these reasons, we have chosen to focus on other challenges where mobile can have significant impact.

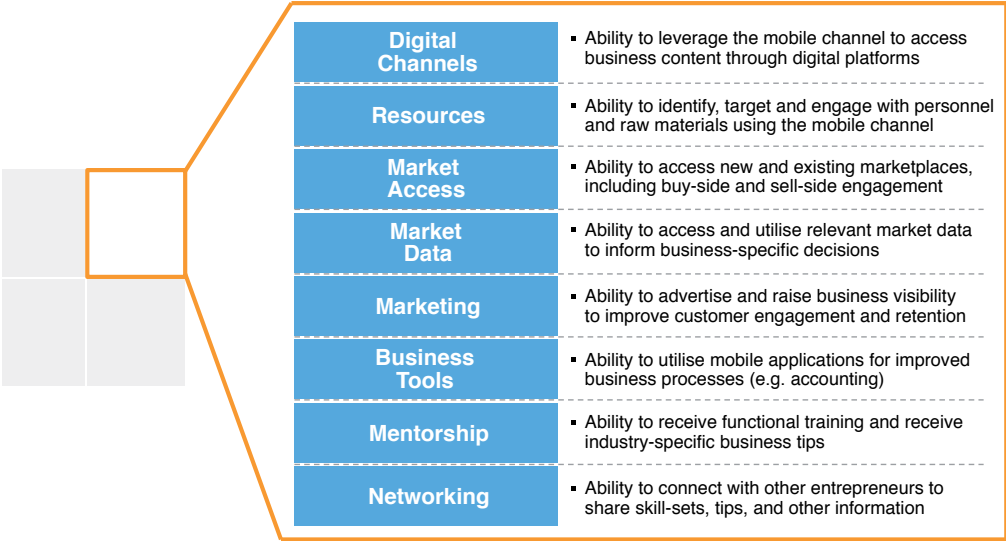


Figure 3.20: Prioritised Challenges

As we will see in the next section, existing mobile VAS solutions align to the challenges identified in this section to different degrees.



4 Mobile VAS Identification and Prioritisation

The previous section prioritised eight business challenges which can potentially be addressed through mobile VAS to deliver significant market impact for women entrepreneurs.

If you could invent a mobile solution for the challenges your business faces, what would it be?

“An SMS-based network which helps choose the required employees.”

“Something that can be easily used to locate the address of a business.”

“A service where I can advertise my business using SMS, so I can get new customers to grow the business.”

This section examines existing mobile VAS solutions that could address the eight challenges discussed above. It does this by identifying different ecosystem stakeholders that support mobile VAS creation and assessing how they might contribute to the development of tailored VAS for women entrepreneurs.

Understanding the motivations and position of these stakeholders is important for any organisation considering launching a mobile VAS product or investigating the possibility of incorporating mobile into their existing activities. This can inform an organisation about how an individual stakeholder impacts the creation of specific mobile VAS products and helps frame different implementation models.

As illustrated in Figure 4.1, the stakeholders we examined fell into five broad categories. These include (1) MNOs, such as Vodafone; (2) handset manufacturers,

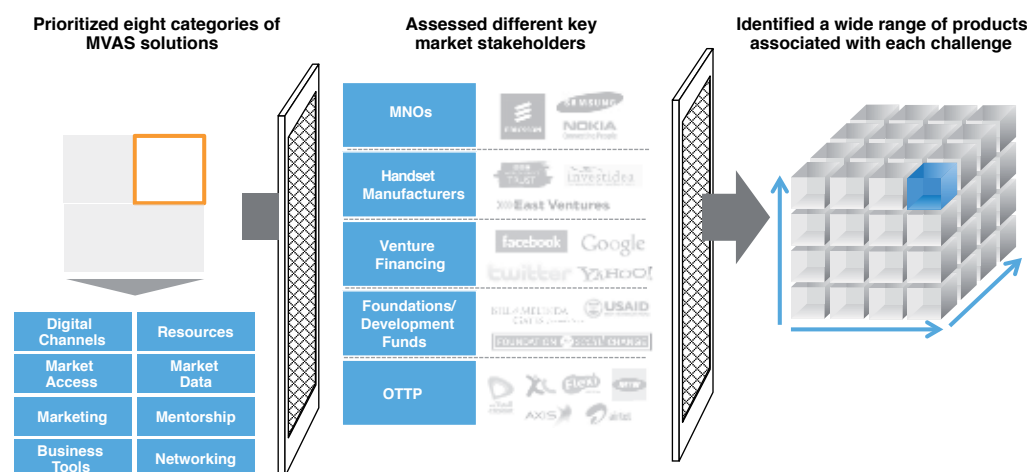


Figure 4.1: Identification and Assessment of Existing Mobile VAS Products

such as Nokia; (3) venture financing entities, such as East Ventures; (4) foundations and development funds, such as USAID and (5) OTTPs, such as Google. Through our analysis, we were able to identify a significant number of products that are aligned with the prioritised challenges and to assess their potential impact on the needs of women entrepreneurs.

This section follows the three steps illustrated in Figure 4.1 above. The first is focused on identifying the key stakeholders and explaining their significance to the development of mobile VAS. The second deals with identifying specific products in the market that map to these stakeholders. The third assesses these existing products in order to understand which of them are likely to have significant and immediate market impact.

4.1 Key Stakeholders

The first stage in assessing products was to understand what mobile VAS are currently available in the market. This required an assessment of the mobile market, its stakeholders and the value chain associated with the creation of a single mobile VAS application.

Market stakeholders were selected and evaluated on the basis of their ability to fund, distribute and catalyse the uptake of mobile VAS. The ability to generate impact is generally linked to the influence each stakeholder has over the mobile VAS value chain (Figure 4.2).



Figure 4.2: Mobile VAS Value Chain²¹

Different stakeholders can play different roles depending on where they operate in the value chain. In general, stakeholders play the following roles in developing and distributing mobile VAS:

The **content owner** has ownership over the content delivered via a specific mobile VAS. Content owners typically benefit from royalties and a minority proportion of the transaction fee realised from the end of the mobile VAS value chain.

The **content developer** creates customised content dictated by the preference of the end-user. Value is primarily derived from licensing content to the up- and mid-stream sections of the mobile VAS value chain.

The **content aggregator** collects content from multiple sources and makes it available to commercial partners such as MNOs and other technology enablers.

Content aggregators benefit from business-to-business service fees from the upstream and mid-stream sections of the mobile VAS value chain. Further value can be derived from marketing and user data analytics.

The **technology enabler** provides the technology platform to deliver mobile VAS to the end-user. This includes MNOs that distribute the services through their network; companies like Google, which use the internet to deliver services, and applications that deliver information to mobile phones via internet portals. Value at this stage is derived from the transaction fee charged to the end section of the mobile VAS value chain. Further value is potentially derived from user data analytics and marketing.

The **end-user** adopts various mobile VAS products to make use of information and improve lifestyle. Value is based on the demand model where the end-user is willing to pay a certain amount – according to different pricing models – in order to access a service.

“Women business owners in particular perceive the phone as an essential productivity tool.”

Cherie Blair Foundation for Women and GSMA (2010)

Next, we briefly examine the role of each stakeholder in order to understand where each sits in the value chain and how each impacts the development of mobile VAS. By understanding the different roles these stakeholders play in the development of mobile VAS, we can then identify which mobile VAS products are best suited to address the challenges faced by micro-entrepreneurs. Moreover, we can make better decisions about the value drivers for these stakeholders that underpin long-term sustainability and scalability in the market.

Handset Manufacturers

Mobile handset manufacturers play a variety of roles across the mobile VAS value chain depending on their position and interest in a given market. These roles are centred on leveraging their ability to provide functionalities that are inherently integrated into the mobile handset. For instance, Nokia Life is an application that is integrated into certain types of Nokia handsets. This enables handset manufacturers to be a potentially significant channel for driving the distribution and uptake of mobile applications.



Figure 4.3: Position of Handset Manufacturers in Value Chain

- **How it works** – Handset manufacturers can embed native content and applications into a handset. Through partnerships with MNOs, handsets are sold in markets according to different subsidy and pricing models. For handset manufacturers, these supply-side partnerships can impact market positioning and sales. From a demand-side perspective, applications can help drive product differentiation.

What are the characteristics of a good mobile solution?

“I want a solution that is simple and easy to access, like internet and SMS, because it enables me to market my products more easily.”

“I want services that are easy to use and available all the time, at a reasonable rate.”

- **Value drivers** – Value is derived in three principal ways. Firstly, end-user revenue, can be captured through application uptake and usage. Secondly, data analytics can be leveraged for informed marketing and advertising. Thirdly, indirect value can be realised through increased sales and brand visibility in the market. This latter benefit can be accentuated by the ability to drive further differentiation through exclusive MNO-centred content.



Indonesian mobile provider Airtel offers services like SMS directory, SMS Fax and SMS to Email. Such services could immediately be used by women like Elizabeth Tinubu in Lagos (see Case Study I) to find alternative sources of raw materials when regular suppliers fall short.

After sourcing the materials, Elizabeth could use the SMS services to fax or email an order. She would then be able to produce her traditional Nigerian children's toys more reliably, and target more distributors.

Mobile Network Operators

By creating, collecting and delivering relevant content to mobile phone users, MNOs impact the value chain in more than one area (Figure 4.4). Like handset manufacturers, MNOs have the ability to tailor and deliver content that is easy to use because it is integrated with the device. The MNOs also control how their products are marketed to different consumer groups, a key point in the chain. By integrating a particular product, like a toolbar on a phone that displays weather or exchange rates, an MNO can drive uptake of its services and differentiate itself from peer competitors.

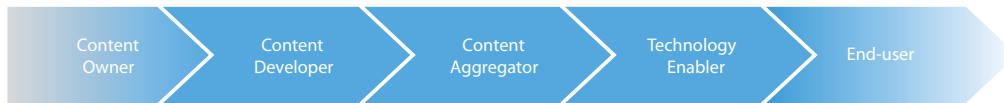


Figure 4.4: Position of MNOs in Value Chain

- **How it works** – MNOs develop mobile VAS to increase the ways in which users can interact with their phones and thus increase usage. The services also reinforce brand differentiation. This can be done either through mobile VAS products that are focused on specific subscriber segments or through universal products that are available to the overall subscriber base. MNOs develop these products on their own or in conjunction with partners from other segments of the value chain.
- **Value drivers** – MNOs primarily profit from direct service revenue (e.g. ringtones) and marketing or through differentiation in the market which leads to reduced churn and improved customer segment acquisition. In addition, MNOs can realise brand benefits associated with CSR.

Over-the-top Players

Over-the-top players such as Google, Facebook and Twitter have a significant footprint in Egypt, Nigeria and Indonesia's mobile markets owing mostly to their existing dominance and popularity on the web. Within each of the markets studied almost all of the MNOs have partnerships with the OTTPs, which facilitates delivery of services and products via mobile subscriptions. The availability of services from these stakeholders via mobile is widely accepted as an important route to increasing user sizes in emerging markets. As a result of the diversification of the delivery of services through multiple mobile platforms, end-users have more ways to access information and spend more time on their phones

- **How it works** – OTTPs directly deliver or facilitate the delivery of VAS in the market. This can take the form of platform-centred services, such as applications that build on top of core Facebook or Google capabilities, or stand-alone services offered by OTTPs themselves, such as the digital delivery of news to a phone. These OTTPs occupy all parts of the value chain and often control end-to-end aspects of content development and delivery (Figure 4.5).



Figure 4.5: Position of OTTPs in Value Chain

- **Value drivers** – OTTPs have the ability to realise value from multiple streams, including the expansion of their existent infrastructure into the mobile space. This includes, for example, user data analytics, advertising and value associated with forming partnerships with MNOs. The increase in the number of platforms via which their existing services can be accessed creates and facilitates more efficient delivery of new and already popular services/data.

Venture Financing Entities and Competitions

Venture financing can be a powerful means of identifying early stage companies and products that have not yet seen significant market uptake. While these solutions are often nascent, they can be an important source of potential innovation and product trends. Venture financing can also act on the value chain at any point, hence it has a potentially large impact (Figure 4.6).

- **How it works** – Venture financing entities typically identify and seed early stage ventures and focus on maximising commercial returns. This investment focus occurs in all parts of the value chain, where individual companies can be potentially disruptive market players. There are a variety of ways in which venture financing can occur, with venture competitions forming an important source of product identification.



Figure 4.6: Position of Venture Financing Entities in Value Chain

- **Value drivers** – Venture financing entities and competitions cover the majority of the mobile VAS value chain and are usually associated with innovation and benefits through partnerships with entities that can drive adoption and promotion, such as MNOs and philanthropic foundations. Such benefits are typically achieved by funding products/services that address the challenges of a large demographic with limited access to digital channels, thereby promoting mass adoption of services by the end-user or other parts of the value chain, e.g. user data analytics and technology standardisation.



Based in Bangladesh, Cell Bazaar has created several ways for individuals to connect with the marketplace through voice, SMS, web and wireless.

For Leila Mustafa, our tutor in Alexandria, getting information about her services to conservative families is easy using Cell Bazaar. She just creates a simple listing for her service, via SMS or on the web. When someone searches for 'tutor', her contact details are available as well as her areas of expertise. She can then speak with her prospective clients over the phone, enabling her to connect with her customers without the difficulties associated with accessing potential clients in public spaces.

Foundations and Development Funds

Various foundations and development funds²² seek to leverage technology in order to improve lives in a variety of ways. Some of the more common approaches are research, implementation of programmes, advocacy, and funding, which in the context of mobile VAS has meant contributing to a better understanding of how the applications can be effectively harnessed for socio-economic development. In many instances, these research-oriented activities have informed a broader body of knowledge and become the basis for more direct engagement. This engagement can take different forms, but generally takes on a blend of advocacy, funding and education.

- **How it works** – The business model for foundations and development funds is highly contingent on the nature, objectives, and approach of the organisation. In general, the activities – and the impact – of these organisations span a range of actors. Focused on the end-user, these activities are often designed to reinforce existing efforts by an organisation to create impact (Figure 4.7). Whether through research or intervention, this impact is usually structured around a specific vision and programme areas. To this degree, the business model often adopted by foundations is less market and more vision oriented. Activities are pursued if they resonate with and advance the broader objectives and mission of such an organisation.



Figure 4.7: Position of Foundations and Development Funds in Value Chain



A Palestinian initiative, SoukTel offers mobile VAS like JobLink, a SMS service that helps rural Palestinians find work by linking basic curriculum vitae – all created by SMS – with employment listings.

Such a service, if market conditions allowed, could address one of the business challenges we identified in Egypt, Nigeria and Indonesia: Access to skilled labour.

It is through a platform such as SoukTel that Amisha Chalid and her wedding dress boutique in Jakarta (see Case Study II) could access qualified seamstresses.

- **Value drivers** – Value from the perspective of a foundation or similar organisation is equated with improvement in the quality of life of the end-user. In terms of mobile VAS, the involvement of commercial partners is linked with the positive marketing image associated with partnering with such organisations and tapping into new segments of a market.

The above description of how different stakeholders operate and realise value or profit informed the selection of mobile services that are discussed in the following pages. We now know, for instance, that venture-backed mobile VAS are likely to be offered by early stage companies with high growth prospects but little current market traction, whereas mobile VAS developed by handset manufacturers could already have wide market distribution but be at a more mature stage of the development life cycle. As mentioned at the beginning of this section, having this understanding enables us to identify which mobile VAS products are best suited to address the challenges faced by women micro-entrepreneurs, and also the underlying value drivers for various stakeholders that underpin long-term sustainability and scalability of these mobile VAS. Greater detail about how these various stakeholders may collaborate synergistically to form a mobile VAS ecosystem is provided in Section 5.1 of this report.

4.2 Identifying Existing Products

We assessed a range of mobile VAS products that were associated with each of the key stakeholder groups examined above. Our first step in identifying these products was to carry out interviews and facilitate discussions with over 30 external stakeholder groups, including handset manufacturers, MNOs, foundations, government agencies, technology providers and investment entities.

Through this process, we identified over 200 individual products that fell into the eight needs categories of women entrepreneurs outlined in section 4 (digital channels, market data, resources etc.). Each product was initially assessed on the basis of three criteria:

- **Accessibility** of the product across a range of mobile channels such as SMS, voice and mobile internet
- **Ability** of the product to address challenges and have a wide market impact
- **Technical and commercial ability** to localise and customise applications for new purposes and functionalities in order to address the prioritised business challenges.

While not designed to be absolutely exhaustive, the 200 identified products represent a holistic overview of what is currently available in the market. These products extend across markets and address all of the prioritised challenges.

Figure 4.8 illustrates the products that were identified as a result of this approach.



Figure 4.8: Identification of Products

Identifying priority products

Marketing tools:

“ This is the one thing I need most in my business. ”
Egyptian businesswoman

Credit:

“ It increases the level of business financial capacity. It makes the business move faster and speedily. It is a means of guiding the business. ”
Nigerian leather retailer

Networking:

“ ...we can exchange information and experience with other players in the same line of business ”
Indonesian entrepreneur

Prioritising Existing Products

In order to differentiate these products, we looked at each in terms of their ability to rapidly scale and be commercially sustainable. The analysis was made based on how market stakeholders of different sizes can deliver impact using mobile VAS, as well as the value chain set out at the start of this section.

While we examined everything from early stage ventures to well-developed commercial product propositions, ultimately we settled on two sets of criteria to further narrow the product selection: technical feasibility and commercial scalability (Figure 4.9).

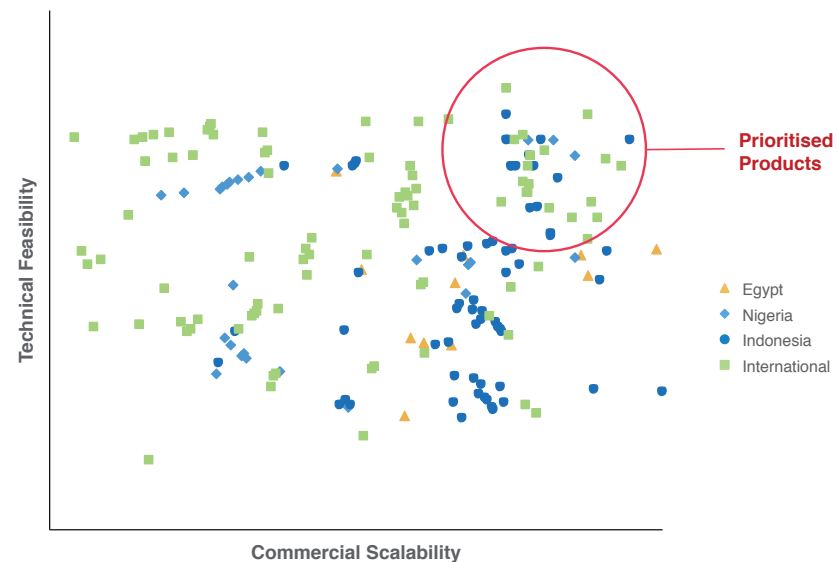







Figure 4.9: Product Prioritisation

Through this exercise, we were able to narrow the number of products that aligned with the core objectives of the study. These products exhibited high scalability, a proven value proposition and a commercially sustainable business model. Some examples of the prioritised mobile VAS include Nokia Life's market data and mentorship services, SoukTel's job matching service, Google's SMS services and Mig33's marketing capabilities (Figure 4.10). Further detail on the products that were examined and prioritised can be found in Appendix C and Appendix D, respectively.

These case studies are only samples of the potential impact that mobile VAS could have in addressing the key challenges facing women micro-entrepreneurs. Nevertheless, whether those that benefit are rural farmers in the case of Nokia Life Tools or Palestinian workers in the case of SoukTel, these examples reinforce how organisations can create powerful tools that are driven by innovation and informed by unmet needs.

Nokia Life Tools		
	Organisational Overview	Nokia Life Tools is a SMS-based information subscription service that provides relevant information to target market segments.
	Challenges Addressed	Market Data, Mentorship, Business Tools
	Geographies	India, Indonesia, China, Nigeria
	Usage and Uptake	50M users in four countries as of 4 Jan 2012
	Key Partners	Local NGOs, MNOs, content providers
	Years in Market	2 – 3
	Revenue Source	End-user subscription

SoukTel		
	Organisational Overview	SoukTel's job match is an SMS-based service designed to efficiently connect job-seekers with employers.
	Challenges addressed	Resources
	Geographies	Palestine
	Usage and Uptake	20,000 members per day (inc. AidLink)
	Key Partners	Local NGOs and MNOs
	Years in Market	6
	Revenue Source	End-user and third-party funding

Google SMS Services		
  	Organisational Overview	MTN is the exclusive delivery partner of Google SMS Services, a joint project with Grameen Foundation with the aim of providing users with web-based information through SMS.
	Challenges addressed	Business Tools, Marketing & Digital Channels, Resources
	Geographies	Uganda, Nigeria
	Usage and Uptake	-
	Key Partners	MTN, Google, Grameen Foundation
	Years in Market	3
	Revenue Source	End-user


Mig33		
	Organisational Overview	Mig33 is a global mobile social network with over 20M users in Indonesia. It is accessible over WAP and SMS
	Challenges addressed	Marketing & Digital Channels, Networking
	Geographies	Global
	Usage and Uptake	20M users in Indonesia
	Key Partners	Local MNOs, PT Numedia Global
	Years in Market	6
	Revenue Source	End-user, delivery partners

Figure 4.10: Illustrative Prioritised Products²⁵

The impact of these applications can be realised by multinational companies such as Nokia and SoukTel and Grameen. While one has inherently greater global scale, all have demonstrated the ability to use mobile technology to inform, engage, and empower. The above-mentioned examples also highlight a powerful reality in the mobile VAS market: through effective collaboration, mobile applications can incorporate more informed solutions and realise benefits across a range of commercial and non-profit stakeholders.



5 Market Implementation

This section examines the different aspects that impact the implementation of mobile VAS in the markets studied. Understanding these aspects is critical for the long-term sustainability and scalability of mobile VAS aimed at women entrepreneurs.

These aspects include:

- **Understanding the mobile VAS ecosystem** – This focuses on the position of key stakeholders identified in the previous section and the interdependent relationships which govern the creation and final distribution of mobile VAS.
- **Sizing the commercial opportunity** – This articulates the potential value associated with mobile VAS that address the prioritised business challenges. The commercial opportunities are determined by looking at both direct revenue potential and indirect sources of value in each of the three markets studied. We also establish the total potential addressable market for a single mobile VAS for each of the three markets.
- **Defining the go-to-market models** – This defines a number of models that organisations can adopt if they wish to incorporate mobile VAS into their core strategy. These models differ depending on the nature of the engagement, the amount of resources required and the potential value that can be derived from implementing the model in a given market.

This section is intended to frame the specific opportunity for non-profit and commercial stakeholders in the context of mobile VAS adoption and usage. It provides the reader with a variety of models and considerations that can be taken into account, depending on the nature and focus of the organisation.

“Four in ten women surveyed across low- and middle-income countries report enjoying increased economic or professional opportunities due to owning a mobile phone.”
Cherie Blair Foundation for Women and GSMA (2010)

By understanding the mobile VAS ecosystem and where each actor gains value, we can better determine how to position products aimed at addressing the needs of women entrepreneurs and ensure that they are commercially sustainable. Sizing the opportunity and assessing how different entities can best realise the benefits of mobile VAS is important in establishing the go-to-market models associated with mobile VAS. The final part of this section brings together the findings presented throughout the report and provides a set of implementation factors that should be considered by any entity examining the viability of incorporating mobile VAS.

5.1 Mobile VAS Ecosystem

The mobile VAS ecosystem is comprised of the market stakeholders discussed in the previous section. These stakeholders have relationships that are independent of their

position along the mobile VAS value chain. These relationships often underscore interdependencies between different actors in developing and bringing different mobile VAS products to market. For example, relationships between foundations, manufacturers, local partners and content developers shape a final product, as well as the likelihood of its success.

Figure 5.1 shows some of the relationships that affect the capabilities of individual stakeholders. While Figure 5.1 illustrates this cyclically, the form these relationships take in the market is dependent on the nature of the partnership.

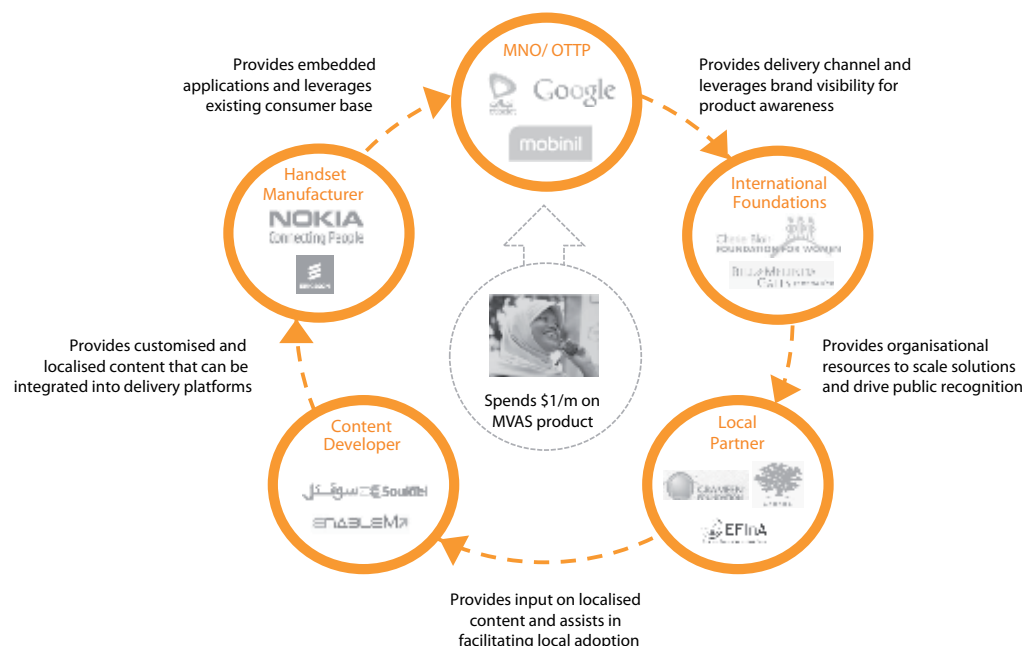


Figure 5.1: Mobile VAS Ecosystem

An example of this is the relationship between Grameen Labs and MTN in Uganda. As a local partner and content provider, Grameen Labs is focused on developing innovative, mobile-enabled solutions that target lower-income agricultural segments. The organisation has teamed up with major mobile operator MTN in order to leverage its mobile infrastructure and rural penetration to expand access to high-impact areas. MTN's high level of mobile penetration in rural areas means that Grameen's services get to the people who need them, while MTN gets enhanced market visibility and an increase in the number of people using its mobile services²⁶.

In addition to MTN, Google has been an important partner in the AppLab initiative, providing funding and technology resources for the development of new applications.

Grameen has also structured relationships with local organisations in Uganda to provide additional localised content, such as information on agricultural products and health. These organisations include other NGOs such as Brosdi, an ICT-oriented NGO focused on agricultural development, which collectively help better inform and deliver solutions that are tailored to the specific needs of the end-user²⁷.

The Grameen example underscores a powerful phenomenon: through collaboration, each individual market actor can realise more significant benefits for themselves while catalysing greater overall impact across the ecosystem as a whole. This virtuous circle connects individuals and stakeholders by realising greater impact and value through their interdependencies. While individual actors will pursue entrepreneurial-oriented mobile VAS products for different reasons, ultimately it is this ability to realise mutual benefit and catalyse market impact that stands at the core of the ecosystem.

“Mobile services which can facilitate entrepreneurship and benefit small businesses will have broad appeal in a variety of markets. These include [...] employment placement and information services that help identify and build on opportunities for entrepreneurship.”

GSMA (2012)

5.2 Sizing the Opportunity

The women entrepreneurs in our target markets represent a viable segment for commercially sustainable and scalable mobile VAS applications. We saw numerous instances of successful collaboration between different ecosystem stakeholders, resulting in innovative mobile products that were able to generate significant uptake and usage. Whether Nokia, Grameen AppLab, SoukTel, Foundation for Social Change, Qualcomm, Qtel, GSMA, or EFinA, our discussions with women entrepreneurs and stakeholders reinforced the core usage trends and reaffirmed the significant market potential of mobile applications in addressing the latent, unmet needs of women entrepreneurs.

In the previous sections we established the broad relevance of specific business challenges through market analysis, surveys of women entrepreneurs and external stakeholder discussions. This analysis showed that certain challenges were significant and that addressing these challenges could have substantial impact on the value of individual businesses. This constitutes an important first step in sizing the overall opportunity because it defines the nature of applications that can deliver the greatest potential impact. By the very nature of their significance, applications that are tailored to these challenges are likely to see the highest uptake and usage in these markets.

To further understand the scope of the opportunity, we wanted to establish the willingness of women entrepreneurs to use mobile VAS to address the business challenges they face. This willingness forms the basis of the opportunity – both for commercial and non-profit actors.

A number of studies, including those by GSMA, Goldman Sachs, Foundation for Social Change, Vodafone, and the Cherie Blair Foundation for Women have explored the demand for mobile applications from women in developing markets. These studies investigated a range of applications and segments, but generally focused on the efficacy and pervasiveness of mobile communication in driving education, information and empowerment.

In addition to this existing body of literature, our discussions with market stakeholders and our survey of women micro-entrepreneurs further reinforced that there is an opportunity for mobile VAS opportunity. One finding from our survey analysis was that women in the target countries overwhelmingly indicated that they would be willing to use mobile VAS to address their main business challenges. Additionally, on average, 83% of women entrepreneurs were willing to pay for mobile VAS applications that addressed these challenges.

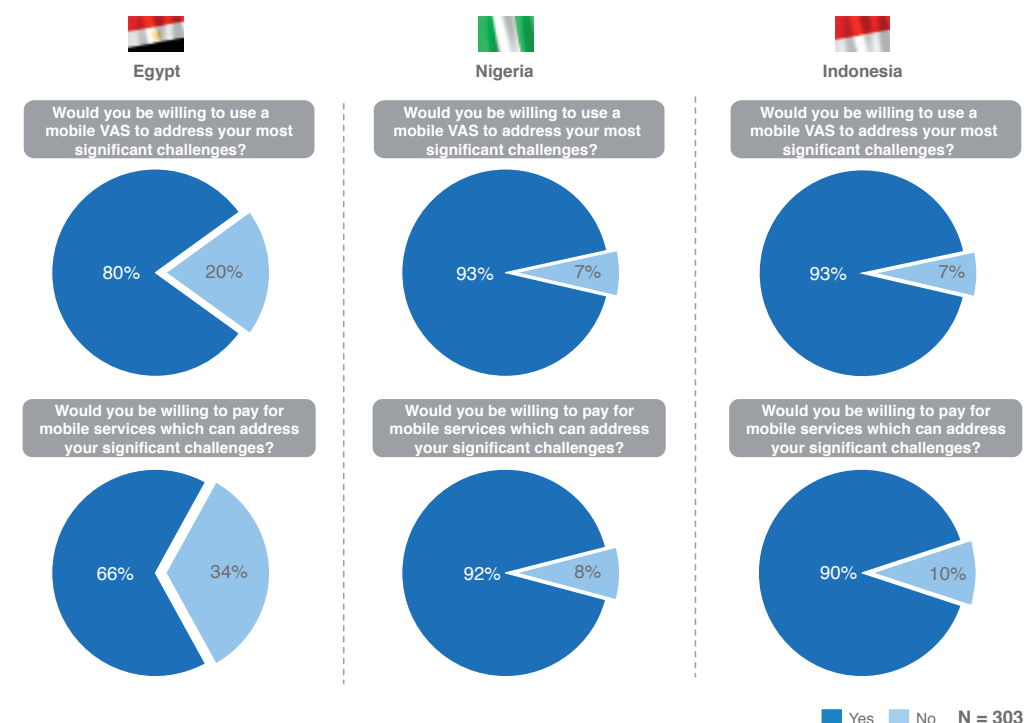


Figure 5.2: Willingness to Use and Pay for Mobile VAS²⁸

Taken together, the high willingness to use and to pay for mobile VAS is an important validation of the overall appeal of the solutions for women micro-entrepreneurs. While we had a relatively small sample size of 303 women micro-entrepreneurs, the overwhelmingly positive response suggests strong uptake potential in each of the markets.

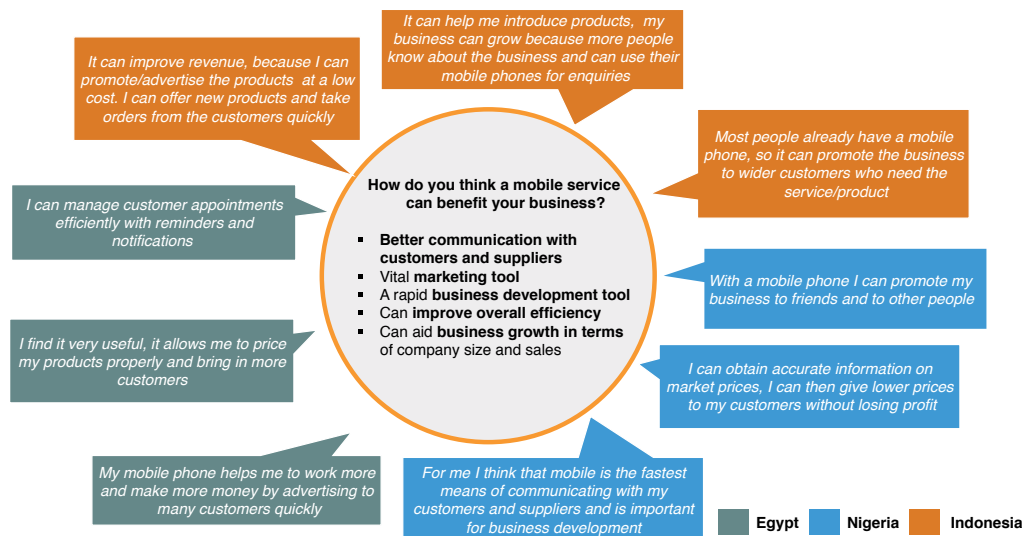


Figure 5.3: Open-ended Comments from Women Entrepreneurs on Potential Impact of Mobile on Business²⁹

These findings are further validated by the open-ended comments that respondents provided as part of the survey component of discussions. Figure 5.3 highlights some of the comments that provide insight into how individual women micro-entrepreneurs view the potential impact of mobile VAS on their businesses.

Understanding Opportunities

It is apparent from the market analysis, external stakeholder interviews, and surveys that mobile VAS presents a significant opportunity – for individual market stakeholders as well as for individual women entrepreneurs. To better understand the nature of the opportunity for different stakeholder groups, we separately examined the benefits for NGOs and commercial stakeholders. This was done in order to understand where and how partnering could achieve alignment on business outcomes.

For NGOs

For NGOs, the opportunity is focused on leveraging the mobile channel to tangibly address the challenges impacting women entrepreneurs in the market.

While the opportunity for NGOs is less defined by the revenue impact, scalability and sustainability are still key considerations. In monitoring and evaluating the impact of a mobile VAS programme, aspects such as the number of women who use the application, the degree to which it improves their business and the ability of these applications to be self-sustaining are important indicators of long-term success. The high relevance of the business challenges identified in this study, combined with a significant willingness of

women entrepreneurs to use mobile to address these challenges, suggests that mobile VAS applications can generate impact as well as substantial uptake.

For Commercial Stakeholders

Unlike foundations and NGOs, commercial stakeholders generally focus on capturing direct as well as indirect value. Much of this indirect value is centred on brand visibility, CSR and competitive differentiation in the market. As seen in the case of MTN and Grameen in Uganda, indirect value can be realised by extending the availability of certain mobile services to specific market segments through partnerships with NGOs.

In addition to indirect value, commercial stakeholders can also gain direct revenue from mobile VAS products, either through service fees associated with application usage, increased subscribers, or through marketing revenue captured from third parties. Willingness to pay for these services – either by the end-user or by third parties – can form a significant part of the direct commercial benefit. However, the MNO benefits associated with customer retention and acquisition can be an even more significant revenue stream if mobile VAS are differentiated in the market. Hence, these services often have a twofold impact on the bottom line—both on commercial returns and socio-economic benefit. For many commercial players there is a real and substantial revenue opportunity to be realised.

Types of Revenue

As illustrated in Figure 5.4, direct revenue pools were calculated based on two distinct variables. The first is the retention and acquisition benefit realised by incorporating mobile VAS into a MNO's product offering. This drives brand differentiation and can result in a MNO capturing additional customers. Through our market surveys, we found that women entrepreneurs spent, on average, four times more on mobile services per month than an ordinary mobile subscriber. This is because these women use mobile for their businesses, communicating more often and using more products than the average subscriber.

To get a sense of the potential value of this segment, we calculated what an additional 5% market share would mean in terms of revenue. By applying this 5% against the total number of women micro-entrepreneurs and multiplying this against their average monthly spend, we found that this segment presents a significant potential revenue opportunity for operators, generating, on average, an additional US\$82 million per market.

In addition to revenue associated with capturing additional market share, marketing and data constitutes a potentially significant revenue opportunity. This involves making use of subscriber data in order to target individuals with paid advertisements, compiling user data to better understand trends in mobile technology and informing third-party entities. Marketing revenue was calculated by assuming certain click-through rates (CTRs) for mobile advertisements. Based on market data and interviews with commercial stakeholders, the CTR for promotions that specifically address the entrepreneurial segment tend to be higher than for the average population.

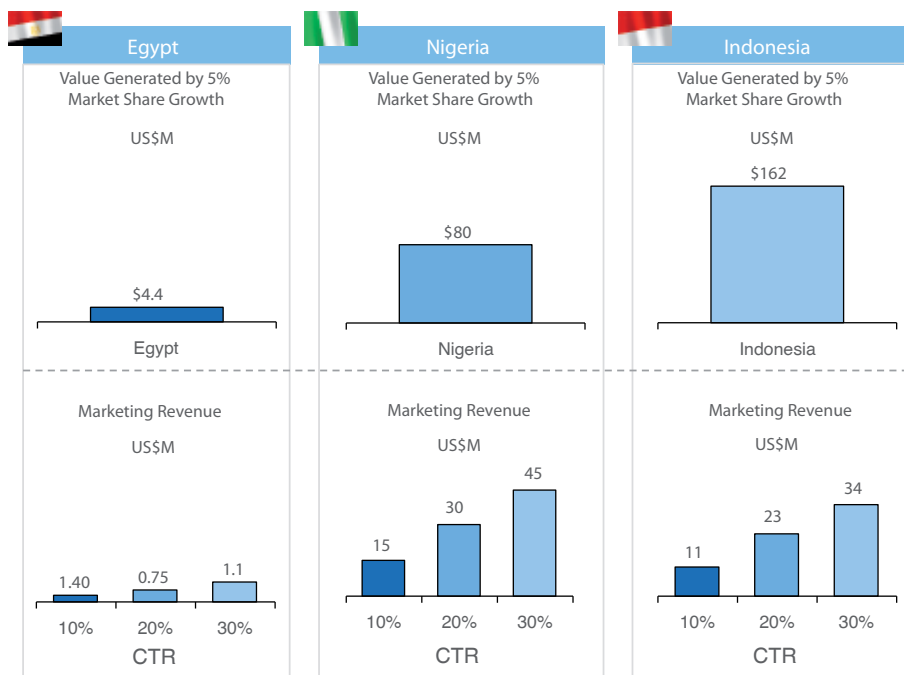


Figure 5.4: Direct Revenue Pools from Women Entrepreneurs Segment³⁰

The amount of money associated with the mobile marketing model was based on market benchmarks. This revenue stream is based on the ability to deliver marketing content as part of the mobile application and leverage usage trends to inform cross-product promotions. Marketing revenue can be derived from third parties and can also help companies to enhance customer segmentation and product targeting. This latter benefit is important because it enables companies to better understand user behaviour and how to tailor services to provide competitive differentiation as well as enhanced usage.

These revenue streams are based only on the women micro-entrepreneurs segment. If a mobile VAS were developed to address the business challenges facing entrepreneurs, it is likely that it would see uptake among the male population as well. While our analysis has not focused on this specifically, it is reasonable to assume that the revenue estimates would be higher due to product uptake by male entrepreneurs.

It should also be noted that the initial uptake of mobile VAS is accelerated in models where the underlying cost to the subscriber is negligible. The length of 'free' period offered depends on the MNO, but based on market examples, generally tends to be at least a year. While a significant aspect of the model is free, MNOs can adopt a 'freemium' model where subscribers have to pay additional fees for extra content or more frequent messages.

5.3 Realising the Opportunity

While our analysis indicated a high level of potential demand, it was through our discussions with external stakeholders and women entrepreneurs that we gained additional insight into the real significance of these applications. A common theme that emerged in these discussions was that uptake of applications was driven through a set of core elements and that the majority of these applications were developed in conjunction with two or more partners.

The importance of market collaboration relied on the ability of different actors to reinforce a common value proposition for entrepreneurs. The significance of the core elements within these partnerships differs by market but generally includes:

- **An application interface that is intuitive and easy to use.** This was a recurring theme from the primary research findings, exemplified by one of the respondents, who stated: *"I would be very happy to use my mobile phone to address my problems, but it has to be cheap and easy to use"*³¹. This was further reinforced through discussions with application developers such as Nokia, Qualcomm and SoukTel, who noted that the user experience has to be instinctive and have a low learning curve.
- **Partnerships with commercial stakeholders to drive brand visibility, distribution and technical delivery.** The importance of partnerships with well-known brands is something that was highlighted by numerous organisations, including Grameen, Vodafone, EFinA and Signal Point Partners. These organisations all emphasised that brand recognition is highly important in establishing trust in the mobile VAS product.
- **Local partners for content generation.** The overall success of a mobile VAS is determined by its ability to incorporate relevant content that addresses the specific needs of a local segment. Numerous external stakeholders noted that establishing partnerships with local groups is important in developing and delivering relevant, successful products.
- **Functionality that has high relevance and reliability.** Relevance is directly related with the ability to localise and customise the content to the needs of the end-user. As noted by one women entrepreneur: *"I would use a service that gave me up-to-date prices of my products nationally"*³².

The four elements above are at the core of being able to realise the market opportunity for any individual stakeholder. Whether an NGO, handset manufacturer, or MNO, it is important to understand the relative value that an organisation can deliver and the key components that are required for success. This forms the foundation for developing a holistic go-to-market approach.

5.4 Go-to-Market Approach

Organisations wishing to incorporate mobile VAS into their core strategy can adopt one of three general models. These models differ depending on the nature of engagement, the scope of resources required and the potential value that can be derived from implementing the model in a specific market.

	Model 1: VAS Growth	Model 2: VAS Adaptation	Model 3: VAS Creation
Focus	<ul style="list-style-type: none"> Dedicate organisational resources to work with a set of commercial and local partners to scale existing VAS Likely to feature expansion of distribution, delivery, marketing, and education efforts Limited focus on product development and functionality adaptation to new content and customer segments 	<ul style="list-style-type: none"> Work with commercial and local partners to adapt existing VAS products to align with core challenges Adaptation could include new content for existing products or new functionality for existing applications Commercial partnership focus will be on driving distribution and market visibility of new products 	<ul style="list-style-type: none"> Emphasis on working with third-party content providers to develop new VAS applications centred on unique, gender-oriented functionality Need to further develop business case to ensure distribution commitments from commercial stakeholders Ability to create bespoke product and control associated data and branding
Implications	<i>Resources will be principally geared to helping existing market entities reach greater scale and impact</i>	<i>Resources will be geared towards informing and developing new content and functionalities for existing VAS</i>	<i>Resources will be geared towards new product development and structuring distribution partnerships</i>
Potential Cost	Medium	Medium	High
Potential Risk	Low	Medium	High

Figure 5.5: Mobile VAS Implementation Models

Figure 5.5 provides a high-level overview of the three different models and summarises the potential benefits and constraints of each model.

Determining which model is best for an individual organisation is highly dependent on the specific mobile VAS objectives and vision of the organisation. For instance, NGOs focused on driving end-user benefits can deliver impact by scaling existing solutions through market education and awareness. These activities can be seen to align with Model 1. Conversely, a company seeking to create competitive differentiation may see value in developing new products that address specific challenges. This approach would be consistent with that presented in Model 3.

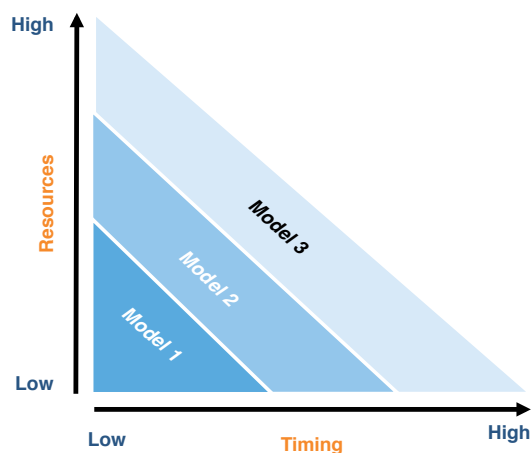


Figure 5.6: Strategic Considerations for Implementation

Each of the three models has benefits and constraints. Assessing the relative impact of these benefits and constraints is contingent on the unique priorities and identity of an individual organisation. As illustrated in Figure 5.6, organisations have to balance timing and resources against the relative impact they hope to generate.

Resourcing is influenced by two variables. The first variable is the human resources required to develop and implement mobile VAS. The level of effort depends on the degree of localisation and customisation required. This is particularly relevant when attempting to adapt an existing application to the needs of a specific segment or market. The human resource component is also impacted by the capabilities of commercial and non-commercial partners. The second variable is the financial resources required. This is primarily impacted by the existing level of funding within an organisation and the desired scale of the mobile VAS solution.

Timing is impacted by three variables. The first is the maturity of the mobile VAS application. Depending on the stage of development, an application will require more time and effort to develop, test and implement. This timing is also impacted by the sophistication of the application; a greater amount of data and functionality will require a longer development cycle. The second variable is the time required to put requisite partnerships and contracts in place. The third variable relates to the time and effort associated with distributing and marketing a mobile VAS application in the chosen market.

After deciding on a particular implementation model, organisations need to consider and plan a number of core activities. As illustrated in Figure 5.7, these activities are, broadly speaking, external management, market facing activities that directly focus on the implementation of the mobile VAS application itself and internal management components.

The nature and scope of these activities will depend on the organisation and the model pursued. However, successful implementation will require understanding how an individual organisation incorporates these activities into their existing operations. Additionally, mapping these activities over the desired implementation timeframe will help clarify the total level of effort required by an organisation and frame key decision points for strategic partners.

Mobile VAS products that are designed to meet the challenges facing women entrepreneurs have the ability to realise significant impact in each of the three target markets. While the degree of impact differs, there is strong market potential in each market. This potential is best captured when different market stakeholders collaborate to develop, implement and scale mobile VAS. Collaboration builds on the organisational strengths of individual entities and drives more rapid adoption and scale in the market. For NGOs, these strengths lie in their ability to inform and integrate unique local content. They also provide brand support and can play a key role in facilitating stakeholder alignment. These strengths are particularly relevant in models with multiple stakeholders, where adoption is driven in part through the active involvement of local and international non-profit partners.

For commercial stakeholders, collaboration can reinforce the benefits associated with CSR. This CSR benefit can be augmented through the involvement of local as well as international NGOs, whose brands can bolster the social-impact component of mobile VAS. Commercial stakeholders also play a key role in the distribution and visibility of mobile VAS in the market. Often representing some of the most widely recognised and trusted brands in a particular country, the involvement of commercial stakeholders can reinforce the value proposition and adoption of a specific VAS.

As noted earlier in this section, collaboration between commercial and non-profit actors creates a virtuous circle where increased adoption and usage of mobile VAS benefits all stakeholders in the market. Ultimately, these interdependencies frame the unique opportunity posed by mobile VAS that address business challenges. This opportunity does not exclude any single stakeholder but can result in benefits for a range of stakeholders – ultimately delivering greater impact to the target segment of this report: the woman entrepreneur.

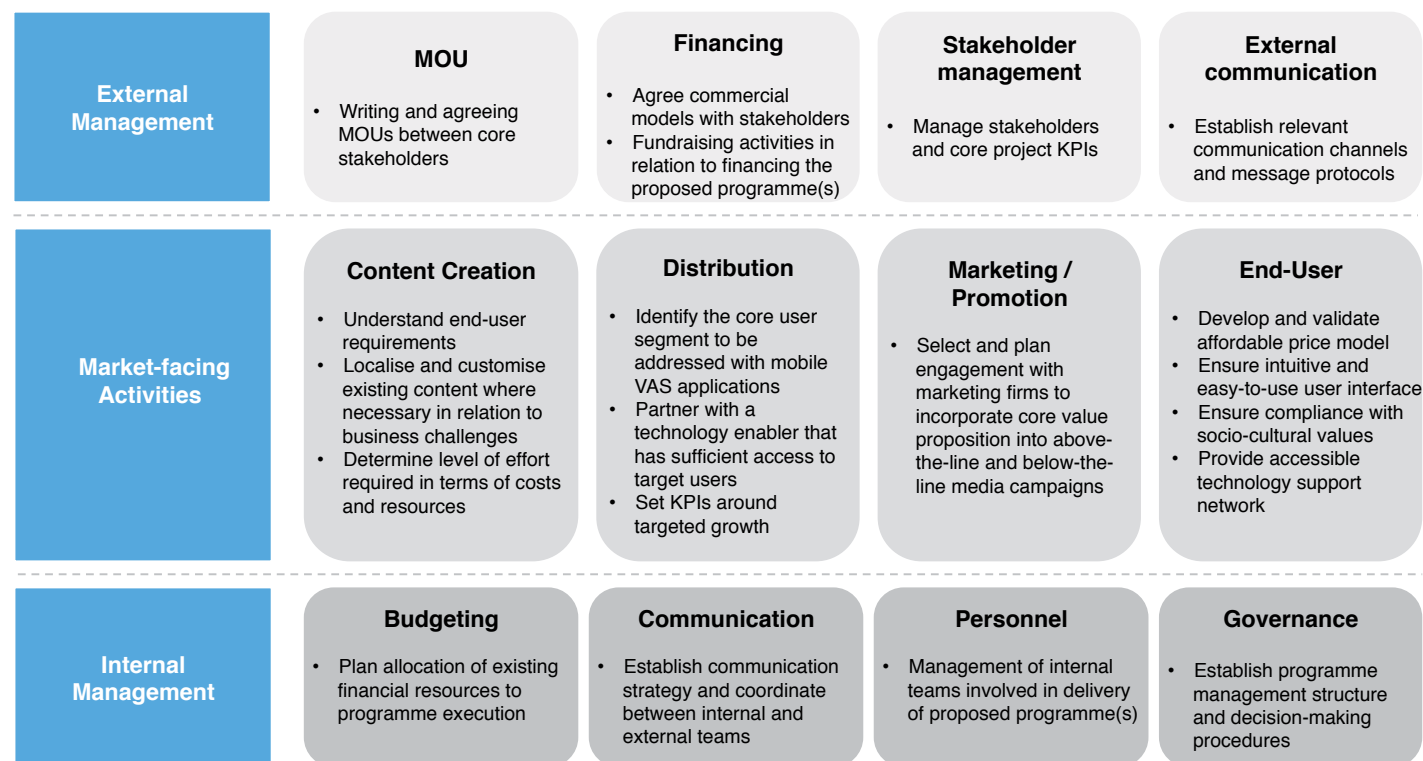


Figure 5.7: Core Activities Associated with the Development and Implementation of Mobile VAS

6 Conclusion

This report has established that micro-entrepreneurs and, more specifically, women entrepreneurs, form a considerable part of the economy in Nigeria, Indonesia and Egypt, and that there is a significant opportunity to support these women entrepreneurs through tailored mobile VAS in the three countries.

This research has identified that in each of these countries, women entrepreneurs are faced with similar challenges that often make developing and maintaining their business difficult. The report identified eight core business challenges which were related to limited access: to digital channels, affordable resources, new and existing marketplaces, adequate marketing channels, functional training and mentorship, and which were also related to: inadequate ability to utilise relevant market data to inform business decisions, to utilise business tools to improve current processes and to network with other entrepreneurs.

The data and analysis presented in this report demonstrates a willingness by women entrepreneurs to use mobile phones to address their business challenges. Moreover, this research revealed that women entrepreneurs in each of the three countries perceive direct and substantial value could be added to their business in doing so. Such challenges could be addressed through the successful application of mobile VAS, which could generate particularly transformational outcomes in terms of improved socio-economic and livelihood opportunities for women entrepreneurs and also in terms of the commercial benefit to private sector stakeholders.

While most of the currently available mobile applications are not specifically geared towards women entrepreneurs, there is a strong indication that mobile solutions are flexible and accessible enough to cater to this particular demographic. Furthermore, the nature of the opportunity to promote widespread adoption of mobile VAS solutions depends on the specific objectives of various stakeholders in each country. For example, NGOs and other non-profit actors may focus their efforts on maximising social impact and driving direct and tangible benefits to women entrepreneurs within their programme areas, while commercial stakeholders may seek to capture direct and indirect value from market differentiation and from subscriber acquisition and retention.

While it might appear that non-profit and commercial stakeholders have independent and differing objectives, this report highlights that the uptake and impact of these applications by women entrepreneurs is contingent on a variety of context-specific circumstances, which can be best addressed through collaboration and partnership between commercial and non-profit stakeholders. For example, MNOs and handset manufacturers often have significant brand recognition and visibility within a given market but might not be particularly familiar with the specific needs of women

entrepreneurs. On the other hand, foundations and NGOs are likely to understand the needs of women entrepreneurs and often benefit from a high level of regular engagement at the local level but might not have the technical capabilities or national networks to drive distribution on a larger scale. Through collaboration, not only can these entities realise the specific benefits that are relevant to their organisations, they can also augment and enhance these benefits by generating greater overall usage. Ultimately, by maximising mobile VAS usage through such partnerships, the potential for enhanced income-generating opportunities for women entrepreneurs and widespread socio-economic impact can be vastly improved.

The Cherie Blair Foundation for Women, along with local commercial and non-profit partners and the support of the ExxonMobil Foundation, will draw on these key research findings as it seeks to implement projects in Egypt, Indonesia and Nigeria following this report. Each project will engage with women entrepreneurs and introduce them to mobile VAS products that will enhance their capacity to effectively manage their businesses, improve their confidence in their business management skills via training and community engagement and expand their opportunities to access capital that will enable business growth. Moreover, the Cherie Blair Foundation for Women and the ExxonMobil Foundation hope that this report has provided the reader with valuable insight into the benefits that exist for all stakeholders seeking to improve the circumstances under which many women entrepreneurs operate and, critically, this report has highlighted the tremendous income-generating opportunities that mobile VAS present for women entrepreneurs worldwide.

Appendix A – Detailed Methodology

1 Sizing and Prioritisation of Specific Business Challenges

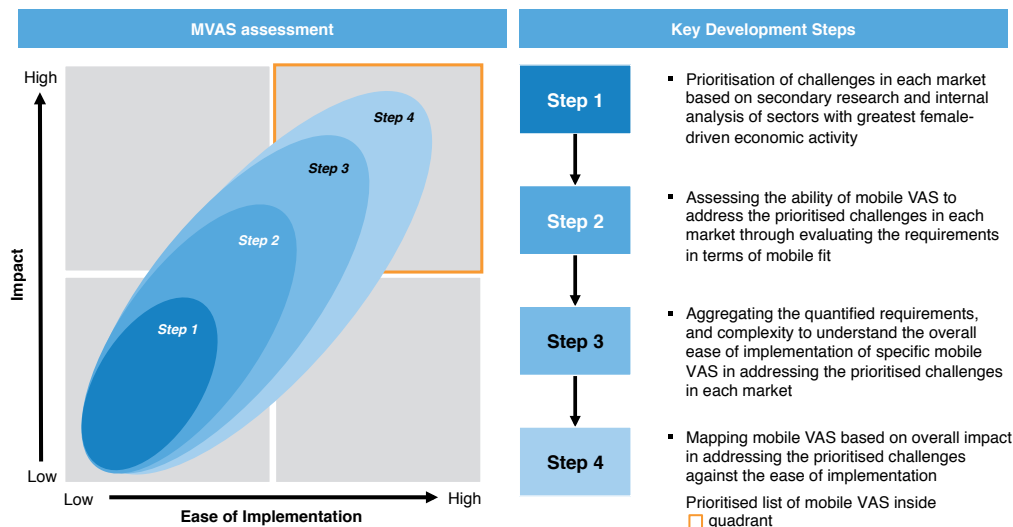


Figure A.1: Procedure Adopted in Mapping Prioritised Business Challenges

Figure A.1 above illustrates the procedure adopted to identify, size and prioritise specific business challenges for each market based on the criteria of *Impact* and *Ease of Implementation*. This approach provides a holistic and comprehensive overview of the relevance and significance of the specific business challenges in each market. Figure A.2 expands on the scoring by defining the classification and mapping used.

1.1 Sizing Impact

The sizing and assessment of specific business challenges in each market is based on the potential impact achieved if a mobile VAS solution were to be implemented to address the business challenge. The sizing and ranking of challenges has been scored based on the relevant elementary parts of each challenge in each market. This scoring is informed by the primary and secondary research as well as extensive discussions with external stakeholders.

The criteria are as follows:

- Availability:** level of availability of resources to an entrepreneur in each market. An example of availability would be the amount of market data available to an entrepreneur in a specific market data in order to make an informed decision on the pricing of their product/service.

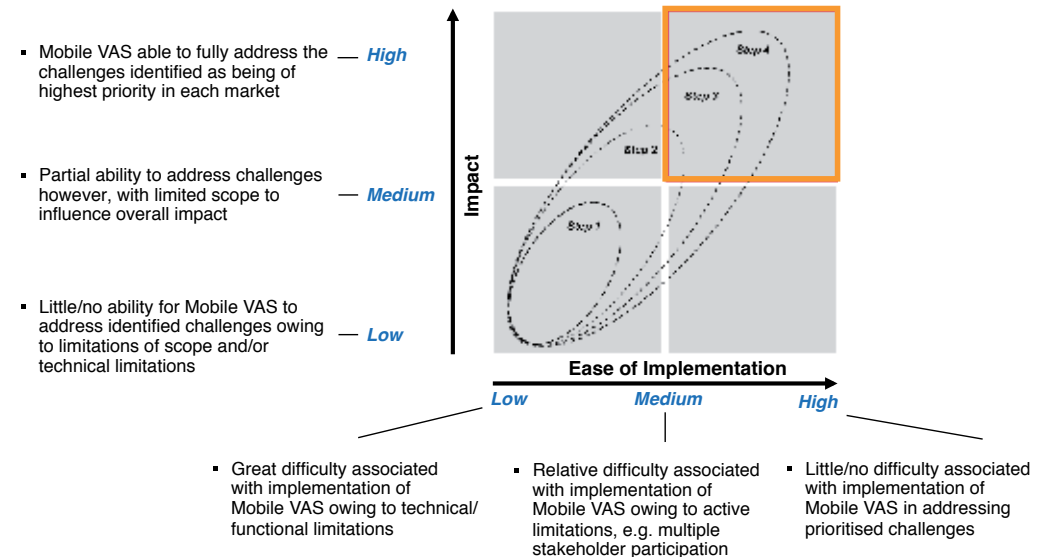


Figure A.2: Scoring of Impact and Ease of Implementation

- Affordability:** cost associated with accessing/acquiring specific resources in each market. An example would be the cost associated with acquiring market data in order for an entrepreneur to make an informed business decision.
- Social Stigma:** level of constraint associated with socio-cultural stigmas. An example of this would be the social stigma attached to a woman entrepreneur negotiating prices with a male counterpart.
- Quality:** quality of resources available to an entrepreneur in each market. An example of this would be if market data were available to an entrepreneur, the quality and detail would need to be of a specific standard to facilitate in making an informed business decision.
- Latency:** time and ease at which entrepreneurs can access relevant resources in each market. An example of this would be the abundant availability of market data but a high level of difficulty associated with accessing this data.
- Reliability:** degree of reliability of relevant resources accessible to entrepreneurs in each market. An example would be the reliability of the market data made available to an entrepreneur based on the frequency the data is updated.

Each business challenge was assessed and scored based on its relevant elementary parts for each market.

1.2 Assessing Ease of Implementation

Informed by the current business, technology and mobile environments present in each market, specific business challenges were assessed on the ease of implementation. This was accomplished by assessing both the technical and functional requirements to implement a mobile-based solution to address each specific business challenge.

Technical requirements were assessed based on the following criteria:

- **Social media:** assessed on the dependence of a social media platform for the development and delivery of mobile VAS to address a specific business challenge and subsequently the social media penetration in each market.
- **Data:** refers to the data usage requirement of a mobile VAS which addresses a specific business challenge and the subsequent degree of data penetration and coverage (e.g. national 3G coverage and the degree of advanced phone penetration).
- **Existent Dominant Technology:** assessed on the ability of the existent dominant technology in each market to cater to the technical requirements of a mobile VAS which addresses a specific business challenge.

Functional requirements were as follows:

- **Stakeholder participation requirement:** the amount and degree of participation required from external stakeholders in each market to implement a mobile VAS which addresses a specific business challenge.
- **Coding requirement:** the level and volume of technical coding required to develop a mobile VAS which addresses a specific business challenge.
- **Costs to implement:** the costs associated with implementing a mobile VAS which addresses a specific business challenge in each market.
- **Time to market:** the time required to implement a mobile VAS which addresses a specific business challenge based on the criteria above.

2 Sizing Total Addressable Market

2.1 Transaction Revenue Calculation

Transaction revenue has been calculated based on identifying key services currently offered via SMS in each market. The assumption of an SMS-only service is reasonable where an average of 90% of respondents from the primary research survey claimed to use their mobile phones for SMS services. The potential uptake was quantified relative to the total number of women entrepreneurs and cost profile of each service in the three markets. Three usage profiles were sized: single usage, monthly subscription and a combination of both. The calculation steps are as follows:

Single Usage

1. Under the assumption that SMS is the only mobile VAS delivery platform being sized, three different user profiles were identified, where usage of a mobile VAS was:
 - Once a day
 - Once a week
 - Once a month
2. The national average SMS cost was then calculated.
3. Based on the three user profiles, each was multiplied by the national average SMS cost. This gives three separate usage costs in terms of cost per user per day.
4. The three cost profiles above were averaged and then multiplied by 365 to give cost per user per year.
5. The above was then multiplied by the number of women entrepreneurs in each market to give the total revenue per year.

Note: all costs refer to costs to the end-user, thus revenue is for a commercial stakeholder.

Monthly Subscription

1. A broad range of mobile VAS with monthly subscriptions were identified from the leading MNOs in each market
2. The monthly costs were averaged to give an average monthly subscription cost, in terms of cost per user per month
3. The above average cost per user per month was then multiplied by 12 to give the cost per user per year
4. The above cost per user per year was then multiplied by the number of women entrepreneurs in each market to give the total revenue per year.

2.2 Marketing Revenue Calculation

Marketing revenue was calculated based on the assumption that marketing content is delivered via SMS each time the end-user utilises the product. Each potential occurrence was multiplied by market-specific cost per million (CPM) values based on three separate CTR scenarios. The CPM values used for Egypt, Nigeria and Indonesia were US\$0.06, US\$0.14 and US\$0.06, respectively (Social Bakers, 2011a, 2011b, 2011c). The calculation steps are as follows:

1. The main assumption is that a marketing link is sent on every occasion the end-user uses mobile VAS
2. Taking the same user profiles described in Step 1 of Single Usage and the CPM for each market, the two were multiplied to give three separate profiles for cost per user per day
3. The above three cost profiles were averaged and multiplied by 365 and the number of women entrepreneurs in each market to give total marketing revenue per year (assuming 100% CTR)
4. The figure above was then multiplied by three different CTR scenarios of 10%, 20% and 30%.

It should be noted that the considerably different SMS usage cost profiles and the vastly different number of women entrepreneurs in each market is the main cause for the variance between the three markets.

The number of women entrepreneurs in Egypt, Nigeria and Indonesia were found to be 630,000 (Ministry of Finance, Egypt, 2007a), 7,400,000 (National Bureau of Statistics, 2010) and 3,3900,000 (Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, 2011) respectively.



Appendix B – External Stakeholder Discussions

The following organisations and stakeholders were consulted for insight into the process of constructing this report.

Non-Profit	Industry
Ashoka	Etisalat
Bill & Melinda Gates Foundation	Google
Efina	Mobinil
Foundation for Social Change	MTN
Grameen Foundation	Nokia
GSMA	Qtel
IFC	Qualcomm
Masawa	Signal Point Partners
Silatech	SoukTel
The World Bank	Vodafone
USAID	

Appendix C – Mobile VAS Products Identified and Evaluated

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Abu Dhabi	LUUP	LUUP		Business Tool	
Africa	Frontline SMS	Frontline SMS		Networking	
Bangladesh	Banglalink	Banglalink		Mentorship	Business Tool
Bangladesh	Banglalink	Banglalink Jobs Link		Resources	
Bangladesh	Banglalink	Banglalink Messenger		Networking	Marketing
Bangladesh	Banglalink	Banglalink Mobile Money		Business Tool	
Bangladesh	Banglalink	Banglalink Stock Info		Market Data	
Bangladesh	Banglalink	Banglalink Travel Guide		Resources	
Bangladesh	Banglalink	Banglalink web2SMS		Networking	Marketing
Bangladesh	Banglalink	Banglalink Yellow Pages		Marketing	Digital Channels
Bangladesh	Banglalink	Banglalink Krishibazaar		Digital Channels	Marketing
Bangladesh	Banglalink	BBC Bangla		Market Data	
Bangladesh	BBC World Service Trust	BBC Janla		Mentorship	Business Tool
Bangladesh	Grameen	Cell Bazaar		Digital Channels	Marketing
Bangladesh	Grameen	Directory		Marketing	Resources
Bangladesh	Grameen	Grameenphone News Service		Market Data	
Bangladesh	Grameen	Job News		Resources	
Bangladesh	Grameen	Stock Update		Market Data	
Brazil	Ericsson	Instituto Vivo – Conexão Belterra		Resources	Mentorship

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
China	Fetion	Fetion		Networking	
China	MIT	Agricultural Prices		Market Data	
China	Nokia	ganji.cn		Digital Channels	Marketing
China	Nokia/Pearson	Mobiedu		Business Tool	Mentorship
China	ZTE	ZTE		Networking	Market Data
East Africa	Ericsson	Ericsson Mobile Weather Alert		Market Data	Business Tool
Egypt	Endeavour Global	3aSMS		Networking	
Egypt	Etisalat	Conference Calling		Networking	Business Tool
Egypt	Etisalat	Etisalat Facebook		Networking	Digital Channels
Egypt	Etisalat	Mubasher		Market Data	
Egypt	Etisalat	SMS Alerts		...	
Egypt	Mobinil	Conference Calling		Networking	Business Tool
Egypt	Mobinil	Fax		Business Tool	
Egypt	Mobinil	Info SMS		Market Data	
Egypt	Mobinil	Mobinil Facebook		Networking	Digital Channels
Egypt	Mobinil	Mobinil Messaging Service		Networking	
Egypt	Mobinil	SMS Gmail		Networking	Business Tool
Egypt	Mobinil	Translations		Business Tool	
Egypt	Mobinil	Weather Forecast		Market Data	
Egypt	Vodafone	Borsa		Market Data	

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Egypt	Vodafone	Buzz		Networking	
Egypt	Vodafone	Mujaz		Market Data	
Egypt	Vodafone	Opera		Digital Channels	
Egypt	Vodafone	SMS Alerts		...	
Egypt, Nigeria	Endeavour Global	SpaceGene		Networking	
Europe	Collaboration@ Rural	Collaboration@ Rural		Resources	Business Tool
Global	Ericsson	flexenclosure		Resources	
Global	Ericsson	kirusa		...	
Global	Facebook	Facebook		Networking	Digital Channels
Global	Florin	Florin		Business Tool	
Global	Frogtex	Frogtex		Business Tool	
Global	Google	Gmail SMS		Networking	Business Tool
Global	Google	Google Calendar SMS		Business Tool	
Global	Google	SMS Tips		Mentorship	Resources
Global	Google	SMS Trader		Digital Channels	Resources
Global	Industrial Media	wanbee.com		Networking	Marketing
Global	International Youth Foundation	JobMatch		Resources	
Global	KNFB	knfb Reading		Business Tool	
Global	LinkedIn	LinkedIn		Networking	Resources
Global	mobiSiteGalore	mobiSiteGalore		Digital Channels	Marketing
Global	Samsung	O3igo		Networking	Marketing

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Global	Samsung	Seven Networks		Networking	
Global	Syware	mEnable		Business Tool	
Global	Twitter	Twitter		Networking	Marketing
Global	Yahoo	Answers		Resources	Business Tool
Global	Yahoo	Calendar		Business Tool	
Global	Yahoo	Finance		Market Data	
Global	Yahoo	Local		Business Tool	Marketing
Global	Yahoo	Mail		Networking	Business Tool
Global	Yahoo	Messenger		Networking	Marketing
Global	Yahoo	News		Market Data	
Global	Yahoo	Search		...	
Global	Yahoo	Weather		Market Data	Business Tool
Global, Indonesia	Indosat	mig33		Networking	Digital Channels
India	Altruist	Altruist		Networking	Business Tool
India	BASIX	Sub-K		Business Tool	
India	Canvas M.	Canvas m		Resources	
India	enableM	enableM		Mentorship	
India	Intuit Technology Services	Intuit		Market Data	
India	MIT	Assured Labour		Resources	
India	MIT	Celedu		Mentorship	Business Tool
India	Nokia	dealsandyou.com		Digital Channels	Marketing
India	Nokia	Quikr		Digital Channels	Marketing
India	Omidyar Network	Verse		Digital Channels	Marketing

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
India	oodle	oodle		Digital Channels	Marketing
India	Ossian	Ossian		...	
India	Vinfinet Technologies	Kisan Raja		...	
India	Voice Tap	Voice Tap		Mentorship	Business Tool
India, South America	Ericsson	Ericsson Mobile Auction		Digital Channels	Marketing
Indonesia	Axis	0.Facebook.com		Networking	
Indonesia	Axis	Axis Facebook & Twitter		Networking	Digital Channels
Indonesia	Axis	Conference Calling		Networking	Business Tool
Indonesia	Axis	Gmail SMS		Networking	Business Tool
Indonesia	Bandung Venture	Ngaturduit.com		Business Tool	Market Data
Indonesia	Bandung Venture	Tokobagus		Digital Channels	Marketing
Indonesia	ChangeCorp	eLife Suite		Mentorship	
Indonesia	East Venture	Tokopedia		Digital Channels	Marketing
Indonesia	Esia	Esia Email		Networking	Business Tool
Indonesia	Esia	EsiaKompas		Resources	
Indonesia	Esia	EsiaVivanews		Market Data	
Indonesia	Esia	JoP		Resources	
Indonesia	Flexi	Facebook, Twitter, Yahoo, Esia Chat		Networking	Marketing
Indonesia	Flexi	Flexi Facebook and Twitter		Networking	Digital Channels

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Indonesia	Flexi	Flexi Kaskus		Networking	Digital Channels
Indonesia	Flexi	FlexiCANTIK		Mentorship	
Indonesia	Flexi	FlexiMedia		Market Data	
Indonesia	Flexi	Gmail, Ymail SMS		Networking	Business Tool
Indonesia	Flexi	SMS Alerts		...	
Indonesia	Flexi	SMS mBanking		Business Tool	
Indonesia	Flexi	SMS Yellowpages		Resources	Marketing
Indonesia	Flexi	SPSI		Resources	
Indonesia	Foundation for Social Change	SmartWoman		Mentorship	
Indonesia	Google	Google Voice SMS		Business Tool	
Indonesia	Grameen Foundation	AppLab		Mentorship	
Indonesia	Indosat	dompetku		Business Tool	
Indonesia	Indosat	i-Buzz		Market Data	
Indonesia	Indosat	i-Kamus		Business Tool	
Indonesia	Indosat	i-Menu *123#		Business Tool	Resources
Indonesia	Indosat	Indosat Facebook and Twitter		Networking	Digital Channels
Indonesia	Indosat	i-Stock		Market Data	
Indonesia	Indosat	Nokia Messaging		Networking	
Indonesia	Investidea	BisTip		Resources	
Indonesia	MerahPutih Inc	Lintas.me		Networking	Resources
Indonesia	M-Stars	Peoples Media		Market Data	Resources

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Indonesia	Poplud	Poplud		Networking	
Indonesia	Smartfren	Conference Calling		Networking	Business Tool
Indonesia	Smartfren	Uangku		Business Tool	
Indonesia	Telkomsel	City Life		Business Tool	Marketing
Indonesia	Telkomsel	Google SMS Translator		Business Tool	
Indonesia	Telkomsel	Location-based Services		Business Tool	
Indonesia	Telkomsel	Nokia Messaging		Networking	
Indonesia	Telkomsel	Petasiaga		Business Tool	Marketing
Indonesia	Telkomsel	SMS Alerts		...	
Indonesia	Telkomsel	SMS Broadcasting		Networking	Marketing
Indonesia	Telkomsel	SMS Mailing List		Networking	Marketing
Indonesia	Telkomsel	YoYo		Business Tool	Marketing
Indonesia	Urban Planet Mobile	Urban Planet Mobile		Business Tool	Mentorship
Indonesia	Waze	Waze		Business Tool	
Indonesia	XL	Cuaps		Networking	Marketing
Indonesia	XL	Funbook		Networking	Marketing
Indonesia	XL	Ngobrol		Networking	Marketing

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Indonesia	XL	XL e-Buddy		Networking	Marketing
Indonesia	XL	XL Facebook and Twitter		Networking	Digital Channels
Iraq	MercyCorps	Women Peacebuilders		Networking	
Israel	Hooja	Hooja		Business Tool	
Kenya	Airtel/ MasterCard/ Standard Chartered Bank	Airtel Card		Digital Channels	Resources
Kenya	Safaricom	M-Pesa		Business Tool	
Malaysia	Alcatel-Lucent	eHomem@kers		Mentorship	Networking
Malaysia	Alcatel-Lucent	Salaam Wanita		Digital Channels	
Malaysia	CWorksMobile	Cworks		Business Tool	
MENA	Mobile Bananas	Mobile Bananas		...	
Mexico	MIT	Fellows Forum		Networking	
Mexico	MIT	Fighting Farmers		Networking	Market Data
Mexico	MIT	Hammock-Mobile		Resources	
Morocco	Employment for Education	EFE		Resources	
Nigeria	3WC	3WC		Market Data	Marketing
Nigeria	Airtel	Airtel Facebook		Networking	Digital Channels
Nigeria	Airtel	Conference Calling		Networking	Business Tool
Nigeria	Airtel	Fax		Business Tool	
Nigeria	Airtel	SMS Directory Service		Resources	Marketing
Nigeria	Airtel	SMS2Email		Networking	Business Tool

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Nigeria	Esoko	Esoko		Market Data	
Nigeria	Etisalat	DotMe		Networking	
Nigeria	Etisalat	Etisalat Facebook		Networking	Digital Channels
Nigeria	Etisalat	SMS Alerts		...	
Nigeria	Glo	Frensz		Networking	
Nigeria	Glo	Glo Direct		Web Access	
Nigeria	Glo	Glo Facebook		Networking	Digital Channels
Nigeria	Glo	Google SMS Chat		Networking	Marketing
Nigeria	Glo	Magic Plus		Market Data	Business Tool
Nigeria	Glo	Voice Alert Service		Market Data	
Nigeria	Google	SMS Search		Market Data	Resources
Nigeria	MTN	Conference Calling		Networking	Business Tool
Nigeria	MTN	Google SMS		Market Data	Digital Channels
Nigeria	MTN	MTNEye		Business Tool	
Nigeria	MTN	Opera		Digital Channels	
Nigeria	MTN	Pulse		Networking	
Nigeria	MTN	Y'ello Pages		Marketing	Resources
Nigeria	Starcomms	AfriChat		Networking	Marketing
Nigeria	Starcomms	Conference Calling		Networking	Business Tool
Nigeria	Starcomms	Gmail SMS		Networking	Business Tool

Market	Company	Product	Logo	Primary Business Challenge	Secondary Business Challenge
Nigeria	Starcomms	Job Search		Resources	
Nigeria	Starcomms	SMS Alerts		Market Data	
Nigeria	Starcomms	SMS2Email		Networking	Business Tool
Nigeria	Visafone	SMS Alerts		...	
Nigeria	Visafone	Visafone Facebook		Networking	Digital Channels
Nigeria, Indonesia	Nokia	Nokia Life Tools		Market Data	Business Tool
Palestine	SoukTel	SoukTel		Resources	
South Africa	Mixt	Mixt		Networking	Business Tool
South America	DataDyne	DataDyne		Market Data	
South America	MIT	m-United Villages		Digital Channels	Marketing
South Korea	Samsung	iconlab		Marketing	
Uganda	Bill & Melinda Gates Foundation	MobileMoney		Business Tool	
Uganda	Google	Baraza		Business Tool	Mentorship
USA	MIT	m-Logistics		Resources	Business Tool
Venezuela	212	212.com		Business Tool	

Appendix D – Prioritised Mobile VAS

Business Tools	Marketing and Digital Channels	Market Data	Mentorship	Resources	Networking
					

Appendix E – Primary Research: Survey of Women Entrepreneurs

1. What is your age?
 - 15-20
 - 21-25
 - 26-30
 - 31-35
 - 36-40
 - 41-45
 - 46-50
 - 51-55
 - 55-60
 - >60
2. What is the nature of your business? (What do you sell/What services do you provide?)
 - Wholesale/Retail (Please give details)
 - Manufacturing (Please give details)
 - Social Services (Please give details)
 - Hospitality (Please give details)
 - Real Estate (Please give details)
 - Other (Please give details)
3. How many years have you owned/have been running your business?
 - <1
 - 1-2
 - 3-5
 - 6-9
 - >10
4. Including yourself, how many people do you permanently/regularly employ?
5. What is your average revenue/turnover per month (EGP)?
 - < \$100
 - \$100-\$150
 - \$150-\$300
 - \$300-\$500
 - \$500-\$1000
 - \$1000-\$2000
 - \$2000-\$4000
 - \$4000-\$7000
 - > \$7000
6. Are you in control of the income that your business generates or is it the responsibility of someone else i.e. your husband/brother/father/business partner?
 - Yes
 - No
7. Is your business formally registered?
 - Yes
 - No
8. What is the highest level of education you have attained?
 - None/Limited
 - Primary/Elementary School
 - Secondary/Middle/High School
9. What model of mobile phone do you have?
 - Nokia (Please specify model)
 - Sony Ericsson (Please specify model)
 - Motorola (Please specify model)
 - Samsung (Please specify model)
 - LG (Please specify model)
 - Alcatel (Please specify model)
 - Apple (Please specify model)
 - Blackberry (Please specify model)
 - HTC (Please specify model)
 - Other (Please specify model)

10. How many mobile SIM cards do you own?

11. Do you have post-paid or pre-paid subscription?

12. Which operator(s) do you use?

- 1
- 2
- 3
- 7
- 8
- 9
- 10
- 11

13. How much on average do you spend per month on mobile phone expenses?

14. What mobile services do you use? (Please select all that apply)

Usage	Tick all that apply	How often do you use your phone for the selected usage per day?
Voice		
SMS		
Data		

15. If you have selected SMS in Q14, what do you mostly use SMS for and how often do you use it for this purpose per day? Else please go to Q16

SMS Usage	Tick all that apply	How often do you use SMS for the selected usage per day?
For emergencies		
Staying in touch with family/friends		
Business related reasons		
Accessing information e.g. news/weather		
Other*		

*Please specify

16. Can you access the internet on your phone?

- Yes
- No

17. Aside from voice and text messaging, what do you use your phone for, how do you access it and how often do you use it?

	1 Very rarely	2	3 Rarely	4	5 Regularly	6	7 Very regularly
How often do you use selected service for?							
	Tick all that apply	How do you access this service?	Personal use	Business use			
Social media (e.g. Facebook, Twitter ...)							
Gaming							
Internet access							
News/Weather/Sport							
Downloading media (e.g. music, ringtones, wallpapers ...)							
Other*							

*Please specify

List of platforms to access mobile services above

- SMS (Text message)
- Internet portal
- Voice
- USSD (short code enabled interactive session e.g. *#108# gives a menu)
- Already embedded on mobile handset

18. If have you have not specified any mobile services for business use, have you used any other services other than voice or texting for business purposes?

- Yes (Please specify)
- No (Please go to Q21)

19. How has it helped your business/what challenges has it addressed?

20. How much does it cost you on average to use per month? (Please go to Q22)

21. Why have you not?

- Unaware of available mobile services which can address business challenges/run business/help growth
- Aware of mobile service offerings but costs too much (e.g. app fees, bandwidth/data costs)
- Aware of mobile service offerings but irrelevant to business challenges/needs
- Do not believe mobile can address business challenges
- Other* (Please specify)

22. Please indicate from the following list of specific business challenges the relevance to your business:

1	2	3	4	5	6	7
Not		Little				Highly
significant		significance		Significant		significant

	Tick all that apply	Significance
--	--------------------------------	---------------------

Access to credit (e.g. loans)		
Access to investment (e.g. investors)		
Insurance		
Access to capital/savings (e.g. access to bank account)		
Information on market data (e.g. product prices, competitors ...)		
Access to Market		
Access to Resources (e.g. raw materials, skilled labour ...)		
Digital distribution channels (e.g. online market place to buy and sell)		
Infrastructure limitations (e.g. roads, utilities, etc...)		
Logistic limitations (e.g. dependence on 3rd parties, sourcing)		

	Tick all that apply	Significance
--	--------------------------------	---------------------

Access to business tool (e.g. accounting, stock management...)		
Access to business training		
Access to mentorship (e.g. established business/people)		
Access to business networks (e.g. people who do the same thing as you)		
Access to marketing channels		
Client relationship management		
Other*		

*Please specify

23. From the most significant challenges identified in Q22 (>5 significance) which two challenges are the most significant to your business?

24. If answers to Q23 are related to finance (Credit, Investment, Insurance, Capital), what are the next most significant two challenges to your business?

25. Why are the identified challenges in Q23/Q24 considered important/highly significant?

26. How will the value of your business change if the most significant challenges are addressed?

- No increase
- Small increase
- Medium increase
- Large increase

27. If there were a mobile application that could address the challenges identified as being most significant, would you be willing to use it?

- Yes (Please go to Q30)
- No (Please go to Q28)

28. Please specify why you would not be willing to use it

- A belief that business challenges are too complex to be addressable by mobile
- Unwillingness to pay for it
- Not comfortable with addressing challenges over a mobile interface
- Prefer to address challenges via different channels (e.g. local institutions, charities...)
- Other*

*Please specify

29. Would you be more inclined to use a mobile application to address the most significant business challenges if it was designed around mobile services/apps you already use e.g. via Facebook?

- Yes, please give details
- No, please specify why

30. If the following business challenges could be addressed via a mobile channel, which would be most useful for your business? (Please select all that apply)

	1 Not useful	2	3 Little useful	4	5 Useful	6	7 Highly useful	
Business Challenge								Tick all that apply Usefulness
Access to marketing channels								
Access to business networks								
Access to resources (e.g. raw materials, skilled labour ...)								
Access to digital distribution channels (e.g. online marketplace)								
Access to business tools (e.g. accounting, stock management ...)								
Access to mentorship (e.g. established business/people)								
Access to business training								
Other*								

*Please specify

31. Are you aware of any mobile services/products which address the challenges identified in Q30, please specify.

	1 Not significant	2	3 Little significance	4	5 Significant	6	7 Highly significant	
Business Challenge								Tick all that apply Please specify service/ product
Access to marketing channels								
Access to business networks								
Access to resources (e.g. raw materials, skilled labour ...)								
Access to digital distribution channels (e.g. online marketplace)								
Access to business tools (e.g. accounting, stock management ...)								
Access to mentorship (e.g. established business/people)								
Access to business training								
Other*								

*Please specify

32. Do you use any of the mobile services/products you have identified in Q.31 and how frequently?

	1 Very rarely	2	3 Rarely	4	5 Regularly	6	7 Very regularly	
Business Challenge								Tick all that apply Please specify service/ product Frequency of usage
Access to marketing channels								
Access to business networks								
Access to resources (e.g. raw materials, skilled labour ...)								
Access to digital distribution channels (e.g. online marketplace)								
Access to business tools (e.g. accounting, stock management ...)								
Access to mentorship (e.g. established business/people)								
Access to business training								
Other*								

*Please specify

33. From the mobile services chosen in Q30, which two are the most important/significant (>5)?

34. Why are the identified services in Q33 considered important/significant?

35. What platform would you be most technically comfortable with accessing relevant mobile services for your business?

- SMS (text message)
- WAP (internet portal)
- IVR (voice recognition)
- USSD (short code enabled interactive session e.g. *#108# gives a menu)

36. If you could invent a mobile solution for the challenges your business faces, what would it be?

37. Would you be willing to pay for mobile services/products which can address identified significant challenges?


- Yes (Please go to Q39)
- No (Please go to Q38)


38. Please specify why.


39. In general, how do you envisage mobile services can help your business?

Appendix F – Case Studies

Primary Research


	Nigeria	Operations	Mobile Context
Name	Faith Afolabi	Faith runs a general trading and merchandise store in Lagos. She currently employs one other person. Her primary reason for starting her business, Pristine Collection, was to act as a form of secondary income to support her family. The primary business challenges she has cited as inhibiting her operations are access to funding for growth, marketing her products and sourcing packaging to resemble 'world-class' products.	She has already engaged in digital advertising through Facebook; however, she has suggested that bulk SMS messaging would be a route she would like to utilise if not for its high costs. Her operations would greatly benefit from mobile applications centred on marketing and easing the management of the business e.g. accounting tools; however, her main concern with using a mobile service to address her business challenges is based on affordability and ease of use.
Location	Lagos, Nigeria		
Business	Pristine Collection		
Type	Retail		
Source	Primary Research		

	Indonesia	Operations	Mobile Context
Name	Amisha Chalid	Amisha currently makes and sells made-to-measure wedding dresses. Based in Jakarta in a small shop, she has been working in the industry for the last three years and opened her shop three years ago. Her clients are all based in Jakarta. Her shop has had a consistent revenue stream since opening. Marketing is a key business challenge to the problems she faces, but sourcing quality materials at an affordable price is considered an even bigger problem. Lesser problems include sourcing staff with previous retail experience and the need to lower prices substantially to compete with imports.	Marketing could be considerably eased and expanded beyond traditional channels, such as local newspapers. The cost associated with marketing products using digital channels would also be lower. Mobile services identified in Indonesia, e.g. the Esia JoP, which allow employers to post opportunities and find employees with the right skill-sets, could address Amisha's lesser business challenges.
Location	Jakarta, Indonesia		
Business	Wedding Dresses		
Type	Manufacturing/Retail		
Source	Primary Research		

	Egypt	Operations	Mobile Context
Name	Fatima Qadir	Fatima operates a t-shirt manufacturing factory in Cairo, she employs two other women. Her business is focused on making novelty t-shirts that feature cartoons for children. She has been in business for the last six years. The business challenge she faces is centered on sourcing affordable raw materials; this has contributed to the difficulty she has faced in scaling up operations. In addition, she has limited access to markets outside her immediate vicinity and is unable to find capable distributors to help her grow her business.	Fatima has yet to utilise mobile services to help her face her business challenges. A service which her business can benefit from, in the context of growth, is sourcing distributors and affordable raw materials, which will ensure she maintains healthy margins and increased distribution of her products.
Location	Cairo, Egypt		
Business	Cartoon T-Shirts		
Type	Manufacturing		
Source	Primary Research		

	Nigeria	Operations	Mobile Context
Name	Elizabeth Tinunbu	Based in Lagos, Elizabeth and three other employees make children's toys. She distributes her products via market stalls and small shops with which she has distribution agreements. She has been operational for four years and started making toys out of necessity to support her family. She initially began as a sole-trader but her profitability has slowly increased allowing the microenterprise to grow in terms of volume produced. This growth has been based on targeting a niche market that exists from demand for traditional Nigerian toys.	The main business challenges she has cited as hindering her company's growth include: difficult access to markets to promote and sell her products, thus she is confined to traditional distribution channels and lacks exposure to – and the ability to – fluctuating raw materials prices and sizing her competition. Access to a digital marketplace, accessible over either WAP or SMS, would help Elizabeth market her products to a wider audience and get a better understanding of the prices she should be charging to maximise her profit.
Location	Lagos, Nigeria		
Business	Children's Toys		
Type	Manufacturing/Retail		
Source	Primary Research		

Secondary Research

	Egypt	Operations	Mobile Context
Name	Vivian Labib	Vivian is the owner and founder of Charisma Arts, an online store which sells hand-made gifts. The products are manufactured by poor families and thus act as a vital source of income. The company was established in 2002 and expanded into a gallery in 2008. The challenges Vivian has faced include overcoming a male-dominated industry, finding skilled labour and accessing affordable funding.	Vivian's ability to reach wider markets is based on distribution through her website. Her web traffic can be increased by providing access through mobile channels. Social media, accessible via mobile, can also act as a valuable and effective marketing tool.
Location	Cairo, Egypt		
Business	Charisma Arts		
Type	Manufacturing/Retail		
Source	The American University in Cairo, WEL Program		

	Nigeria	Operations	Mobile Context
Name	Aso Oke	Aso Oke refers to the 'top cloth' industry which produces clothing for ceremonial occasions associated with the Yorùbá people of southwest Nigeria. The challenges that the participants of this industry face include a general lack of access to information and the long lead times associated with the supply chains on which their businesses depend.	The digitisation of the supply chain through mobile telephony will impact the speed and quality of information communicated. In turn, this is predicted to improve business decision-making processes, diversify trading beyond immediate markets available, reduce the need for travel and therefore decrease the cost of trading.
Location	Southwest Nigeria		
Type	Manufacturing/Retail		
Source	Jagun, Heeks, and Whalley (2008)		

	Egypt	Operations	Mobile Context
Name	Rasha	An authentic Egyptian art production based in Siwa, the Afran Centre sells bags, bed linen and accessories. The business model is centered around supplying local women with raw materials for the creation of bags, scarves, blouses and linens based on traditional Egyptian designs. The main business challenges Rasha has cited include funding the business' initial capital, marketing products and the preparation of a business strategy.	The operations and growth of Rasha's business would benefit from access to digital marketing channels to expand her current customer base and access to affordable financing channels. Beyond the context of addressing operational challenges, business education modules can be delivered on mobile platforms to facilitate with e.g. business management.
Location	Siwa, Egypt		
Business	Afran Centre		
Type	Manufacturing/Retail		
Source	Goldman Sachs (2012)		

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- World Business Council for Sustainable Development. SNV. (2007). *Promoting Small and Medium Enterprises for Sustainable Development*. Geneva: WBCSD, SNV.

Endnotes

- ¹ Tsirulnik (2011) estimates that global SMS traffic will increase to 8.7 trillion messages per year in 2015.
- ² Data of total national labour force and female labour force from Index Mundi (n.d. a,b,c).
- ³ **Egypt:** African Development Bank (2009)
Nigeria: National Bureau of Statistics (2010)
Indonesia: Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia (2011)
- ⁴ **Egypt GDP:** UNDP (2005)
Egypt National Employment: African Development Bank (2009)
Egypt Private Sector: African Development Bank (2009)
Nigeria GDP: Nwannekanma (2009)
Nigeria National Employment: National Bureau of Statistics (2010)
Nigeria Private Sector: National Bureau of Statistics (2010)
Indonesia GDP: IFC (2008)
Indonesia National Employment: Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia (2011)
Indonesia Private Sector: Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia (2011)
- ⁵ **Egypt:** African Development Bank (2009)
Nigeria: National Bureau of Statistics (2010)
Indonesia: Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia (2011)
- ⁶ **Egypt:** African Development Bank (2009)
Nigeria: National Bureau of Statistics (2010)
Indonesia: (Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia (2011)

- ⁷ Agriculture has been excluded from the scope of this study for the following reasons:

This study has found that the vast majority of female participation is concentrated within the labour-intensive sections of the typical agricultural value chain, as illustrated in Figure A below

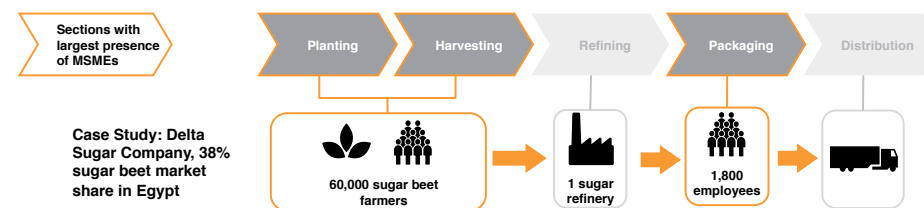


Figure A – Typical Agricultural Value Chain

The nature of the agricultural industry across the three markets inherently inhibits entrepreneurship and the ability of participants to profit from market price differences. This is further exacerbated by the limited ability of microenterprises to participate across the agricultural value chain. Profit is almost entirely derived from large corporations with interests spanning the value chain.

From an industry perspective, microenterprises are forced to concentrate their operations on single parts of the value-chain as a result of the price inelasticity due to heavy regulation and large corporation presence.

From an employment perspective, the majority of female employment in agriculture is rural, informal, extra-legal, unregulated, seasonal and heavily dependent on domestic production deficiencies. The low education levels associated with the industry and the relatively low technology and mobile penetration limits the potential impact of mobile VAS in agriculture.

However, we have taken an ‘agnostic’ approach when identifying mobile-based solutions to the prioritised business challenges. The proposed solutions can have utility in either agriculture or any other industry pending customisation and localisation of content.

- ⁸ Ministry of Finance, Egypt (2007).
- ⁹ Booz & Company analysis based on identifying general business challenges faced by women entrepreneurs across industries and markets.
- ¹⁰ Challenges informed by responses collected from the primary market survey and the following secondary sources: Accenture, 2007; Alasrag, 2007; Bosma and Levie, 2009; Cherie Blair Foundation for Women; GSMA Development Fund; Vital Wave Consulting, 2010; Cuong, Sang, and Anh, 2009; Ekopuri, Widyadari, and Tamani, 2007; European Training Foundation, 2009; Gender Entrepreneurship Markets, 2007; Hussain and Yaqub, 2010; International Finance Corporation, 2008;

Iarossi, Mousley, and Radwan, 2009; Instituto de Industria, Universidad Nacional de General Sarmiento, Japan Economic Research Institute, Development Bank of Japan, 2002; International Fund for Agricultural Development, 2009; Klaveren, Tijdens, Hughie-Williams, and Martin, 2010; Lammers, Willebrands, and Harog, 2010; Lawanson, 2008; Mamman, Eldrige, and Branine, 2007; MasterCard Worldwide, 2010; Ministry of Finance, Egypt; 2007; Ministry of Foreign Trade SMEPol, 2003; National Tempus Office, 2007; Okafor and Mordi, 2010; SMEPol, 2007; Spierings and Smits, 2007; Supprakit, 2011; Sørensen, 2005; Tambunan, 2009; The World Bank, 2010; The Asia Foundation, 2002; The World Bank, International Finance Corporation, 2012; UNDP, 2005; USAID, 2002; World Business Council for Sustainable Development, SNV, 2007.

¹¹ **Indonesia:** Business Monitor International, 2011; World Cellular Information Service, 2011; TeleGeography, Indonesia, 2011a.

Egypt: Informa, 2010; World Cellular Information Service, 2011;

Nigeria: Mbongue, 2011; World Cellular Information Service, 2011; TeleGeography, 2011c.

¹² **Egypt:** Informa, 2010; World Cellular Information Service, 2011; TeleGeography, 2011a.

Nigeria: Mbongue, 2011; World Cellular Information Service, 2011; TeleGeography, 2011c.

Indonesia: Business Monitor International, 2011; World Cellular Information Service, 2011; TeleGeography, 2011b.

¹³ **Egypt:** Informa, 2010.

Nigeria: Mbongue, 2011.

Indonesia: Business Monitor International, 2011; World Cellular Information Service, 2011; TeleGeography, 2011c.

¹⁴ **M-Pesa** is a highly successful mobile-phone-based money transfer service from Safaricom in Kenya. The service allows users to use their SMS-enabled mobile-phones to withdraw and deposit money, transfer money to others, purchase mobile-phone airtime vouchers and pay bills.

Nokia Life Tools is a SMS-based subscription information service offering information on a wide array of topics ranging from entertainment to agriculture. It currently has 50 million users across India, Indonesia, Nigeria and China. By embedding the services in Nokia handsets, access to highly relevant and useful information is relatively simple.

Google SMS Trader is currently available in Uganda and is a marketplace application that allows users to sell and buy goods and services using their SMS-enabled mobile-phones. Users are charged at a per SMS rate. A key functionality is the ability to localise listings and searches.

¹⁵ Dharia, 2011.

¹⁶ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, and Alexandria in response to the question: “Aside from voice and text messaging, what do you use your phone for, how do you access it and how often do you use it?”

¹⁷ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the question: “Why are the identified challenges considered important/highly significant?”

¹⁸ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the question: “In general, how do you envisage mobile services can help your business?”

¹⁹ Facebook statistics in each market as informed by Social Bakers.

²⁰ Booz & Company.

²¹ Boston Analytics, 2007.

²² The term ‘foundations and development funds’ covers a wide range of non-profit entities such as NGOs, charities and foundations. Examples include the Cherie Blair Foundation for Women, the Bill & Melinda Gates Foundation, the Clinton Global Initiative, GSMA, Ashoka Changemakers etc.

²³ For the purposes of our analysis, *Technical Feasibility* was assessed according to the following criteria:

- Mobile delivery platform: this analysed the principal mobile channel(s) through which the product is offered (e.g. SMS, IVR, WAP) and assessed the reliability of that channel in the market. This score enabled us to understand the technical difficulty associated with realising the benefits and scaling the product in the market.
- Degree of localisation and customisation required: assessed the level of unique content and data that would need to be developed and integrated into an existing product offering in order to address market-specific business challenges.

²⁴ For the purposes of our analysis, *Commercial Scalability* was assessed according to the following criteria:

- Stage of product development: analysed the maturity of the product offering in the market based on whether it is beta-stage, early-stage, or growth-stage. This score qualified the existing uptake of the product and validated the commercial infrastructure behind it.
- Existing partnerships the company currently has: this was judged by the nature of a product company’s commercial partners and their influence over the mobile VAS value chain. Ultimately this score quantified the overall ease of implementation of the product into the market based on the ability to leverage partnerships for distribution, marketing and brand visibility.

- Localisation and customisation costs: this is based on the potential investment required to localise and customise the product in order to address the prioritised business challenges.

²⁵ This was informed by interviews with external stakeholders. See also, Nokia Life Tools, 2011; Google SMS Services, 2011; SoukTel Job Match, 2012.

²⁶ This was informed by discussions with Morawczynski, 2012 and the Grameen Foundation 2012.

²⁷ This was informed by discussions with Morawczynski, 2012 and the Grameen Foundation 2012.

²⁸ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the questions:

“If there were a mobile application that could address the challenges identified as being most significant, would you be willing to use it?”

“Would you be willing to pay for mobile services/products which can address identified significant challenges?”

²⁹ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the question: “In general, how do you envisage mobile services can help your business?”

³⁰ It should be noted that the considerably different SMS usage cost profiles and the vastly different number of women entrepreneurs in each market is the main cause for the variance between the three markets.

The total potential revenue highlighted in the red dotted boxes is based on the number of women entrepreneurs in each market. This report recognises that this number could be substantially larger if male entrepreneurs were also considered, particularly since the utility of the identified solutions can be gender agnostic.

The CPM rates were taken from country equivalent Facebook CPM data found on (Social Bakers.. This is a conservative estimate as this rate is the lowest digital CPM in most markets

³¹ Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the question: “If there were a mobile application that could address the challenges identified as being most significant, would you be willing to use it?”

³² Cherie Blair Foundation for Women – primary research survey findings from a sample size of 303 female respondents conducted in February 2012 in Jakarta, Surabaya, Lagos, Abuja, Cairo, Alexandria in response to the question: “If you could invent a mobile solution for the challenges your business faces, what would it be?”

About the Cherie Blair Foundation for Women:

The Cherie Blair Foundation for Women provides women with the skills, technology, networks and access to finance they need to become successful small and growing business owners, so that they can contribute to their economies and have a stronger voice in their societies.

www.cherieblairfoundation.org



About the ExxonMobil Foundation:

ExxonMobil Foundation is the primary philanthropic arm of Exxon Mobil Corporation. Globally, ExxonMobil and the ExxonMobil Foundation provide funding to improve basic education, promote women as catalysts for development, and combat malaria.

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