



The Impact of Social Media on the Performance of Microfinance Institutions in Developing Countries: A Quantitative Approach

Thesis submitted for the degree of Doctor of Philosophy by

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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

يَا أَيُّهَا الَّذِينَ آمَنُوا اسْتَعِينُوا بِالصَّبْرِ وَالصَّلَاةِ إِنَّ اللَّهَ مَعَ الصَّابِرِينَ ۝

O you who believe! Seek assistance through patience and prayer; surely Allah is with the patient.

[Surah Al-Baqarah: Ayah 153]

PhD Abstract

Over the last few decades, microfinance industry has played an essential role in alleviating poverty level and helping the underprivileged, by enabling access to myriads of financial services. Statistics from the World Bank reveals that, currently, only 4% of the underprivileged were served out of the 3 billion potential clients. Such results were due to several claims, particularly the operational and financial challenges faced by the MFIs in the constant flux, inviting more attentions towards its performance. While explicit focuses were given by many researchers towards mobile banking and Information Communication Technology (ICT) and online services in improving the MFIs performance, the study on how Social Media, as a rapidly growing online phenomenon, could affect the MFIs performance remain scarce. Hence, this study was aimed at investigating and clarifying the impact of social media on MFIs, based on four dimensional performance indicators: *efficiency*, *financial sustainability*, *portfolio quality*, and *outreach*. A model was developed utilising Resource Based-View (RBV) Theory, to test the relationship between social media application and organisational performance. A quantitative approach has been adopted employing from web-based questionnaires, to collect data from MFIs employees in developing countries such as Kenya, India and Jordan. Structured Equation Modelling (SEM) technique (i.e. SPSS and AMOS 20 software) was used as a tool to analyse the responses. Results revealed a significant influence of the social media over the MFIs performance, offering valuable insights to both researchers and practitioners in the domain of micro-finance, as well as social media – conforming that the adoption of social media as marketing, advertising and communication tools could significantly improve the MFIs performance.

Keywords: Microfinance, Microfinance Institution Performance, Social Media, Resource Based View Theory.

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Last, I cannot thank enough the partners of every success of my life: my exceptional lady Ruaa and our amazing children Adam and Tia.

Dedication

To my parents Amal & Issa, Ruaa, Adam & Tia

Declarations

The author, Ahmad Daowd, confirms that this thesis is his own work conducted for the purpose of a PhD degree at Brunel University London. Some of this thesis was already published, submitted, and under preparation for publication. Following is a list of the publications:

- Daowd, A., Eldabi, T., Kamal, M. (2016) The Impact of Social Media on the Performance of Microfinance Institutions in Developing Countries: A Quantitative Approach, *Information and Management, Decision Pending..*
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Chapter 1: Introduction to the Research Area

1.1 Introduction

Microfinance is “the provision of a broad range of financial services, such as deposits, loans, payments services, money transfers and insurance, to the poor and low-income households and their farm or non-farm micro-enterprises” (Charitonenko and Campion, 2003). The main reason why deprived people are not able to access the traditional financial services is that they lack security (i.e. something to be pledged as security for repayment of a loan or to be forfeited in the event of a default) (Todaro and Smith, 2009). Throughout the developing world, Microfinance Institutions (MFIs) succeed in supporting the poor people to obtain access to financial services and encouraging them to think in a better way about their financial life. Their success in this respect has been documented broadly in policy, academic, and development arenas (Otero, 1999; Blavy *et al.*, 2004). However, levels of success vary across MFIs; while some fail, others grow to reach millions of borrowers, covering costs in the process (Ahlin and Maio, 2011).

Reviewing the most successful experience in microfinance industry, Nasir (2013) discussed the success of the Grameen Bank model in Bangladesh. He noted a number of significant features;

- Financially it has low transaction costs,
- socially no need for collateral (peer pressure is sufficient),
- loan with very little paper work and no formality,
- repayment of loans in small and short interval,
- quick loan sanctions.

This experience was copied around the world; notable examples are Activists for Social Alternatives (ASA) and CASHPOR Financial, the SHARE Microfinance Limited and Technical Services Limited. Microfinance has an important role to play in improving the financial and social environments of poor people. Since the inception of the Grameen Bank in Bangladesh, microfinance is seen as a successful tool for the alleviation of poverty in developing countries (Hulme and Mosley, 1996). Microfinance focuses on reducing of poverty through improving access to finance and financial services for those who were previously not able (Santosh et al., 2016).

MFIs face difficulties that prevent them from continuously and properly providing their services to the poor; the major concern about the microfinance industry is the high operational costs (Sun and Im, 2015; Basharat *et al.*, 2015). Some MFIs rely more on subsidies to cover their costs (Tang *et al.*, 2002), while others charge sufficient interest rates to cover their expenses and rely less on subsidies (Gulli, 1998), the latter of which increase the burden on the poor.

However, MFIs have been criticised for many other aspects, such as their over-ambitious focus on growth, inadequate staff supervision, high client dropout rates and multiple lending (Harper, 2012). In addition, the problem of the high interest rates charged has always been criticised for enriching wealthy investors instead of helping the underprivileged (Dichter and Harper, 2007).

In order to avoid so-called “*mission drift*” (referring to organisations shifted from the social orientation to commercial), MFIs gave more attention to the performance and sustainability; this indeed requires microfinance institutions to consider reducing their financial and operational expenses to the lowest possible level and, at the same time, increasing the returns to the highest possible level. This does not only mean that MFIs have to charge very high interest rates, but it means that they have to consider effectively using all available resources and assets. It was discussed in the literature that there is an opportunity for MFIs to reduce their operational costs to the level, which helps them to achieve self-sustainability without damaging their social mission of alleviating the poverty (Basharat *et al.*, 2015; Daniel et al., 2016).

Technology implemented in this industry has positively impacted the accessibility to the services and the cost of transactions; such as the remarkable successes of M-Pesa in Kenya (Wijesiri and Meoli, 2015). However, with the rapid increase of social media use as communication and marketing tools in businesses and organisations, this study will examine the capacity of extending the use of social media to the MFIs in order to improve the outreach and the expenses as proposed in previous studies (Kauffman and Riggins, 2010, Agarwal *et al.*, 2011).

In this chapter, Section 1.2 discusses the research problem by reviewing the capacity of sustainable MFIs to expand their outreach. Section 1.3 presents the aim and objectives based on the research problem while section 1.4 briefly discuss the research approach and the appropriate methods to empirically investigate the impact of social media on MFIs. Before this chapter is concluded, section 1.5 presents an outline of the dissertation describing the contents of each chapter of the thesis.

1.2 Research Problem Statement

Recently, there has been growing interest in the performance and sustainability of MFIs (Tulchin and Grossman, 2006; Rozzani *et al.*, 2013). Better performance of MFIs can be achieved on both micro and macro levels. Tulchin and Grossman (2006) stated that, on the organisation's level, MFIs are financially self-sufficient when they are able to provide services without external funding. While at the *macro* level, industry 'massification' can be achieved when it is able to increase the outreach by covering more underprivileged people and making microfinance an effective tool for poverty alleviation.

In 2009, based on World Bank figures, microfinance serviced over 130 million clients worldwide, while potentially it is able to serve 3 billion (Nyapati, 2011). In order to fulfil their mission, microfinance institutions need to reach the neediest, regardless of the distance, provide them with financial services and keep communicating with them while considering the operational costs as a major factor influencing sustainability. Augsburg *et al.*, (2011) and Diniz *et al.*, (2008) highlighted two types of technology previously implemented in MFIs to help them achieve this aim. These are:

- Information and Communication Technology (ICT) (Weber *et al.*, 2012; Rozani *et al.*, 2013)
- Mobile banking technology (Hinson, 2011; Molina, 2013).

According to Ali and Khan (2013), ICT has been recognised as a preferred investment within the banking industry due to its significant impact on operational efficiency, risk analysing and controlling/mitigation, getting new customers and retention of existing customers. Similarly, the study of Hossain and Ahmed (2012) revealed that MFIs are trying to reach as many poor people as possible by using mobile technology due to its significant impact on increasing customers, branding & images and staff familiarity with technology. However, despite the potential benefits of both tools, they are still constrained by regulatory environment, infrastructure, high skilled staff availability, financial resources and other difficulties (Rozzani *et al.*, 2013; Molina, 2013). The findings of Hossain and Ahmed (2012) added that low financial resources and technology literacy of clients is the main challenge for mobile banking success. They also found that deploying mobile banking platform requires MFIs to have large investment in IT infrastructures and strong management and negotiation skills.

In contrast, social media holds enormous potential for organisations and businesses as an available tool to get closer to customers and clients and, by doing so, increase revenue, collaboration, helping environment, marketing, brand loyalty, cost reduction and efficiencies (Edosomwan *et al.*, 2011; Lyon and Montgomery, 2013). Indeed, social media still offers a unique opportunity for academics to analyse new types of data, to communicate and interact with clients, and to help organisations to be ready for this new age of internet and smart-phones applications (Kaplan and Haenlein, 2012).

1.3 Research Aim and Objectives

This research aims to better understand the issues around microfinance industry and social media by benefiting from a frame of reference to support such understanding. This frame of reference will help the MFIs management and decision makers to understand the effect of social media on their organisations' performance and

structure, before proceeding with their investment strategy. The proposed frame of reference is going to be decoded into a model. As a result, the aim of this thesis is to:

“Investigate the impact of social media on the performance of microfinance institutions and, in doing so, develop and propose a model that may support in understanding social media as a modern tool of marketing and communication on critical indicators of MFIs performance in developing countries.”

Based on the success of social media in supporting organisations to overcome difficulties, and due to major difficulties slowing the development of MFIs, this study investigates the impact of extending social media success to MFIs on their performance; it aims to investigate the extent to which social media is able to expand the outreach and provide a cheaper and easier-to-access channel of communication.

The impact of social media on MFIs’ performance in this regard is assessed by monitoring a framework of performance indicators such as outreach and efficiency. Therefore, the objectives of this PhD thesis are outlined as below,

- **Objective 1:** To critically review the literature on microfinance challenges and performance with a specific focus on social media as a tool for better performance
- **Objective 2:** To identify the significance of the key performance indicators related to the microfinance institutions.
- **Objective 3:** To develop, propose and evaluate a model demonstrating the impact of social media usage on microfinance industry in developing country context.
- **Objective 4:** To analyse the collected data and validate the proposed research hypotheses.
- **Objective 5:** To conclude the theoretical and practical applications of the findings along with a path for further research avenues in this research field.

1.4 Research Methodology

In order to investigate the impact of social media on MFIs performance, this study aims to develop a conceptual model along with its measurable hypotheses based on a review of the existing literature. Hence, this study adopts a positivism philosophy to conduct its investigation and test the proposed conceptual model. Furthermore, this research benefits from the advantages of quantitative paradigm as follows:

- testing and validating the proposed research model and its hypothesis,
- the ability to generalise research findings,
- the ability to construct a situation that eradicates the perplexing influence of many variables,
- allowing one to more credibly evaluate cause-and-effect relationships,
- data have higher credibility for studying large numbers of observation with less time consuming (Creswell, 2014).

Similar studies concerning the influence of technology usage in organisations have followed a quantitative approach (e.g. Jawadi *et al.*, 2010; Ala and Ngugi, 2013). Therefore, in order to examine the proposed hypotheses, this research has adopted a quantitative paradigm which requires a large sample of data. Survey is the most appropriate methodology to be adopted in this study as it meets its requirements with regards to the large number of data needed with convenient cost, time, and effort. This research benefits from online questionnaire to collect data as it offers more flexibility for designing the questionnaire in comparing with traditional paper based formats, as well as offering convenience and access to sufficient samples (Gray, 2014). Structural Equation Modelling (SEM) was used to analyse the collected data and both SPSS 20 and AMOS 20 software were used to run the required tests and examine the hypotheses and the validity of the proposed model (Hair *et al.*, 2010).

1.5 Thesis Structure

The methodology described by Phillips and Pugh (1994) is followed for the structure of this PhD thesis. It includes four elements: (a) background theory; (b) focal theory;

(c) data theory and (d) novel contribution. The first one focuses on discussing the research area (included in Chapter 1), assessing the field of research and recognising the problem domain (included in Chapter 2). Focal theory is second element of the thesis; it deals with producing a conceptual model (included in Chapter 3). In Chapter 4, data theory presents issues related to the suitable epistemological stance to adopt, the development of an appropriate methodology, and the circumstances impacting the selection of research strategy. Furthermore, data theory deals with the data collection process and analysis (Chapter 5). The novel contribution is the fourth one, which is concerned with explaining the importance of the thesis to the development of the discipline being researched (included in Chapters 6). A summary of the thesis is offered in Chapter 7 of this research briefly presenting the main contributions and discussion of the possible areas for further investigation. Therefore, the following paragraphs explain the thesis outline as it is demonstrated in Figure 1.1.

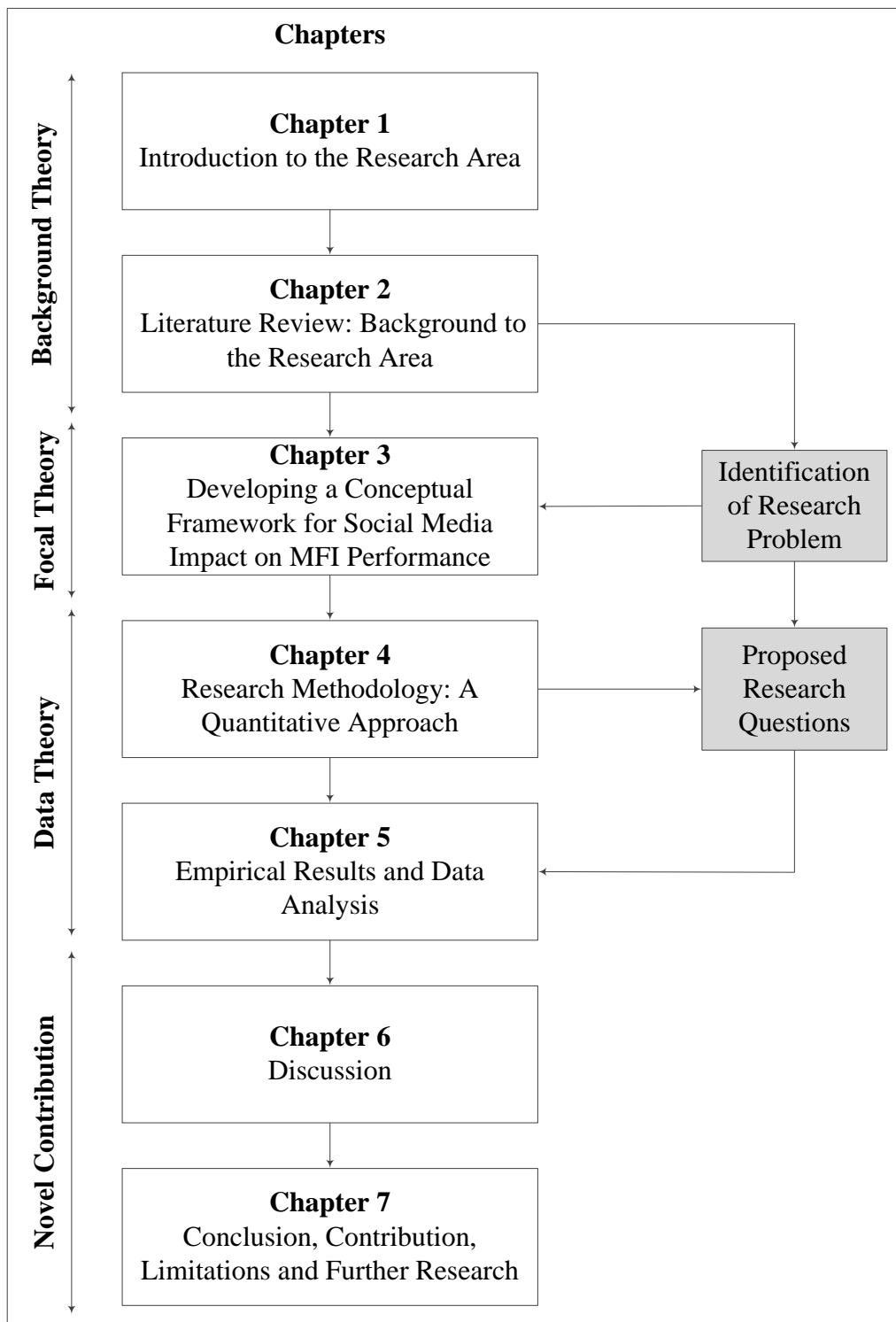


Figure 1.1 Thesis Outlines

- **Chapter 1: Introduction to the Research Area**

Chapter 1 begins by providing an introduction to the research area and the research problem this research will address by focusing on Social Media and MFIs performance. Thereafter, the aim and objectives are stated, brief

justification to the selection of the research approach, with an outline of the thesis (Figure 1.1) in the end.

- **Chapter 2: Literature Review – Critical Analysis of the Research Area**

After providing a brief introduction to the research area and establishing the scope, this study begins to review the literature on MFIs and Social Media. Initially, this chapter provides an overview of microfinance industry in developing countries and the challenges facing this industry, followed by discussion over the most critical indicators of MFIs performance and the role of technology in improving this performance; the chapter is concluded by presenting the related theories to the research area along with justification of the most appropriate one to ground the research hypotheses.

- **Chapter 3: Developing a Conceptual Model for Social Media Impact on MFI Performance**

Chapter 3 presents a detailed discussion on theoretical development and as a result, proposes the research model (Figure 3.7) and hypotheses for further testing. All hypotheses claim the significant impact of social media in creating value for MFIs performance. This value is explained on each of MFIs performance indicator: efficiency, financial sustainability, portfolio quality, and outreach.

- **Chapter 4: Research Methodology – A Quantitative Approach**

Chapter 2 is setting the background of this thesis and Chapter 3 proposes a conceptual model for Social Media Impact on MFI Performance. Those chapters have supported the researcher to understand and identify research problem for further investigation. To commence the research that focuses on the discussed issues, a research methodology is followed to examine the research model. Chapter 4 focuses on the methodology to describe the data and the empirical model used for the analysis, full presentation of different research approach is introduced along with the appropriate research philosophy, design, paradigm, strategy, and questionnaire development.

- **Chapter 5: Empirical Results and Data Analysis**

Having achieved an understanding of the relevant problems for this research, Chapter 5 then presents the empirical analysis of the collected data by running the appropriate tests for normality, validity, reliability, confirmatory factor analysis, and structural modeling for hypotheses testing. A full empirical investigation is conducted based on 383 questionnaire responses from developing countries. The sample size is considered to be good in order to analyse the proposed model using structural equation modeling (SEM).

- **Chapter 6: Discussion**

Based on the research findings and analysis presented in the previous chapter, this chapter presents further discussion on the results and its reflection on the literature to accept and/or reject the research hypotheses. A full consideration is given for each of the empirical results and its meaning in term of the research hypothesis.

- **Chapter 7: Conclusions, Contribution, Limitations and Further Research**

Summary of this study is presented in Chapter 7. Therefore, the researcher describes the aim and objectives the thesis met and main findings from the overall thesis. Afterwards, the statement of the contributions and research novel is highlighted. In conclusion, the researcher provides the main limitations of the research and describes the potential areas of further research.

1.6 Summary

This chapter introduced the research area by providing a quick view of microfinance experience as a background to the research. Furthermore, this chapter covered the research problem highlighting the importance of technology to help improving microfinance performance. Also, the research aim and objectives were covered in addition to the research approach and methodology. Finally, this chapter concluded with a plan and brief explanation of the research.

The next chapter is going to discuss and review the literature in the field of microfinance challenges and performance and the use of technology in this context.

Chapter 2: Literature Review – Background to Research Area

2.1 Introduction

The microfinance industry began to attract the attention of policymakers and the academic sector after the successful experience Grameen Bank in Bangladesh, where financing the poor was more based on “moral” collaterals due to the lack of other sort of collaterals; this led to a significant change in the financial and social aspect for the targeted population. As this study is going to examine the influence of technology usage on the performance of MFIs in developing countries, the previous chapter maps the research problem addressing the poor performance of MFIs as a result of major difficulties facing their operations. Among other technologies, this research highlights the social media as a method to overcome those challenges and improve the performance.

In this chapter, the microfinance industry will first be considered from a literature perspective (section 2). The significance of the microfinance industry is presented in section 3 to drive the discussion to a comprehensive revision of the challenges and difficulties facing the operation of MFIs in developing countries as in section 4. The high operational expenses issue is addressed as a major constraint of such improvement, and the high interest rate applied by MFIs as consequence of such expenses. Later, section 5 presents the performance measurement indicator as a tool to assess the change on the performance as a result of the suggested technology implementation. Section 6 will review the literature of technology usage in microfinance considering information and communication technology (ICT) and mobile banking experience, in addition to proposing the social media in this context based on its success in different sectors. Section 7 will have a presentation on the

theories related to the research topic while section 8 will justify the reason of adopting the theory which underpinning the research hypotheses.

2.2 Microfinance and MFIs: A Literature Perspective

Poverty is a global disease and becomes an internationalised social problem associated with more social and economic consequences. The World Bank revealed that, in 2011, the poverty ratio at USD 1.25 a day (PPP) is 14.5% for the world, 7.9% for East Asia and Pacific, 24.5% for South Asia, 4.6% for Latin America, and the most shocking is 46.8% for Sub-Saharan Africa (Data.worldbank.org, 2015). According to the Food and Agriculture Organization (FAO), nearly half the world's population, 2.8 billion people, survive on less than \$2 a day and about 20% of the world's population (1.2 billion people) live on less than \$1 a day (FAO News Release, 2010). The lack of income as financial means has its own negatives on both individuals and societies. Economic poverty means living in squalor, dying early and raising children who face similar prospects (Haushofer and Fehr, 2014). Different approaches were considered in term of fighting the poverty and supporting the underprivileged people in developing countries to pull themselves out of this siege, one of these methods is microfinance.

It is widely understood that microfinance is the establishment of financial services to low-income people (Thard and Singh, 2016; Ashta *et al.*, 2016). The term microfinance refers to a wave that creates a world where low-income people have stable access to high-quality and affordable financial services to finance income-producing activities, build assets, stabilise consumption, and protect against risks (CGAP, 2015). These services include products such as savings, insurance, payments, and remittances (CGAP, 2015).

Microfinance institutions are committed to giving the underprivileged population the chance to access financial services by providing them with the wide range of micro-financial services such as micro-credit, micro-insurance, and saving (Nkpoyen and Eteng, 2012). Based on the review of Brau and Woller (2004), MFIs provide products and services to their customers similar to what formal sector financial institutions do,

but the size and method of delivery differ. At a later stage, more services have been added to MFIs, such as savings, emergency loans, and insurance. Littlefield *et al.*, (2003) highlighted the use of those financial services by the poor to invest in health and education, to manage household crisis and emergencies, and to meet the other cash needs that they encounter.

Following is a brief presentation of some MFIs in different countries, this presentation will enhance our understanding to the importance of microfinance industry in developing countries by highlighting the business value and the number of people who have been served by this type of organisations, looking at different geographical context.

- *Mali* - Kafo Jiginew offers four loans (campaign loans, short term ordinary loans, education savings loans, and equipment loans). In 2013 its gross loan portfolio was 48.9 USD million and the number of active borrowers was 59,979 as average loan balance per borrower was 816.1 USD. As of 2010, Kago Jiginew achieved operational self-sufficiency at 113.44%. The cost per loan is 126 USD (Mixmarket.org, 2015). 65.1% of its 15 million populations live in rural area, with 33.4% of the total population over the age of fifteen are literate (CIA.gov, 2015).
- *Nigeria* - Life Above Poverty Organisation (LAPO-NGR) offers a variety of services including loans, voluntary savings, training and consulting, business development, micro insurance, and health services. In 2013, its gross loan portfolio was 146.5 million USD with 685,138 active borrowers, in average 213.9 USD loan balance per borrower; for the same year it also has deposits of 86.6 million USD from 1 million depositors (Mixmarket.org, 2015). The total population of Nigeria is 170,123,740 people, 50% of the population lives in rural areas. The literacy rate of people over the age of fifteen in Nigeria is 61.3% (CIA.gov, 2015). McIntyre (2012) stated that Mali was the least successful, while Nigeria was the most successful among the five West African countries discussed taking into account three main indicators of success: financial sustainability, institutional viability and outreach.

- *Latin America* - has established for microfinance industry since the 1980s, one popular institution in Latin America is CMAC-MAYNAS from Peru which provides consumer loans, loans to micro, small and medium enterprises, it also offers savings instruments and fund transfer services; according to MIX Market, in 2013 its gross loan portfolio was 113.4 million USD with 34,167 active borrowers as an average loan balance per borrower of 3,319.0 USD; it was also reported with 119.8 million USD of deposit collected from 88,559 depositors. Moreover, it has been addressed that the poverty rate has dropped substantially during the last decade but remains stubbornly high at about 30% of its 30 million populations with more than 55% of them are based in rural areas in spite of Peru's low rural population (only 22.7% of population as in 2011).
- More popular experience is from Asia, as it is the birthplace of this industry. ASA from Bangladesh was placed on the top of MFIs around the world as ranked by Forbes (Swibel, 2007). In the mid-80's, it introduced new programs working in the sector of health and nutrition, education, sanitation, etc. ASA at this stage introduced microcredit as a pilot project. The year 1992 is when ASA focus solely on microfinance as its tool in fighting poverty. It obtained financial self-sufficiency in 1994 and declared itself as donor free institution in 2001 (Mix Market, 2015).

As noted from the literature, the issue of high operation costs is a common problem among all regions; in response to these high expenses, most MFIs transfer them to their clients in the form of high interest rates (Sabi, 2013). One clear example of transforming these costs to the clients is microfinance markets in the Latin American region which has the highest degree of commercialisation in the world (Chengping, 2009), such commercialisation is a new phenomenon to the field of microfinance and it is identified as a mission drift (Armendáriz and Szafarz, 2011).

The literature has demonstrated that source of fund may play a significant role on designing the interest rate (D'Espallier *et al.*, 2013). For example, the interest rates of Asian unsubsidised MFIs are lower than those charged by African and Latin

American subsidised MFIs. The source of fund also may play a role on the deciding the loan size where unsubsidised MFIs in Eastern Europe and Central Asia offer larger loans compared to same-region subsidised MFIs (D'Espallier *et al.*, 2013). In other words, sustainable MFIs have more control over the interest rate and loan size; therefore, in order for MFIs to be sustainable, previous studies have addressed different challenges affecting the performance of MFIs. The high operational costs were presented as a major challenge of MFIs and it drains a big share of their returns (Tulchin, 2006). The poor MFIs performance was explained as being due to the lack of access to technology by MFIs (Kulik and Molinari, 2004; Mishra and Chowbwy, 2009).

2.3 The Significance of Microfinance and MFIs

Microfinance is the provision of financial services to low-income poor and very poor self-employed people (Otero, 1999; Thard and Singh, 2016; Ashta *et al.*, 2016). These financial services generally include savings and credit but can also include other financial services, such as insurance and payment services (Ledgerwood, 1999). This approach became more popular after the success of the microfinance industry in Bangladesh, which established an effective model and tool for poverty alleviation in the developing world. A clear link was established between the problems of access to regulated financial services and rising levels of poverty and disadvantage (Ford 1988; Berthoud and Kempson 1992; Littlefield *et al.*, 2003; Dunford, 2006). Indeed, this explains the significance of allowing the poor people to access the financial system in order to improve their financial circumstances.

The successful experience of the microfinance industry in Bangladesh provided evidence of the need for microfinance services more widely across all the developing countries. Littlefield *et al.* (2003) discussed how access to financial products and services enables the underprivileged to increase their household incomes, build assets, and decrease their vulnerability to the crises; they supported this statement by based on evidence from the millions of microfinance clients around the world. Similar to that, Otero (1999) has identified them as they are poor city dwellers housed in slums or squatter settlements lacking access to basic services such as education and health.

Using national household data from India, Imai *et al.* (2010) employed treatment effects model to estimate the poverty-reducing effects of MFIs loans for productive purposes, such as investment in agriculture or non-farm businesses on household poverty levels. Their findings address a significant positive effect of MFI productive loans on multidimensional welfare indicator. Another study looked at the microfinance as programs which have the potential to exploit social networks and alleviate credit market failures (Ghatak, 2002).

Findings of Pei-Wen et al (2016) revealed that microfinance facilities run by both government agencies and non-government agencies have a positive impact on SMEs' business income. In other words, SMEs can improve their income when get funded by microfinance stream.

However, highlighting the dark side of microfinance was barely discussed; e.g. Hermes and Lensink (2011) raised doubt whether access to finance may contribute to a substantial poverty reduction. Furthermore, it has been observed that there is increasing dynamism and interest by governments and donors with regard to the importance of microfinance in the fight against poverty and, on the other hand, with regard to the preparation of national legislation on microfinance, the MFIs have shown interest in coming together as a network (United Nations, 2010). Therefore, the literature supports the concept of improving the performance of MFIs as a significant vehicle to alleviate the poverty, such microfinance will act as a driver of social change and social innovation and such performance cannot be achieved without the use of technology; it is essential for MFIs to speed up the technological change (Mishra and Chowbwy, 2009; Singh and Padhi, 2015).

2.4 Challenges of Microfinance Institutions

Following the brief presentation on microfinance experience in few different regions, lessons are learnt about the importance of increasing the performance of MFIs. It is clear that the microfinance industry faces a wide range of challenges from an operational, cultural, and strategic perspective; those challenges obviously led to a failure of many microfinance institutions in many developing countries such as Nigeria, the Philippines, and India and, even in the home of microfinance industry,

Bangladesh. Addressing the main challenges will help in clarifying the current picture of microfinance industry in order to suggest the appropriate methods to improve their performance. Moreover, developing countries (India, Bangladesh, Kenya etc.) suffer from common challenges affecting the overall economy (such as corruption, frauds and forgeries, low educational level etc.); likewise, the microfinance sub-sector is not left out of the ravages of those challenges. Unfavourable regulatory environments, government policies and regulations, are issues of interest in order to develop microfinance industry in developing countries, while McIntyre (2012) revealed that the country conditions indicated a high correlation with the success of the MFI.

Furthermore, some challenges could be classified under the category of cultural challenges, such as unwillingness of clients to provide personal information, and the lack of banking culture in rural areas; those challenges were mentioned as minor difficulties and country-related difficulties. Reviewing previous studies, the next section will consider the major and common difficulties all over the developing countries which slow the growth of microfinance industry.

2.4.1 High Operational Costs

One major challenge of the microfinance industry is the high operational cost, which is translated into high interest rates; indeed, this issue prevents the expansion of microfinance scale. Therefore, the influence of high operational expenses on the interest rate charged by microfinance banks was previously addressed in few studies (e.g. Morduch, 2000; Acha Ikechukwu 2012). According to a study carried out by UNDP (2003), microfinance banks charge between 30% to 100% interest on loans while they pay 4.5% to 6% on savings. Brau and Woller (2004) argued that when MFIs charge rates too high, they may hinder their capability to support the poor, pull themselves out of poverty, and also price very poor people out of the market for loans. The purpose here of highlighting the issue of high interest rates is to draw attention to the importance of controlling the operational expenses and running the MFIs more efficiently. The literature has widely discussed the consequences of high interest rates from different perspectives, as in Table 2.1; e.g. Serrano-Cinca and Gutiérrez-Nieto (2014) identified it as a mission drift, while Mendoza (2011) identified it as “poverty penalty”.

However, despite of the burden of the interest rate, it is still one of the few options available to poor people who need to access financial services. Morduch (2000) has argued that, despite the high interest rates charged by MFIs, this is still a cheaper option for poor people compared with the interest rates charged by moneylenders, which may be in excess of 100%. Hence, by providing access to the financial stram to the poor people, MFIs encourage long-term investment as the business plan for each applicant is part of the application, while usually money borrowed from moneylenders is to meet short-term consumption needs. Morduch (2000) offered no explanation for the distinction between moneylenders and MFIs, but fails to consider the differing categories of damage that caused by the high interest rate charged by MFIs comparing with other financial institutions. Therefore, achieving financial sustainability, according to Kar and Swain (2014), requires that MFIs be able to cover the cost of lending out of the income created from the outstanding loan portfolio (and hence interest rates applied) and decreasing the operational costs.

Table 2.1 presents evidence regarding the issue of high operating expenses as a major challenge for MFIs, which has a negative impact on improving the services in the microfinance industry. Kneiding and Rosenberg (2008) discussed that better performance will lead to lower costs and lower interest rate charges, as per the experiences of MFIs in Sri Lanka, India, Nepal, and Senegal, which charged average rates considered at the lowest level (20%). Similarly, in Bangladesh, the Grameen Bank charged an annual interest rate of 20% on its main credit products (Islam *et al.*, 2014). It has commonly been assumed that the usage of advanced technology may help institutions to improve their performance; therefore, policy-makers need to pay attention to improving infrastructure that specifically impacts the use of new technology by MFIs, given that such technology can have a potentially significant positive influence on microfinance providers' operating costs (Fernando, 2006).

Challenge	Perspective	Description	References
High Operating Costs	Mission Drift	After identifying two groups (the most centred MFIs and the most drifted MFIs), a logistic regression model was developed to measure the mission drift due to the high interest rate charged by MFIs.	De Aghion and Morduch (2006) Serrano-Cinca and Gutiérrez-Nieto (2014)
	Response to High Operating Costs	High operating costs due to small loan for poor clients and the lack of deposits, mission centred MFIs either need subsidies or have to charge high interest rates (poverty penalty).	Mendoza (2011)
	Response to High Operating Costs	A common response for NGOs facing high costs (Operating Expense, loan loss provisions, and cost of funds) is to raise interest rates.	Cull <i>et al.</i> , (2010)
	Fairness of MFIs Interest Rate	Four approaches and criteria of fairness of interest rates were presented in response to the very high interest rate charged by MFIs.	Hudon (2007)
	Impact of High Interest Rate on Poor	The negative impact of high interest rate is a barrier for the poor to pull themselves out of poverty and discussion over its bad impact on repayment rat.	Brau and Woller (2004)
	Borrower Perspective of Interest Rate	A comparative analysis of interest rates from the borrower point of view was presented to investigate the highest interest rate for lending money from different provider and the MFIs was the second highest rate behind the money lenders.	Mukherjee (2013)
	Higher Interest Rate Comparing to Formal Banks	An empirical support was presented for the proposition that operating costs are much higher for tiny microloans than for normal bank loans, and therefore, sustainable interest rates for microloans have to be significantly higher than normal bank interest rates.	Rosenberg <i>et al.</i> , (2009)
	MFIs Failure	Presenting the experience of MFIs in an Indian state after closing 50 branches because of charging what called “usurious” interest rates and indulging in forced loan practices.	Shylendra (2006)
	Staff Capability	Lack of qualified staff was addressed as an operational challenge by few studies.	Boateng and Agyei (2013); Bell <i>et al.</i> , (2002); Thela (2012)
	IT Support	The lack of IT support in management information system (MIS) in MFIs, and lack of standardisation in procedures in the MIS.	Nasir (2013)
	Trust	Lack of credibility of MFIs in operating their services (such as a failure and licence withdrawal) damages public confidence in these banks.	Acha Ikechukwu (2012)
Repayment	Another challenge of loan collection method which is found an issue that creates a problem in growing the organisation.	Nasir (2013)	

Table 2.1: The Dimensions of High Operating Costs Challenge

In addition to the abovementioned, MFIs face several other operational challenges; these are related to the methods and tools followed by the organisation to handle its mission. MFIs also suffer from limited support for human and institutional capacity building. The purpose of mentioning even those minor issues is to provide a sufficient picture of MFI environments which will help further to diagnose the major problems. The lack of qualified staff was widely addressed in previous studies as a primary constraint of microfinance growth (Thela, 2012; Boateng and Agyei, 2013; Nasir, 2013). Nasir (2013) addressed other difficulties, such as the lack of IT support in Management Information System (MIS) in MFIs, lack of organised training in IT for the MFI employees, lack of standardisation in procedures in the MIS; and loan collection method. Another challenge is the low public confidence due to a failure of MFIs in some countries such as Nigeria (Acha Ikechukwu, 2012).

2.4.2 Education Level of Clients and Staff

As the target population of MFIs is the poor people, most of them are expected to be in rural areas where they have a lower education level. The low educational level is another challenge facing microfinance, as discussed in previous studies (Quadri *et al.*, 2011; McIntyre, 2012; Nasir, 2013). The low educational level of both staff and/or clients could make it harder for microfinance to deliver the information about their applications, process and procedure to the clients. In addition, the approved loans might be invested in the wrong manner, which makes the portfolio quality at a higher risk. Moreover, this challenge indeed conducts few other sub-challenges, such as the lack of debt management knowledge among poor and the problem of late payments (Nasir, 2013); it was reported that, in India, 70% of the clients in MFIs were unaware of the fact that how to manage their debt and the same percentage was reported regarding the late payments (Nasir, 2013). It is also documented from the literature that MFIs use less educated and trained staff due to the limited budget of salaries they could afford and this, in turn, affects the overall staff productivity and performance (Parikh *et al.*, 2006; McIntyre, 2012). The client's low awareness is another consequence the low educational level (McIntyre, 2012; Nasir, 2013). Table (2.2) presents few evidences related to the difficulty of low education level from different perspectives.

Challenge	Perspective	Description	References
Low Education Level of the Clients and Staff	Clients Awareness	Low education level of the clients leads to: <ul style="list-style-type: none"> • The clients in MFIs are unaware of the fact that how to manage their debt, • The clients in MFIs are unaware of services and products provided by the institutions, • Difficult for the MFIs employees to make the clients understand the policy and related details. 	Nasir (2013); McIntyre (2012)
	Staff Capability	Lack of organised training in IT for the MFI employees.	Quadri <i>et al.</i> , (2011)
	Communication Skills	The education level of the staff is a barrier to apply the proposed CAM user interface toolkit as a method of communicating with the clients.	Parikh <i>et al.</i> , (2006)

Table 2.2: Challenges related to Low Educational Level

As from literature, Table 2.2 presents the problems of low educational level and its consequences from the clients and staff perspective. Aiming to increase the educational level of MFIs stakeholders is very important for their success and forcing technology, such as social media, in this context may provide an educational platform for sharing knowledge (Edosomwan *et al.*, 2011).

2.4.3 Lack of Funding

Another challenge that affects the ability of MFIs to continue providing poor people with financial services is the fund availability. The United Nations (2010) reported that MFIs do not have sufficient financial resources; the ones that do not collect savings depend mostly on subventions and might totally disappear in case the subventions are abolished or in case of serious degradation of holdings. It is also being addressed by the United Nations (2010) that there is a glaring need to find cheap financing sources to enable the MFIs to play their role in the fight against poverty through microfinance.

As a result of lack of funding challenge, Quadri *et al.*, (2011) addressed a challenge in sustaining management information system. The above study addressed that the low MFIs budgets makes it difficult for them to build and operate MIS that can help in

improving the performance. For a microfinance programme to continue to expand its coverage, MFIs will need to keep access to a stream of subsidised funds – and that will depend on the ability to prove the institutions’ social worth relative to other social interventions (Cull *et al.*, 2010). Lack of access to funding is a factor consequently contributing to the lack of growth in MFIs, which has not been provided to MFIs by concerned agencies, and this lack of adequate loan or equity capital makes it hard for MFIs to increase loanable funds (e.g. see Quadri *et al.*, 2011; United Nations, 2010; Nasir, 2013; Kanayo *et al.*, 2013). Table 2.3 provides a brief presentation on the problem of lack of funding:

Challenge	Perspective	Description	References
Lack of Funds	Limited Resources	One of the major challenges faced by microfinance institutions in Nigeria is the lack of adequate loan or equity capital to increase loan-able funds.	Kanayo <i>et al.</i> , (2013)
	Sustainability of Financial Resources	The continued expansion of microfinance needs to be funded by the market available means of funding as subsidised funds are sharply limited or will soon dry up.	Cull <i>et al.</i> ,(2010)
	Technical Side-Effect	The difficulty to access the fund by MFIs causes low budget which makes it difficult for MFI to build and operate management information system (MIS) that can have a positive impact.	Quadri <i>et al.</i> , (2011)
	MFIs’ Outreach	The informal financial institutions that try to provide microfinance services generally have limited outreach due mainly to scarcity of loanable funds.	CBN (2005)

Table 2.3: Challenges related to Lack of Funds

Therefore, the lack of access to sufficient fund by MFIs will make the institution unable to properly continue providing the poor people with the financial services and to expand this coverage; it will also make it difficult for MFIs to apply advanced technological tools with skilled human resources to improve the performance.

2.5 Microfinance Institutions and Performance Measurement

Performance of MFIs started to receive more attention following the failure of many MFIs around the world, including the home country of this industry Bangladesh.

According to the discussion of Mustafa and Saat (2013), MFI performance is a very critical matter for different reasons, such as: to help the regulators in monitoring the MFIs, and also to ensure donor and investors efficient use of the money they have injected in microfinance programs. Therefore, pressure was put on MFIs to improve their performance by sustainably proving the efficiency while they are providing more reliable underprivileged population access to the basic financial services. Measuring the performance of MFIs is essential for their management for planning, and it is also important for the donors and other MFIs fund providers then they will be able to allocate the appropriate support. Moreover, the finding of Mustafa and Saat (2013) support the vision that performance measures are means for managing MFIs and are a probable necessary for sustainability and may be adopted by other evolving MFIs.

The study of Nanayakkara (2012) stressed the importance of measuring the performance in relation to MFIs due to many reasons. He addressed the main three reasons as follows: the first one is that the amount of aid money injected into the microfinancing sector runs into hundreds of millions of dollars (e.g. World Bank during 2009 provided US\$378 million). The second one, regulatory frameworks to monitor and control the MFIs are still in the infancy stage or are non-existent. The third one, there is very low competition among the MFIs to attract customers caused mainly by the very high demand for microfinancing products and services. Pakdel and Monroy (2010) draw a clear and simple guidance for identifying the characteristics of a good microfinance program as follow:

- There are small amounts of money and short term loans.
- The term of reposition is short, weekly or monthly.
- The borrower and investment appraisal is informal.
- There are different easy methods as collateral substitution.
- After timely repayment base on the performance, it provides the access to larger amount of loans.
- The resources rendered are invested in economic activities chosen in advanced by the borrowers.

More deeply, Yaron (1994) has discussed that dissimilar to traditional banks, traditional indicators, such as accounting profit, do not measure MFIs performance

well because they do not take into consideration the MFIs social goal and orientation. As a result, Yaron (1994) has referred to his own research conducted for the World Bank in (1992) regarding two prime criteria for MFI success: (i) the level of outreach achieved with the targeted population and (ii) degree of self-sustainability. The level of outreach can be determined as the type of clients MFIs serve and the variety of financial services they offer, while self-sustainability is achieved when the return on equity, net of any subsidy received, equals or exceeds the opportunity cost of funds.

In addition to the two criteria proposed by Yaron (1992), Zelle and Meyer (2002) pointed out the social benefits and presented a framework to measure the performance with three dimension criteria: outreach, financial sustainability, and the welfare impact. In contrast, Arsyad (2005) has assessed the influence of MFIs on both sustainability and outreach. Moreover, as one of the major backers of the MFIs, the World Bank has developed an index referred to as the ‘Subsidy Dependence Index (SDI) (Francisco, 2008). Sanfeliu *et al.*, (2013) proposed a goal programming based multicriterion methodology in order to measure the performance of MFIs considering both the banking side and the social side. Lapenu and Zeller (2002) identified the performance measurement in three critical dimensions: repayment, staff productivity, and outreach. However, it was found from the literature that staff productivity is a segment of overall efficiency (Lafourcade *et al.*, 2005; Kinde, 2012).

Rosenberg (2009) offers basic tools to measure performance in few critical areas as follows in Table 2.4:

Method	Description
Breadth of Outreach	By identifying how many clients are being served.
Depth of Outreach	By identifying the poverty level of the served clients.
Loan Repayment (Portfolio Quality)	By identifying how well is the lender collecting its loans.
Financial Sustainability (Profitability)	By investigating whether the MFI is profitable enough to maintain and increase its services without continued injections of subsidies.
Efficiency	Refers to how well the MFI control its operating costs.

Table 2.4: Performance Measurement Indicators (Source: Rosenberg, 2009)

As MFIs operate in geographically widespread areas, their administration costs increase as a result of high communication cost. A link was established from the literature between the efficiency and communication which confirms that achieving efficiency and cost effectiveness through modern information and communication technology is a significant character of MFI. Consequently, more efficient communication in MFIs is a sign of better performance. Therefore, this study includes the efficiency of communication as a sub-indicator of performance under the umbrella of overall efficiency.

Assessing the performance for microfinance providers is about examining the development toward accomplishing goals (Mustafa and Saat, 2013). Therefore, as there is no agreement from the literature on a specific framework that can be used by donors, policy makers and MFIs management in addition to the other stakeholders involved in microfinance industry (Mustafa and Saat, 2013), the current study develops its own performance measurement framework in favour of what was discussed above. The framework will include the following key indicators:

- Overall efficiency includes: communication efficiency and staff productivity.
- Financial sustainability.
- Portfolio quality (loan repayment).
- Outreach (breadth and depth).

The following section discusses in details those four key indicators and why they are used as the characteristics for the framework for performance measurement.

2.5.1 Efficiency

There have been few previous studies that have addressed the efficiency of microfinance institution as a measure of performance. The efficiency refers to the ability to produce maximum output at a given level of input, and it is the most effective way of delivering small loans to the very poor in microfinance context (Woller, 2000). Efficiency was identified using different perspectives in the literature; e.g. Lafourcade *et al.*, (2005) use cost per borrower and cost per saver as measure of

it, while Makame and Murinde (2006) mainly focused on the cost per borrower and quoted that “lower cost per borrower reflects higher operational efficiency of the MFI and sustainability potential in the long run”. More accurately than the above indicators, Farrington (2000) extended the variables reflecting the efficiency of MFIs and concluded them in: administrative expense ratio, number of loans per loan officer and loan officers to total staff, portfolio size, loan size, lending methodology, source of funds and salary structure.

Recently, there has been a shift from subsidising MFIs towards a focus on financial sustainability and efficiency (Hermes *et al.*, 2011), this increased focus is due to a number of developments such as the growing competition among MFIs, the commercialisation of microfinance, technological development that also has become available for, and implemented in microfinance, and financial liberalisation and regulations of the government (Rhyne and Otero, 2006). When their costs are covered, MFIs would be able to extend their scope of activities and, consequently, improve their outreach to more potential recipients in the long term (Rozzani *et al.*, 2013).

According to Rosenberg (2009), there are two common indicators used to measure whether retail MFI is a cost effective as follow:

- *Operating Expense Ratio (OER) = Personnel and administrative expense / Period-average gross loan portfolio*
- *Cost Per Client (or loan)= Personnel and administrative expense / Period-average number of active clients (or loans)*

Considering the question on efficiency improvement, Hermes *et al.*, (2011) suggests that improving efficiency may only be achieved if MFIs focus less on the poor, which is consistent with a wave of studies calls for commercialising the microfinance industry; others believed that this will drift the MFIs from their main goal as a tool for poverty alleviation, contributing to the empowerment of women (Mersland and Strøm, 2010; Serrano-Cinca and Gutiérrez-Nieto, 2014). On the other hand, in order to improve efficiency, other studies discussed restructuring the microfinance

institution by focusing on reducing operational costs with using new banking technology (Kapoor *et al.*, 2007; Kauffman and Riggins, 2012; Rozzani *et al.*, 2013).

2.5.2 Financial Sustainability

The financial sustainability of an MFI can be explained as its capacity to cover all of its costs by its revenue and to create a margin to finance its growth. It is the capacity of an MFI to carry out its business without the need for subsidies in the form of concessional loan or donations (Microbanking Bulletin, 2005). Nyamsogoro (2010) explained the performance of microfinance and presented a set of financial terms for measuring the trends of financial performance of MFIs, such as return on assets; total assets; total equity; cost per borrower and number of borrowers per staff.

Addressing the returns and income of MFIs, Lafourcade *et al.*, (2005) mentioned that the financial income comes from loans and other financial services in the form of interest fees penalties, and commissions. They also include income from other financial assets, such as investment income. On the other hand, MFI's financial activities produce numerous expenses. These expenses include: general operating expenses and the cost of borrowing to provisioning for the potential loss from defaulted loans. Hence, for MFI to be profitable, it should earn a positive net income (i.e., operating income exceeds total expenses). Quayes (2012) discussed that the motivation for the increased stress on the financial performance of the MFIs is twofold – the first one is that donors have a vested interest in the efficient utilisation of the funds allocated, and the second one is that requirement of financial efficiency is an essential condition for future self-sufficiency of MFIs and eventually deterring themselves off external donations.

Therefore, profitability (used in the literature as another term of financial sustainability) is the product of the difference between revenues and expenses. In order for MFIs to improve their profitability, they have to increase their overall revenues and/or decrease the expenses. However, increasing the revenues will mean increasing the burden on the clients who are already suffering from hard financial circumstances, while it seems that there is a potential for controlling the expenses and decreasing the costs.

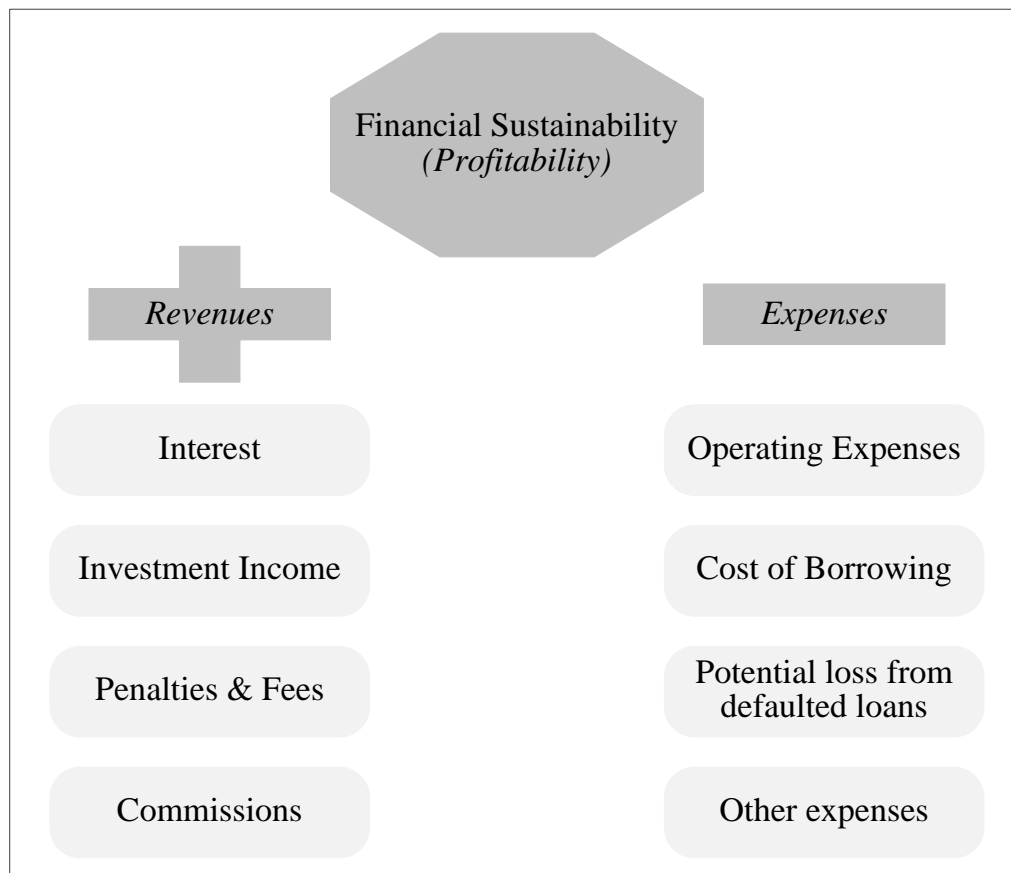


Figure 2.1: Elements of Financial Sustainability

Therefore, the sustainability over a period of study (S) is equal to the Total Operating Revenues (TOR) over the Total Operating Expenses (TOE):

$$S = TOR / TOE$$

In sum, the profitability of the microfinance institution is measured by the net profit gained from the difference between the overall revenues and expenses; the only aspect which might be controlled of this equation is the operational expenses. Few suggestions were presented for such improvement, such as running staff training sessions and testing advanced technology tools, where applying technology could pave the way for microfinance to achieve their self-sustainability (Rozzani *et al.*, 2013).

2.5.3 Portfolio Quality (*Loan Repayment*)

This indicator is the most revealing of the performance dimensions. MFI ability to recollect the loans is critical for its success; Rosenberg (2009) addressed high loan repayment rate is always associated with the successful microfinance organisations. It is seen as a critical as it concerns all stakeholders where the high default rate leads to failure of MFIs (Maata, 2004; Godquin, 2004). Low repayment performance may cause a failure of MFI as it drains the institution's fund, whereas high repayment rates will benefit the borrowers by reusing the service again, and will also benefit MFI by carrying on its operation and extending its scale.

The loan repayment indicator is more important than any other indicators of measuring the performance of MFIs and deserves special care to ensure meaningful and reliable reporting. Factors affecting the loan repayment rate vary based on loan characteristics, borrower characteristics and MFI characteristics. According to Godquin (2004), the key elements influencing repayment are either related to information asymmetries, to adverse shocks affecting the client, or to the low performance of organisations such as justice or education. Ozdemir and Boran (2004) stated that when the loan is not paid back it may be due to the borrower unwillingness or inability to pay. Greenbaum and Thakor (1995) suggest considering the borrower's past record and economic prospects, while Stiglitz and Weiss (1981) recommend that the banks should screen the borrowers and select the good ones.

The literature mainly addressed three variables as indicators of repayment performance:

- The first one is the loan repayment rate, which is the percentage of what was paid over the total amount of loans.
- The second one is the portfolio at risk, which indicates to the value of the loans that are overdue at a certain point of time (Nanayakkara, 2012).
- The default rate is the third indicator to measure the loan repayment rate, which is the percent of the total money lost over the total amount of loans.

The technology in general, and the social media more specifically, is expected to play a significant role in improving the repayment rates by providing a platform for the clients to be more engaged with their MFIs; such a platform will ease the communication regarding the repayment date and also following up with clients who are unable to pay.

2.5.4 Outreach: Breadth and Depth

Outreach is the efforts to expand microfinance services to the people who are underserved by financial institutions (Charitonenko and Campion, 2003). The outreach measures are the MFI's average outstanding loan and the number of credit clients served (Schreiner, 2002). Outreach is usually measured in two dimensions: depth and breadth (Olivares-Polanco, 2005). The depth of outreach refers to the socioeconomic level of clients that MFI reach, which means the lower income clients can MFI reaches, the deeper outreach they achieve. Lafourcade *et al.*, (2005) considered that MFIs achieve deeper outreach by targeting more women as they are the most vulnerable. Whereas breadth of outreach is measured by the number of people MFIs have expanded credit to, or the number of borrowers over a specific period of time (Quayes, 2012).

Empirically, the breadth of outreach is the number of customers or accounts that are active at a given time, while depth of outreach is more complicated to measure. The standard way of doing so is by taking the average loan balance as a ratio of the gross national income (GNI) per capita of the country in which the MFI operate (CGAP, 2003). Therefore, the term depth of outreach could be identified as follows:

$$\text{Depth} = \text{Average outstanding loan or saving balance per client} / \text{GNI per capita}$$

Moreover, the outreach can be measured by: the value and number of loans, the value and number of savings accounts, the types of financial services offered, the number of branches and village post/units, the percentage of total rural population served, the real annual growth of MFI assets over recent years, and women's participation (Mori *et al.*, 2015; Mia and Chandran, 2016).

Indeed, given their limited resources, extending both of the breadth and depth for MFIs outreach is a hard and challenging task to be achieved due to geographical distance between the institution and the targeted population (breadth) and due to the limited tools of MFIs to assign a population with specific demographic profile and reach them. However, this research proposes that boarder outreach might be achieved by the help of modern technology (Riggins and Weber, 2016).

2.6 The Use of Technology to Improve the Performance of MFIs

Technology becomes a significant element of our everyday life, affecting the individual's lifestyle and mentality; advanced smartphones with a wide range of applications provide individuals with digital communication technology replacing the traditional tools. Similarly, for business purposes, technology is occupying more space next to the old fashion machines and traditional tools. More specifically, in the field of microfinance sector, there are few successful attempts implement different types of technology to improve their performance and increase their outreach and efficiency. However, complicated technology implementation within this domain has struggled with many difficulties, such as education level, infrastructure, fund availability, and others. Hence, the purpose of this section is to provide a comprehensive overview on all types of technology which applied for microfinance and will also discuss briefly the influence of each of this technology on the institution. This will start discussing the main two methods implemented in MFIs, which are Information and Communication Technology (ICT) and mobile banking technology. This section will also discuss the potential of social media usage in MFIs as from the experiences from different industries and businesses (Riggins and Weber, 2016).

2.6.1 ICT Implementation in MFIs

ICT has been defined as “a set of activities facilitated by technology for processing and transmitting information and further sharing and distributing it in the community, ICTs are important mechanisms to bridge the digital divide” (Ayanso *et al.*, 2010, via Raman, 2015). It has been shown that it is important enablers of economic development and the alleviation of poverty in developing nations (Dewan and

Riggins, 2005). As the microfinance industry matures, ICT is being introduced as an important method to help MFIs expand the reach of their helping hands and remain viable in an increasing competitive environment (Kauffman and Riggins, 2012).

Addressing the question of: “*Why should MFIs adopt technology?*”, a study of Weber *et al.*, (2012) discussed the impact of ICT adoption on outreach capabilities of microfinance institutions considering both its breadth and depth; their analysis reveals that software, database, and policy ICT adoption impact poverty outreach mediated through financial performance and loan portfolio improvements.

Similarly, using a different approach and geographical perspective, De and Ratan (2009) examined two models ICT employments in the Indian microfinance industry, specifically exploring the interactions between the ICT intervention, the organisations and people employing the change, and the structural and institutional context within which these projects implemented.

Another study presented the ICT contribution in MFIs from different geographical and socio-economical prospective; Jawad *et al.*, (2010) mapped its evolution in Europe and explore how ICT contribute to this evolution while helping European MFI commercialise their services. They presented three aspects on how ICT can impact MFIs as follows: work efficiency, risk management and customer relationship management. They further concluded that the implementation of ICT enables MFIs to meaningfully improve their services while enhancing work efficiency and customer relationship management.

Moya Musa *et al.*, (2012) assessed the impact of investment in ICT on performance and growth of microfinance institution in Uganda; they found that the ICT provides the opportunity to decrease transaction expenses and improve coordination of various activities, inside and outside firms. Innovative ICT improves the efficiency of all inputs by improving the production processes and organisational structures of the firm. As ICT has long been a favourite area for capital investment in the banking and financial services industry (Kauffman and Riggins, 2012), Rozani *et al.*, (2013) identified in their review the issues that were limiting the microfinance institutions from appropriately adopting technology into their operations. Hereafter, a system of

technology had been suggested through the application of Management Information System, client-facing technology and also process automation technology.

The cost of ICT usage has been addressed as the major constraint of its implementation, particularly considering that the microfinance institutions lack funds to support even their basic operations. Infrastructure and qualified staff are also other barriers (Kauffman and Riggins, 2012; Rozani *et al.*, 2013).

2.6.2 Mobile Banking Usage in MFIs

The use of mobile banking technology has emerged in the financial sector within the last decade, in which mobile phones rapidly and significantly improved. In the microfinance sub-sector, the experience of Kenya is a benchmark in this context; where in March 2007, Safaricom, the leading mobile phone company in Kenya, formalises this procedure with the launch of M-PESA, SMS-based money transfer system that allows clients to deposit, send, and withdraw fund using their mobile phone. This application was extended to reach 65 percent of Kenyan households by the end of 2009 (Jack and Suri, 2011).

Similarly, there is a remarkable experience from Japan and the Nordic countries; mobile phones are being used in the m-Commerce application, where the clients' phones are linked to credit cards or bank accounts, which in turn are used to make small payments, such as payment for transportation and vending machines (Rozani *et al.*, 2013). While in the Philippines, the application of e-Money was implemented by Globe Telecom, which enabled its clients to load cash into their mobile phones at partner merchants or Globe outlets (Cellular-news, 2011). Moreover, Telenor Pakistan and Tameer Microfinance Bank have together created a “virtual organisation” to run their Easypaisa service (Davidson, 2011). Mobicash is another experience from Pakistan as a collaboration of Orascom Telecom and Waseela Microfinance Bank to be used by costumers to gain access for services of payment and m-Wallet (Mobicash, 2012).

Mas and Kumar (2008) examine the ability of banks to convert the potential of mobile phones into greater financial access for poor people; this study focused only on

mobile banking by considering examples of successful and unsuccessful experiences in this context, excluding the use of other technology methods. The use of mobile banking was proposed by Ahmed *et al.*, (2011) after the failure of microcredit operations at the district of Jamalganj in Sylhet, Bangladesh. Correspondingly, Hinson (2011) argued that if the traditional financial sector does not give the opportunity for the poor to access the financial services similar banking, the poor could be offered these services through mobile technologies.

In order to create an enabling environment for branchless banking, Dermish *et al.*, (2011) have presented a review of the literature on the meanings and model taxonomies employed in mobile banking along with the grade and drivers of global acceptance of these schemes; and the take-up and usage patterns of customers and their socioeconomic impact. Few authors studied the introduction of mobile banking to the financial sector as whole regardless of its effect on the microfinance industry, e.g. Ashta (2010) studied the progress of the mobile banking regulations in five zones (Kenya, South Africa, the Philippines, India and European Union) in diverse phases of economic development and offers possible causes for such differing evolutions. However, this study did not look at the influence of mobile banking on the financial institutions. Ala and Ngugi (2013) studied the influence of mobile banking on the growth of MFIs in Kenya; they concluded that access to financial services through mobile banking affects the growth of MFIs to a great extent.

Using qualitative perceptions of relevant stakeholders, Molina (2013) attempted to evaluate the conditions of the mobile financial services (MFS) ecosystem in El Salvador with an eye toward its expansion, identifying progress and bottlenecks. The methodology proposes an analysis of three areas for evaluating the MFI regulatory environment: (1) the institutional environment, (2) the market environment and (3) the end-user environment. The results of his report highlight the weak development of MFIs in El Salvador and the lack of knowledge about progress in this area, in addition that the government has not placed much importance on the issue.

Thus, similar to the other ICT tools, it is established that limited number of studies focused on the role of mobile banking in enhancing the performance of MFIs, while more focus was on presenting the experience itself. Major constraints of the

implementation of mobile banking services have been addressed from the literature, e.g. Molina (2013) raise the issue of lack regulations for mobile financial services (MFS), and support infrastructure for non-bank correspondents is not very well developed; the services were also limited only on money transfers via SMS messages. Rozani *et al.*, (2013) added that the skilled staff and the cost in addition to the infrastructure were among the other barriers of wider implementation of mobile banking technology.

2.6.3 Social Media Usage in Different Sectors

Social media refers to a wide range of interacting tools, including those that are not yet definite; one popular definition widely adopted in previous studies is presented by Kaplan and Haenlein (2010); they define the social media as “a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content (UGC)”. Within this definition, there are various types of social media that need to be distinguished further (Kaplan and Haenlein, 2010). It is a two-way street that gives you the ability to communicate (Nations, 2010).

Therefore, it is important to identify the types of social media based on the above definition. Kaplan and Haenlein (2010) have presented a classification of social media by social presence/media richness and self-presentation/self-disclosure as in Table 2.5:

		Social Presence / Media Richness		
		Low	Medium	High
Self-presentation / Self-disclosure	High	Blogs	Social networking sites (e.g., Facebook)	Virtual social worlds (e.g., Second Life)
	Low	Collaborative projects (e.g., Wikipedia)	Content communities (e.g., YouTube)	Virtual game world (e.g., World of Warcraft)

Table 2.5: Classification of Social Media (Source: Kaplan and Haenlein, 2010)

As in the last few years, the virtual methods of interacting and communicating between people rapidly increased to replace the traditional tools; among those, social

media applications are considered to occupy the massive interest letting the individuals, groups and businesses to share and exchange information, feedbacks and ideas. It is indeed stated as the number one tool on the internet (Wright and Hinson, 2009). The aim of this section is to review the discussion about the social media in order to justify to what extent it is able to be applied to help microfinance in fulfilling their mission and overcoming challenges.

The year 2009 was the year when 800 million monthly visitors thought “life wasn’t worth living unless it was documented on Facebook and Twitter” (Clark, 2009; *The Economist*, 2010) (quoted from Bulearca and Bulearca, 2010). Social media holds enormous potential for organisations to get closer to clients and, by doing so, increase revenue, cost reduction and efficiencies (Baird and Parasnis, 2011). As an example, companies like Dell were reporting to have gained £1.9 million from sales and cost savings via Twitter (Campaign, 2009; Davidson, 2009) (quoted from Bulearca and Bulearca, 2010).

The literature has widely discussed the importance of social media in work place. Zeiller and Schauer (2011) discussed the importance of social media in term of team collaboration, a comprehensive study addressed that Small or Medium-sized Enterprises (SMEs) can benefit significantly from easy to use and easy to implement software applications like social software; SMEs may benefit even more from using social media for team collaboration than LEs.

Using a cross-case analysis of six case studies conducted in European SMEs, Zeiller and Schauer (2011) found that social media implementations in SMEs are associated with enhancements in working procedures and processes i.e. social media support people to work more efficiently in their daily business. In addition, Zeiller and Schauer (2011) discussed that team members in SMEs are very much encouraged to use social media if these applications provide a significant amount of relevant and up-to-date content of high quality. It can be used to be realistic, transparent and for being able to communicate issues on time; thereby reducing rumours, negative talk, and motivating individuals to speak for the company (Hollier, 2009). Social media actually acts as a powerful way to communicate the brand value and brand attribute as

they facilitate open forms of communication, it is seen to be helpful in building a good reputation for a business organisation (Edosomwan *et al.*, 2011).

Edosomwan *et al.*, (2011) addressed the wide range of benefits gained from implementing social media in workplaces and business; social media becomes a good place for discussions and becomes a classic goal of marketing and communications, it makes it easier to communicate collaboratively between current and potential clients, in receiving feedback, product definition, product development, other type of customer services, in additions to promoting inter-business open communication between employees and management which in turn enable employees to share knowledge, experiences, project ideas and work in teams effectively.

Moreover, the results from Curtis *et al.*, (2010) indicate that social media tools are becoming beneficial methods of communication for public relations practitioners; they added that social media tools will become more abundant as public relations practitioners become aware of their effectiveness in regards to endorsing a specific cause, reaching target audiences, and further developing communication strategies. It is expected to achieve sustained success if enterprises provide key users and personal assistance to support users (Zeiller and Schauer, 2011).

The influence of social media usage for internal organisation's operation was discussed by Edosomwan (2011) who concluded that when a team is encouraged to work as a team allowing them to share their workload and also allow people to generate and share their ideas which increase the overall effectiveness of a team. In addition, social media became one an easy method to increase productivity and to produce a natural interest in the work carried out by the workers by tracking their creativity and enthusiasm (Edosomwan, 2011). The adoption of social media also becoming more necessary when it comes to the climate change and environment; social media positively affect the environments when it reduces or replace the use of papers by governments, individuals, and corporations in communicating with others; this reduction was seen to be varied based on the corporation's type (Lyon and Montgomery, 2013).

In term of education, social media was used to educate customers and employees; Cain (2011) addressed the use of social media by health services providers such as pharmacies and hospitals to educate the patients and the employees. Social media has the potential to mobilise knowledge to reach farm families to educate them about health and safety for children (Gualtieri, 2012). Whiting and Williams (2013) also discussed that people use social media to seek out information or to self-educate. In this context, Waters (2009) found that nonprofit organisations mainly use social media to streamline management functions, educate the public about programs and services and communicate with constituents. Also, Murugesan (2007) found that social media includes “a multitude of sources” of online information that are created, circulated and used by consumers to educate each other about products, services and brands available in the marketplace. To the researcher best knowledge, in theory, bringing social media to the MFI is not yet addressed, while the reality proves that social media started to take place in MFIs plan and strategy.

2.7 Theories Related to the Research Area

As this study aims to evaluate the impact of social media on the MFI’s performance, the related theories should consider the technology implementation and the organisational performance. At the beginning, discussing the theories related to social media, Nagi *et al.*, (2015) have presented a comprehensive systematic review to present each of these theories and its implementation. Those theories were classified in three different categories:

- Personal behaviour theories, such as Attribution Theory and Elaboration Likelihood Model
- Social behaviour theories, such as Cognitive Map, Effectuation Process, and Involvement Theory
- Mass communication theories, such as Media Richness Theory, Para-social Interaction, and Uses and Gratifications Theory

Although those theories discuss the impact of social media as a technology on the organisational and individual level, they are only considering the impact on the behaviour rather than the change in organisation’s operating performance. Similarly,

Gangadharbatla (2008) addressed that previous academic research on the social media usage on both individual and organisational levels were built on theories that analyse adoption at the individual level.

The search revealed a number of theories linking the impact of implementing a new technic (which is social media in the current research) on the organisation. Thus, Adaptive Structuration Theory (AST) was widely used to assist the organisational changes due to the technological changes (Furumo and Melcher, 2006; Wu and Ku, 2013). Similarly, the Technology–Organisation–Environment (TOE) Framework is applied to investigate how the firm context influences the adoption and implementation of innovations (Tornatzky and Fleischer, 1990). Resource-Based View (RBV) is another theory was implemented to evaluate the impact of Information Technology (IT) on the organisations performance where the main construct of this theory were firm performance, organisational resources, and capabilities (Liang *et al.*, 2010). In the following section, a full revision of the relevant theories is presented in order to choose the appropriate one to help in assessing the impact of social media on the MFIs performance from the organisation’s perspective.

2.7.1 Adaptive Structuration Theory (AST)

Adaptive Structuration Theory (AST) was conducted on the impact of technology in organisations by DeSanctis and Poole (1994). It states that the key factor in organisational change is the adoption of technology structures. This theory provides a model that describes the interplay between advanced information technologies, social structures, and human interaction. Therefore, AST focuses on social structures, rules and resources provided by technologies and institutions as the basis for human activity. As discussed by DeSanctis and Poole (1994), this theory has three different types of assumptions: Ontological Assumptions, Epistemological Assumptions, and Axiological Assumptions.

- ***Ontological Assumptions:*** The theory is deterministic in that groups follow guidelines, yet they are willing to adapt through numerous different structures. Rules are always being created for the group.

- ***Epistemological Assumptions:*** The theory is based on the assumption that groups are constantly changing guidelines and rules. It emphasizes on that groups will always be able to adjust to these changes.
- ***Axiological Assumptions:*** The theory is value-laden, taking into consideration that groups often times need to make changes to improve themselves or due to certain conditions. If the group considers the values of their members, they will adapt well to these changes.

AST was applied by Gopal *et al.*, (1992) to investigate the process of group support systems use; it was also used by Furumo and Melcher (2006) to analyse the transition from the mainframe legacy system environment to the distributed Enterprise Resource Planning (ERP) environment. More recent use of AST was by Wu and Ku (2013) to explore the impact of Radio Frequency Identification System (RFID) introduction into supply chains. Etudo *et al.* (2015) presented a synthesis of the group support systems literature (GSS) with a focus on adaptive structuration theory (AST) and media richness theory (MRT).

However, AST theory has received criticisms; for example, Rose (1998) regarding the conflation of structure and agency is the main criticism of this theory. Another criticism is that the theory is not easy to be understood by readers as the complexity and the outspread of the theory that lead to contradictions (Giddens, 1991; Craib, 1992; Joseph, 2006).

2.7.2 The Technology–Organisation–Environment (TOE) Framework

This framework is explained in Tornatzky and Fleischer (1990), they describe the whole process of innovation – extending from the development of innovations by engineers and entrepreneurs to the adoption and implementation of those innovations by users within the context of a firm. The TOE framework is an organisation-level theory which explains that three different elements of a firm’s context influence adoption decisions: The technological, the organisational, and the environmental context. All three are posited to influence technological innovation. The TOE

framework represents one segment of this process – how the firm context influences the adoption and implementation of innovations.

The technological context includes all of the technologies that are relevant to the firm – both technologies that are already in use at the firm as well as those that are available in the marketplace but not currently in use. The organisational context refers to the characteristics and resources of the firm, including linking structures between employees, intra-firm communication processes, firm size, and the amount of slack resources. The environmental context includes the structure of the industry, the presence or absence of technology service providers, and the regulatory environment. Industry structure has been investigated in several ways.

One popular study for the use of a technology–organisation–environment framework, Kuan and Chau (2001), proposed a perception-based small business EDI (electronic data interchange) adoption model that is tested against data collected from 575 small firms in Hong Kong. Their findings suggest the perception-based model using a technology–organisation–environment framework is a useful approach for examining factors affecting the adoption decision. Also, the theory was widely used to explain different technology adoption in organisation such as a website (Oliveira and Martins 2008), e-commerce and also business to business (B2B) (Teo *et al.*, 2006; Oliveira and Martins 2009), and enterprise resource planning (ERP) (Pan and Jang 2008).

2.7.3 Resource-Based View (RBV) Theory

The resource-based view argues that an organisation holds resources which enable it to achieve a competitive advantage, and a further subset which leads to superior long-term performance (Barney 1991; Grant 1991; Wernerfelt 1984). It suggests that to be valuable, resources must be (1) economically valuable, (2) relatively scarce, (3) difficult to imitate, and (4) immobile across companies (Peteraf, 1993). Firm performance, organisational resources and capabilities are the main constructs on RBV theory, where the dependent term is the organisational performance; the theory suggests that this performance could be improved by the proper use of the organisation's resources (Venkatraman and Ramanujam, 1986; Saraf *et al.*, 2007; quoted from Liang *et al.*, 2010).

The term “resource” refers to something an organisation can draw on to accomplish its goals; Barney and Hesterly (2012) suggest four main resource categories: physical, financial, human and organisational; they could be tangible and intangible assets used by the firms to conceive of and implement its strategies (Barney and Arikan 2001, p. 138). While capabilities are subsets of the organisation’s resources, which represent “an organisationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm” (Makadok 2001, p. 389). The distinction between capabilities and resources was addressed in the literature (e.g. Amit and Schoemaker, 1993; Makadok, 2001), where capabilities are seen as specifically an organisationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm (Makadok, 2001; Barua *et al.*, 2004). Therefore, this theory was widely considered in different research arenas such as human resources (Wright *et al.*, 2001), marketing (Srivastava *et al.*, 2001; Kozlenkova *et al.*, 2014), strategic management and IT (Hulland *et al.*, 2007).

2.8 Theory Underpinning this Research

Based on the brief presentation of theories related to the research subject in the previous section, this section designs criteria for allocating the appropriate theory for this study in light of the objectives. Therefore, as this study attempts to evaluate the expected impact of implementing the social media on MFIs’ performance, the performance measurement indicators which were discussed earlier in this chapter will allow the researcher to use the most relevant theory. The theory level and stage of consideration will also be among the criteria as the appropriate theory should evaluate the impact of the proposed technology on both individual and organisational level for the pre-implementation stage. It is also important that the theory can be empirically proven and is able to capture the impact of advanced technology.

As from theory discussion earlier and from the literature, AST theory was applied to measure the change in the client’s number (Outreach). Although AST is a viable approach to examine the impact of advanced information technologies in organisation change, and it also examines the structures that emerge in human action (DeSanctis

and Poole, 1994), but it does not look at the organisation profitability and portfolio quality. In comparison, the/a TOE framework is also a viable approach to measuring the change in the client's scope, human attitude toward advanced technology including the staff one (change in efficiency) and the change in expenses; this theory also considers the technology implementation process on the organisational level (Oliveira and Martins, 2011). However, this framework was not able to evaluate the impact of new technology on the individual level and was short to consider the change on the portfolio quality.

Evidence suggests that RBV is a viable method to assist the change in portfolio quality and profitability in response to organisational change; e.g. it is applied to analyse the impact of e-Commerce usage on business performance as in Salwani *et al.*, (2009) and Ramanathan *et al.*, (2012). RBV is also implemented to support the evaluation of the organisation's resources in order to be used for improving the operational efficiency and increase the organisation's customer base (Ramanathan *et al.*, 2012; Schaupp and Belanger, 2013). In addition, compared with other theories, RBV is the only one which considers the pre-implementation stage of analysis instead of only analysing the adoption process from a technical perspective. Although RBV was implemented to capture the advanced technology impact on the organisation similar to AST and TOE, it is more convenient to be empirically validated (Table 2.5 provides full details of criteria of fitness for each theory).

Criteria	AST	TOE	RBV
Outreach	✓	✓	✓
Portfolio Quality	×	×	✓
Profitability	×	✓	✓
Efficiency	✓	✓	✓
Theory Level	Individual + Organisational	Organisational	Organisational
Stage of Consideration	Implementation Process	Implementation Process	Pre-implementation
Empirical Validity	×	✓	✓
Ability Capturing the Technology Impact	✓	✓	✓
Applied in Strategic Management	×	×	✓

Table 2.6: Criteria for Theory Fitness

As presented in Table 2.6, RBV theory was widely used in analysing the impact of organisation's technology resources on its performance, e.g. Ramanathan *et al.*, (2012) conducted a study for distinguishing the impacts of e-commerce on marketing and operations functions and investigating how these impacts have affected performance of Taiwanese SMEs; from RBV theory perspective.

RBV was also used by Hulland *et al.*, (2007) to assess the impact of capabilities and prior investments on online channel commitment and performance. In addition to its use by Byrd *et al.*, (2008) in order to investigate the mechanisms through which IT impacts organisational performance by examining the direct and indirect impact of IT at both the intermediate and organisational levels. Table 2.6 presents more studies the have used RBV for analysing the impact of IT on organisation performance. Therefore, RBV theory will be considered in this research as it supports our argument for the link between usage of social media as a technological resource and its value for organisations on various dimensions of value creation. Therefore, the model posits that managers will identify social media use as an opportunity to create value for the organisation (Schaupp and Bélanger, 2013). Further discussion on this theory and its adoption in this study will be presented in Chapter 3.

Author	Aim	Findings
Bharadwaj (2000)	Assessing the relationship between superior IT capability and firm performance.	IT capability is rent-generating resource that is not easily imitated or substituted.
Hulland <i>et al.</i> , (2007)	Investigating the impact of capabilities and prior investments on online channel commitment and performance.	A positive relationship between the use of online commerce and the performance of their online undertakings.
Jacks <i>et al.</i> , (2011)	To investigate the multitude of organisation-level studies of the impact of IT.	IS impacts the organisation in three main ways: profitability, productivity, and other intangible benefits.
Byrd <i>et al.</i> , (2008)	Investigating the mechanisms through which IT influences organisational performance by examining the direct and indirect impact of IT at both the intermediate and organisational levels.	The most value is likely to accrue when the technical and human IT resources are appropriately combined.
Salwani <i>et al.</i> , (2008)	Investigating the impact of e-Commerce usage on business performance in the tourism sector.	Technology competency, firm size, firm scope, web-technology investment, pressure intensity, and back-end usage have significant influence on e-Commerce usage; and e-Commerce experience (in years) is found to moderate the relationship between e-Commerce usage and business performance.
Ramanathan <i>et al.</i> , (2012)	Distinguishing the impacts of e-Commerce on marketing and operations functions and investigating how these impacts have affected performance of Taiwanese SMEs.	Operations and marketing aspects of e-Commerce have strong impacts on performance of SMEs.
Liang <i>et al.</i> , (2010)	Investigating the impact of IT resources on organisational capabilities and firm performance.	Technological resources can significantly improve organisational capabilities.

Table 2.7: Use of RBV for Analysing IT Impact on Organisational Performance

2.9 Research Gap

Reviewing the literature has helped in highlighting a number of research gaps that this study aims to tackle. Although the literature addressed the importance of organisational performance in the field of microfinance industry, there is a gap in investigating the impact of different types of technology in this context. Previous research on microfinance development has only focused on the use of ICT and mobile banking technology while social media as relatively new tools are neither theoretically nor empirically examined (Peters *et al.*, 2013), this technology offers a

unique opportunity for academics to analyse new types of data (Kaplan and Haenlein, 2012).

In order to provide cheaper and more convenient products for their customers, it is important for MFIs to “rethink their business models and to innovate with the ways they deliver and receive services” (Arun and Hulme, 2008). As the social media is a promising technology for developing organisational performance, it was significantly overlooked in the literature. Therefore, this study attempts to cover this gap by addressing the benefits of social media on MFIs performance; such knowledge about the impact of social media on each of MFIs performance indicators would enhance the understanding of MFIs management and policy-makers on when, where, and how to apply this technology.

Hence this study is aimed at investigating the impact of social media on MFIs performance in developing countries, the findings are expected to, in addition to adding to the literature, open the door for further research on the use of social media for business purposes and its application in the context of organisational performance and more specifically to MFIs.

2.10 Summary

In this chapter, the need of the microfinance as an effective tool for poverty alleviation by providing the poor people with access to the financial services was discussed. As healthy MFIs are significantly needed for poverty alleviation, this chapter discussed different types of challenges which are restricting or slowing the sustainability of microfinance institutions as the main issue is the high operational cost which consequently leads to high interest rate. These high charge rates may deter the ability of MFIs to help the poor. In addition, extreme interest rates may also lead to MFI losses as borrowers are not able to pay, default on loans, and, in the case of group lending, bog down their solidarity groups.

Measuring the performance of MFIs is necessary for the MFIs management, the donors, lenders, and all fund providers. This chapter reviews the previous literature and presented a framework to guide the efforts for assessing the performance and any

changes may happen to it. This framework includes four main indicators: efficiency (includes communication and staff productivity), financial sustainability, portfolio quality (loan repayment), and Outreach (breadth and depth). A detailed discussion over these indicators was provided. The later section has presented the importance of technology for organisation with more focus on the microfinance. Few issues were addressed as difficulties prevented the success if ICT and mobile banking services such as the lack of regulations for mobile, the skilled staff and the cost in addition to the infrastructure. Resource-Based View (RBV) was adopted to ground the argument on the link between usage of social media as a technological resource and its value for organisations on various dimensions of value creation.

MFI's performance is found to be essential for the success of microfinance social goal and this performance needs more attention. In the other hand, social media is a new path of research and still offers an unprecedented opportunity for researchers to analyse new types of data, to communicate and interact with consumers, and to help organisations to be prepared for this new era of internet and mobile applications. Therefore, linking social media to microfinance industry is one of the main issues to be taken forward for further investigation beside the use of RBV to support this linkage.

Chapter 3: Developing a Conceptual Model for Social Media Impact on MFI Performance

3.1 Introduction

In the previous chapter, the researcher addressed the main challenges of MFIs that hinder the improvement of MFIs – challenges that reflect the nature and environments where microfinance institutions operate. Literature highlights high operational expenses as a critical challenge and its influence on the interest rate charged to the clients was explained. Few other challenges such as lack of fund and educational level of employees and clients are limiting the MFIs' outreach and leaving a huge gap between those who are covered and the underprivileged people who are desperate to receive financial services. Thereafter, the researcher presented the measurements to identify any development in the performance which will guide the investigation of the impact of social media on this type of institutions, the outreach and operational costs was highlighted among the indicators for performance measurement where the performance is enhanced outreach increase and/or operating expenses decrease. The researcher briefly addressed the technology tools which used in some MFIs in order to help them to overcome those challenges; and also discussed the difficulties of implementing such tools with respect to the cost and infrastructure.

The previous chapter reviewed the usage of technology and its impact on the performance of MFIs, therefore the experiences of ICT implementation and mobile banking applications in different regions were presented beside the difficulties facing such full use. This presentation opened the discussion over the potentials of using social media in MFIs for different purposes such as communication and marketing goals. Building on the discussion in the previous chapter, the main objective of this chapter is the proposition of a conceptual model that attempts to capture and evaluate

the impact of social media on MFIs. In this chapter, the researcher initially presented the theoretical background discussing the resource-based view (RBV) theory and its propositions. In later section, the theory is implemented as a lens to understand the influence of applying social media platforms on the MFIs. As an outcome of this discussion, a conceptual model of this study was conducted including six hypotheses which extend the benefits of social media in the context of microfinance industry; such extension is grounded on the RBV theory and its implementation in the IT arena.

3.2 Theoretical Development – Resource-Based View Theory

Resource-Based View theory has been addressed in the literature to link the performance of organisations to their resources. The theory, as it was introduced by Werenerfelt (1984, p. 172), states that the competitive advantage of any organisation lies mainly in the implementation of a valuable tangible or intangible resources. Tangible assets are physical properties such as equipment and machinery while intangible ones are those that have no physical presence such as reputation and skills; these resources assets the organisations to choose and implement strategies (Barney, 1991). Competitive Advantage is explained in Peteraf and Barney (2003, p. 314) as creation of “more economic value than the marginal (breakeven) competitor in its product market”.

Makadok (2001, p. 389) defined capability as “*a subset of resources which represent an organisationally embedded non-transferable firm-specific resource whose purpose is to improve the productivity of the other resources possessed by the firm*”, resources in this context were categorised by Barney (1991) into 3 types: Physical capital resources; human capital resources and organisational resources, while Amit and Schoemaker (1993) split them up into capabilities and resources. Capron and Hulland (1999) explain the resources as those which enable the organisation to produce, efficiently and/or effectively, marketing offerings that have value for some market segments including physical assets, human capital and stock of knowledge. Barney and Hesterly (2010, p. 66) discussed the resources, they defined resources as the tangible and intangible assets that organisation controls which it could be used to conceive and implement its strategies. Under this definition they classified resources into four types:

- **Financial** resources which includes all sort of fund from all sources. Under this type of resources we can find cash from entrepreneurs, equity and bond holders, banks and retained earnings.
- **Physical** resources such as technology used in the organisation, equipment, its geographic location, computer hard ware and software technology and automated warehouse.
- **Human** resources, considered as an attribute to individuals such as training, judgment, intelligence, experience, relationships. This is a valuable resources not only limited to managers or owners but also includes each employee where everyone is seen as essential for the overall success of the organisation
- **Organisational** resources, which considered as an attribute to group of individuals, these include the formal reporting structure, formal and informal planning, the culture and reputation and controlling.

A split up of resources into resources and capabilities was first suggested by Amit and Schoemaker (1993) and later was widely adopted in RBV literature (Baharadwaj, 2000; Ismail *et al.*, 2014). Resources are defined as stocks of available factors that are owned or controlled by the firm and can be converted into final products or services by using a wide range of other firm assets and bonding mechanisms. These resources include technology, management information systems, incentive systems, trust between management and labour, and much more. Capabilities refer to an organisation's capacity to deploy resources, usually in combination, using organisational processes, to affect a desired end.

3.2.1 RBV – Theory Implementation

The two main assumptions of RBV theory state that the organisation's resources should be heterogynous and immobile (Peteraf and Barney, 2003; Barney and Hesterly, 2012). Peteraf and Barney (2003) explained that the heterogeneity assumption implies that some firms are more skilled in accomplishing certain activities, because they possess unique resources, while the resource immobility

assumption consider these differences in resources may persist due to the difficulty of trading resources across firms; this theory was mainly used in strategic management arena and in IS research. As in strategic management literature, in order to link the performance of organisations to their resources and to understand the sources of competitive advantage, Barney (1991) identified four attributes that firm's resources must possess in order to become a source of Sustained Competitive Advantage (SCA), those attributes addressed that resources must be **V**aluable, **R**are, imperfectly **I**mitable and **N**on-substitutable, which is termed as VRIN framework.

Later, Barney and Hesterly (2012) discussed that the SCA could be achieved only when the resource is Valuable, Rare, imperfectly Imitable, and Organisation. First, the resources are valuable if they “enable a firm to develop and implement strategies that have the effect of lowering a firm's net costs and/or increase a firm's net revenues beyond what would have been the case” without these resources (Barney and Arian 2001, p. 138 via Kozlenkova *et al.*, 2014). Second, the resources should also be rare (Barney and Hesterly 2012) otherwise competitive parity is expected as other firms that possess the resource also have the capability of take advantage of it (Kozlenkova *et al.*, 2014). Third, the resource should be imperfectly imitable which suggests that firms without that resource cannot get it through direct duplication or substitution then a resource must be substantially costly to obtain or develop for competing firms (Barney and Hesterly, 2012). A firm that has valuable, rare and costly to imitate resources can (but not necessarily will) achieve sustained competitive advantage. However, Barney and Clark (2007) discussed that resources may be imperfectly imitable due to unique historical conditions, causal ambiguity, or social complexity. The fourth and last term is related to the organisation, it states that in order for a firm to get sustained competitive advantage of its resources it must be organised to capture the value from them. That is, poor organisational processes, policies, and procedures may weaken a resource's potential competitive advantage (Barney and Clark 2007).

In contrast to the strategic management, RBV has been used in the IS literature to analyse IT capabilities (Mata *et al.*, 1995) and to explain how IT business value resides more in the organisation's skills to leverage IT than in the technology itself (Clemons and Row, 1991; Soh and Markus, 1995; Ross *et al.*, 1996) (quoted from Zhu and Kraemer, 2005). Zhu (2004b) explained that IT business value depends on

the extent to which IT is used in the key activities in the firm's value chain where all computers, networks, databases, and communication platforms form the core of a firm's overall IT infrastructure. The significance of RBV theory for IT researchers is that this theory investigating the connection between IT and the organisation strategy and performance. More specifically, this theory grounds a persuasive framework to assess the significant value of IT resources (Wade and Hulland, 2004 p.109). This argument leads the discussion into the model of Schaupp and Belanger (2013) regarding the social media value for small businesses, as presented in the next section.

RBV theory has been widely applied to evaluate the impact of firm resources on its efficiency and competitive advantage; sufficient number of studies have used this theory in the IT context to theoretically analyse the impact of information and communication technology on the organisation's performance (Ramanathan *et al.*, 2012a; Liang *et al.*, 2010; Jacks *et al.*, 2011; Bharadwaj, 2000; Hulland *et al.*, 2007; Byrd *et al.*, 2008; Salwani *et al.*, 2009). Zhu and Kraemer (2005) presented a model to assess the use and value of e-Business by organisations as they first confirmed that the ultimate goal of using e-Business is to improve the organisation business performance. The model explained the e-Business value by identifying its impact on three main antecedents: impact on sales, impact on internal operation, and impact on procurement. E-business is found to have a significant impact on these three latter value indicators. The researcher applied RBV theory in order to assess the impact of such use (post-adoption) while TOE framework was used for the implementation process.

Adopting from Zhu and Kraemer (2005), Picoto *et al.*, (2012) have developed a model for m-Business usage and value; their study also confirmed that higher depth and breadth of m-Business usage increases m-Business value, according to the RBV. In line with RBV discussion in the IS literature (e.g. Ramanathan *et al.*, 2011; Zhu and Kraemer, 2005), Picoto *et al.*, (2012) agree that technology usage in organisation is unique and imitable. Their study considered mobile technologies somehow a commodity as many other technologies where the specific way in which an organisation implement this technology in its business processes and integrates it in its supply chain is unique. They added that the continued accumulation of knowledge in a firm through innovative use of e-Commerce technologies provides competitive

advantage to the firm. As from Zhu and Kraemer (2005), comprising the overall impact of e-Business on organisational performance, Picoto *et al.*, (2012) also discussed that higher degrees of IT usage will be associated with business performance improvement which is the vital endogenous variable; the conclusion from Picoto *et al.*, (2012) is that m-Business value has a positive and significant effect on the overall business impact of m-Business on the organisation. Therefore, this model reinforces the theory that higher levels of m-Business value are associated with improved business performance in terms of the perceived success of an m-Business project and overall firm performance. TOE framework and Diffusion of innovation (DOI) were integrated in their model to guide their research about the antecedents of m-Business usage as a first construct.

More recently, Schaupp and Belanger (2013) conducted a model to assess the value of social media for small businesses named as “A Model of Social Media Value for Small Businesses” and their empirical investigation addressed a significant impact of social media on internal operations, marketing, customer service, and sales. The model was grounded on the previous work of Zhu (2004b), Zhu and Kraemer (2005), Gattiker and Goodhue (2006), Zhu *et al.*, (2006), and Picoto *et al.*, (2012). Similar to Schaupp and Belanger (2013) in their second construct assessing the impact of social media on SMEs, in the next section this study develops a model to assess the social media value in the context of MFIs in the form of improved performance. This concept is grounded on the above discussed theory (RBV) fundamentals which address a clear link between usage of social media and its value for organisations on various aspects of value creation; the value suggested in this context is in shape of improved performance. Although some similarity in performance indicators among organisations, the interest here will be on MFIs performance indicators as discussed in the previous chapter.

3.3 The Impact of Social Media Usage on the Performance on MFIs

Social media offers huge potential for organisations to get closer to customers and, by doing so, increase income, cost decrease and efficiencies (Baird and Parasnis, 2011); as an example, companies like Dell reporting to have gained £1.9 million from sales and cost savings via Twitter (Campaign, 2009; Davidson, 2009, via Bulearca and

Bulearca, 2010). The ease of use and ‘elementary directions’ of the different applications make social media accessible to both inexperienced and technically orientated people (Lacho and Marinello 2010, p.128), it is considered as the number one tool on the internet (Wright and Hinson, 2009) and expected to achieve sustained success (Zeiller and Schauer, 2011). Social media is also used to educate customers and employees. For example, Cain (2011) addressed the use of social media by health services providers such as pharmacies and hospitals to educate the patients and the employees. Social media has the potential to mobilise knowledge to reach farm families to educate them about health and safety for children (Gualtieri, 2012), Findley *et al.*, (2013) stressed the implementation of social media for training purposes due to cost advantages.

Moreover, social media plays a great role in spreading the information widely and quickly. Whiting and Williams (2013) discussed that people use social media to seek out information or to self-educate. In this context, Waters (2009) found that nonprofit organisations mostly use social media to streamline management functions, educate the public about services, and communicate with constituents. Murugesan (2007) found that social media comprises a crowd of sources of online information that are produced, circulated and used by consumers to review products, services, and brands in the market. Social media platform is a source of horizontal and vertical flow of frequently updated information and knowledge; it has a clear identity and gives the user multiple options of interaction (Gray *et al.*, 2011; Siaka *et al.*, 2014). More recent study conducted by Schaupp and Belanger (2013) investigated the impact of social media use on major factors within the organisations. Applying their research on small business, they found that social media has a significant positive impact on internal operation, marketing, customer services and also on sales.

The current study benefits from the above discussion and brings forward the framework of performance measurement key factors, as from Chapter 2, and discuss to what extent social media is able to support MFIs to face their challenges by improving their performance. These indicators are used as assessment tools of the impact of social media on the performance of MFIs. Therefore, the researcher looks at the impact of social media use in different sectors on each indicator and its

potentials in microfinance context. Thus, following sections will discuss the impact of social media on performance indicators in light of the literature.

3.3.1 Efficiency

As a marketing and advertising tool and channel of communication and platform for group discussion on different levels of responsibilities (management levels, employee levels, and customer level); social media has potentials to enhance the organisation internal operations and increase efficiency. According to Kirakosyan (2015), the use of social media in businesses allows organisation to achieve wider reach of clients at higher level of efficiency and lower cost in comparing with traditional communication tools. Edosomwan (2011) has concluded that when a team is stimulated to work as a group allowing them to share their workload and also allow people to generate and share their ideas which increase the overall effectiveness of a team. Sharing and organising knowledge through social media and place it in a form accessible to other organisational members was previously addressed by Flanagan (2002). Therefore, accessible knowledge will enhance the efficiency and help the organisation internal operations to be run more smoothly.

Also, the adoption of social media is expected to reduce the use of papers by governments, individuals, and corporations variedly based on the corporation's type (Lyon and Montgomery, 2013). It has a great potential to enhance the organisation's ability to do things well, successfully, and without waste. Besides, social media was addressed as a promotor for collaboration, where all work to do a task and to achieve shared goals (Martinez-Moyano, 2006). A study by Zeiller and Schauer (2011) on SMEs discussed the ability of organisation to benefit greatly from using social media for team collaboration. Trainor (2012) has also highlighted the effective use of social media for managing customer relationships and the potential of such use to dramatically influence firm performance by increasing customer engagement and the value created from such interactions.

Using a cross-case analysis of six case studies conducted in European SMEs, Zeiller and Schauer (2011) found that social media applications in SMEs are associated with enhancements in working procedures and processes; it assists people to do jobs more

efficiently in their everyday business. Also, team members within organisations are extremely encouraged to use it if these applications provide a significant amount of relevant and up-to-date content of high quality (Treem and Leonardi, 2013). The short-tempered growth of social media gave the opportunity to millions of people around the world to create and share content on a scale barely possible a few years ago (Romero *et al.*, 2011). As from their model, Schaupp and Belanger (2013) have investigated the impact of social media on the internal operation in the context of small businesses and it was found positively significant. Based on the discussion, this study proposes the following hypothesis:

Hypothesis 1: *Social media usage has a significant positive impact on efficiency.*

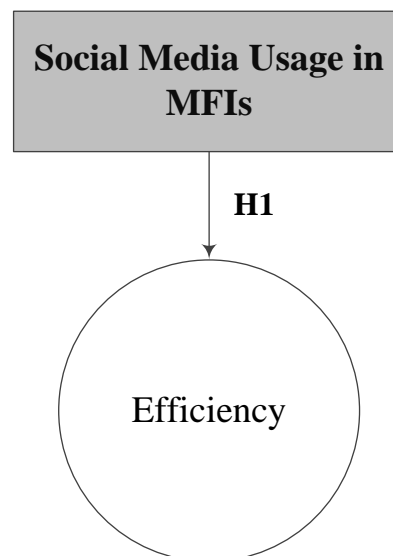


Figure 3.1: Hypothesis 1 on Efficiency

3.3.1.1 Communication

Within its use and impact for the organisation's efficiency and internal operations, social media is one of the best methods used nowadays when it comes to communication internally and externally in all type of organisations and businesses; e.g. Moorhead *et al.*, (2013) reviewed the literature to identify the uses, benefits, and limitations of social media for health communication among the general public, patients, and health professionals. They concluded that social media is an influential

tool, which offers collaboration between users and is a social interaction mechanism for a range of individuals. Powell *et al.*, (2011) describe the beauty of social media channels in that it provides an open platform for real time communication which gives the ability to the organisation to spot trouble, help customers, and reply to inquiries much quicker than the traditional tools.

Moreover, a study by Edosomwan *et al.*, (2011) revealed that social media act as a powerful way to communicate the brand value and brand attribute as they facilitate open forms of communication, it is seen to be helpful in building a good reputation for a business organisation. Social media communication will provide wide range of benefits to corporations such as the easy and instant access to information, the ability to engage internally and externally, and richer experiences of users (Postman, 2009; Lattemann and Stieglitz, 2007; Macnamara, 2010). Empirical analysis conducted by Nagle and Pope (2013) analysing the data collected through the social media strategies revealed several different types of uniqueness value creation. In particular, social networking sites are seen to create new services, new communities and new processes.

The study of Lee (2015) has presented extended evidence consistent with Greenwald (2010) that social media is a cost-effective tool for internal communication in organisations, and it is also consistent with Khan and Khan (2011) in that social media is able to produce better communication, stronger relationship and engagement between the management and employees. Assessing the use of social media in state public health departments (SHDs), Thackeray *et al.*, (2012) addressed that social media has improved communication between clients and organisations and has the potential to augment public health communication. Thus, the research proposes the second hypothesis as a conclusion of this discussion as follow:

Hypothesis 1(a): Social media usage within MFI improves the communication efficiency.

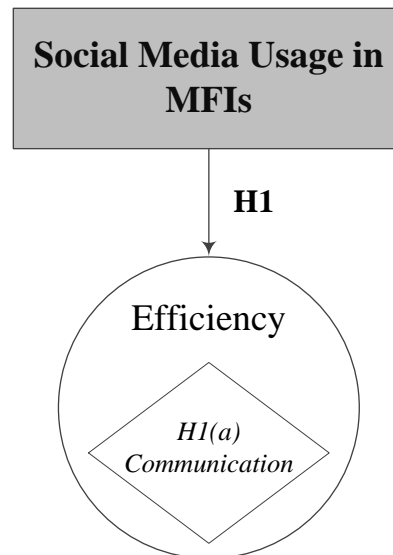


Figure 3.2: Hypothesis 1(a) on Communication

3.3.1.2 Staff Productivity

Under the umbrella of internal operations, a remarkable impact of social media on the staff productivity has been also addressed in the literature; Aguenza *et al.*, (2012) confirmed that most of the studies supporting the positive impact of social media on staff productivity. Lee (2015) and Burrus (2010) have stated that social media is an effective method to improve productivity and sharing information among organisational members. Also, Edosomwan *et al.*, (2011) discussed the wide range of benefits gained from implementing social media in workplaces and business, those social media becomes a good channel for discussions and becomes a classic goal of marketing and communications. As it was previously discussed, it is able to help current and potential customers to communicate collaboratively. Beside, social media promote inter-business open communication between employees and management which in turn enable employees to share knowledge, experiences, project ideas and work in teams effectively (Edosomwan *et al.*, 2011).

Kirakosyan (2015) discussed the use of social media in banks and claimed that banks need to be on social media where current and potential customers are talking, blogging, complaining, expressing their experiences about the products and services. Social media has also become an appropriate tool to improve productivity and to generate a natural interest in the work carried out by the employees by tracking their

creativity and enthusiasm (Edosomwan, 2011). It allows organisations to reach clients at comparably low cost and higher level of efficiency than can be achieved with more traditional communication tools (Kirakosyan, 2015).

The associations offered by social media can be a powerful platform for employees to establish relationships with others in an organisation. Social media is able to establish an inter-organisation platform where every staff member is able to present their knowledge and experiences offering others the opportunity to build strengthened relations and exchange of views (Siakas *et al.*, 2014), to edit, revise, and alter organisational content long after the time it is first displayed, and also to find individuals with similar interests, or discover potential mentors (Treem and Leonardi, 2012). Thus, based on the discussions this research proposes the following third hypothesis:

Hypothesis 1(b): *There is a positive impact of social media usage on the staff productivity.*

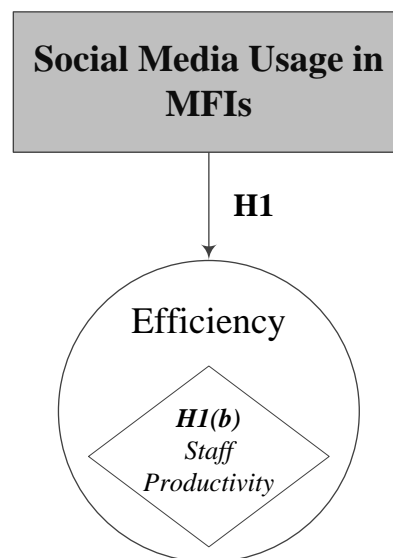


Figure 3.3: Hypothesis 1(b) on Staff Productivity

3.3.2 Financial Sustainability (Profitability)

The financial sustainability of MFIs as defined earlier is its capacity to cover all of its expenses by its returns and to generate a margin to finance its growth, improving it requires reducing the expenses and/or increasing the revenues. Utilising social media

as an effective communication platform and for marketing purposes will enable the organisations to reduce the costs comparing to the traditional methods (Colliander *et al.*, 2015). Kapoor *et al.*, (2013) addressed the importance of social media to support stakeholder's interaction and engagement which was described by Piller *et al.*, (2012) as supportive in the way to enhance the effectiveness and the efficiency of co-creation by dropping the cost of interaction among participants. In addition, social media holds enormous potential on internal operations and efficiency which helps businesses and organisations to reduce their spending on operations (Baird and Parasnis, 2011). Trainor *et al.*, (2011) found evidence that advanced technology applications can help organisations keep profitable customers, thereby increasing customer-based profit performance.

Handful studies supported the use of information technology for the purpose of reducing the expenses and increasing the revenues (e.g. Grover *et al.*, 2009; Nevo and Wade, 2010; Saraf *et al.*, 2007; Wade and Hulland, 2004; Mithas *et al.*, 2012). Drawing on the RBV theory, the study of Mithas *et al.*, (2012) has presented three significant reasons to explain the positive impact of IT investment:

- *First*, the virtuous cycle argument where a magnified effect will result over time from the benefit of such investment at the first place;
- *Second*, learning-based explanation as the organisation leverages its capabilities from the experience of managing these investments; and
- *Third*, based on the cost reduction.

More specifically on the social media as one of IT tools, the literature supports the significant impact of utilising social media on sales (Schaupp and Belanger, 2013). As an example on that, Dell has reported to have gained £1.9 million from sales and cost savings via Twitter in 2009 (Davidson, 2009). Evidence regarding the return on investment (ROI) of social media was presented by Kumar and Mirchandani (2012). The authors proposed a seven-step framework for success in social media marketing campaigns. The framework was implemented at Hokey Pokey Ice Cream Creations, an upscale ice-cream retailer with more than a dozen outlets across India. Hokey Pokey's social media campaign caused extensive increases in brand awareness, social

media ROI and sales revenue growth rate for the company. Similar to other organisations, MFIs are expected to benefit from the use of social media and reduce their expenses. Thus, this research proposes the fourth hypothesis as follow:

Hypothesis 2: There is a positive impact for social media usage in MFIs on the financial sustainability.

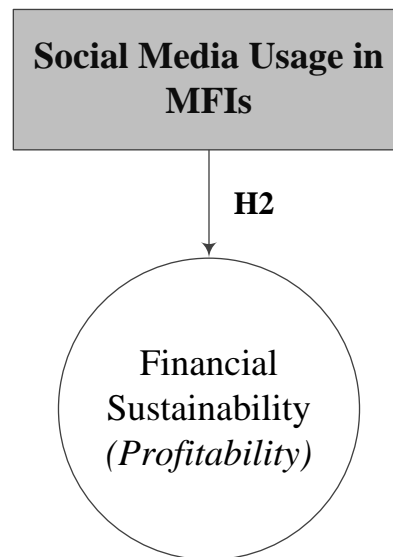


Figure 3.04: Hypothesis 2 on Financial Sustainability (Profitability)

3.3.3 Portfolio Quality (Loan Repayment)

The lack of financial records and data regarding individual's financial history in addition to the absence of collateral leads the MFIs to select the eligible borrower on the recommendation of a local agent; the agent will try to collect as much information as possible from the local community about the applicant to check the credit worthiness. Thus, the applicant's eligibility relies on the final judgement of the agent, social networks were suggested as a solution to this difficulty (Mitra and Newar, 2015). Therefore, social media could support the MFIs decision with less cost and time.

Social media is believed to enable MFIs to improve the loan repayment in two levels: before issuing the loan to the applicant and on the time of collecting the payments. On the first one is when the MFI takes the decision regarding a loan applicant where

social media may offer a significant channel for providing comprehensive information about the applicant's adequacy for the loan. On the repayment time, a reminder of the dates and tracking the late payment could be more convenient by the use of social media. Recently, a leading microfinance working in 83 countries, Kiva has implemented social media with borrowers to establish the extent and strength of their networks, and requiring them to invite their own personal network to support their loan (Kiva.org). Other than microfinance, Wakuloba (2006) suggested that it is necessary to employ IT technology for data mining to enable early detection of slow repayment borrowers.

A study by Norrel (2001) has discussed the issue of arrears in MFIs and explained the causes of these arrears; the findings suggest that the key to reducing arrears is quick follow-up. Thus, social media could play a great role as an instant communication tools to follow up with late payment. Social media can also help in promoting community pressure for late clients by using the weapon of the borrower local community on social media. Thus, this discussion produces hypothesis 3 as follow:

Hypothesis 3: Social media usage in MFIs has a significant positive impact on the portfolio quality.

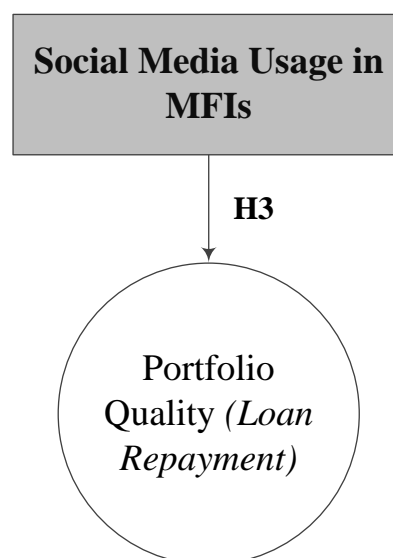


Figure 3.5: Hypothesis 3 on Portfolio Quality (Loan Repayment)

3.3.4 Outreach

Following the rapid technological development within the last two decades, the traditional marketing methods became insufficient to accommodate the organisations and their client's needs. Geho and Dangelo (2012) discussed that social connectivity was becoming the key to marketing. Similarly, Hennig-Thurau *et al.*, (2010) (quoted from Castronovo and Huang, 2012) claimed that social media marketing works to efficiently achieve the community creation and one-to-one relationship building to sell products and develop brand loyalty. As the marketing involve in promoting and selling products and services, then in the context of microfinance improving marketing means extending the institution's outreach. The use of social media as marketing method was massively increased in the past few years due to its great impact on the corporation image. Neti (2011) confirmed that it is a strategic and methodical process to establish the company's reputation, influence, and brand within communities of potential customers, readers or supporters.

Technically, extending the MFIs outreach has two dimensions: Marketing and communication. The marketing dimension will introduce and present the services to the current and potential communities while the communication dimension will give the opportunity to the clients to discuss and express their concerns about the product and also apply and receive advice about the services. Therefore, what social media can do comparing to the traditional marketing and communicating tools is ultimately increasing the outreach with less expense (Kirakosyan, 2015; Edosomwan *et al.*, 2011). In line with the above discussion, Neti (2011) addressed that it is among the 'best opportunities available' to a brand for connecting with prospective consumers. It is seen as cost-effective method for marketing activities (Paridon and Carraher, 2009) and an influential tool for gaining customer and for communicating with potential and existing ones (Kirakosyan, 2015). In addition, Treem and Leonardi (2012) discussed social media afford new types of behaviours that were previously difficult or impossible to achieve before these new technologies entered the workplace.

The impacts of social media for organisational outreach and communication was widely discussed in the literature (Rimkuniene and Zinkeviciute, 2014; Linke and Zerfass, 2012; Zeiller and Schauer, 2011; Holtz and Havens, 2008; Pleil and Zerfass,

2007; Ruisinger, 2007). Based on a quantitative online survey among 860 communication professionals in Germany followed by a qualitative Delphi study with 32 identified experts from the organisational communication profession and academia, Linke and Zerfass (2012) examined the use of social media for communication by enterprises, political organisations and non-profit organisations (NPOs). They concluded that due to their intensive positive impact, an ever increasing number of organisations establish the necessary and relevant structural conditions for social media communication and they expected that budgets for social media communication will rise as allocated from other sources.

Moreover, with regards to increasing the depth of outreach in the case of microfinance industry, the results from Curtis *et al.*, (2010) confirm that social media is becoming beneficial platforms of communication for public relations practitioners; and it is also effective in reaching target audiences, promoting a specific cause, and further developing communication strategies.

As a powerful communication method to reach individuals at a scale and speed larger and more quickly than previous communication mediums (Hays *et al.*, 2013), social media is also able to reach targeted audiences based on their demographical and financial circumstances. Therefore, when deeper outreach is required, technically, the microfinance providers are able to benefit from the flexibility of social media platforms in order to reach and communicate with the clients from specific socio-economics profile. Hence, a call from previous studies was emerged to organisations and businesses to allocate more resources to be used for marketing through social media (Hudson and Thal, 2013; Neti, 2011). It is able to reach audiences at a scale and speed larger and more quickly than previous communication mediums (Hays *et al.*, 2013). Therefore, the last hypothesis of this research conducted in the light of the above literature is as follow:

Hypothesis 4: Social media usage in MFIs increases the outreach.

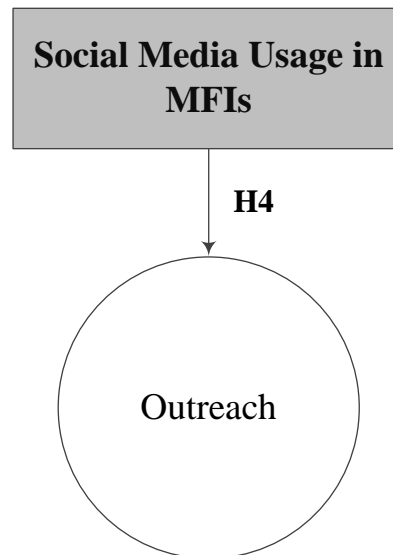


Figure 3.6: Hypothesis 6 on Outreach

Based on the above discussion, Figure 3.7 presents the conceptual model and propositions. Figure 3.7 illustrates a direct positive impact on the performance measurements of efficiency, financial sustainability, portfolio quality, and depth and breadth of outreach. The model suggests social media as a substantial technology which may help in improving the social and financial performance of MFIs in developing countries.

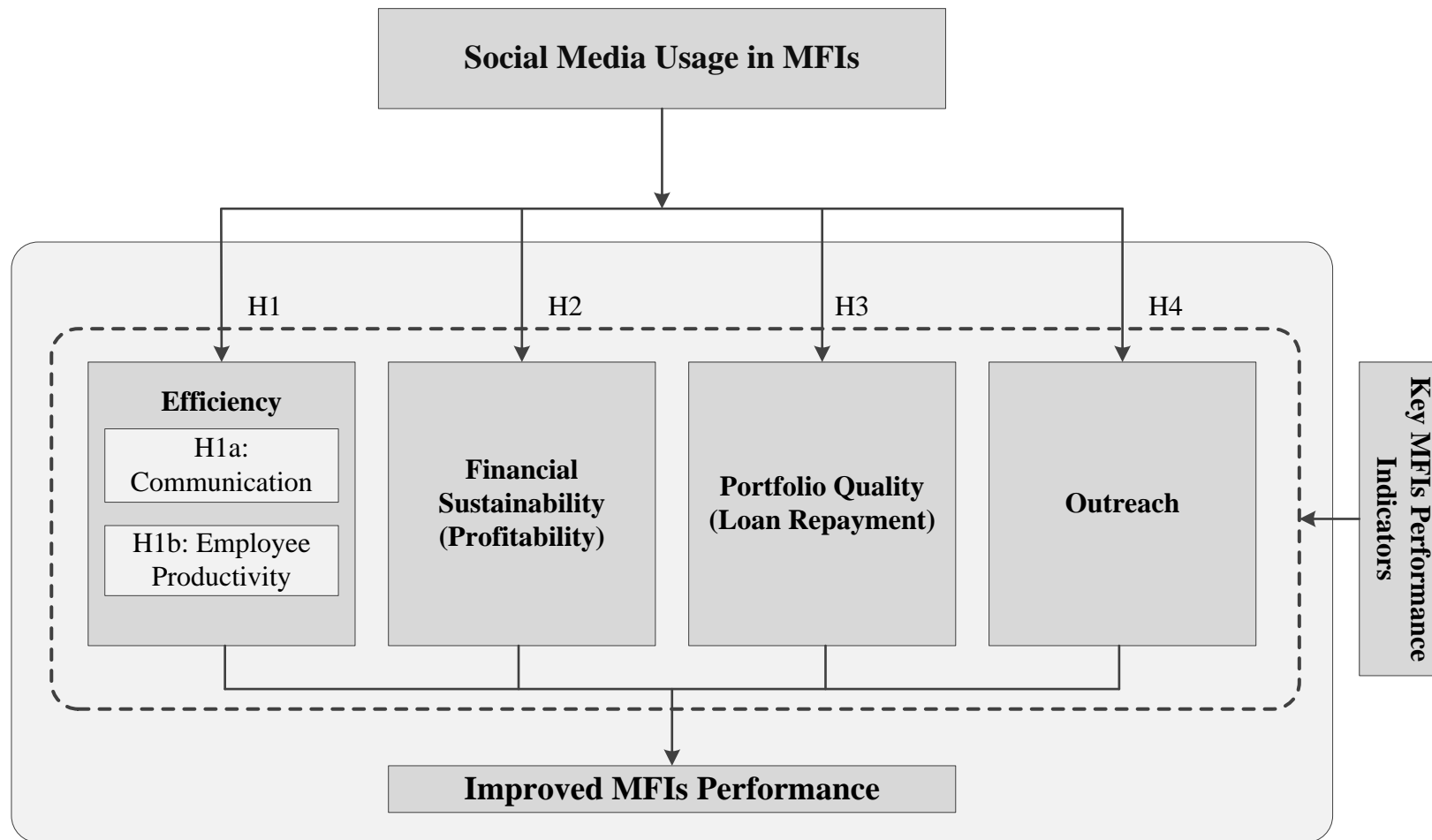


Figure 3.7: Proposed Conceptual Model

3.4 Summary

This chapter has briefly presented the theoretical background of the study which underpins the conceptual model and the importance of understanding the role of social media in proceeding the MFIs tasks. The need for developing a conceptual model for evaluating the impact of social media in businesses is justified by discussing that better understanding could lead to better social media utilisation for business purposes. Later in this chapter, the researcher presented discussion over RBV theory to ground the research hypotheses. Bringing the success of social media tools in different sectors to the microfinance industry, this research proposed a model with six hypotheses identified and supported from previous literature. The next chapter defines the suitable methodology to validate the proposed hypotheses.

Chapter 4: Research Methodology – A Quantitative Approach

4.1 Introduction

In the previous chapter a conceptual model was developed to understand the impact of social media on MFIs in order to bridge the gap found from the literature. As from previous study addressed the importance of social media for businesses, the research model identified six hypothesised relationships among the five constructs. Therefore, this chapter considers different research methodologies to identify the appropriate approach to examine this research conceptual model and the hypothesis. Hence, it provides a full explanation of how the researcher performs the empirical investigation in the study to validate the research hypotheses. Therefore, different research philosophies are presented and discussed along with research approaches, strategies. A justify is also provided for the chosen materials.

4.2 Research Philosophies

A research philosophy, as from Saunders *et al.*, (2012), is “a belief about the way in which data about a phenomenon should be gathered, analysed and used. It is referred to as the development of knowledge and the nature of that knowledge”. According to Blumberg *et al.*, (2014), research is based on reasoning (theory) and observations (data or information), where there is still ongoing philosophical debate on the development of knowledge on how observations and reasoning are related to each other. Understanding the basic assumptions of research philosophies is important for the researcher as it helps to clarify the research design and can enable them to reach designs beyond their experience (Blumberg *et al.*, 2014). Ontological assumption and epistemological assumption were addressed by Collis and Hussey (2013). An epistemological issue concerns the question of what is (or should be) regarded as

acceptable knowledge in a discipline, while ontological issue concerns with the nature of social entities or nature of the reality (Saunders *et al.*, 2012; Bryman and Bell, 2011). According to Orlikowski and Baroudi (1991), epistemology forms the selection of an appropriate research strategy and methods to collect empirical evidence.

Blumberg *et al.*, (2014) have suggested two epistemologies that researcher can use: positivist and interpretive. Various other research philosophies exist between these two and the most notable of them is realism which shares principles of both positivism and interpretivism. However, the following sections will provide further explanation only will be on the two most distinguished epistemologies and followed by discussion on the relevant one to the current study.

4.2.1 Positivism

Positivism, as presented in Blumberg *et al.*, (2014), is a research philosophy adopted from the natural sciences. Orlikowski and Baroudi (1991, p. 5) defined positivist studies as “premised on the existence of a priori fixed relationships within phenomena which are typically investigated with structured instrumentation”. As from Blumberg *et al.*, (2014), observing objective facts is the way to investigate the social reality in order to develop knowledge. Building on this view, developing a theory requires hypothesising fundamental laws and concluding the supportive observations to assess and validate the hypotheses (Blumberg *et al.*, 2014). It implies the following assumptions:

- The social world is observed by collecting objective facts.
- The social world consists of simple elements to which it can be reduced.

As the observable facts are external and the researcher cannot be involved (independent), researches following this philosophy assume that those facts are objective. Therefore, Collis and Hussey (2013) stated that positivist believes that a social phenomenon is measurable and linked with quantitative methods of analysis based on the statistical analysis of quantitative research data.

4.2.2 Interpretivism

Interpretive studies assume that people create and associate their own subjective and inter-subjective meanings as they interact with the world around them; interpretive researchers thus attempt to understand phenomena through accessing the meanings participants assign to them (Orlikowski and Baroudi 1991). Those, the interpretivists do not agree with the positivists in that research is value-free. Unlike the positivism, interpretivists believe that the social phenomena cannot be understood by simple fundamental laws. Here, the process of developing knowledge and building theory starts with inducting ideas from observing and interpreting social constructions (Blumberg *et al.*, 2014), as from Blumberg *et al.*, (2014), the interpretivist implies the following two assumptions:

- The social world is observed by seeing what meaning people give to it and interpreting these meanings from their viewpoints.
- Social phenomena can only be understood by looking at the totality.

This philosophy focuses more on understanding social phenomena by “exploring why people have different experiences and by understanding how these differences result in the different constructions and meanings people give to the social world” (Blumberg *et al.*, 2014).

Based on the above discussion on positivism and interpretivism philosophies, as summarised in Table 4.1, to investigate the impact of social media on MFIs performance, the current research developed a conceptual model along with six measurable hypotheses in favour of previous studies. Hence, this research adopts a positivism philosophy to fulfil its aim as the main interest is to test the conceptual model in order to improve the understanding of the value created by social media in the form of improving MFIs performance and the five of performance indicators, as discussed in Chapter 3, are measurable and in addition to that the researcher is independent.

	Positivism	Interpretivism
<i>Basic Principles</i>		
View of the world	The world in external and objective	The world is socially constructed and subjective.
Involvement of researcher	Researcher is independent	Researcher is part of what is observed and sometimes even actively collaborates.
Researcher's influence	Research is value-free	Researcher is driven by human interest.
<i>Assumptions</i>		
What is observed?	Objective, often quantitative, facts	Subjective interpretation of meanings.
How is knowledge developed?	Reducing phenomena to simple elements representing general laws	Taking a broad and total view of phenomena to detect explanations beyond the current knowledge.

Table 4.1: Comparing Positivism and Interpretivism Approaches (Source: *Blumberg et al., 2014*)

4.3 Research Design

According to Saunders *et al.*, (2012), research design is defined as the general plan on the procedures followed by a researcher to answer the chosen research question. It “provides a framework for the collection and analysis of data” (Bryman and Bell, 2011). Bryman and Bell (2011) presented the choice of research design as a reflection of decision about the priority being given to a range of dimensions of the research process. This research comprises three phases: First one is research design, the second one is data collection and the third one is data analysis. In the first stage, the researcher conducts a comprehensive literature review on the challenges of MFIs which affect the performance, then allocating the most appropriate indicators to assess the performance as a tool to measure improvement as a result of social media usage. Afterward, the research model was developed including six hypotheses. The survey was adopted as a research strategy for this study.

The data collection phase, a pilot study is carried out in order to check the reliability and validity of the designed questionnaire to be amended accordingly; in addition to the main targeted population of MFIs employees, feedback on the questionnaire was requested from experts in order to check its ability to meet the research aim and objectives and validate the model. The amended copy of survey questionnaire was

sent out to the sample population. Analysing and discussing the empirical results of the collected sample is the last stage of this research. This stage is performed using appropriate statistical software. Figure 4.1 include a full presentation of research design stages and procedures of each stage.

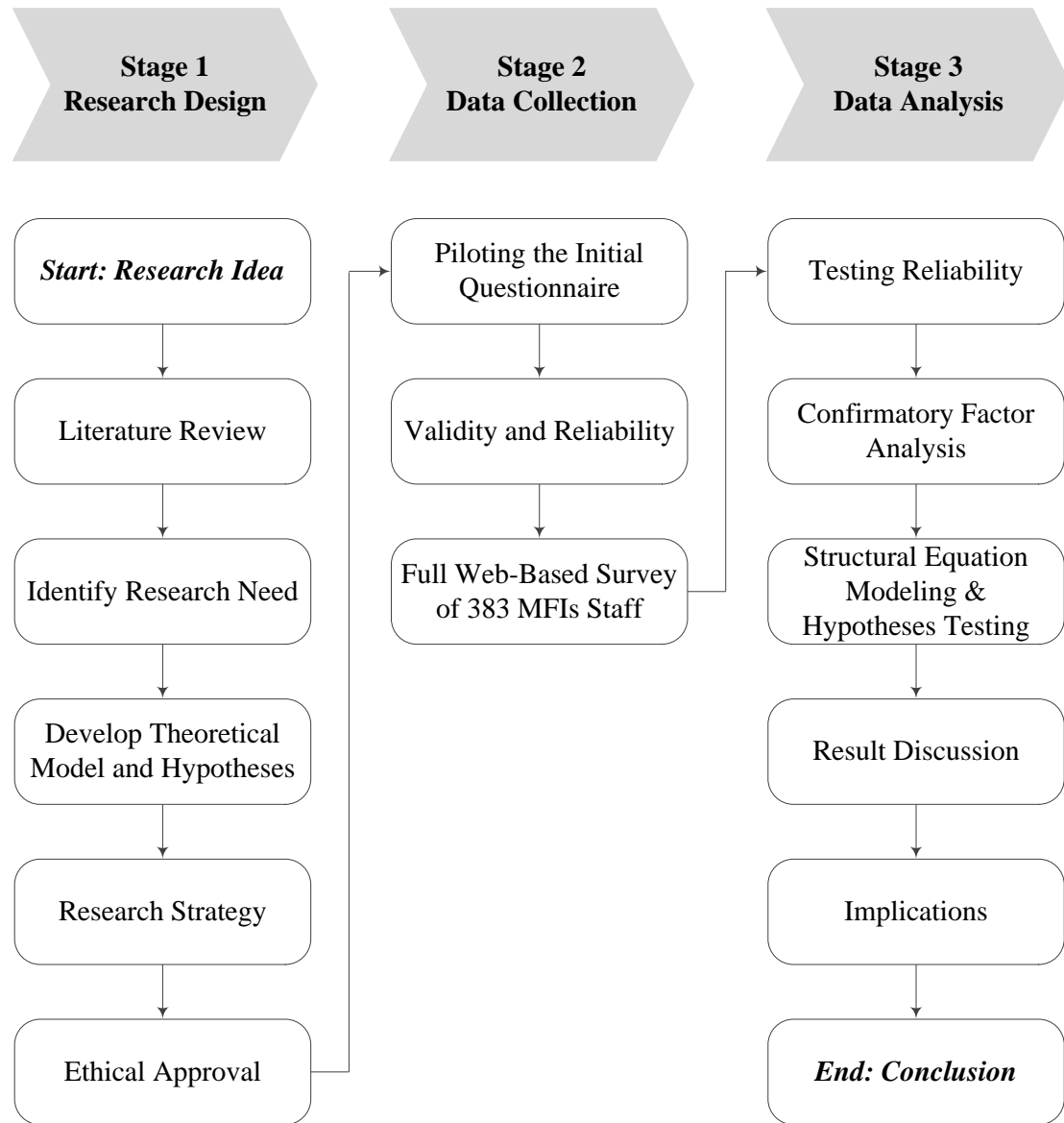


Figure 4.1: Research Design of the PhD Research Process

4.4 Research Paradigms: Quantitative vs Qualitative

There are two paradigms used in literature in order to meet the research objective: quantitative and qualitative. The quantitative is termed the traditional, the positivist, the experimental, or the empirical paradigm. The qualitative is termed the

constructivist approach or naturalistic, the interpretative approach, or the postpositivist or postmodern perspective (Creswell, 1994). Both qualitative and quantitative paradigms have been adopted as appropriate approaches to investigate the influence of technology on different types of organisations. Both paradigms hold its own advantages and weaknesses as addressed Johnson and Onwuegbuzie (2004) in Table 4.2 and Table 4.3.

Considering the research philosophy, based on the ontological assumption, quantitative methods state that the reality is objective and singular. It is also based on positivism and all phenomena are believed to be reduced to empirical indicators which represent the truth; also, epistemologically, the researcher and researched are independent (Johnson and Onwuegbuzie, 2004; Sale *et al.*, 2002). The quantitative paradigm's goal is to measure causal relationships between variables within "value-free framework" and analyse those relationships and this investigation will need a large sample size (Denzin and Lincoln, 1994 quoted from Sale *et al.*, 2002).

In contrast, the qualitative paradigm is based on interpretivism (Secker *et al.*, 1995) and constructivism (Guba and Lincoln, 1994) (quoted from Sale *et al.*, 2002). From the ontological consideration on the qualitative paradigm, reality is subjective and multiple as seen by participants in a study. Whereas, on an epistemological level, Smith (1983) discussed that there is no access to reality independent of our minds. Contrary to quantitative paradigm, qualitative one considers the investigator and the object of study are interactively linked so that findings are mutually created within the context of the situation (Guba and Lincoln, 1994; Denzin and Lincoln, 1994). This actually means that reality has no existence prior to the investigation (Smith, 1983). In term of methodology, while the quantitative methods use survey techniques, qualitative studies include in-depth and focus group interviews and participant observation with much smaller sample than the quantitative (Reid, 1996).

The above paragraph has discussed assumptions on both paradigms have given rise to different journals, different sources of funding, different expertise, and different methods in addition to the differences in scientific language used to describe them (Sale *et al.*, 2002).

Assumption	Question	Quantitative	Qualitative
Ontological Assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher.	Reality is subjective and multiple as seen by participants in a study.
Epistemological Assumption	What is the relationship of the researcher to the researched?	Researcher is independent from that being researched.	Researcher interacts with that being researched.
Axiological Assumption	What is the role of values?	Value-free and unbiased.	Value-laden and biased.
Rhetorical Assumption	What is the language of the research?	<ul style="list-style-type: none"> • Formal. • Based on set definitions. • Impersonal voice. • Use of accepted quantitative words. 	<ul style="list-style-type: none"> • Informal. • Evolving decisions. • Personal voice. • Accepted qualitative words.
Methodological Assumption	What is the process of the research?	<ul style="list-style-type: none"> • Deductive process. • Cause and effect. • Static design-categories isolated before study. • Context free. • Generalisation leading to prediction, explanation, and understanding. • Accurate and reliable through validity and reliability. 	<ul style="list-style-type: none"> • Inductive process. • Mutual simultaneous shaping of factors. • Emerging design-categories identified during research process. • Context-bound. • Patterns, theories developed for understanding. • Accurate and reliable through verification.

Table 4.2: Qualitative & Quantitative Assumptions (Source: Creswell, 1994)

4.4.1 Criteria of Paradigm Selection

Creswell (1994) has designed guidance for the researcher to choose the appropriate paradigm which helps them within their research process (see Table 4.3). The researcher's worldview is very important in this respect; it is also essential to clarify the nature of the problem where explanatory research for a new phenomenon with unknown variable and lack a theory base will need carrying out a qualitative research. Therefore, as the research is interested on the impact of social media on the performance of MFIs, there is sufficient literature of the technology usage on the organisational performance and the variable are known and discussed previously, a quantitative approach seems more fitting and convenient for this research.

Criteria	Quantitative Paradigm	Qualitative Paradigm
Researcher's Worldview	A researcher's comfort with the ontological, epistemological, axiological, rhetorical, and methodological assumption of the quantitative paradigm	A researcher's comfort with the ontological, epistemological, axiological, rhetorical, and methodological assumption of the qualitative paradigm
Training and Experience of the Researcher	Technical writing skills, computer statistical skills, library skills	Literary writing skills, computer text-analysis skills, library skills
Researcher's Psychological Attributes	Comfort with rules and guidelines for conducting research, low tolerance for ambiguity, time for a study of short duration	Comfort with lack of specific rules and procedures for conducting research, high tolerance for ambiguity, time for lengthy study
Nature of the Problem	Previously studied by other researchers so the body of literature exists, known variables, existing theories	Exploratory research, variable unknown, context important, may lack theory base for study
Audience for the Study (e.g., journal editors and readers, graduate committees)	Individuals accustomed to / supportive of quantitative studies	Individuals accustomed to / supportive of qualitative studies

Table 4.3: Selection Criteria (Source: Creswell, 1994)

This study benefits from the advantages of quantitative paradigm such testing and validating the proposed research model and its hypothesis, the ability to generalise research findings, the ability to construct a situation that eliminates the confounding influence of many variables, allowing one to more credibly assess cause-and-effect relationships, data have higher credibility for studying large numbers of observation with less time consuming (Creswell, 1994). Therefore, similar studies with similar research objectives regarding assessing the influence of technology usage in organisation have followed a quantitative approach (Parvin, 2013; Jawadi *et al.*, 2011; Ala and Ngugi, 2013) (see Table 4.5).

Author	Region	Research Objectives	Approaches	Methods
Parvin (2013)	Bangladesh	Evaluating mobile banking operation, quality of mobile banking, prospects of Mobile Banking operation	Quantitative	Primary and secondary data
Ramirez (2013)	Paraguay	evaluating the regulatory environment of the telecommunications sector from the standpoint of key stakeholders	Quantitative	Surveys and secondary data
			Qualitative	Interviews
Jawadi <i>et al.</i> , (2011)	Middle East and Africa	The influence of ICT on MFI performance	Quantitative	Surveys and secondary data
	France		Qualitative	Interviews
Ala and Ngugi (2013)	Kenya	investigate the influence of mobile banking on growth of MFIs	Quantitative	Primary and secondary data
Amran <i>et al.</i> , (2013)	Malaysia	identify and analyse the issue in mobile banking implementation by the Islamic Microfinance Institutions (IMFIs) in serving their clients	Qualitative	Literature review
Ahmed <i>et al.</i> , (2011)	Bangladesh	investigating the reasons of MFIs failure in a suburban area of the Sunamganj district of Bangladesh	Qualitative	Field study
Rozzani <i>et al.</i> , (2013)	Developing countries	Identifying the issues surrounding the operation in MFIs from previous research, particularly relating to their disbursement and payment, data gathering and dissemination systems.	Qualitative	Literature review
Mohan <i>et al.</i> , (2013)	India	examining the contribution that IS innovations have made to microfinance	Qualitative	Interviews
Riggins and Weber (2013)	Developing countries	Examining how ICTs are changing the microfinance industry given recent advancements in mobile banking, Internet usage, and connectivity	Qualitative	Reports

Table 4.4: Research Approaches applied in Microfinance Industry

4.5 Research Strategy

Generally speaking, a strategy is a plan of action to reach a target, and research strategy as defined by Saunder *et al.*, (2016) is a plan of how researcher will go about answering the research question. It is a methodological link between the philosophy and subsequent choice of methods to collect and analyse data (Denzin and Lincoln, 2011). In their book, Saunder *et al.*, (2016) discussed eight research strategies: experiment, survey, archival and documentary research, case study, Ethnography, action research, grounded theory, and narrative inquiry. Experiment and survey research strategies are principally linked to a quantitative research design, while archival and documentary research and case study may involve quantitative or qualitative research, or a mixed design combining both. The rest of them are exclusively linked to a qualitative research design (Saunder *et al.*, 2016). The research questions and objectives will guide the selection of the research strategy where, as discussed by Saunder *et al.*, (2016), the key to the selection is that the researcher achieves a reasonable level of coherence throughout his/her research design which will enable answering the particular research questions and meet the objectives. Based on the discussion above and the adoption of quantitative paradigm, this study will follow the survey as its research strategy.

4.6 Surveys

Survey is mainly used to collect data from a sample, with a view to analysing the collected data statistically and generalising the results to a population (Collis and Hussey, 2014). It is a common strategy in business and management research; it allows the researcher to collect quantitative data which can be used to suggest explanation for the relationships between variables then to conduct models of those relationships (Saunder *et al.*, 2016). Some advantages of this strategy that it provides a better control over the process and it saves time and money collecting a large amount of data from a large population (Saunder *et al.*, 2016).

As survey strategy is adopted, deductive approach will be followed (Saunder *et al.*, 2016) starting with the theory and moving on to research model and hypothesis, then confirming or rejecting each of the hypotheses (Bryman and Bell, 2011). Those, two

kinds of the surveys were found: descriptive survey and analytical survey (Collis and Hussey, 2014). The descriptive one is used to gather information largely on people characteristics and thoughts while analytical survey is used to answer research questions or to test hypotheses by taking the logic into field (Altinay *et al.*, 2015). Therefore, in order to examine its hypotheses, this research has adopted a quantitative paradigm which will require a large number of data. Survey is the most appropriate methodology to be adopted in this study as it meets its requirements in the large number of data needed with convenient cost, time, and effort.

4.7 Sampling Strategies and Sample Size

Sampling techniques enable the researcher to decrease the amount of data which needed to collect by considering only data from a sub- group rather than all possible cases or elements (Saunders *et al.*, 2016). Sampling provides a valid alternative to a census when it would be impracticable for the researcher to survey the entire population and when the researcher's budget and time constraints prevent the researcher from surveying the whole population; selecting a sample is similarly significant whether the researcher is planning to use interviews, questionnaires, observation or some other data collection technique (Saunders *et al.*, 2016). As the population of the current study is MFIs' staff, it is almost impossible and impracticable to collect and analyse data from every employee in developing countries due to the budget and time constraints. It was argued that using sampling makes possible a higher accuracy than a census (Barnett, 2002), and sampling fewer cases means that the researcher can collect information that is more detailed (Saunders *et al.*, 2016). For this purpose, Willoughby (2015, p. 15) has presented many different methods that can be used when selecting a sample from the population of the researcher's interest including: simple random, convenience, quota, systematic, cluster and stratified sampling.

This study is adopting the convenience sampling method which involves choosing people who are conveniently available to be questioned. Willoughby (2015, p. 17) addressed this method as it can be carried out very quickly, inexpensive, and a sampling frame containing information about every population member is not required. The sample size should be sufficient to allow the researcher addressing the

research question; thus sample size will help generalisation the findings (Collis and Hussey, 2013).

4.8 Questionnaire Development

In order to assess the impact of social media on the performance on MFIs, this study uses a questionnaire. The items for this questionnaire are collected from previous studies. A total of eight constructs (social media usage, MFI efficiency, the facilitated communication, staff productivity, profitability, portfolio quality, outreach and the depth of outreach) are designed with appropriate items. Therefore, this research used the Likert scale for rating the questions (Bryman and Bell, 2007). Five points rating scale is used in this study where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. In this study, the items used to measure the construct are mainly adopted from similar studies where their main aim was to measure the change on the organisational performance and its antecedents as a result of new tools implemented. Therefore, measures adopted with respect to their high reliability.

4.8.1 Social Media Usage

In order to investigate the impact of social media usage on the performance on MFIs, the questionnaire starts by identifying the types of social media implemented along with the extent of this implementation. As presented in Figure 3.2, the use of social media presents the first level of the model and it is the key to all of this study's hypotheses. Items with high reliability were conducted from the literature to measure this use (Shang, 2014), as presented in Table 4.5. Based on its previous use in critical areas of organisations to operate the tasks, those items investigate the extent of such possible usage in MFIs, along with identifying the social media platforms.

Item	Code	Source
Picture and video broadcasting websites.	SMT1	Shang (2014)
Social networking website.	SMT2	
Product review system website.	SMT3	
Microblogging	SMT4	
Blogs	SMT5	
Document management.	SMT6	
Others (Skype, Viber, WhatsApp)	SMT7	

Table 4.5: Social Media Usage Items

4.8.2 Efficiency

This construct is to measure the change in the operational efficiency level as a result of implementing social media. For this purpose, literature were searched and we tried to collect as much item as possible which measure the change in the efficiency as a result of new technology implementation. Those, the items were conducted from Picoto *et al.*, (2012) where they investigated the impact of mobile business to enhance the firm performance, also were adopted from Zhu and Kraemer (2005) who examined the value of e-Business use, in addition to the efficiency characteristics in the field of microfinance as conducted by Farrington (2000); full presentation of the items, their codes, and their sources is in Table 4.6. Also, within the efficiency, Table 4.7 and 4.8 present items used to measure any improvement as a result of technology adoption for communication and staff productivity accordingly.

Item	Code	Source
Internal operations more efficient.	EIO1	Zhu and Kraemer (2005); Picoto <i>et al.</i> , (2012)
Improved decision making.	EIO2	
Reduce administration workload.	EIO3	
Better information quality.	EIO4	

Table 4.6: Efficiency Items

4.8.2.1 Communication Improvement

Improved efficiency is linked to better communication. As this study propose that social media has a significant impact on communication, it is important to obtain the

perception of MFIs employees which helps in validating the research hypotheses. Items measuring the communication performance were conducted from Andriole (2010); Picoto *et al.*, (2012); Schaupp and Belanger (2013); and Lee (2015). Table 4.7 presents all items along with the reference.

Item	Code	Source
Facilitate communication among employees.	COM1	Andriole (2010); Picoto <i>et al.</i> , (2012); Schaupp and Belanger (2013); Lee (2015).
Facilitate communication with customers.	COM2	
Ability to audit communications streams.	COM3	
Improved communication performance.	COM4	
Ability to reach more people faster.	COM5	

Table 4.7: Communication Items

4.8.2.2 Staff Productivity

As it was discussed earlier, improved staff productivity is another sign of better efficiency within the organisation. Therefore, in order to measure the staff productivity and its response to the technological change within the organisation, items were conducted from Picoto *et al.*, (2012); Schaupp and Belanger (2013) are used to obtain MFIs employees perception when social media implemented in their organisation. Table 4.8 presents the items and their references.

Item	Code	Source
Staff productivity increased	SP1	Picoto <i>et al.</i> , (2012); Schaupp and Belanger (2013)
Increased staff motivation and satisfaction	SP2	
Improved employee effectiveness	SP3	
Easier for the staff to do their job	SP4	

Table 4.8: Staff Productivity Items

4.8.3 Financial Sustainability (Profitability)

Similar to other constructs, the items which were used to measure the profitability were adopted from studies where they measured the change on the construct as a

result of new tools and technology adoption; the items here will also include the measures of the costs and revenues as antecedents of institution profitability. Some items were based on Picoto *et al.*, (2012); others were developed by Schaupp and Belanger (2013) and also from Zhu *et al.*, (2006b) as illustrated in table 4.9.

Item	Code	Source
Increased profitability.	FS1	Zhu <i>et al.</i> , (2006b); Picoto <i>et al.</i> , (2012); Schaupp and Belanger (2013).
Operational costs decreased.	FS2	
Reduced marketing costs.	FS3	
Inventory costs decreased.	FS4	
Total cost decreased.	FS5	

Table 4.9: Financial Sustainability Items

4.8.4 Portfolio Quality (Loan Repayment)

In chapter 2 the researcher discussed the importance of loan repayment performance on the success of microfinance industry. MFIs employees are asked to assess the portfolio quality using measurements were previously used for such purpose. Therefore, this construct is going to be measured by the items adopted from Rosenberg (2009) and Nanayakkara (2012), the item coding and references are presented in Table 4.10.

Item	Code	Source
Improved loan repayment.	PQ1	Rosenberg (2009); Nanayakkara (2012)
Decreased portfolio at risk.	PQ2	
Decreased defaults rate.	PQ3	
Decreased arrears rate.	PQ4	

Table 4.10: Portfolio Quality Items

4.8.5 Outreach

The main goal of establishing microfinance is to reach the poor people and provide them with access to the financial services and a significant sign of microfinance success is when outreach improves. In this research, social media is proposed in order

to help MFIs to increase the number of clients and/or loans. Therefore, empirical validation of social media role in improving the outreach is based on the employee's perception using a valid measures and questions. Those items will be adopted from Picoto *et al.*, (2012), Schaupp and Belanger (2013) and also from Zhu *et al.*, (2006b). Table 4.11 presents the items, their codes, and references.

Item	Code	Source
Outreach increased.	BDO1	Nanayakkara (2012); Picoto <i>et al.</i> , (2012); Schaupp and Belanger (2013).
Outreach area widened.	BDO2	
Increase convenience / service level to the clients.	BDO3	
Improved marketing flexibility.	BDO4	
Increased control of direct marketing objectives.	BDO5	
Deeper outreach.	BDO6	

Table 4.11: Outreach Items

4.9 Pilot Testing

In order to save time and costs, a copy of the questionnaire is planned to be first distributed to experts and part of the targeted population to carry out a pilot testing. According to Saunders *et al.*, (2012), the pilot test mainly aims to improve the questions and to give the researcher an opportunity to assess the reliability and validity of the items. Feedback from experts supports in verifying the ability of the questions to validate the model and meet the research aim and objectives. Therefore, questionnaire validity is obtained from group of expert at Brunel University London. They were asked to check the clarity and attractiveness of the questions. While Saunders *et al.*, (2012) stated that reliability considers the consistency of responses to questions. After making sure that the questions are related and clear based on the feedback given, first run of the refined questionnaire will then be sent out to the targeted population. It is important to double check the reliability of the questionnaire from the targeted population perspective. Internal consistency is used to check the reliability of items loading on each construct and Cronbach's Alpha is the most popular method for this check (Hinton *et al.*, 2004; Hair *et al.*, 2010).

4.10 Data Collection Procedure

Data collection procedure involves collecting opinion and useful information from target population about the research topic (Churchill, 1987). Therefore, the literature identified different methods to collect data such as face-to-face meeting, posting methods, e-mails, phone calls, and a combination of those methods (Sekaran, 2000; Cooper and Schindler, 2001).

Thus, using MixMarket (2016) database, the researcher has prepared a list of microfinance institutions from all around the developing countries. The list was screened with those which implement social media for business purposes as it was critical for this research to have a response only from institutions have already implemented at least one type of social media platform. First, contact details from MixMarket were checked if it includes links to website and/or platform. If this stage fails to find any information, the researcher runs a Google search for this purpose. It was found that some of the organisations have a website but no any information about social media use, while some others have social media platforms but they do not have website. Others have both of social media platforms and website linked to each other. Emails were sent for the first time for 1000 organisations. In a week time, the researcher followed-up with email reminder, phone call, and Facebook messages when it is convenient. The total number was received is 390 responses. 7 of them were deleted as they were found outliers. The final number was used for analysis is 383 observation and the final response rate was 38.3%.

4.11 Data Analysis

The data analysis process is in two phases: data cleaning and data modeling. The first stage of data cleaning involves checking the missing data and outliers, this stage will employ SPSS which will also produce descriptive statistics as an overview of the sample, presenting means and standards deviations, also to produce the reliability tests to ensure the consistency of the measurements. The later stage involves validating the conceptual model using Structural Equation Model (SEM) which is a statistical procedure for testing measurement, functional, predictive, and causal hypotheses (Bagozzi and Yi, 2012).

SEM may offer many benefits, according to Bagozzi and Yi (2012), as generic tool which provides a broad, integrative function conveying the synergy and complementarity among many different statistical methods; SEM also takes into account reliability of measures in tests of hypotheses in ways going beyond the averaging of multi-measures of constructs. It often suggests novel hypotheses originally not considered and useful in experimental or survey research, cross-sectional or longitudinal studies, measurement or hypothesis testing endeavours, in addition to that it is easy to use (Bagozzi and Yi, 2012).

4.12 Ethical Considerations

As the current research has chosen the questionnaire as a data collection method and involved human participation, the ethical consideration is very critical (Hesse-Biber and Leavy, 2010). Thus, ethics in the field of business studies refers to the set of behavioural principles and norms (Sekaran, 2003). Therefore, during the research, this study was guided by the ethical principles of Bryman and Bell (2011) classified as follow:

- Causing no harm from any type to the participant.
- The participants were clearly introduced to the purpose of the research and they were given the right to accept or reject their participation.
- The privacy of the participants was highly respected and all questions have no information of personal details.
- The researcher will not engage in deception by hiding the purpose of the study.

The researcher has carefully considered the ethical obligations through every stage of the study and the Research Ethics Committee of Brunel University London has granted the researcher with the formal approval (please see Appendix B) before commencing the data collection and the university's ethical codes are in place to safeguard the participants.

4.13 Summary

The aim of this chapter is to present the research design. First, the chapter reviewed the most popular research philosophies and the positivist was found to be the most appropriate one for this research. The two main research paradigms qualitative and quantitative were also discussed in the light of the aim of this research. Hence, based on the criteria of selection conducted by Creswell (1994), the current research adopted the quantitative paradigm and will benefit from its advantages in testing and validating the proposed research model.

Experiment and survey research strategies are principally linked to a quantitative research design. The study's aim and objectives guide the selection of the research strategy where the key to the selection is that the researcher achieves a reasonable level of coherence throughout the research design (Saunders *et al.*, 2016). Therefore survey research strategy was adopted. The measurement items for the questionnaire were also adapted from the literature to fit the context of this study. A brief discussion over the data analysis tools were presented in later sections along with research ethics consideration. The research will benefit from SEM as a statistical procedure for testing measurement, functional, predictive, and causal hypotheses (Bagozzi and Yi, 2012).

Chapter 5: Empirical Results and Data Analysis

5.1 Introduction

The previous chapter presented the research philosophies, research design, and paradigm. Thus, justification was provided for choosing the positivism philosophy was adopted for this research and quantitative paradigm. Thereafter, sampling strategy and questionnaire survey was discussed as a tool to conduct the research empirical evidence. A brief presentation on the data analysis process was argued to pave the way for detailed discussion over the results. In this chapter, data analysis process commences with pilot testing to insure the validity and reliability of the survey item before conducting the full survey.

The main analysis is conducted in two phases: data cleaning and data modeling. The first stage of data cleaning involves checking the missing data and outliers, this stage employs SPSS which also generates descriptive statistics as an overview of the sample, presenting means and standards deviations, also to produce the reliability tests to ensure the consistency of the measurements. The later stage involves validating the conceptual model using structural equation model, which is a statistical procedure for testing measurement, functional, predictive, and causal hypotheses (Bagozzi and Yi, 2012).

SEM may offer many benefits, according to Bagozzi and Yi (2012), as generic tool which provides a broad, integrative function conveying the synergy and complementarity among many different statistical methods. Also, as it was discussed earlier. SEM also considers reliability of measures in tests of hypotheses and often suggests novel hypotheses originally.

5.2 Pilot Study

In order to empirically investigate the conceptual model and its hypotheses, a survey questionnaire is conducted. Prior to the full study, a pilot test is highly recommended by scholars as it saves time and costs by showing the weaknesses of the full-scale study (Hair *et al.*, 2010). The pilot test is an essential procedure in the way to scale development (Churchill, 1979). Hall and Howard (2008) addressed the main roles of pilot studies by:

- Identifying unanticipated problems that may affect the validity of the main study.
- Checking the reliability and validity of the data collection instrument used.
- Checking that the timing of completion is convenient.

In sum, as the goodness of measures, according to Sekaran (2003), is established through the different types of validity and reliability, the results of any research can only be as good as the measures that tap the concepts in the theoretical framework. Therefore, well-validated and reliable measures are going to be used to ensure that this research is scientific. This study uses measures have been developed from the literature and their psychometric properties (i.e., the reliability and validity) established by the developers.

Therefore, the pilot study for this research was conducted within the staff of MFIs using online survey. From 1st to 18th May 2016, 48 responses were collected to be used for this purpose. 10 of the responses were at the managerial level, 10 minutes was the average time required to respond to the survey. More discussion on the pilot study results is presented in the next section of reliability and validity (Table 5.1 presents the results).

Factor	Number of Items	Cronbach Alpha	Inter-Item Correlation	Item-to-total Correlation
SMT	7	0.644	0.14 - 0.530	0.11 - 0.691
EIO	4	0.828	0.343 - 0.702	0.566 - 0.757
SP	4	0.909	0.570 - 0.854	0.644 - 0.874
COM	5	0.762	0.221 - 0.599	0.432 - 0.674
FS	5	0.932	0.581 - 0.872	0.757 - 0.902
PQ	4	0.966	0.820 - 0.947	0.890 - 0.935
BDO	6	0.944	0.614 - 0.886	0.749 - 0.864

Table 5.1: The Reliability and Validity Indicators

5.2.1 Reliability

Joppe (2000, p. 1) defines reliability as “the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable”. In other words, the reliability of a measure indicates the extent to which it is without bias (error free), it is considered as an indication of the stability and consistency with which the instrument measures the concept and helps to assess the goodness of a measure (Sekaran, 2003, p. 206). The most popular test of reliability is Cronbach’s coefficient alpha (Churchill, 1979). According to this test, reliability is considered to be good when Cronbach’s coefficient alpha is over than 0.8, acceptable when less than 0.8 and over 0.6, and poor for less than 0.6 (Sekaran, 2000). In this study, as from Table 5.1, Cronbach alpha is good for all construct except SMT and COM which is acceptable and can be translated that items in each construct were independent measures of the same concept.

5.2.2 Validity

Validity refers to the accuracy of measurements (Burns and Bush, 1995); it determines whether the research truly measures that it is intended to measure or how truthful the research results are (Joppe, 2000). According to Sekaran (2003), few types of validity tests are used to test the goodness of measure and they were grouped under

three headings: content validity, criterion-related validity, and construct validity. In this study, only content and construct validity is considered to be applicable.

- **Content validity** ensures that the measure includes an adequate and representative set of items that tap the concept (Sekaran, 2003). It is mainly the subjective agreement among professionals that the measurement scales accurately reflect what is supposed to measure (Cooper and Schindler, 2001). For the purpose of this research, content validity was checked first when all items were taken from previous studies, second by asking academic as they provided their comments and feedback, and third by undertaking pilot test of similar subject as the study's main population (MFIs employees). Few minor comments were taken and the questionnaire was adjusted accordingly.
- **Construct validity** According to Sekaran (2003), construct validity testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed. This is assessed through convergent and discriminant validity. *Discriminant validity* is established when, based on theory, two variables are predicted to be uncorrelated, and the scores obtained by measuring them are indeed empirically found to be so, as the current study did not propose such hypotheses, this test is not applicable.

Convergent validity is established when the scores obtained with two different instruments measuring the same concept are highly correlated (Sekaran, 2003). According to Churchill (1979), evidence of the convergent validity of the measure is provided by the extent to which it correlates highly with other methods designed to measure the same construct. Robinson *et al.*, (1991) has suggested that item-to-total correlations exceed 0.50 and the inter-item correlations exceed 0.30. Cohen (1998) suggests that item-to-total correlation (r) =0.50 to 1.00 is large correlation and (r) = 0.3 to 0.49 is medium correlation, while it is small correlation for less than 0.3. In the current study context, as from Table 5.1, Inter-item correlation was over than 0.3 for all items, apart from SMT7 which shows low correlations with all other items in the same construct, it also shows low item-to-total correlation. Removing this item even

will improve the reliability for the social media types by increasing Cronbach's alpha value to 0.718.

5.3 Main Surveys

5.3.1 Geographical Spread of the Data

As this research follows convenience sampling technique, a list of organisations from all over the developing countries was prepared from MixMarket.com database (2016) and they were all contacted to fill in the survey. Responses were received from:

- Africa: such as Egypt, Nigeria, Zimbabwe, Pakistan, Cambodia, Tunisia, Morocco, Sudan, Algeria,
- Asia: such as India, Pakistan, Bangladesh, Iraq, Yemen, Tajikistan, Afghanistan, and Jordan.
- Europe: such as Romania and Bulgaria.

Also, as answering the question about the country and organisation was optional, we had number of the responses left them blank.

5.3.2 Validity

This study collected data from the staff of MFIs all around the developing countries. 1000 emails attached with a link of the questionnaire were sent to the available email addresses as from each institution contact details from Mixmarket.com followed by a reminder by different means after a week time. Therefore, using online survey this study was able to collect a total of 383 valid responses. 44 responses were removed as they were incomplete or considered to be outliers. The sample size of 383 responses is considered to be good in order to analyse the proposed theoretical framework using SEM (Hair *et al.*, 2010). The questionnaire included few questions regarding the demographic profile of the respondents. First, the gender of the respondents is presented in Table 5.2. The table reveals that 227 responses were completed by mail making 59.3% of the total number while 156 of them are female which make 40.7% of the total number.

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	227	59.3	59.3	59.3
	Female	156	40.7	40.7	100.0
	Total	383	100.0	100.0	

Table 5.2: Gender Frequency of the Sample

The age of the respondents is presented in Table 5.3 which shows that the majority of the respondents are between 25-39 years old with 232 responses making 60.6% of all respondents. Only 41 responses were completed by staff over 40 years old (10.7%) and 110 responses from staff less than 24 years old (28.7%).

	Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	G1	110	28.7	28.7	28.7
	G2	232	60.6	60.6	89.3
	G3	41	10.7	10.7	100.0
	Total	383	100.0	100.0	

Table 5.3: Age Groups Frequency of the Sample

Another important demographic factor is the position of the respondents. Table 5.4 reveals that 118 responses were completed from staff at the strategic level such as manager and making 30.8% of the total responses and 265 responses were completed by employees at the operational level.

	Positions	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	118	30.8	30.8	30.8
	Staff	265	69.2	69.2	100.0
	Total	383	100.0	100.0	

Table 5.4: Positions Frequency of the Sample

Table 5.5 presents the purpose of social media use in MFIs where the majority of respondents claimed that they use social media for marketing purposes with percentage of 84%, second purpose of social media usage as it is from responses was

the use for communication, product sales and distribution, and for management purposes with 60%, 58% and 53%., while only 16% of the respondents revealed that they use it for market research and other purposes.

Purpose of Use	Frequency	Percentage %
Marketing & Advertising	322	80.07
Communication	232	60.57
Product sales & Distribution	222	57.96
Management	203	53
Market research & others	64	16.71

Table 5.5: Purpose of Social Media Uses Frequency of the Sample

5.3.3 Data Screening: Missing Data and Outliers

The next step after collecting all responses from the full survey is data screening. The collected data need to be checked before moving on to the main analysis, this procedure is to ensure that the used data is error-free and clean by identifying missing data and outliers. Produced and run by the University of Bristol, Bristol Online Survey (BOS) was used to run the survey online. A full required answer feature was designed, which prevents survey data submission unless certain items are responded to. For the current survey, this feature was implemented for all questions which reduced missing data to zero. Outliers are defined as “observations with a unique combination of characteristics identifiable as distinctly different from the other observation” (Hair *et al.*, 2010, p.64). Therefore, Tabachnick and Fidell (2007) addressed the importance of detecting and treating outliers as it may affect the normality of the data and can completely distort statistical tests and they suggested that extreme ones should be removed while keeping the mild-outliers. Hair *et al.*, (2010, p. 66) identified two methods to detect the outliers: Univariate detection, bivariate detection, and multivariate detection.

- *Univariate* detection examines the distribution of observations for each variable in the analysis and selects as outliers those cases falling at the outer ranges of the distribution. As suggested by Kline (2010), identifying the univariate outliers for the sample should be done by determining frequency

distributions of z-score; the current study implemented SPSS 20 for this purpose. While there are no specific rules to identify extreme values in literature, for a large sample (more than 80) a value up to ± 3.29 can be accepted as a cut-off-point and this study deleted the row that has more than two univariate outliers from the dataset.

- **Bivariate** outliers can be detected by considering pairs of variables to be assessed jointly through a scatterplot (Hair *et al.*, 2010, p.66). Isolated points in the scatterplot are cases that fall markedly outside the range of the other observation.
- **Multivariate** detection involves more than two variables at a time. In the current study, Mahalanobis D^2 measure, which is a multi-dimensional version of a z-score, was used to determine the multivariate outlier (Hair *et al.*, 2010; Kline, 2010). Hair *et al.*, (2010) explained that this method measures each observation's distance in multidimensional space from the mean centre of all observations, giving a single value for each observation. Therefore, higher values of the Mahalanobis D^2 represent observations farther removed from the general distribution of observations in this multidimensional space.

Therefore, based on the above discussion, a check was run to identify all kinds of outliers before proceeding to the next stage, and total of 7 outliers were found and removed.

5.3.4 Testing the Normality Assumption

Normality is the most vital assumption in multivariate analysis as it refers to the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution (Hair *et al.*, 2010). Therefore, if the variation from the normal distribution is sufficiently large, all resulting statistical test are invalid (Hair *et al.*, 2010). This study employed skewness-kurtosis test to check whether the data is normally distributed or not.

	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
SMT1	2.79	1.329	.000	.125	-1.222	.249
SMT2	3.01	1.355	-.033	.125	-1.228	.249
SMT3	2.36	1.195	.443	.125	-.967	.249
SMT4	1.95	1.127	1.097	.125	.188	.249
SMT5	1.89	1.064	1.105	.125	.257	.249
SMT6	2.23	1.202	.662	.125	-.736	.249
EIO1	3.83	1.069	-.905	.125	.193	.249
EIO2	3.76	1.002	-.939	.125	.506	.249
EIO3	3.72	1.016	-.898	.125	.235	.249
EIO4	3.89	.975	-1.234	.125	1.417	.249
SP1	3.83	1.042	-.767	.125	-.088	.249
SP2	3.48	1.106	-.310	.125	-.722	.249
SP3	3.75	.999	-.840	.125	.348	.249
SP4	3.78	1.051	-.906	.125	.287	.249
COM1	4.07	.838	-1.187	.125	2.115	.249
COM2	3.94	.852	-1.134	.125	1.834	.249
COM3	3.86	.830	-.709	.125	.620	.249
COM4	3.95	.796	-.967	.125	1.475	.249
COM5	4.03	.805	-1.136	.125	2.177	.249
FS1	3.41	1.185	-.435	.125	-.819	.249
FS2	3.42	1.188	-.458	.125	-.828	.249
FS3	3.71	1.061	-.911	.125	.317	.249
FS4	2.95	1.053	-.025	.125	-.624	.249
FS5	3.42	1.215	-.485	.125	-.827	.249
PQ1	2.61	1.092	.315	.125	-.653	.249
PQ2	2.52	1.063	.474	.125	-.312	.249
PQ3	2.45	1.042	.387	.125	-.461	.249
PQ4	2.50	1.132	.411	.125	-.613	.249
BDO1	3.76	.879	-.864	.125	1.048	.249
BDO2	3.78	.899	-.840	.125	.885	.249
BDO3	3.83	.867	-.759	.125	.774	.249
BDO4	3.91	.867	-.870	.125	.915	.249
BDO5	3.83	.894	-.815	.125	.659	.249
BDO6	3.72	.948	-.714	.125	.377	.249

Note: the sample size is $N=383$; no missing data.

Table 5.6: Descriptive Statistics

According to Pallant (2010), the skewness value indicates the symmetry of the distribution where negative skew indicates that the distribution is shifted to the right; whereas positive skew indicates a shift to the left; while kurtosis provides information about the height of the distribution, the positive kurtosis value indicates a peaked

distribution; whereas a negative value indicates a flatter distribution. The normal range for skewness-kurtosis value is ± 2.58 (Tabachnick and Fidell, 2007). As it is showed in Table 5.6, this study has no skewness-kurtosis issues.

5.3.5 KMO and Bartlett's Test

Before we proceed to the next step of confirmatory factor analysis, it is suggested to perform Kaiser-Meyer-Olkin (KMO) and Bartlett's tests. According to Hinton *et al.*, (2004), KMO test is designed to check multicollinearity as it calculates whether variables are so highly correlated that we cannot distinguish between them, the thumb of KMO value for satisfactory factor analysis is 0.5 and the higher the better, while Bartlett's test of Sphericity investigates if there is a relationship between the variables. A p value <0.05 indicates that we can continue with the factor analysis as there are relationships between the variables. Therefore, as presented in Table 5.7, KMO value is excellent 0.922 and p value is significant and <0.01 which conclude that we can continue to the next step of factor analysis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.922
Bartlett's Test of Sphericity	Approx. Chi-Square	11459.897
	df	561
	Sig.	.000

Table 5.7: KMO and Bartlett's Test

5.3.6 Common Method Variance

Common method variance is defined as “the variance that is attributable to the measurement method rather than to the constructs the measures represent” (Podsakoff *et al.*, 2003, p. 879). Method biases are considered as a problem due to its effect in inflating the relationship between variables measured with the same method (Sharma *et al.*, 2009). According to Podsakoff *et al.*, (2003), one of the major sources of measurement error is method biases which threaten the validity of the assumption of relationship between measures. Harman's (1967) one-factor test was conducted in this study to check the severity of common method bias. The result of main components

factor analysis shows seven factors each with an eigenvalue over than one. The result confirmed that there is no concern related to common method variance as the largest covariance explained by one factor is only 34.342%.

5.4 Structural Equation Modelling

As it was discussed in the previous chapter, this study selected the SEM by the use of Analysis of Moment Structures (AMOS) version 20 to validate the research hypotheses. As it is defined by Hair *et al.*, (2010), a structural equation modeling is a family of statistical models that seek to explain the relationship among multiple variables includes two sorts of models: Confirmatory factor analysis (CFA) also known as the measurement model, and the structural model (Hair *et al.*, 2006). The following sections present the results from both models.

5.4.1 Confirmatory Factor Analysis

For the purpose of testing the measurement model, the current research conducted CFA using AMOS 20.0 software. SEM is the most-recent approach in conducting CFA in social sciences (Worthington and Whittaker, 2006). According to Asparouhov and Muthén (2009), the CFA measurement model specifies a number of factor loadings fixed at zero to reflect the hypothesis that certain factors influence certain factor indicators. Following the recommendation of Hair *et al.* (2006), in order to assess the measurement model, two main approaches were used:

- deliberation GOF criteria indices; and
- construct validity approach.

5.4.1.1 Goodness of Fit for CFA

The CFA was conducted on 7 constructs include 34 questions. The constructs are: Social Media Type (SMT), Efficiency (EIO), Staff Productivity (SP), Communication (COM), Financial Sustainability (FS), Portfolio Quality (PQ), and Breadth and Depth of Outreach (BDO). They were all loaded with their own measurements and

examined. The minimum of four tests of model fit need to be considered (Hair *et al.*, 2010); this study looked at 5 indices:

- Root mean square error of approximation (RMSEA), which shows how well the model, with unknown but optimally chosen parameter estimates would fit the population's covariance matrix (Byrne, 1998). PCLOSE is also a value associated with RMSEA in order to identify close fit.
- Comparative fit index (CFI), first introduced by Bentler (1990), is a revised form of the Normed-fit index (NFI) which takes into account sample size (Byrne, 1998) that performs well even when sample size is small (Tabachnick and Fidell, 2007).
- Chi square to (X^2) to the degree of freedom (Df) is the traditional measure for evaluating overall model fit, where it is accompanied with p value less than 0.05.
- Incremental fit indices (IFI) which compare the chi square value to a baseline model. For these models the null hypothesis is that all variables are uncorrelated (McDonald and Ho, 2002).
- Tucker-Lewis Index (TLI), also known as Non-normed Fit Index (NNFI), is a development of Normed Fit Index (NFI) with more consideration to sample size (Schermele-Engel *et al.*, 2003).

As presented in Table 5.8, the cut-off points were considered to be compared with the default model valued; the results show good fit for the measurement model.

Indices	Default Model	Suggested Criteria <i>Hu & Bentler (1999)</i>
RMSEA	0.069	<0.08
PCLOSE	0.000	<0.05
χ^2/df	2.831	1:5
p	0.000	≤ 0.001
CFI	0.918	Close to 0.90
IFI	0.918	Close to 0.90
TLI	0.903	Close to 0.90

Table 5.8: Goodness of Fit for CFA

5.4.1.2 Construct Validity and Reliability

Before proceeding to test the proposed model hypothesis it is very important to check the validity and reliability of the measures as this affect the outcome of the research (Hair *et al.*, 2010). Both validity and reliability should be checked as a measure may have high reliability (consistency) but not be valid (accurate), and a measure may have high validity (accuracy) but not be reliable (consistent) (Holmes-Smith, 2001). Validity was defined as the extent to which a set of measured variables actually represent the theoretical latent construct they are designed to measure (Hair *et al.*, 2010). Hair *et al.*, (2010) suggested that construct validity can be examined by convergent validity, discriminant validity.

Convergent Validity refers to the extent to which measures of a specific construct should converge or share a high proportion of variance in common (Hair *et al.*, 2010). Three indicators could be used to evaluate the convergent validity: Composite Reliability (CR), Average Variance Extracted (AVE), and factor loading. CR is considered as an appropriate tool to measure the internal consistency reliability which is the first creation to be assessed. CR is a value in the range 0-1 and the higher value means higher reliability. Hair *et al.*, (2014) suggest that CR value less than 0.6 means lack of internal consistently reliability. They also suggested that AVE value over than 0.5 means that the construct explains more than half of the variance of its indicators while more error remains in the items than the variance explained by the construct when AVE is less than 0.5. Also, acceptable factor loading should be over than 0.5.

Construct	Item	Factor loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Social Media Type	SMT1	0.558	0.859	0.515
	SMT2	0.493		
	SMT3	0.654		
	SMT4	0.899		
	SMT5	0.825		
	SMT6	0.788		
Efficiency	EIO1	0.866	0.919	0.739
	EIO2	0.872		
	EIO3	0.836		
	EIO4	0.865		
Staff Productivity	SP1	0.842	0.913	0.725
	SP2	0.713		
	SP3	0.919		
	SP4	0.915		
Communication	COM1	0.778	0.907	0.662
	COM2	0.766		
	COM3	0.818		
	COM4	0.892		
	COM5	0.809		
Financial Sustainability	FS1	0.906	0.920	0.701
	FS2	0.950		
	FS3	0.724		
	FS4	0.654		
	FS5	0.912		
Portfolio Quality	PQ1	0.876	0.959	0.854
	PQ2	0.933		
	PQ3	0.946		
	PQ4	0.939		
Outreach	BDO1	0.843	0.932	0.695
	BDO2	0.841		
	BDO3	0.870		
	BDO4	0.807		
	BDO5	0.820		
	BDO6	0.818		

Table 5.9: Summary Results of Convergent Validity

As AMOS does not calculate the AVE and CR on each construct, two formulas will be used for this purpose following Fornell and Larcker (1981) and Chau and Hu (2001).

$AVE = (\text{summation of squared factor loadings}) / (\text{summation of squared factor loadings}) * (\text{summation of error variances})$

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n}$$

$CR = (\text{square of summation of factor loadings}) / (\text{square of summation of factor loadings}) + (\text{summation of error variances})$

$$CR = \frac{(\sum_{i=1}^n \lambda_i)^2}{(\sum_{i=1}^n \lambda_i)^2 + (\sum_{i=1}^n \delta_i)}$$

Where:

- λ is factor loadings (standardised regression weights)
- i is the number of item
- δ represents the error variance term for each latent construct

The results, as presented in Table 5.9, show that all the values of factor loading, CR, and AVE are regarded as satisfactory, apart from factor loading for SMT2 with a value 0.493 which is very close to 0.5.

Discriminant Validity is defined by Hair *et al.*, (2010, p. 125) is “the degree to which two conceptually similar concepts are distinct”, in other words, the extent to which a construct is unique and different from others based on empirical standard. In order to test it, the researcher compares the average variance extracted (AVE) values for two constructs with the square of correlation estimate between these two constructs. Discriminant validity is significant when average variance extracted is greater than squared correlation estimates between constructs. As presented in Table 5.10, a

significant level of discriminant validity was established as AVE > than the squared correlation estimate for all the constructs.

	SMT	EIOS	SP	COM	FS	PQ	BDO
SMT	0.718						
EIOS	-0.230	0.860					
SP	-0.163	0.814	0.851				
COM	-0.234	0.707	0.683	0.814			
FS	-0.044	0.552	0.584	0.443	0.837		
PQ	0.340	0.137	0.132	0.124	0.272	0.924	
BDO	-0.189	0.521	0.580	0.557	0.536	0.135	0.833

Table 5.10: Summary Results of Discriminant Validity

5.4.2 Structural Model and Hypotheses Testing

After testing the validity of CFA, it is the time to confirm the research hypotheses by testing the structural model which will empirically identify the relations between the factors. First, there is a need to check the model fit and minimum of four indices should be considered in this context (Hair *et al.*, 2010). This study employed the same indices used when it checked CFA model fit. Therefore, as presented in Table 5.11, acceptable value of RMSEA was found indicating good fit associated with PCLOSE less than 0.05, in addition, CFI, IFI, and TLI were very close to 0.9 which is also accepted according to the suggested value of Hu and Bentler (1999). Chi-squared was also in the range >1 and <5 associated with significant *p*-value.

Indices	Default Model	Suggested Criteria (Hu & Bentler, 1999)
RMSEA	0.078	< 0.08
PCLOSE	0.000	<0.05
χ^2/df	3.322	1:5
<i>p</i>	0.000	≤0.001
CFI	0.898	Close to 0.90
IFI	0.899	Close to 0.90
TLI	0.884	Close to 0.90

Table 5.11: Goodness of fit for Structural Model

Proceeding to the next step of hypotheses testing, this study considered analysing the path significant of each relationship, where it examined the standardised estimate (S.E), critical ratios (C.R) and p -value for each proposed relationship. A relationship is considered as significant if a t -value > 1.96 and a p -value ≤ 0.05 . Therefore, in order to obtain t -value, the regression weight estimate should be divided by standard error (S.E). Therefore, the regression weight estimate of the six hypotheses in this study are presented in Table 5.12 and all the results indicate that all casual paths for these six hypotheses are significant with the t -values above 1.96 and the p -value is ≤ 0.05 .

Hypotheses	Variables	Estimate	S.E	C.R	P	Outcome
1: H1	SMT→EIO	0.872	0.145	6.004	***	Supported
2: H1a	SMT→COM	0.296	0.077	3.866	***	Supported
3: H1b	SMT→SP	0.670	0.127	5.289	***	Supported
4: H2	SMT→FS	0.286	0.122	2.338	0.019	Supported
5: H3	SMT→PQ	0.937	0.164	5.702	***	Supported
6: H4	SMT→BDO	0.219	0.080	2.729	0.006	Supported

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$
 t -value > 1.96

Table 5.12: Summary of Results of Hypotheses Testing

The results show a significant relationship between social media and efficiency with a path coefficient of 0.872, critical ratio of 6.004, and a p -value less than 0.05. This means that the hypothesis H1 is supported. Similarly, a path coefficient for the proposed relationship between social media and staff productivity is 0.670 with a t -value of 5.289 and p -value of 0.000 which support H1a hypothesis. The results also show a significant relationship between social media and communication (H1b) with 0.296 a path coefficient, 3.866 critical ratio and p -value less than 0.05.

In regard to the relationship between the social media usage and the financial sustainability (H2), the result revealed a t -value of 2.338 (> 1.96) and p -value less than 0.05 so the path coefficient of 0.286 indicates a significant relationship between the factors. The results also support the significant relationship between both social media usage and portfolio quality (H3) with a path coefficient of 0.937, t -value of 5.702, and p -value less than 0.05. The last hypothesis is also supported and the relationship

between the social media usage and breadth and depth of outreach is significant with a path estimate of 0.219, t-value of 0.729, and *p*-value of 0.006.

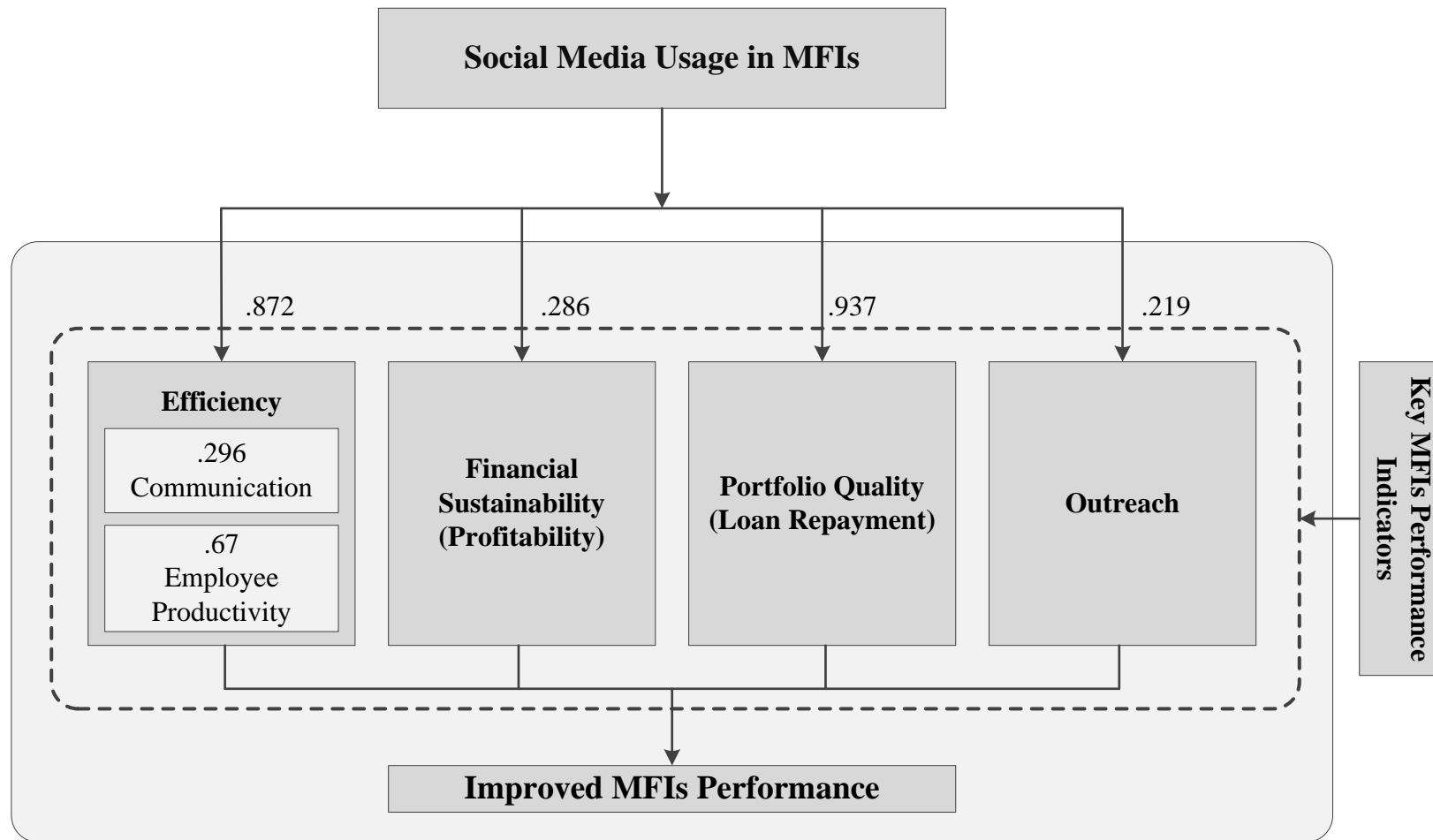


Figure 5. 1 The final Model

5.5 Summary

In this chapter, in order to run the analysis, the author used the remaining 383 observation after performing data screening and cleaning. The sample presents a diverse population from developing countries including: Jordan, Egypt, Iraq, Tajikistan, India, Pakistan, Bangladesh, Romania, Yemen, Cambodia, Tunisia Morocco, Sudan, Algeria, Afghanistan, and others.

All the respondents work for MFIs where at least one type of social media tools is implemented. SPSS version 20 software was used for the pilot stage and it was also used to present descriptive statistics and the demographic profile. Later, AMOS software version 20 was used to carry out the two stages of Structural Equation Modeling (SEM). Confirmatory factor analysis as the first stage of SEM was also validated in two steps: Goodness of fit indices and construct validity; both of them came out with satisfactory results. Thereafter, validating the hypothesis was carried out through the structural model stage and also the results supported all research hypotheses. The next chapter presents an explanation and a discussion over these results and compare them with the previous literature.

Chapter 6: Discussions

6.1 Introduction

This study was designed to examine the impact of social media tools on the performance of MFIs. The importance of microfinance industry was highlighted by researchers and policy makers as a vehicle for poverty alleviation; the need to develop this industry was also discussed in order to reach more underprivileged population all around developing countries. The literature addressed fundamental issues and challenges slowing the growth of microfinance industry; among different types of technology, ICT and mobile banking technology were previously recommended to support microfinance industry but their contribution to the growth of this industry was limited due to difficulties, such as infrastructure and regularity environment. The current study argues that MFIs are able to benefit from the advantages of social media in order to fulfil their mission with a better performance. After identifying the popular performance indicators for MFIs, the research hypotheses suggested that there is a direct impact of social media usage on each of these indicators. Based on sample of 383 observations, the research model was examined and the empirical results were presented in the previous chapter. This chapter discusses the results in favour of the literature.

6.2 Hypotheses Testing

Grounded on RBV theory, this study introduced the value of social media on four indicators and two sub-indicators of MFIs performance. The results confirmed the significant positive impact of social media usage on all reviewed factors, as illustrated in Table 6.1. The findings reveal that social media usage will make the performance of MFIs more efficient. Also, within the efficiency, social media will ease the internal and external communications and improve the staff productivity. Moreover, the

results identified the importance of social media in increasing financial sustainability and reducing the overall expenses. Implementing social media in the field of microfinance industry was also found to improve the portfolio quality.

No.	Description	Results
H1	Social media usage has a positive impact on efficiency.	Supported
H1a	Social media positively impact the MFI communication methods within the MFIs efficiency.	Supported
H1b	There is a positive impact of social media usage within MFIs efficiency.	Supported
H2	There is a positive impact for social media usage in MFIs on the financial sustainability.	Supported
H3	Social media usage in MFIs has a significant positive impact on the portfolio quality.	Supported
H4	Social media is an effective method for MFIs to increase the breadth of outreach.	Supported

Table 6.1: Final Hypothesis Testing Results

The following sections are discussing each of these results individually in comparing with the literature.

6.2.1 Social Media Usage

As presented in the conceptual model, the social media has an impact on the performance diminutions. Therefore, the empirical study confirms that implementing social media will help the MFIs to perform better based on its applications in different sectors. This result is in line with previous results concerning the impact of social media usage on organisational performance (Edosomwan *et al.*, 2011; Colliander *et al.*, 2015; Lee, 2015). Furthermore, this result is consistent with the majority of research establishing that the social media is a comprehensive tool to lead the development at the organisational level.

The literature examined the impact of social media in different industries. Kim *et al.*, (2015) investigated the effectiveness of managing social media on hotel performance and they concluded that both traditional media and new social media should be explored to be fully utilised for marketing. They confirmed that business today should rely on a mix of both traditional marketing and online marketing, and should also

produce a way which enables them to increase their communications through interactive media in order to reach their customers. While Edosomwan *et al.*, (2011) revealed that social media acts as a powerful way to communicate the brand value and brand attribute as they facilitate open forms of communication, it is seen to be helpful in building a good reputation for a business organisation. Cain (2011) addressed the use of social media by health services providers such as pharmacies and hospitals to educate the patients and the employees. Social media has the potential to mobilise knowledge to reach farm families to educate them about health and safety for children (Gualtieri, 2012).

With regard to the purpose of social media usage within organisations, the current study reported that, in the context of microfinance industry, social media was mainly used for marketing and advertising purposes, with 322 observations presenting 80% of the total population. Williamson (2011) found that companies are increasingly investing in social media marketing and about \$4.3 billion was spent for marketing on social networking sites. On the consumer side, Van Belleghem *et al.*, (2011) found that, in 2011, more than 50% of social media users follow brands on social media.

However, Moorcroft (2008) argued that social networking tools can also waste people's time, as well as creating regulatory, disclosure and legal risks. For these reasons, this could be a reason for some organisations to be late in deciding whether they implement social media. This, however, gives organisations that have not adopted the technology can actually plan for their successful adoption (Parveen *et al.*, 2015). Leader-Chivéé and Cowan (2008) suggested that different process improvement may be gained by implementing efficient social networking programs and organisational connectivity.

The research results are also consistent with Blanchard (2011), who claimed that when it is fully implemented, social media is a completely integrated mechanism that amplifies the impact of every task within an organisation by leveraging the power of human networks via social media platforms; it is not a replacement for the traditional tools, but it is a complement.

6.2.2 Efficiency

The simple definition of efficiency is how well the organisation controls its operating costs (Rosenberg, 2009). The literature presented a number of accounting variables to reflect the efficiency of MFIs, such as administrative expense ratio, number of loans per loan officer and loan officers to total staff, portfolio size, loan size, cost per borrower and cost per saver, and lending methodology (Farrington, 2000; Lafourcade *et al.*, 2005). The empirical investigation supported the current study's first hypothesis and confirmed that the social media has a significant and direct positive impact on MFIs efficiency, with a path coefficient of 0.872 associated with t-value 6.004 and *p*-value of 0.000.

Therefore, this result is consistent with the existing literature where the social media was found to have a great impact on the organisational efficiency. Nah and Saxon (2012) have examined the drivers of social media adoption and use by nonprofit organisations. They found that social media is among the significant reason for utilising social media. Similarly, Trainor (2012) addressed the importance of social media and found that the primary purpose of this technology is to improve employee efficiency and effectiveness and enhance data capture and analysis, which also support inside-out processes.

In comparing with traditional communication tools, more recent study by Kirakosyan (2015) confirmed that implementing social media allows organisations to reach clients at comparably low cost and higher level of efficiency. Hence, this discussion settles that the results of this research are in line with previous studies and provides evidence for microfinance management to give more attention to social media usage as it is strongly linked to more efficient operations; many organisations have either stayed away from using social media tools or failed to see beneficial results from their use within their organisation (Huy and Shipilov, 2012). Moreover, in the case of compartmentalised organisation, fully implementing social media is expected to enhance collaboration, increase efficiency, and reduce the costs (Blanchard, 2011).

6.2.2.1 Communication

Communication is one of the most costly tasks within all types of organisation. In the case of microfinance industry, with most of the clients living in a far distance from the MFIs offices, the cost of communication is even greater. This study suggested that social media is able to provide the MFIs with a platform on which to make the internal and external communication more efficient in term of cost and hassle. The result of our empirical investigation reveal that social media has a direct effect on communication tasks within the institution with a path coefficient of 0.296 and critical t-value of 3.866 associated with p -value less than 0.05.

This result is consistent with what it was presented in the literature; e.g. Moorhead *et al.*, (2013) discussed the importance of social media for health communication among the general public, patients, and health professionals. Their conclusion was that social media is a powerful tool, which offers collaboration between users and is a social interaction mechanism for a range of individuals. Similarly, Khan and Khan (2011) found that social media is able to promote better communication, stronger relationships and engagement between the management and employees. This is also in line with Kirakosyan (2015), who admitted that social media is a low cost and more efficient communication tools. This was also supported by Lee (2015), who argued that social media is a cost-effective tool for internal communication in organisations. Huy and Shipilov (2012) presented a survey was conducted in 2010 of 1,060 global executives; only about 50% said that their organisations had adopted social media platforms for their businesses. Of those, about 60% reported that social media had positive effects on their company's internal communications.

Social media as a communication tool is able to provide wide range of benefits to corporations, such as the easy and instant access to information, the ability to engage internally and externally, and richer experiences of users (Lattemann and Stieglitz, 2007; Postman, 2009; Macnamara, 2010; Blanchard, 2011). One of the interesting findings of Nah and Saxton (2012) suggests that nonprofit organisations that focus strategically on obtaining returns from market-based program delivery, rather than grants or donations, tend to rely more on social media to facilitate communications with their customers. In the context of microfinance, this finding means that

implementing social media is a sign of sustainability which is in turn the main aim of microfinance management and policy-makers at the moment. Therefore, the current research validated the efficiency of social media for communications within MFIs.

6.2.2.2 Staff Productivity

Staff productivity in the field of microfinance can be identified as the number of loans per office, or the number of borrowers and savers per member of staff. Given their limited resources, it is essential for MFIs to increase their staff productivity. The current study has examined the extent to which social media is able to improve this indicator; the result revealed that social media usage will significantly improve staff productivity with a path coefficient of 0.67 and critical value of 5.289 along with p-value less than 0.05. This result is in line with Lee (2015) and Burrus (2010), who stated that social media is an effective method to improve productivity and sharing information among organisational members. Despite presenting concerns about security and privacy, employee productivity, benefits of social media use, and the cost of implementing social media. The research findings by Childs (2015) indicate that the potential benefits of using social media in may outweigh potential risks of social media, helping organisations achieve competitive advantage.

Few studies were found to address the risk of misusing social media at the workplace and its negative impact in reducing staff productivity. Wilson (2009) addressed five principal risks that organisation has in regard to social networking: perceived loss in staff productivity, data leakage from staff gossiping freely in an open environment, damage to a business's reputation, scam practiced by cyber crooks and the open access to organisation's information due to outdated passwords. This statement was later supported by Gaudin (2009), who found that staff productivity was reduced due to addictive and excessive browsing and uploading photos which were not related to the business and workplace.

However, the importance of social media for business purposes should not let the management ignore the potential risk associated with such usage when it is left uncontrolled or unattended. Ferreira and du Plessis (2009) suggested that social media should be channelled in an operative way to get maximum results from the

employees, as there is a concern that employees may succumb to it when left unattended. Apart from that, a review from the literature by Aguenza *et al.*, (2012) confirmed that most of the studies supporting the positive impact of social media on staff productivity e.g. Edosomwan *et al.*, (2011) argued that social media is an effective tool to improve productivity and to generate a natural interest in the work carried out by the employees by tracking their creativity and enthusiasm. The empirical result of this research has validated the above argument and also highlighted the importance of social media on efficiency in general and on staff productivity more specifically.

6.2.3 Financial Sustainability

As it can be seen from the literature, improving the financial sustainability in the field of microfinance means that the overall expenses should be decreased and/or the revenues should be increased. Better organisation of the microfinance institutions and investing in the new technology is expected to help this industry to perform better. The current study has found that implementing social media within MFIs is expected to have a significant impact in the way of improving the financial sustainability. The empirical investigation has produced a path coefficient of 0.286 accompanied with t-value of 2.338 and p-value less than 0.05. As social media explodes in popularity among consumers, companies seek to transform businesses with social media and capitalise on its financial value (Divol *et al.*, 2012). Social media was successfully implemented by a number of companies to meet important objectives such as reducing their costs, increasing revenues or stimulating innovation (Huy and Shipilov, 2012).

Social media is a communication tool, similar to the traditional tools, such as the telephone and email, with more ability to serve “the purpose of critical business functions”, which may include marketing, customer services, public relations, lead generation and market research (Powell *et al.*, 2011). The beauty of social media channels that it provides an open platform for real time communication, which gives the ability to the organisation to spot trouble, help customers, and reply to inquiries within seconds (Powell *et al.*, 2011). As discussed earlier, the implementation of social media allows organisations to reach clients at low cost and higher level of

efficiency in comparing with traditional communication tools; it has the potential for cost reductions and business growth (Blanchard, 2011; Kirakosyan, 2015).

6.2.4 Portfolio Quality

It is essential for microfinance providers to improve their portfolio profile by having more reliable clients. Without high performance of loan repayment in this industry, MFIs will not be able to survive and keep providing their services. As developing countries suffer from the lack of financial records and data regarding individual's financial history among MFIs potential clients, in addition to the absence of collateral leads the MFIs to select the eligible borrower on the recommendation of a local agent, the agent needs to collect as much information as possible from the local community about the applicants in order to check their credit worthiness. Thus, the applicant's eligibility relies on the final judgement of the agent (Mitra and Newar, 2015). In spite of its limitations compared with social media, mobile technology was already implemented by microfinance lenders and borrowers to track the use of funds and repayment (Petrick and Juntiwasarakij, 2011).

The importance of social media in this context, as discussed in the literature, comes from its ability to collect as much information as possible about each applicant before proceeding to the loan. It is also very important to tackle and follow up with the due and late payments, Wakuloba (2006) discussed the need for strengthening organisational management information systems for data mining to enable early detection of slow repayment borrowers.

The empirical investigation of the current study supports this proposition with claiming a very high and significant path coefficient (0.937) of social media on the portfolio quality associated with t-value of 5.702 and p-value of 0.000. In order to improve the repayment rate, Kiva, as one of the leading microfinance organisations, serving people from 83 different countries, has developed a tool connected with borrowers on social media to establish the extent and strength of their networks, and requiring them to invite their own personal network to support their loan (Kiva.org, 2016). However, there is limited evidence from the literature discussing the

importance of social media in improving the portfolio quality (loan repayment) in the financial sector in general and in the MFI specifically.

6.2.5 Outreach

Extending the coverage of social media was always a key interest as the main goal of microfinance is to alleviate poverty. As a marketing and advertising tool, social media could provide marketing and advertising platform for MFIs to notify the public about their products and could be also used as communication tool to maintain good relationship with the clients. This discussion is consistent with Powell *et al.*, (2011) who considered the significant role of social media for companies to help them as starters to acquire new customers, first through its reach, then through influence. They suggested leveraging social media to increase frequency of customer transactions and by the yield of certain transactions. Similarly, Neti (2011) described social media among the 'best opportunities available' to a brand for connecting with prospective consumers. Kirakosyan (2015) claimed that social media is a powerful tool for gaining customer and for communicating with potential and existing ones.

The above discussion is confirmed by the empirical results of this study where social media was found to have a significant impact on the microfinance outreach with a path coefficient of 0.219, t-value of 2.729 and p-value of 0.006. This result also in line with Curtis *et al.* (2010) who stated that social media tools will be effective in reaching target audiences, it is also consistent with Hays *et al.*, (2013) who found it as a powerful communication method to reach individuals at a scale and speed larger and more quickly than previous communication mediums. When it is fully deployed, it helps tens of millions of clients discover a company, organisation, or product at a very cheap cost (Blanchard, 2011).

The findings of this study are very important in term of the research gap this research aims to cover; they improve the understanding of the role of social media on the performance of MFIs. As it was earlier addressed, there is a lack of theoretical discussion in the domain of microfinance in specific in addition to the lack of empirical investigation on all type of organisations.

Therefore, these findings confirm what RBV propose in that there is a link between usage of technology and its value for organisations on various dimensions of value creation. The current study added to the theory by empirically investigating the change which social media as a technology can make in term of organisational performance.

6.3 Summary

This chapter was designed to explain the empirical results of hypotheses testing as presented in the previous chapter. Each of these hypotheses was presented with in-depth discussion as compared with its reflection in the literature. This discussion and its confirmation from the results have significantly contributed to the field of organisational performance and highlighted its connection to the social media. Moreover, this chapter has discussed the extent to which social media can improve the performance of microfinance providers from different dimensions. According to this research, social media may help MFIs to operate their tasks in more efficient way; it may also provide the organisation with cost-effective and more efficient communication platform, in addition to an effective way to get maximum results from the employees. The findings have also addressed the significant influence social media may has on the institutions overall expenses and revenues. Another finding has also confirmed that social media can play a great role in improving the performance of loan repayment, which was rarely investigated in the previous literature. The ability of social media to increase the scope of MFIs and reach more customers is also one of the interesting findings of this study.

The following chapter concludes the research by highlighting the contribution, limitations and future research recommendations.

Chapter 7: Conclusion, Contribution, Limitations and Further Research

7.1 Introduction

The previous chapter presented the discussion over the research results and findings in comparison with the literature. The empirical investigation in this study has supported the research hypotheses in that there is a significant impact of deploying full social media programme on the performance of MFIs in developing countries. This chapter is a brief presentation of the current research journey; it is going to highlight each step was followed to fulfil this research. This chapter commences by revisiting the research aim and objectives in order to discuss what was carried out in comparison with what was planned. Thereafter, the chapter concludes the main findings of this study along with the theoretical and practical contributions of this study. Before concluding the research, the chapter will outline the limitation and difficulties and then provide the author's recommendations for further research.

7.2 Meeting the Aim and Objectives of this Thesis

This thesis was conducted in order to achieve the aim of developing and proposing a model that may support in understanding the impact of social media as a modern marketing and communication tool on the performance of MFIs. As presented in Table 7.1, a number of objectives were designed in order to meet the research aim.

No.	Objectives	Chapters
1	To critically review the literature on microfinance challenges and performance with specific focus on social media as a tool for better performance.	Chapter 2
2	To develop a model and set of hypotheses which shows the impact of social media usage on microfinance institutions.	Chapter 3
3	To evaluate the model by empirically investigating the impact of social media application on the key indicators of MFIs performance.	Chapter 4 Chapter 5
4	To analyse the collected data and validate the proposed research hypotheses.	Chapter 6
5	To conclude the theoretical and practical applications of the findings along with a path for further studies in this field.	Chapter 7

Table 7.1: Meeting the Aim and Objectives of this Thesis

- **Objective 1:** To critically review the literature on microfinance challenges and performance with specific focus on social media as a tool for better performance.

By undertaking a comprehensive review of the literature, this study discussed the importance of microfinance as a successful tool for poverty alleviation, presenting few experiences from different geographical perspectives. Later, the challenges of MFIs which slow the improvement of this industry were addressed. This, indeed, encouraged the research to move on to discussing the importance of improving the performance of MFIs by focusing on the most recognised performance indicators. Technology has been widely advocated as a solution for MFIs to face the difficulties so they can perform better but the use of social media was overlooked among suggested technology. Meanwhile, the usefulness of social media for business purposes in other domains was discussed from the literature. However, a need was found for further studies on empirical investigation of social media linked to the organisational performance in general. Therefore, the current research addressed this gap and proposed a model on social media value for microfinance grounded by resource based view theory (RBV).

- **Objective 2:** To identify the significance of the key performance indicators related to the MFIs.

As part of the literature review, Chapter 2 covers a discussion over the importance of performance measurement. It is essential for MFI's management to set up a set of indicators to help them tracking the change in their organisation's performance. The researcher presented a combination of indicators which were previously used for this purpose. The performance key indicators include: efficiency (which also include communication performance and staff productivity), financial sustainability, portfolio quality, and outreach. These indicators are also used as a base to measure the value of social media on the MFI's performance.

- **Objective 3:** To develop, propose and evaluate a model demonstrating the impact of social media usage on the MFI in the context of developing countries.

A conceptual model of this study was drawn along with its 6 hypotheses in chapter 3. The conceptual model and hypotheses explain the suggested value of social media as an improvement of MFIs performance by discussing the influence on critical performance indicators. In order to assess the model, a revision on the methodologies was presented in Chapter 4 in the way to assign the most appropriate one for conducting the empirical part of this study. Based on this presentation, a quantitative approach was followed and a survey questionnaire was designed as a data collection method. Thereafter, Chapter 5 followed data analysis procedures: after running a pilot test, all of normality, validity and reliability were checked in order to proceed to structural equation modeling tests. Two stages structural equation modeling (SEM) was used to test the research hypotheses: confirmatory factor analysis and structural modeling; satisfactory results were found.

- **Objective 4:** To analyse the collected data and validate the proposed research hypotheses.

Chapter 6 has brought forward the result from Chapter 5 and explained them in link with the research conceptual model. Each of the 6 hypotheses was considered for detailed discussion in comparison with the previous studies.

The conclusion of empirical investigation was that all research hypotheses were found to be positively supported and the hypotheses on the direct and significant impact of social media on critical indicators of MFIs performance were confirmed. Therefore, the proposed model remains the same as it is in Chapter 3.

- **Objective 5:** To conclude the theoretical and practical applications of the findings along with a path for further research avenues in this research field.

In the conclusion chapter, an overview of the research aim and objectives were revisited to make sure what is achieved; the key findings are summarised in this chapter. Afterward, a presentation of the theoretical and practical implementation of the research model was provided before concluding with the limitation and recommendation of future studies.

7.3 Main Research Findings of this Thesis

The finding from the literature review in Chapter 2 has driven this study to propose the conceptual model as in Chapter 3. The purpose of this model was to identify the impact of social media on the MFI from the organisational performance perspective. A set of 383 observation answered by the employees of MFIs from all around the developing countries enabled the validation of the research hypotheses in order to answer the main question of this study: “To what extent social media is able to improve the MFIs performance”. The critical areas of performance were concluded in 4 factors: Efficiency, financial sustainability, portfolio quality, and outreach. The following is a discussion on what social media can do for each of these factors.

- In terms of the purpose of implementing social media, this study found that most of the MFIs use social media for marketing and advertising purposes as a first priority (80%), for communication as second purpose (60%), for product sales and distribution as a third purpose (58%), for managerial purposes as fourth (53%), and only (16%) claimed that it is used for market research and other uses. On the other hand, the results revealed that social networking websites are the most popular type of social media deployed in MFIs, picture

and video broadcasting websites second most popular, and product review system websites is the third one.

- **Efficiency:** This study found that the social media is able to improve the efficiency of MFIs in general, and it can also help to achieve more efficient communication and staff productivity. The results show that there is significant impact for social media on the overall efficiency with t-value of 6.004 and p-value less than 0.05. In addition, under the umbrella of efficiency, both communication and staff productivity seemed to be positively affected by implementing social media within the organisation, with t-values of 3.866 and 5.289, associated with p-values less than 0.05 respectively. The current study suggested that social media is an efficient platform to be used in MFIs to handle internal operation more efficient, improve decision making process, reduce administrative workload, improve information quality, increase the number of loans per officer. The study has also suggested that within the efficiency, social media is able to facilitate communication within the organisation and with the clients, audit the communication streams. In addition, it was suggested that social media can increase the staff effectiveness, motivation, and satisfaction in order that they perform their tasks in a more productive manner.
- **Financial sustainability:** The empirical results showed that social media usage will help microfinance providers to improve the financial sustainability. It was found that social media has a direct significant and positive influence on the financial sustainability, with a critical value of 2.338 and p-value less than 0.05. This result suggests that social media may increase the institution's revenues and decrease operational costs, marketing costs, inventory costs, and overall expenses which may also improve the organisation profitability.
- **Portfolio quality:** Another outcome of the empirical investigation indicated that the social media has a significant impact on the portfolio quality. The result shows that the direct and positive relation of social media on the loan repayment performance is associated with t-value of 5.702 along with p-value

below 0.05. The findings suggest that social media is a comprehensive tool to be implemented by microfinance providers to increase the loan repayment rate, decrease the portfolio at risk, decrease defaults and arrears rate.

- Outreach: The last empirical result of this research has confirmed the relation between the social media and microfinance outreach. The empirical investigation showed that social media is significantly associated with better outreach with a critical t-value of 2.729 and p-value of 0.00. Therefore, the current work suggests that social media is a powerful platform for MFIs to widen the outreach area, increase control of marketing objectives by improving marketing flexibility.

7.4 Theoretical Contribution

Due to its significant role as a poverty alleviation vehicle, improving the performance of microfinance industry was always under the attention of researcher and policy-makers where extending the coverage of these organisations means providing more poor people with the financial tools to pull themselves out of the poverty trap. This study presented a comprehensive investigation in the way to achieve such goal.

Therefore, from a theoretical point of view, this study provides a number of important contributions:

First, this study has extended the scope of RBV theory within the information system arena to consider social media as an organisation's resource enables it to create value and achieve sustainable competitive advantage. This study employ RBV theory as a lens to support the link between usage of social media and improved performance. It adds to the literature of RBV in the field of information by providing the theoretical framework and empirical validation. Therefore, this research is among the first to use this theory to investigate the impact of technology use on this unique type of organisations.

Second, this study has theoretically contributed to the field of organisational performance. To the best of the researcher's knowledge, linking the three bodies of

research (social media, microfinance industry, and organisational performance) has not previously been attempted. Previous research on microfinance development has only focused on the use of ICT and mobile banking technology.

Third, this study adds to existing literature in information management field by developing a conceptual model for assessing the value of social media on the organisational performance. It delivers a theoretical presentation and empirical investigation on the impact of social on MFIs; such knowledge will open the door to more interest from information management field not only on the profit-oriented organisations but also on social-oriented organisations. Bringing the experience of social media from different domain to such type of organisation will extend the scope of information management interest. According to Kaplan and Haenlein (2012), social media still offers a unique opportunity for academics to analyse new types of data, to communicate and interact with clients, and to help organisations to be ready for this new age of internet and smart-phones applications.

Fourth, this study provides a critical analysis on the importance of identifying microfinance challenges as a step in the way to improve performance; it presents a brief review on the experience of microfinance programs in different geographical context along with the most common challenges that preventing the improvement of the MFI. Based on that, this study discussed the performance measurements from different perspectives and developed a framework of key performance indicators.

Finally, it is evident from the literature that there is a need for further empirical investigation on the impact of social media on organisational performance (Peters *et al.*, 2013). After presenting a model for assessing the performance of MFIs, this study has contributed to the literature by empirically investigating the impact of social media on each of the performance indicators. Hence, this study is a confirmation to the literature that facing the MFIs difficulties is merely by improving the performance where better performance will make microfinance a significant poverty alleviation method by leading to less costs, less charged interest, and wider coverage (Kneiding and Rosenberg, 2008).

7.5 Practical Contribution

Taking the discussion on the novelty of this research from theory to practice, this study offers microfinance industry's sponsors, managers, and policy makers with a frame of reference to understand the impact of social media on the performance of MFIs. As such, the research findings offer the MFIs management and the research community a model for improving the performance of MFIs by implementing social media as a marketing, advertising, and interactive communication platform. This model will provide decision makers in the MFI with more knowledge on the importance of investing on social media aside with the traditional marketing and communication tools. It will enrich the understanding of decision makers about the benefits of using these methods.

Therefore, this study alerts MFI management about the importance of social media. The researcher found that social media use is speeding up globally and restructuring the way humans communicate, share ideas about products and services, share experiences, and connect with each other. The findings may encourage the MFI's management to build up a social media profile, which enables them to widen their coverage and remove the geographical barrier by coming closer to their current and potential clients.

Furthermore, this study provides MFI management and decision makers with a clear view of the most popular social media platforms for their businesses; the responses to this study's questionnaire reveals that social networking websites is number one tool for the organisations that already employed social media. The second most widely used tool as revealed is picture and video broadcasting websites, followed by product review system websites. The findings also revealed that 80% of the MFIs who deployed social media are using it for marketing and advertising purposes, in addition to 60% who use it for communications, 58% who use it for product sales and distribution, and 53% who use it for managerial purposes. This view supports the MFIs management when they designing the social media profile for their institutions in the light of their needs and priorities.

Also, as a flexible marketing tool, this suggests that social media might be used to extend not only the net number of clients (breadth of outreach) but also the quality of those clients (depth of outreach). Increasing depth of outreach by extending the supply of microfinance products to a particular target group is one of the critical issues for MFIs. There is a consensus is that it is socially more important to expand the frontier of finance for the poor than it is to further expand the frontier of finance for the rich (Morduch *et al.*, 2005; Gulli, 1998) (quoted from Robert *et al.*, 2013). Therefore, social media allows the MFI's management to target a designed population to offer the services and to communicate without difficulty and instantly with them.

Moreover, in response to calls from practices for new and better ways of measuring MFI performance, the combination of key performance indicators used in this study to measure the social media effect also can be used for assessing the progress of MFI performance between two points of time and after implementing new tools, strategies, and/or plans.

7.6 Research Limitations

The researcher fully acknowledges that this research has some limitations, and readers and future academics and researchers should be aware of it and indeed interpret the material presented in this thesis within the context of the limitations.

- By using the term social media, the research included all types of social media in this investigation and treated them equally; however, different communities are engaged to different types of social media and different organisations may implement different types of social media based on the purpose of such implementation.
- By the use of self-administrated survey, the current work has quantitatively examined the suggested conceptual model. Hence, the limitation of using such tools is that it bounds the capability of accessing the in-depth view of social media benefits on each of the performance indicators.

- In the empirical investigation of this study, a sample from all over the developing countries was conducted; the limitation of this sample is that it ignores the socio-economics characteristics of population from different countries and different backgrounds.
- There was a requirement for convenient sampling to collect the data, which limits the capability to guarantee the validity of generalising the results of a small sample to the whole population.

7.7 Future Research Recommendations

Building upon the rich foundation of the research findings described and overall understanding acquired in this thesis, the researcher presents the concerns that merit further research and anticipate that these issues may hold the potential in contributing towards the future research studies. Six areas that may require attention from academics and researchers in the future and further work may be carried out, e.g.:

- Future research can validate the impact of social media on the performance of MFIs qualitatively by the use of interviews or focus groups, as it will enable the researcher to have in depth views of MFI management and employees, which will allow the extraction of more factors of social media value. In addition, there is a need for research on the use of social media within the MFI for each of the performance indicators. For example, further study could further clarify the best use of social media for marketing purposes benefiting from the advantages of case study methodology.
- Further research may also use a content analysis technique for systematically describing the use of social media for microfinance communication. This technique is identified as indigenous to communication research and it is one of the most important ones in this context.
- This research recommends that future studies may take into account the probability sampling technique as a data collection technique where each unit

within the targeted population will have a probability of being part of the sample.

- The current study was broad, considering all types of social media usage in developing countries. Further studies could be more specific and consider one social media platform such as Twitter or Facebook on within one country or region. Each type of social media and its use within specific geographical area could be another path of research.
- The challenges of adopting the social media for microfinance could be another path for studies. More focus is needed on the acceptance and engagement of the microfinance industry stakeholders to social media adoption.
- The dark side of misusing social media in the work place could be investigated in further studies, as the main focus of this study was on the importance of social media when it is used for business purposes.

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Appendix A: Survey Questionnaire

The Impact of Social Media on Microfinance Institutions in Developing... <https://admin.onlinesurveys.ac.uk/account/demo-account/preview/the-im...>



The Impact of Social Media on Microfinance Institutions in Developing Countries

Page 1: Declairation

Dear Participant,

You are invited to participate in a research study titled "The Impact of Social Media on the Performance of Microfinance Institutions in Developing Countries" sponsored by Brunel University London.

Your participation is voluntary and you are free to withdraw your participation at any time. The survey should take roughly 5 minutes to complete. By completing and submitting this survey, you are indicating your consent to participate in the study. Your answers will be dealt very confidentially and there is no any risk associated with your participation.

As a thank you to that, there will be **a draw on a small prize for the participants (\$100)**

If you have any questions, please contact Ahmad Daowd at ahmad.daowd@Brunel.ac.uk

Your participation is highly appreciated.

Ahmad Daowd,

Doctoral Candidate, Brunel Business School

Advisors: Dr. Tillal El-Dabi and Dr Mohammad Kamal

Brunel University London, Uxbridge, Middlesex, Tel. +441895266705

Page 2: The Survey Structure

This survey is divided into three parts: The first one includes the demographic profile of you (the respondent) and your organisation. The second part is about the social media implementation within the organisation. The third part considers your view on the difference introduced by social media implementation.

Page 3: The Demographic Profile

1 Your gender?

- Male
- Female

2 Your age group?

- 24 or younger
- 25 to 39
- 40 and older

3 Your position at the institution?

- Strategic level (e.g. managers)
- Operational level (e.g. staff)

4 Your country of residence?

5 Your organisation's name?

Page 4: Social Media Types & Purposes

6 Please specify to what extent each of the following social media types is implemented within your organisation * Required

	Very poor	Poor	Fair	Good	Very good
Picture and video broadcasting websites (e.g. YouTube, Instagram, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social networking website (e.g. Facebook, Google+, LinkedIn, MySpace, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product review system website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microblogging (e.g. Twitter, Posterous, Tumblr, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blogs (Drupal, Blogger, WordPress, LiveJournal, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Document management (Google Docs, Dropbox, Syncplicity, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Based on your answer from the previous question, please specify the purposes of social media implementation with the institution Please tick all appropriate answers

- Marketing & advertising
- Communication (External & internal)
- Product sales & distribution
- Management
- Market Research and other purposes

Page 5: The Impact of Implementing Social Media on the Performance

Please specify to what extent you agree or disagree with the following statements as a result of implementing the social media

8 The Impact of Social Media on the Efficiency and Internal Operations

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Internal operations more efficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved decision making process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduce administration workload	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better information quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative expense ratio decreased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of loans per loan officer improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal operations improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.a The Impact of Social Media on Staff Productivity

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Staff productivity increased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased staff motivation and satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved employee effectiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It makes it easier for the staff to do their job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8.b The Impact of Social Media on Communications

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Facilitate communication among employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitate communication with customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to audit communications streams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved communication performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to reach more people faster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9 The Impact of Social Media on Financial Sustainability

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Increased profitability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational costs decreased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced marketing costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory costs decreased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total cost decreased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10 The Impact of Social Media on Portfolio Quality

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Improved loan repayment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased portfolio at risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased defaults rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased arrears rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11 The Impact of Social Media on the Institution's Depth & Breadth of Outreach (**Breadth** refers to the number of all clients, **Depth** of outreach is the percentage of the poorest people)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Outreach increased	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outreach area widened	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase convenience/service level to the clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved marketing flexibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased control of direct marketing objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deeper outreach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12 The Impact of Social Media on the Institution's Overall Performance

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Better organisation success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better overall business performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved overall benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better organisation effect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decreased overall costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13 Please add your contact details (name & email) here if you want to take a part in the draw for USD 100

14 Any other comments:

Page 6: You are done, thank you very much for your participation

Appendix B: Ethical Approval



College of Business, Arts and Social Sciences Research Ethics Committee
Brunel University London
Kingston Lane
Uxbridge
UB8 3PH
United Kingdom
www.brunel.ac.uk

21 April 2016

LETTER OF APPROVAL

Applicant: MR AHMAD DAOWD
Project Title: Social Media and MFIs Performance
Reference: 2034-LR-Apr2016- 2910-3

Dear MR AHMAD DAOWD

The Research Ethics Committee has considered the above application recently submitted by you.

The Chair, acting under delegated authority has agreed that there is no objection on ethical grounds to the proposed study. Approval is given on the understanding that the conditions of approval set out below are followed:

- The agreed protocol must be followed. Any changes to the protocol will require prior approval from the Committee by way of an application for an amendment.

Please note that:

- Research Participant Information Sheets and (where relevant) flyers, posters, and consent forms should include a clear statement that research ethics approval has been obtained from the relevant Research Ethics Committee.
- The Research Participant Information Sheets should include a clear statement that queries should be directed, in the first instance, to the Supervisor (where relevant), or the researcher. Complaints, on the other hand, should be directed, in the first instance, to the Chair of the relevant Research Ethics Committee.
- Approval to proceed with the study is granted subject to receipt by the Committee of satisfactory responses to any conditions that may appear above, in addition to any subsequent changes to the protocol.
- The Research Ethics Committee reserves the right to sample and review documentation, including raw data, relevant to the study
- You may not undertake any research activity if you are not a registered student of Brunel University or if you cease to become registered, including abeyance or temporary withdrawal. As a deregistered student you would not be insured to undertake research activity. Research activity includes the recruitment of participants, undertaking consent procedures and collection of data. Breach of this requirement constitutes research misconduct and is a disciplinary offence.

A handwritten signature in black ink, appearing to read "James Knowles", written over a horizontal line.

Professor James Knowles

Chair

College of Business, Arts and Social Sciences Research Ethics Committee
Brunel University London