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**COMPARISON OF MOBILE FINANCIAL SERVICES BETWEEN  
BANGLADESH AND FINLAND**

**Bachelor's Thesis**

**CENTRIA UNIVERSITY OF APPLIED SCIENCES**

**Business Management, Enterprise Resource Planning (ERP)**

**August 2021**

## ABSTRACT

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<b>Degree programme</b> Business Management, Enterprise Resource Planning (ERP)		
<b>Name of thesis</b> COMPARISON OF MOBILE FINANCIAL SERVICES BETWEEN BANGLADESH AND FINLAND		
<b>Instructor</b> Karin kallis	<b>Pages</b> 25+6	
<b>Supervisor</b> Paula Tornikoski		
<p>The domination of mobile financial services in the global finance sector is manifested in both developed and developing countries. In Bangladesh, for instance, traditional banking platforms had dominated the financial sector for several decades, but the entry of mobile financial services has expanded the scope of service delivery within the sector for non-bank financial institutions. A similar case exists in Finland, where an increase in the use of mobile financial services has forced players within the banking sector to consider revising the existing legislation and regulations to boost the operationalization of such services.</p> <p>The issue, however, has been the skewed growth of mobile financial services, where the developing countries have shown an increase in the adoption of such services compared to the developed countries. In this analysis, some of the identified reasons for this phenomenon include the introduction of a larger population of developed countries that were never captured by the existing traditional banking processes with the introduction of mobile financial services. The other factor is the nature of the service packages that are provided through mobile financial services that have proven attractive to populations in the developing countries.</p> <p>In the developed countries, the approach in incorporating mobile financial services has been in a complementary manner, as opposed to a mechanism of expansion, as is the case in developing countries. This explains the skewed growth of mobile financial services in the developing countries compared to developed countries.</p>		

**Key words:** banks, developed countries, developing countries, mobile financial services, non-bank institutions, regulations

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## 1 INTRODUCTION

This thesis examines the factors, both micro and macro, which have enabled the mobile financial services to favorably thrive in Bangladesh compared to Finland. The dissertation begins with an introduction section that is divided into various sub-sections, with this overview forming the first sub-section. The next sub-section after the overview is the background of the research topic, where the history of mobile financial services in the two countries is provided. The background shall also focus on some of the strategies that the financial institutions in the two countries have used to enable the financial sector to accommodate use of mobile financial services.

After the background sub-section, the next sub-section is the rationale of this study, which will highlight reasons for conducting this study, given the elements enumerated in the background sub-section. The rationale sub-section will be followed by the identification of the aims and objectives of this thesis. This shall complete the introduction section, with the subsequent section featuring the methodology used in this thesis. The methodology section shall also include a demonstration of the study design used, the research strategy that the researcher employed in collecting content and data, and the criteria applied to include and exclude some sources. The section after methodology is the literature review and analysis section, where different themes shall be developed and their contents documented to provide responses to the aims and objectives of the thesis. After the methodology section is the conclusion and recommendations section, where a summary of the key issues discussed in the thesis is provided.

### 1.1 Background

The financial services environment in both the developed and developing countries have witnessed rapid changes in the past two decades (Karjaluoto et al., 2019). First, there has been an increase in competition that is necessitated with the entry of new players in the financial sector from the non-banking sector (Shaikh & Karjaluoto, 2016). Second, product innovations have also meant that different financial services providers can specialize on specific aspects of financial services, such as microfinance, microcredit, and mobile financial services. Third, the technological advancements and globalization have increased the scope of demand for financial services by consumers, giving rise to a global outlook for most financial service providers as opposed to a local outlook (Hai & Rahman, 2016). The net effect

of these changes is an intense battle for customers within the financial sector. One of the areas where innovation has been high in the quest to gain a competitive advantage over other providers is the delivery channels for the services (Yesmin, Paul, & Uddin, 2019). Through dependable and reliable delivery channels, most financial service providers can establish increased efficiency and consumer satisfaction. The application of electronic delivery channels has been enumerated by several studies as one of the steps of enhancing efficiency and increasing consumer satisfaction (Islam & Hossain, 2018). Consumers as well, have demanded innovative services and up-to-date service delivery options, which has pressured financial institutions to develop mechanisms of remaining relevant in the heightened competitive environment (Shaikh, Alharthi, & Alamoudi, 2020). Consequently, the global financial sector not only experiences pressure from the increase in competition in the financial market, but also from the evolving needs of consumers.

Finland and Bangladesh are two countries that are ranked differently in development terms. Bangladesh is characterized as a developing country (Yesmin, Paul, & Uddin, 2019), while Finland is regarded as a developed country (Shaikh, Glavee-Geo, & Karjaluoto, 2021). Subsequently, the level of penetration for financial services in the two countries is different, given the varying demand for financial services in the two countries. However, both countries have similar structure in their financial sector, where banks are the primary providers of financial services, with the financial regulatory authorities in the two countries regulating the actions of players within the sector. In the case of Finland, the country has four major banks that dominate the country's banking market, cumulatively controlling 80 percent of the financial market shares (Finance Finland, 2020). They are Danske Bank, Municipality Finance, OP Financial Group, and Nordea Bank. Danske Bank is a foreign bank that turned its subsidiary in Finland into a branch in 2018 (Finance Finland, 2020). Finance Finland (2020) reveals that the European Central Bank (ECB) supervises three of these four banks, namely Finnish Kuntarahoitus, OP Financial Group, and Nordea Bank, because they are considered as domestically significant institutions.

Other domestic retail financial service providers like the POP Bank group, Savings Banks group, and other domestic banks, are supervised by the Finnish Supervisory Authority (FSA) (Finance Finland, 2020). The FSA operates under Finnish Act (878/2008) regulation, which provides it with a broader mandate in regulating the country's financial sector (Finance Finland, 2020). According to Shaikh and Karjaluoto (2016), apart from the FSA, there are other Regional State Administrative Agencies that are responsible for regulation of certain financial sector areas such as debt collection, peer-to-peer lending,

and consumer small loans, which are short-time loans granted to consumers that are payable within days or weeks.

Bangladesh, on the other hand, has its financial sector largely regulated by the Bangladesh Bank, which is the country's Central Bank (Yesmin, Paul, & Uddin, 2019). The country has two forms of banks, namely the scheduled banks and the non-scheduled banks (Bangladesh Bank, 2021). Scheduled banks are banks that form part of the list of banks under the 1972 Bangladesh Bank Order, and are maintained by the Bangladesh Bank (Hossain & Samad, 2020). Presently, Bangladesh has 61 scheduled banks that operate under the supervision and control of the Bangladesh Bank (Hossain & Samad, 2020). The scheduled banks are further classified into different categories, namely the Private Commercial Banks (PCBs), Specialized Banks, State-owned Commercial Banks, and Foreign Commercial Banks (Bangladesh Bank, 2021). Private Commercial Banks (PCBs) in Bangladesh are further divided into Islami Shariah-based PCBs and Conventional PCBs, and they are majorly owned by private entities (Bangladesh Bank, 2021). Currently, Bangladesh has 43 private commercial banks. Bangladesh has six state-owned commercial banks that are either majorly or fully owned by the Bangladeshi government (Bangladesh Bank, 2021). Apart from the state-owned commercial banks, specialized banks in Bangladesh are also majorly or fully owned by the Bangladeshi government, and they are established for certain specific objectives such as industrial or agricultural development. Presently, Bangladesh has three specialized banks. Non-scheduled banks are banks that are established for definite and special objectives, and cannot perform all the functions performed by the scheduled banks (Bangladesh Bank, 2021). There are five non-scheduled banks in Bangladesh, and they include the Grameen Bank, the Jubilee Bank, Palli Sanchay Bank, Karmasangsthan Bank, and Ansar VDP Unnayan Bank.

In both Finland and Bangladesh, there are non-bank financial institutions that provide certain financial services as well. The operations of those institutions are regulated by the legislation in the two countries that govern financial services. In the case of Bangladesh, the non-bank financial institutions are controlled by the Bangladesh Bank and regulated by the Financial Institution Act, 1993. Finland, on the other hand, has the non-bank financial institutions regulated and controlled by the FSA (Shaikh, Alharthi, & Alamoudi, 2020). The difference between banks in the two countries and the non-bank financial institutions is on the nature of the services provided to consumers. Banks are allowed to issue demand drafts or pay-orders and cheques, while non-bank financial institutions cannot. Banks can also finance foreign exchange, receive demand deposits, while non-bank financial institutions are not

mandated to provide such services (Shaikh, Glavee-Geo, & Karjaluoto, 2021). Lastly, non-bank financial institutions can use diversified financing modes such as lease financing, private equity placement, securitization instruments, bridge financing, and syndicated financing, while banks cannot. Some of the examples of non-bank financial institutions in the two countries include currency exchanges, pawn shops, some microloan organizations, venture capitalists, and insurance firms. These institutions offer competition to banks given their specialization in certain services that could be required by consumers of banking institutions (Hossain & Samad, 2020). Mobile telecommunication service providers who develop platforms for money receipt and transfer are also characterized under non-bank financial institutions. This is because of the limitation on the type of financial services that they can provide.

The above enumeration of the financial sector in the two countries provides the basis for examination of the mobile financial services. During the present COVID-19 pandemic, the consumption of mobile financial services has increased exponentially as restrictions are made on both social distancing and health guidelines on sanitization and other features (Shaikh, Glavee-Geo, & Karjaluoto, 2021). The fear of spread of the virus through money circulation, coupled with the existence of mechanisms to make payments and receive finances through mobile financial services has improved the adoption of such services by consumers (Shaikh, Glavee-Geo, & Karjaluoto, 2021). Further, this increases the need to assess the impact of mobile financial services, and the extent to which they could either duplicate or replace some of the traditional services that are provided by banks (Hossain & Samad, 2020). Additionally, the demand expansion for financial services means that banks must adjust their service provision and technological applications to accommodate the integration of consumer needs for banking services, and the technological reality that is brought about by mobile financial services.

In the case of Finland, some of the mobile financial service platforms that have witnessed an increase in consumer usage during the pandemic includes Apple Pay and Apple Wallet, Aktia Wallet, Fitbit Pay, Google Pay, Garmin Pay, Klarna, Nordea Wallet, Pivo, Siirto, Samsung Pay, Masterpass, MobilePay, Mobiilimaksu, and S-mobiili (Shaikh, Alharthi, & Alamoudi, 2020). In Bangladesh, the mobile financial service platforms that have been depended upon by consumers during the pandemic include Hello, which is provided by the Bank Asia Limited (Yesmin, Paul, & Uddin, 2019); OK banking, which is provided by the ONE Bank Limited (Parvez, Islam, and Woodard, 2015); MYCash, which is provided by the Mercantile Bank Limited, bKash, provided by the BRAC Bank Limited (Yesmin, Paul, & Uddin, 2019);

mCash that is provided by the Islami Bank Bangladesh Limited; UCash that is provided by the United Commercial Bank Limited; and DBBL Mobile Banking, which is provided by the Dutch-Bangla Bank Limited.

Past research on the significance of mobile financial services have focused mainly on their impact on the global financial sector, with few studies examining the role that mobile financial services play in changing the nature of financial sectors in specific countries (Shaikh, Glavee-Geo, & Karjaluoto, 2021). A few studies have also examined the impact that the services have had in expanding the consumption of financial services in regions or locations where traditional financial services could not reach (Hossain & Samad, 2020). Some of the locations or regions that have not witnessed the presence of traditional financial services are largely in the developing nations (Shaikh, Glavee-Geo, & Karjaluoto, 2021). Most developed countries have a highly visible financial sector in almost every region of the countries, leaving minimal gaps that could be exploited by other non-bank financial institutions that specialize in mobile financial service provision (Rahman et al., 2017). The studies that have examined the acceptability of mobile financial services have demonstrated a higher adoption of such services in developing countries compared to the developed countries (Verhoef, 2017). This dissertation advances the discussion on mobile financial services and how they thrive in both the developed and developing nations by examining the factors that could explain the popularity of the services in developing nations compared to developed nations. In the subsequent sections of this dissertation, Bangladesh shall represent the developing nations, while Finland shall represent the developed nations.

## 1.2 Thesis rationale

The importance of this dissertation, especially during this time, is to acknowledge the impact that mobile financial services have had in both developing and the developed countries as a critical component of enabling the continued enjoyment of financial services during the pandemic. Additionally, it gives credence to the need to incorporate mobile financial services in certain critical areas of financial service provisions as a feature of sustainability in the financial sector. Such effects of mobile financial services can only be appreciated through an analysis of their availability in countries, and the extent to which consumers wish to use them. Globally, developed countries have a more established financial sector, with presence in almost every region or location in those countries (Verhoef, 2017). In the case of

developing countries, the accessibility of traditional financial services has been limited to the realistic nature of availing those services in locations that are not economically empowered to engage in financial activities (Verhoef, 2017). Consequently, most developing countries have a more limited accessibility of traditional financial services from banks compared to developed countries.

In this dissertation, the focus is on examining some of the factors that contribute towards the faster growth of mobile financial services in developing countries compared to developed countries, despite the highly developed financial sector in the developed nations. Finland is one such country that has an integrated financial sector in a large area of consumer consumption of financial services, including the payment of services and goods, and receipt of salaries and wages (Finance Finland, 2020). Bangladesh, on the other hand, is characterized by a high small-and medium-sized enterprise level (Rahman et al., 2017), where the income of most households is not as high as those of Finland. Additionally, the regulatory framework for financial services in Bangladesh is not as detailed and broad as is the case in Finland. However, Bangladesh seems to have a dependable and sustainable growth in the adoption of mobile financial services compared to Finland. Studies have also demonstrated similar situations in the examination of the growth of mobile financial services in both developed and developing countries (Verhoef, 2017). The analysis in this dissertation will assist in understanding why such a phenomenon exists.

### **1.3 Thesis aim and objectives**

The aim of this dissertation is to examine some of the micro- and macro-economic reasons that enable mobile financial services to favorably thrive in Bangladesh compared to Finland. There are four objectives of this study. The first is to investigate the present situation of mobile financial services between Bangladesh and Finland. The study also seeks to survey the micro- and macro-economic factors that contribute to the demand for mobile financial services in Bangladesh and Finland. Additionally, this study will explore the effects of the demand for mobile financial services to the financial industry in both Bangladesh and Finland. Lastly, this study will evaluate the impact of legislation and other regulatory frameworks in the financial industry between Bangladesh and Finland on adoption of mobile financial services in the two countries.

## 2 METHODOLOGIES

This section highlights the methodology used in this dissertation. It is important for a study such as this one to provide the methodology applied in generating the analysis because of the need to substantiate the findings made by the researcher. Additionally, the recommendations that the researcher provides will be informed by the analysis of the data or content used in the study and giving the methodology that is used in the study can assist other peers in the profession to critique the conclusions made by the researcher. The other benefit of explaining the methodology used is to give other researchers who could consider conducting similar studies in other countries to replicate the same approach and examine if the results would be similar, or the extent of variance in the results found by such studies when compared to this study (Brannen, 2017). This would give indications on other study areas that could be explored by future researchers who would want to compare the effect of mobile financial services in developed and developing countries. For this dissertation, this section commences with an overview of the study design, followed by the strategy used in searching for literature and data for analysis, and the approach that the researcher took in analyzing the data received. The data analysis sub-section is then followed by an examination of the limitations in the process of collecting the data, and the ethical considerations that the researcher made when collecting data and applying it in the dissertation.

### 2.1 Study design

Study design in a research refers to the approach applied by a researcher in collecting information, measuring the feasibility of the information or data to the research objectives, and analysis of the collected content. The benefit of a study design for a dissertation like this one is that the credibility of the dissertation is pegged on the design that the researcher uses (Crick, 2020). Consequently, where the design does not result in accurate statistics or data to be relied upon in the analysis, the recommendations that the researcher makes could either be undependable or stale (Brannen, 2017). In this dissertation, the researcher relies on secondary research, primarily because of the difficulty to conduct primary research given the nature of the comparison, and the restrictions that have been provided by the governments of the two countries whose mobile financial sectors are under review. Given this reality, this dissertation shall depend on existing literature that discusses the financial sectors in Finland and Bangladesh, either independently or collectively, and the nature of mobile financial services in the two countries. The

reliance on other literary materials is considered qualitative research, because of its dependency on secondary research (Crick, 2020). In study designs, relying on secondary research means utilizing content and data from other sources such as the census data, data from banking institutions or central banks, and information from other peer-reviewed analysis on the research topic that this research examines.

Apart from the health restrictions necessitated by the present health pandemic, other reasons why this dissertation preferred secondary research is because of the availability of sufficient data from various institutions and journal articles that have examined the issue of mobile financial services in both Finland and Bangladesh. It would be replicatory to examine certain areas or variables that would generate similar information when the researcher opted for a primary research approach (Brannen, 2017). The other reason is the lower costs that are incurred when a researcher relies on secondary research as opposed to conducting primary research (Crick, 2020). In the event of conducting a primary research, the researcher would be required to pay for a sampling frame, reserve monetary resources for designing and implementing the developed survey, conduct fieldwork, and collect and analyze the data (Brannen, 2017). The researcher lacks sufficient funds that would warrant conducting appropriate primary research that meets the minimal expectations of a proper empirical process on a research topic that compares mobile financial services in two countries.

The other benefit of relying on secondary research in this dissertation is the lower amount of time that is consumed in using secondary research compared to conducting primary research (Neuman & Robson, 2020). Where the researcher would have sought to conduct a primary research, there would be a need to allocate time to develop questionnaires or survey questions where necessary, administer the questions to selected respondents, identify the respondents to the study, seek clearance from relevant authorities before engaging certain entities (Crick, 2020), and these processes would consume significant time that is not presently possible for the researcher. Secondary research considerably reduces the time that is needed in conducting this research, given that there is sufficient literature and data that can be relied upon to develop an analysis on the thematic areas identified by the researcher as integral to responding to the research objectives.

Regardless of the benefits enumerated above on usage of secondary research, it has certain limitations as well. For instance, relying on secondary research would limit a researcher to the variables that were considered in the literary materials that the researcher is using. There are instances where a researcher could require information or data on a specific variable that is critical to his or her research topic, and the same content is not available in the available secondary research (Brannen, 2017). The other limitation is on the accessibility of certain forms of data that can only be provided by specific organizations, government institutions, or banking institutions, which third party entities are denied access to. Where such instances exist, the ability of a researcher to explore all the facets of a research topic is limited to the extent that the needed data on an area is not accessible. Some organizations or institutions would require that a researcher pays some subscription fee or enroll to a program promoted by an organization before being given access to data or information that the researcher seeks, and this diminishes the scope of content of reliance in secondary research (Crick, 2020). Some of the limitations that have been enumerated above cannot be overcome, but they have minimal impact on this dissertation when compared to the disadvantages or limitations that the researcher would face in opting for a primary collection of data.

## **2.2 Strategy for literature search**

The strategy for literature search refers to the approach that a researcher uses in collecting information that is relevant to the research conducted by the researcher (Brannen, 2017). The importance of having a literature search strategy is its ability to minimize the instances where a researcher applies irrelevant information in a study, or situations where dubious sources are adopted in making arguments on research objectives, or where a researcher relies on biased data to inform the position that he or she takes on a research topic (Ali & Usman, 2017). Where a researcher does not have a strategy for literature search, there is a higher probability for the search process to have errors that might impute negative connotation to the recommendations that are made by the researcher on a study (Mourão et al., 2017). Some of the negative connotations could be an unbalanced review of an issue, reliance on incomplete evidence, and use of problematic data whose reliability is questionable (Stansfield, 2018). However, for every research process, a researcher must rely on an approach that would be reliable to the needs of the research topic. Subsequent sub-sections of this section enumerate the steps that the researcher adopted in searching for literature to be used in this study.

### **2.2.1 Databases**

One of the areas where literature can be found in a qualitative research process is in databases. Databases are platforms where content from recognized sources are digitized then presented in an organized way for access by people who are interested in such information. One of the areas that this dissertation depended on is the government databases on banking institutions and mobile financial services in both Finland and Bangladesh. Both governments have their finance ministries generating regulation frameworks that can be useful in providing insight to the mobile financial services situation in the two countries. The census data, which has critical information on the household incomes that can be applied in this dissertation to project the demand for financial services, is also hosted by government databases. The benefit of government databases is that most of the content is public and would not require making payments or subscription for access (Neuman & Robson, 2020). Apart from the government databases, the researcher also used sources from other business and economic research databases like Economic Intelligence Unit (EIU), FAITS, EconLit, D&B Hoovers, MarketLine, Mergent Archives, and ProQuest. The researcher also sought information from other databases like Google Scholar and JSTOR, which host several peer-reviewed articles that are not specific to one discipline. The collection of research articles that the researcher received from these databases were largely journal articles that are peer-reviewed, which improves the credibility of the content in those sources. Other databases that were used in collection of data and content included those that have specialized in data collection, such as Statista, Mintel Reports, eMarketer, and Technavio Reports.

### **2.2.2 Organizational websites**

The organizational websites relied upon were basically for insight on the mobile financial services position in both Bangladesh and Finland, since there is the expectation that some of the content in the organizational websites are biased to the objectives and agenda of such institutions. The content was examined on the financial sector and mobile financial services in Finland and Bangladesh from oecd.org and imf.org, which are international websites that give insight into the financial positioning and undertakings of countries, including the policies that such countries are implementing in certain areas in the financial sector. The content was also examined from the Ministry of Economic Affairs and Employment in Finland, through tem.fi/en. Some of the content that the study examined was related to

the usage of mobile financial services during the pandemic, and the effect of such services in enabling some sectors to remain operational despite the health regulations proposed by the government.

The same was done for Bangladesh, where the study examined content on the country from worldbank.org, trade.gov, erd.gov.bd, Bloomberg.com, sustainabledevelopment.un.org, and ifc.org. These websites were useful in demonstrating the positioning of the two countries as relates to mobile financial services. The risk of solely relying on content from the organizational websites revealed above is that they could be selectively applied to develop a narrative that can sustain the need to continue with a policy or support the discontinuation of a policy in a country. Consequently, the research was applied sparingly, and considered how other literary materials have used such content as well to develop the context within which some data or discussions are highlighted in the websites.

### **2.2.3 Keywords**

There were certain keywords in the literature search that were keyed in the documented websites above to generate the sources that I would consider using in the dissertation. The keywords provided content that were either directly related to the themes the study sought to address, while some corroborated the arguments and positions made by the content from the institutional websites examined. Some of the keywords used included ‘Mobile financial services in Bangladesh,’ ‘Mobile Financial Services in Finland,’ ‘Bangladeshi government strategies to expand adoption of mobile financial services in developed countries,’ ‘Finland’s absorption of mobile financial services,’ and ‘Bangladesh and Finland’s financial sectors.’ Other keywords used included ‘Differences in application of mobile financial services in developed and developing countries,’ ‘Rise in mobile financial services in Bangladesh,’ ‘Competition for mobile financial services in Finland,’ and ‘Micro- and macro-economic reasons that make mobile financial services to thrive in Bangladesh compared to Finland.’ Each of these keywords provided sources to be considered when developing content to be included in the analysis of the research objectives.

#### **2.2.4 Criteria for inclusion and exclusion of sources**

This sub-section explains the criteria that used to exclude or include the sources that retrieved from the databases and website searches. It is important when conducting a study to highlight the mechanism used to exclude and include sources, as this forms the definition of the operational approach that a researcher used (Brannen, 2017). The searches conducted generated numerous articles and content, and there was a need to determine which of the articles and content applied in this study. The first criterion was that the materials had to be in English. The second criterion targeted materials from databases, and the selected materials had to be peer-reviewed articles. The third criterion, which targeted sources from government or organizational websites, was that they needed to be related to mobile financial services in either Finland, or Bangladesh, or both. The third criterion also included the requirement that such sources must be accessible or free.

In the fourth criterion, which was purely an exclusion criterion, any sources that required subscription or payment of some fee or were inaccessible were excluded. The fourth criterion, which was an exclusion approach as well, was to exclude any letters, editorials, and opinionated pieces, or content that did not touch on mobile financial services in Finland or Bangladesh. This exclusion and inclusion criteria were applied because it resulted in sources that were relevant to the objectives of this dissertation. Conscious effort was taken to avoid applying selection criteria that was too narrow, as this would have limited my ability to receive materials that address a broader scope as pertains to factors that make mobile financial services to favorably thrive in Bangladesh compared to Finland.

#### **2.2.5 Sources used**

After conducting the search, 85 articles were retrieved that had content that was relevant to the aim of the dissertation. However, only 45 articles passed the inclusion criteria. From the 45 articles, an additional 10 articles that did not have sufficient referencing on the information that they provided were excluded, and this left 35 materials for the literature review and analysis section.

## 2.3 Data Analysis

The researcher applied thematic analysis as the data analysis framework for this dissertation. In analysis of qualitative research, thematic analysis is useful because it allows a researcher to manage the findings from literary review in specific themes that reflect the study's objectives (Scharp & Sanders, 2019). When conducting a research, the abstract elements of the research that highlight the needs of the research are called themes (Vaismoradi & Snelgrove, 2019). The themes in this dissertation were derived from the research objectives enumerated in Chapter One. Consequently, the four themes that have been documented in Chapter Three emanate from the four research objectives highlighted in Chapter One. One of the reasons why thematic analysis was chosen for this dissertation is because of the flexibility that it gives a researcher to analyze data in a way that is systematic and coherent (Vaismoradi & Snelgrove, 2019). The second reason is because thematic analysis does not require a researcher to possess detailed theoretical and technological knowledge of data analysis as is the case in empirical research (Scharp & Sanders, 2019). The third reason is on the expectation that a researcher will handle the retrieved data appropriately to apportion content satisfactorily in specific themes, which enhances the organization of data analysis.

## 2.4 Limitations

Every dissertation that applies a qualitative research approach is bound to have some limitations, and in this dissertation, one of the limitations is the lack of critique on the sources that have been used. Most of the sources that this study has relied on are sources within the past 10 years, and the level of critique has not been as extensive as is the case in other topics that have some established principles and philosophies on how they operate. In minimizing the effects of this limitation, the researcher examined other sources that corroborate the content extracted from the selected articles, and justified the information based on the multiple indications of the same content in several articles. The other limitation was on the access to some information that was in custody of banking institutions, such as the level of absorption of mobile financial services to the normal operations of a bank, as this was critical in determining the level to which mobile financial services have impacted the service provision in traditional financial services. The banks that the researcher sought information from were not willing to provide such information, but the same information was received through comments from the World Bank, IMF, and the OECD on absorption rates of mobile financial services in the Nordic countries.

## 2.5 Ethical considerations

In a dissertation, ethical consideration refers to the expectations through codes of behavior for researchers. Throughout the research process, and in all stages, there is the requirement to observe certain codes of ethics as pertains to conducting a study (Neuman & Robson, 2020). These codes of behaviors ensure that the end-product is completed by adherence to ethics and integrity in research practice. In this dissertation, I observed three principles that guided my collection and usage of data and external content in the research analysis. The first principle was on the acknowledgment of any data that was retrieved from websites, institutions, or other secondary sources. Whenever external data and information was used in this dissertation, there was an appropriate recognition of the same from the sources where such data was retrieved. The second principle was on the usage of the information taken from secondary sources. Most researchers develop their content relative to their research objectives, and the analysis that they provide should be recognized based on the research objectives in those sources (Brannen, 2017). This limits instances of bias and taking information out of context when applying it to situations that do not mimic the environment that necessitated such usage of the data or information. When conducting independent analysis of researchers and applying them to this dissertation, focus was on the examination of the context within which the researchers were making their analysis to avoid instances where information is applied inappropriately to give wrong interpretation, or for bias purposes. The third principle was on allegiance to the objectives and aims of this dissertation, which assisted in ensuring that the discussion and analysis was limited to the motive of this dissertation as opposed to examining issues that are irrelevant to this dissertation's research intentions.

## 2.6 Summary

Chapter Two has enumerated the methodology that the researcher applied in collecting sources and information relevant to this dissertation. The process involved the identification of websites and databases that could have content or information that the researcher needs, the development of the study design, and the approach to sourcing the information by using certain keywords. Additionally, Chapter Two explained the criteria that the researcher used to exclude and include sources relevant to this dissertation, while providing some of the limitations that exist in applying the study design that the researcher used. The Chapter also discussed the data analysis approach that was applied, and the ethical considerations observed by the researcher when completing this study. The next section in this

dissertation is Chapter Three, which focuses on literature review findings and analysis of those findings. In Chapter Three, the researcher shall incorporate information from the sources identified and selected in Chapter Two in addressing the themes that shall be revealed in Chapter Three. Subsequently, an analysis on every theme shall be provided in adherence to the dissertation's aims and objectives.

### **3 LITERATURE REVIEW FINDINGS AND ANALYSIS**

This section provides a literature review on the identified themes that would assist in comparing mobile financial services in both Bangladesh and Finland. The themes include the current situation of mobile financial services in Bangladesh and Finland, micro- and macro-economic factors that contribute towards the demand for mobile financial services, impact of the demand for mobile financial services to the financial sectors of both Bangladesh and Finland, and impact on the legislation and regulatory framework in both Bangladesh and Finland to the adoption of mobile financial services in the two countries.

#### **3.1 Definitional Issues**

In this section, mobile financial services refer to the accessibility of financial services such as financial transactions through mobile phones. The scope of the services is not limited to transactional services, but cover non-transactional services as well, such as viewing of financial information through a mobile phone. Apart from mobile financial services, legislation and regulatory framework is discussed in this section to refer to the laws and procedures that are required by the legal framework in the two countries for provision of mobile financial services. Micro- and macro-economic factors, on the other hand, refers to both individual and national economic factors that influence the adoption of mobile financial services in the two countries.

#### **3.2 Analysis of current situation of mobile financial services in Bangladesh and Finland**

Bangladesh has witnessed a significant growth in mobile financial services. The growth of mobile financial services and the increase in the number of companies that provide such services has ensured that the service cost for both bank institutions have reduced as well (Hossain & Samad, 2020). Consequently, a level-playing field has been established for both bank and non-bank financial institutions since mobile financial services have opened a new frontier for competition that depends on innovation and technological capability of players within the financial sector (Scharp & Sanders, 2019). Despite the concept being new in Bangladesh, the country has witnessed a rise in demand from people

who would want to use such services (Hossain & Samad, 2020). This has led to the adoption of mobile financial services by different bank and non-bank financial institutions. Presently, the country has Hello, OK banking, MYCash, bKash, mCash, and UCash as some of the platforms that provide mobile financial services. Through these platforms, users can check their accounts, make transactions, and conduct purchase services as well.

In the case of Finland, the country has established bank services in almost all its habitable regions, and this has allowed people to easily access banking services from traditional bank platforms (Finance Finland, 2020). The mobile financial services in the country have acted to complement the existing services that are already provided by banks, and to allow customers to access such services easily through their mobile phones (Brannen, 2017). The approach to adoption of financial services in Finland has been different as well compared to how it has been done in Bangladesh, since in Bangladesh, banks have established various platforms within the traditional banking institutions to ease the accessibility of financial services. This has been through apps by banks. In the case of Finland, the provision of mobile financial services has been through a collaboration with other platforms such as Google, Mastercard, Samsung, among other companies, to ease the accessibility of financial services through mobile platforms (Finance Finland, 2020). This has resulted in the platforms such as Apple Pay and Apple Wallet, Aktia Wallet, Fitbit Pay, Google Pay, Garmin Pay, Klarna, Nordea Wallet, Pivo, Siirto, Samsung Pay, Masterpass, MobilePay, Mobiilimaksu, and S-mobiili (Shaikh, Alharthi, & Alamoudi, 2020). Bangladesh has such collaboration as well, but in Bangladesh, the collaboration is with telecommunication companies who provide capacity to have apps that support the provision of mobile financial services.

As has been the case in most economies, the impact of COVID-19 to the financial operations of most countries has been significantly affected. The adoption of mobile financial services as an effective mechanism of accessing and using financial services has allowed both financial sectors in Bangladesh and Finland to continue operating. Businesses have equally adapted their operations to include payments using mobile platforms, and this enhances the influence that mobile financial services have on the two economies. In the case of Bangladesh, there are several mobile finance platforms such as Hello, which is provided by the Bank Asia Limited (Yesmin, Paul, & Uddin, 2019); OK banking, which is provided by the ONE Bank Limited (Parvez, Islam, and Woodard, 2015); MYCash, which is provided by the Mercantile Bank Limited, bKash, provided by the BRAC Bank Limited (Yesmin, Paul, & Uddin, 2019);

mCash that is provided by the Islami Bank Bangladesh Limited; UCash that is provided by the United Commercial Bank Limited; and DBBL Mobile Banking, which is provided by the Dutch-Bangla Bank Limited. These platforms are accessible both to the rural and urban populations. Additionally, they allow people in locations where there are no brick-and-mortar bank services to access such services as well. This improves the usability of mobile financial services in Bangladesh, not only during the COVID-19 pandemic, but in periods before the pandemic. Given that Bangladesh is a developing country, with a significant percentage of its population at the lower economic class, the influence that mobile financial services have in the country can explain the effect that such services have in other developing countries as well.

As has been indicated in the above-section, some of the mobile financial service platforms that have witnessed an increase in consumer usage during the pandemic in Finland includes Apple Pay and Apple Wallet, Aktia Wallet, Fitbit Pay, Google Pay, Garmin Pay, Klarna, Nordea Wallet, Pivo, Siirto, Samsung Pay, Masterpass, MobilePay, Mobiilimaksu, and S-mobiili (Shaikh, Alharthi, & Alamoudi, 2020). Finland has a significant percentage of its population under the middle-class bracket, and the spread of the mobile financial services is not limited to the urban areas, since the rural areas equally have representation of banks. This is different from the situation in Bangladesh. Consequently, the effect that the mobile financial services have in Finland is complementary as opposed to enhancing the reach of the financial services in the country. With Bangladesh, mobile financial services expand the reach of the financial sector to populations that initially were not covered or served by the traditional financial platforms. This is reflected in the increase in the number of people who use the mobile financial services in Bangladesh compared to Finland, and demonstrates why there is a more rapid rise in the adoption of mobile financial services in Bangladesh than Finland.

### **3.3 Analysis of micro- and macro-economic factors that contribute to the demand for mobile financial services**

The demand for mobile financial services has been one of the major microeconomic factors that has led to the expansion of financial services to several regions across Bangladesh (Shaikh, Glavee-Geo, & Karjaluoto, 2021). Unlike in the past where mobile phones did not exist, the accessibility of financial services in Bangladesh depended on the existence of bank institutions in localities. This meant that most people in the rural areas where bank institutions were not established did not have access to such services. However, since the inception of mobile phones and expansive usage of such phones in the

country, Bangladesh has seen an increase in demand for mobile services (Bangladesh Bank, 2021). This supported both bank and non-bank financial institutions to expand their approach to service delivery by exploring the possibilities that exist through mobile services. The net effect is the introduction of mobile financial services, and expansion on the reach of bank and non-bank financial institutions to the people that they can serve (Shaikh, Glavee-Geo, & Karjaluoto, 2021). The increase in demand for micro-finance in the country also supported the existence of mobile financial services in the country, since the rural areas accounted for the larger part of consumers of micro-finance activities. Inflation is another factor that contributed to money use, and this meant that there were minimal savings in the country. Most people conduct transactions daily, meaning that the ease of accessing such services was in high demand.

In the case of Finland, consumers of financial services sought a mechanism that would allow them to enjoy financial services without the need to visit a bank and non-bank institutions for smaller services that could not require much bureaucracy, and this increased the demand for mobile financial services (Finance Finland, 2020). Apart from this, the growth in technology that allowed mobile phones to accommodate several apps provided an opportunity for banking institutions to consider satisfying the need for consumers for mobile services by providing mobile financial services. Regulatory authorities in both Finland and Bangladesh had to adjust their practices to allow adoption of mobile financial services in the two countries. Brannen (2017) advises that this includes an adjustment to interest rates, and the monetary policies that the governments adopted.

As indicated above, one of the micro-economic factors that contribute to the demand of mobile financial services is the demand for such services in the market. In Bangladesh, there is a significant demand for mobile financial services compared to Finland. Finland has traditionally witnessed an improved network of financial services in the country, while in Bangladesh, the accessibility of financial services depended on the demand for such services. Subsequently, most financial services were more readily accessed in urban centers than in rural areas. However, with the inception of mobile financial services, the accessibility of financial services was improved to allow for rural regions in the country to access such services. Additionally, the demand for mobile financial services from lower cadres in the economy who would not seek to have their money stored in banks felt the need to do so through mobile financial services. In the case of Finland, the demand for mobile financial services came from the need to make it easier for account holders and other customers that have been served through traditional financial services to do so without necessarily having to visit the financial institutions. Shaikh, Alharthi, and

Alamoudi (2020) asserts that the demand for such comfort in how financial services are accessed and used informed the rise in demand for mobile financial services in Finland.

On the macro-economic front, monetary policies, interest rates, inflation, money demand, and private-sector credit, are some of the factors that influenced the demand for mobile financial services in Bangladesh. The stringent monetary policies that had ensured rigidity in the accessibility of monetary services from financial institutions were reduced, and banking institutions and other financial players could venture into the money market and expand the accessibility of monetary services. Consequently, the mobile financial services platform was conceived and its effect is a significant number of people in Bangladesh consuming such services. The relaxing of regulation on entry of businesses into the financial sector also improved the scope of financial services and innovation within the financial sector. Subsequently, other practices in developed countries that had been instrumental in expanding the consumers of financial services, such as mobile financial services, were introduced in Bangladesh. As Shaikh, Glavee-Geo, and Karjaluoto (2021), it is an approach that has been applied in most developing countries to great effect.

Inflation and interest rates are another aspect that have determined how mobile financial services are marketed. While in Finland, this effect is not as expansive as is the case in Bangladesh, the nature of interest rates set on financial institutions, influence the capacity of financial institutions to expand their services. Unlike Finland, Bangladesh imposes lower interest rates on services provided through mobile financial services, and the net effect is that such services are provided to people at lower costs that can be managed by all classes in society. This has allowed Bangladesh to expand its accessibility of mobile financial services to a broader population than is the case in Finland. However, Finland does not have much of its population with no access to traditional financial services, as is the case in Bangladesh, meaning that in Finland, the demand for mobile financial services is to complement the existing forms of accessing financial services. On inflation, its impact is on the storage of finances in banks and other traditional financial institutions. The rate of inflation in Bangladesh is higher than in Finland, and this has meant that the use of money in Bangladesh is higher than in Finland (Bangladesh Bank, 2021). Additionally, the rate of savings in Finland is higher than in Bangladesh. This also means that the need to access savings is higher in Bangladesh than Finland, hence the efficiency of mobile financial services as a mechanism of achieving that goal. People would not need to physically go to their financial institutions to withdraw their money, as they can do so through their mobile financial service platforms.

Also, the platforms allow individuals to make payments as well, which is a reason for the demand of mobile financial services in Finland. Given this, the micro- and macro-economic reasons that influence the demand for mobile financial services vary depending on developed and developing nations.

### **3.4 Analysis of effect of the demand to the financial sectors of Finland and Bangladesh**

One of the effects of demand to the financial sectors of Finland and Bangladesh is that there has been an increase in competition that is necessitated with the entry of new players in the financial sector from the non-banking sector (Shaikh & Karjaluoto, 2016). The other effect is that product innovations have also meant that different financial services providers can specialize on specific aspects of financial services, such as microfinance, microcredit, and mobile financial services. Also, the technological advancements and globalization have increased the scope of demand for financial services by consumers, giving rise to a global outlook for most financial service providers as opposed to a local outlook (Hai & Rahman, 2016). The net effect of these changes is an intense battle for customers within the financial sector. One of the areas where innovation has been high in the quest to gain a competitive advantage over other providers is the delivery channels for the services (Yesmin, Paul, & Uddin, 2019). Through dependable and reliable delivery channels, most financial service providers can establish increased efficiency and consumer satisfaction. The application of electronic delivery channels has been enumerated by several researches as one of the steps of enhancing efficiency and increasing consumer satisfaction (Islam & Hossain, 2018). Consumers as well, have demanded for innovative services and up-to-date service delivery options, which has pressured financial institutions to develop mechanisms of remaining relevant in the heightened competitive environment.

In the case of Bangladesh, the demand for mobile financial services has meant that some of the traditional financial services offered by specific banks have seen a reduction in demand. The reduction in demand, however, is not because of the lack of such services, but because those services are readily accessed through mobile financial service platforms. Most banks in Bangladesh that have not adapted to the effects of mobile financial services have witnessed a reduction in their revenues. Some of the banking sectors have adapted and introduced their mobile financial service platforms to remain competitive in the market. For instance, Bank Asia provides the Hello platform, ONE Bank Limited provides the OK banking mobile banking platform, while Mercantile Bank Limited provides the MYCash mobile banking

platform. This allows such banks to remain competitive in an industry that is witnessing a change in the consumer demand for financial services.

In the case of Finland, banks have equally adapted and introduced their mobile financial service platforms as well. However, such services have been dwarfed in their impact through the existence of other independent companies that seek partnership with banks in using their platforms to provide mobile financial services as is the case in the mobile financial service platforms in Finland. This has also meant that Finland's financial sector introduces regulations that governs how data from consumers is handled, and the mechanism of collaboration between the companies that provide platforms to be used by banks, and banks who seek such platforms to provide mobile financial services. The case of Bangladesh is like that of Finland in terms of the changes to regulations within the financial sector, however, Bangladesh has also expanded the financial sector to allow entry of other financial service providers who are only focused on providing mobile financial services. Additionally, Bangladesh has limited some of the services that could be provided by the mobile financial service providers, and ensured that there are services that are only provided by traditional financial service providers in the country. The net effect of this is a limit to the extent that financial services can be provided by mobile financial service providers.

### **3.5 Analysis of impact of legislation and regulatory framework on adoption of mobile financial services**

The regulation of mobile financial services in both Finland and Bangladesh is through legislation and guidelines that are provided to various financial bodies. In the case of Bangladesh, the Bangladesh Bank is given the mandate of controlling the operations of both non-bank and bank institutions. The powers exist through the Financial Institution Act, 1993 (Hossain & Samad, 2020). For Finland, it is the FSA that has been mandated under legislation to regulate non-bank and bank institutions. The mandate provided through legislation for these two institutions in the two countries include mobile financial services as well (Shaikh, Alharthi, & Alamoudi, 2020). One of the key differences in the way legislation determines the operations of mobile financial services in both countries is that unlike non-bank financial institutions, bank institutions are allowed to issue cheques, pay-orders, or drafts. Banks can also receive demand deposits and finance foreign exchange while non-bank financial institutions cannot (Shaikh, Glavee-Geo, & Karjaluoto, 2021). However, non-bank financial institutions can use diversified financing modes like lease financing, private equity placement, securitization instruments, bridge

financing, and syndicated financing, while banks cannot. The examples of non-bank financial institutions in the two countries include currency exchanges, pawn shops, some microloan organizations, venture capitalists, and insurance firms. These institutions offer competition to banks given their specialization in certain services that could be required by consumers of banking institutions (Hossain & Samad, 2020). Mobile telecommunication service providers who develop platforms for money receipt and transfer are also characterized under non-bank financial institutions. This is because of the limitation on the type of financial services that they can provide.

Finland has been wary of the impact that mobile financial services could have on the country's financial sector, and the effect of expanding the provision of traditional financial services beyond traditional financial institutions such as banks (Finance Finland, 2020). With this, most of the regulations that have been provided in Finland have been centered on ensuring that there is no expansion on the accessibility of some financial services to platforms that could be difficult to regulate. For instance, the security of financial and personal data of financial service consumers can be guaranteed through the established regulations, framework, and practice under traditional financial institutions, but this could not be guaranteed through mobile financial service platforms that are not only difficult to regulate, but whose risk levels are higher. Bangladesh has used the same approach in establishing regulations that dictate how mobile financial service is accessed and utilized in the country. However, with Bangladesh, the focus has been tempered by the benefit of inclusion of a significant part of the country's population to the financial sector, who initially were not covered by the traditional financial service platforms. This introduces the balancing act that most developing countries that seek to expand the consumption of financial services face when developing regulations and legislation on mobile financial services. In the case of developed nations, such as Finland, the accessibility of financial services has been at optimum levels, with mobile financial services playing a complementary role to consumers.

### **3.6 Key issues in the literature**

When conducting this literature review and analysis, few changes were already in place that had been introduced as policy changes to the usage of mobile financial services in the two countries. For instance, Finland had encouraged the use of mobile financial services as a mechanism of minimizing the need to access financial institutions during the COVID-19 pandemic, and Bangladesh had equally relaxed some of the regulations that it put in place to minimize the scope of use of mobile financial services in the

country (Bangladesh Bank, 2021). However, it is not yet known whether the changes could be permanent, as they could have some effect on how mobile financial services are used in the countries, and this could result in a different analysis to the one provided under this section.

#### **4 CONCLUSION AND RECOMANDATIONS**

Mobile financial services in developed and developing nations have been critical in expanding the accessibility of financial services. The rate of adoption of mobile financial services in developed nations has been lower than developing nations, and the above comparison on mobile financial services in both Bangladesh and Finland have demonstrated this reality. While both countries regulate the mechanisms of providing financial services, the regulations and legislation that determine the use and provision of mobile financial services vary. In the case of Bangladesh, mainstream traditional financial service providers have introduced their respective mobile financial service platforms to counter the impact of new companies in the industry that only provide mobile financial services. One of the reasons for this is to avoid a migration of mainstream customers, but also to expand their services to a population that is targeted by mobile financial service providers.

The same differences in the approach to how mobile financial services are regulated exist as well in the approach to regulate the influence that other micro- and macro-economic factors have on the demand for mobile financial services in Bangladesh. The recommendation to Finland is to avoid regulations that would minimize the scope to which mobile financial services are utilized in the country. Most developed nations fear the disruption in the financial sector that could be caused through reduction in regulation on mobile financial services, and this has limited the usability of such services to a complementary level to the services provided by traditional financial institutions. For Bangladesh, it is critical that policymakers consider the reservations that developed nations have in the use of mobile financial services. This can limit the exposure of developing nations to certain risks that could occur because of the unlimited scope provided to mobile financial services.

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