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**Assessing the Performance and Scope of Islamic  
Microfinance in Thailand: Developments and Prospects**

**By**

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**Thesis Submitted in Fulfillment of the Requirements for the  
Degree of Doctor of Philosophy at Durham University**

**The School of Government and International Affairs  
Institute of Middle Eastern and Islamic Studies  
Durham University, UK**

**2013**

## **ABSTRACT**

### **Assessing the Performance and Scope of Islamic Microfinance in Thailand: Developments and Prospects Tawat Noipom**

Microfinance has become very important for inclusive finance and micro-based economic development and the rise of Islamic finance responds to this change in many parts of the world. In Thailand, the first Islamic microfinance institution was established in the Muslim populated Pattani Province in 1987 and several others followed over the years. Yet, very few studies have been conducted to systematically document the basic aspects of this endeavour. The aim of this study is to examine the development and prospects of Islamic microfinance (IsMF) and assess the perceptions of the customers on the products, impact, performance and scope in Thailand. In doing so, this study is one the first to provide an overview of IsMF industry in Thailand and identifies factors affecting demand for IsMF services. Importantly, it will analyse the impacts of various IsMF services of the socio-economy of the Thai society. The study also evaluates outreach and sustainability of the IsMFIs.

In an attempt to accomplish the aims of the study, a triangulation research method was employed. First, the questionnaire-based survey was administered to the customers of the IsMFIs in order to ascertain the factors affecting demand for products and impacts of IsMF. Secondly, a semi-structure interview was subsequently conducted with the customers in order to develop an in-depth understanding on demand for and impacts of IsMF. Thirdly, secondary data from financial reports of the IsMFIs were collected to compute relevant financial ratios, indicating outreach, sustainability, and efficiency and profitability of these IsMFIs.

The findings from the survey analysis reveal that the demand for IsMF services are driven by the needs in various life cycle events, affordability, awareness and exposure of IsMF regulations and procedures. In addition, IsMF services have enhanced the well-being of the poor and financially excluded in different aspects. The levels of impacts are influenced by the emerging needs, affordability and exposure factors in varying degrees. Interestingly, IsMFIs have achieved operational sustainability, reached considerable number of the client-base, and been profitable. The findings not only provide valuable information in terms of behavioural dimensions and customer preferences, they are also useful for the microfinance providers and government in considering the future development related to Islamic microfinance programmes.

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## **LIST OF ABBREVIATION**

BOT	Bank of Thailand
CAD	Cooperative Auditing Department
CLT	Cooperative League of Thailand
CPD	Cooperative Promotion Department
FINCA	Foundation of International Community Assistance
GB	Grameen Bank
IPC	International Poverty Centre
IsMF	Islamic Microfinance
IsMFI	Islamic Microfinance Institution
MFA	Ministry of Foreign Affairs
MOF	Ministry of Finance
NESDB	National Economic and Social Development Board
NSO	National Statistical Office
SME	Small and Medium-sized Enterprise
UNDP	United Nations Development Programme
WB	World Bank



## **DECLARATION**

I hereby declare that no portion of the work that appears in this study has been used in support of an application of another degree in qualification to this or any other university or institution of learning.

## **STATEMENT OF COPYRIGHTS**

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## **DEDICATION**

To my mother and father, my beloved wife, Rusnat and, my children, Faadey, Weishaan and Wafeeq, and my mother-in-law.

## **Chapter 1**

### **INTRODUCTION**

#### **1.1 RESEARCH BACKGROUND**

Microfinance, the supply of loans, savings, insurance and other financial services to target towards low-income people, has proved successful as a tool in helping to reduce poverty and to encourage economic growth specifically in rural areas in many parts of the world. Grameen Bank, a microfinance institution, founded by the Nobel Peace Prize winner for 2006, Professor Muhammad Yunus, for instance, has now expanded and has been adopted by many countries all over the world. Banco Sol of Bolivia and Indonesia's village banking models are other microfinance models which have been arguably predominant and successful.

The global microfinance initiatives were also boosted when, in the 1990s, the poverty alleviation agenda became top priority in many international development agencies. The United Nations Assembly, in response to this trend, designated the year 2005 as the International Year of Microcredit. The increasing importance of microfinance has also been brought up in many other international meetings such as the 2004 G8 Summit, the G8 Gleneagles Summit in 2005 and the Commission for Africa Report, 2005.

Islamic finance, with a core foundational goal of social justice and the elimination of interest, has developed rapidly in the past few decades. A closer reading of this development shows that the current Islamic finance does not necessarily fulfil these goals. As both microfinance and Islamic finance share the same basic philosophy and objectives of social welfare, Islamic finance might then incorporate the microfinance tool in its substantial financing activities (Dhumale and Sapcanin, 1999, El Hawary and Grais, 2005, Segrado, 2005, Dusuki, 2008a). As a result, Islamic microfinance institutions (IsMFIs) may be able to extend access to financial services to needy Muslims in Islamic and non-Islamic countries.

In Thailand, Islam is the second largest religious group with about three million followers (NSO, 2000). The majority of Muslims live in the five Malaysian border provinces and are therefore easily exposed to the Malaysian banking system, where an Islamic bank was

established in 1983. A group of dedicated Muslims in Pattani then created an Islamic group fund which was later transformed into the Pattani Islamic Savings Cooperative Limited in 1987. Since then, many Islamic cooperatives have been created in different parts of the country primarily to offer alternative Islamic microfinancial products to Muslim clients. This endeavour arguably allows Muslims to participate in financial markets and at the same time preserve their Islamic beliefs and customs. In addition to that, an association of Islamic cooperatives has been recently formed as an effort to enhance cooperation and standardisation among the Islamic cooperative practices in the country.

Since the so-called current southern unrest began in January 2004, many people and organisations, including government agencies, academics, and domestic and international peace groups, have put considerable efforts into unveiling the actual causes of the problem and identifying various alternative solutions. It is generally agreed that one of the major causes of the southern conflict, apart from political grievances, is poverty and economic exclusion (Moawad, 2005, MFA, 2007). A study conducted by a team of researchers from universities in the area highlights that Muslims in the area prefer to have *Shariah*-compliant financial services which conform to their norms and religious values based on Islam, though many of them do not really understand how the *Shariah* compliant financial products might work (Narongraksakhet *et al.*, 2006). The finding clearly indicates that economic factors, entailing poverty, are one of the main causes of the conflict in southern Thailand; and the Muslims, who form the majority population of the area, want these issues to be solved using approaches that conform to their norms and values.

In response to the turmoil, Islamic microfinance has recently become top of the Thai government's agenda to increase economic inclusiveness and to eradicate poverty among Muslims in the southern border provinces of Yala, Pattani, Narathiwat, and some parts of Songkla Province. The government has recently approved two Islamic microfinance initiatives, namely Islamic microfinance via the Islamic Bank of Thailand under the Ministry of Finance, and the Islamic microfinance programme proposed by the Southern Border Provinces Administrative Centre (SBPAC) under the Ministry of Interior. In the

first programme, the government provides total loans of THB<sup>1</sup>1,150 million (USD35 million). Another programme, in contrast, will assist households in this area to form their own IsMFIs in their villages with little or no financial assistance from the government. Under this programme, the responsible government agencies such as the Cooperative Promotion Department and the Cooperative Auditing Department will provide management and administrative expertise to the village microfinance programmes while Muslim *Shariah* and economic experts will provide Islamic-compliant supervision (MOF, 2009).

With the above national and international phenomena, the performance and prospects of the existing IsMFIs in the form of an Islamic cooperative in Thailand are crucial for understanding Islamic microfinance activities and the role of Islamic financial institutions in promoting justice and distribution of income in Muslim communities, especially in a non-Muslim country, and in the Muslim world in general. In addition, the period 1997-2008 was chosen because of the availability of data at the four IsMFIs. As-Siddeek was established in 1997, the data prior to this year are not available. Islam Pattani and Ibnu Affan could not provide financial data after the year 2008.

## **1.2 STATEMENT OF THE PROBLEM**

In the international development arena, although there has been considerable emergence of microfinance in many forms in various countries, it has been argued that most microfinance innovations do not reach the core poor. The microfinance programme, therefore, should offer a 'protectionally focused scheme for the poorest' (Hulme and Mosley, 1996, Meyer, 2002, Hulme, 2003, Mosley and Hulme, 1998). IsMFIs in Thailand, unlike most of their conventional counterparts, offer both 'promotional products' based on *Shariah*-compliant contracts such as *murabahah*, *mudarabah* and *musharakah*, and 'protectional products' based on contracts of *takaful*, *wadiah* and the like. It will therefore be interesting to see whether these IsMFIs can really generate significant impacts for the clients.

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<sup>1</sup> Thai baht

In addition, much existing research in the area of the conventional microfinance has concentrated on the supply side of microfinance (Zeller and Meyer, 2002a). The studies usually focus on the management of MFIs, and methods of sustainability assessment and comparison (Yaron, 1992, Otero and Rhyne, 1994). A study of demand for Islamic microfinancial products in a Muslim community, given that a large number of the poorest groups of the world are Muslims, will possibly discover the real need of microfinancial products that conform their norms, values and religious principles. This finding may lead to an improved alternative, containing both 'protectional' and 'promotional' solutions, for poverty eradication in Muslim communities around the world.

Islamic microfinance is a relatively new phenomenon. Not many studies have yet been conducted on it. Most of the studies are either related to basic concepts of Islamic microfinance such as its similarities and differences compared to conventional microfinance, or to propose models of Islamic microfinance, Islamic contracts applicable for Islamic microfinance, and operations and experience of emerging Islamic microfinance in Muslim communities, mostly Islamic countries (Dhumale and Sapcanin, 1999, Ahmed, 2002, Ahmed, 2007, Al Asaad, 2008, Wilson, 2007, Dusuki, 2008a, Seibel, 2008, Smolo and Ismail, 2011). Some studies carried out in non-Muslim countries such as India, Sri Lanka, Australia, the Philippines, and the United States of America mainly provide historical background, operations, and preliminary evaluation of the IsMFIs (Obaidullah and Mohamed-Saleem, 2008, Ahmad and Ahmad, 2008, Karim et al., 2008b). As the non-Muslim countries' specific internal and external environments greatly affect the formation, operations and survival of the IsMFIs, an in-depth study of such IsMFIs is then proposed.

In Thailand, a limited number of studies have been conducted on microfinance in general and IsMFIs in particular. Usually, the Thai microfinance research, as in other countries, focuses on the supply side of microfinance, especially its effect on household income and livelihood. As for IsMF studies, which are really few in number, the researchers concentrate on either legal or managerial aspects (Kama, 2009, Phatthanapreechawong, 2004). As Thai development policy-makers have been moving towards IsMF programmes to increase economic inclusiveness, to reduce the poverty of the southerners and



subsequently, to possibly resolve the conflict, a study on demand for, outreach, sustainability and, particularly, impact of the existing IsMFIs becomes overwhelmingly relevant. This will offer some insights into the possibility of the success of the upcoming IsMF programme initiated by the government based on the experiment of Islamic saving cooperatives in the same settings and socio-economic environment.

Finally, many Muslim scholars emphasise the socio-economic role of Islamic financial institutions is to promote Islamic goals of Islamic economics. However, most Islamic financial institutions seem to fail to address this issue. The emergence of IsMFIs is viewed as a practical innovative finance programme to reach those goals. It will therefore be interesting to see, apart from conventional goals of microfinance, whether these IsMFIs in Thailand do achieve some other goals of Islamic economic activities.

### **1.3 RESEARCH AIM AND OBJECTIVES**

This study aims at examining the developments and prospects of Islamic microfinance and assessing their performance and scope in a non-Muslim country, Thailand. The specific objectives of the study are as follows;

- (i) To identify the factors affecting the demand for IsMF services;
- (ii) To evaluate impacts of these IsMFIs on client households;
- (iii) To examine outreach and sustainability of IsMFIs in Thailand; and
- (iv) To highlight prospects and challenges facing these IsMFIs.

### **1.4 RESEARCH QUESTIONS**

The following research questions should be answered in order to fulfil the research aim and objectives:

- (i) What are the income and non-income factors affecting the demand for IsMF products and services?

- (ii) How do different IsMF products and services affect the economic wellbeing of the poor and financially excluded?<sup>2</sup>
- (iii) How do different IsMF products and services affect the non-economic variables of the poor and financially excluded?
- (iv) How successful the IsMFIs are in reaching the poor and financially excluded?
- (v) What is the extent of the sustainability, efficiency and profitability of the IsMFIs?
- (vi) What are the prospects and challenges facing the IsMF in a non-Muslim country, Thailand?

## **1.5 MOTIVATION FOR THE RESEARCH**

There are three main motivations for this research:

- (i) A review of microfinance literature reveals a scarcity of research relating to impacts of other microfinance products, except micro-loan or microfinancing. The review also indicates a scarcity of research relating to Islamic microfinance in all aspects, including demand, impact and outreach and sustainability. A scarcity is also found in literature on Islamic microfinance in a non-Muslim country, like Thailand. There is, therefore, a strong incentive to investigate, demand and impacts of IsMFI products in Thailand.
- (ii) A review of Islamic microfinance literature indicates that microfinance tool can be incorporated into Islamic finance so that the socio-economic objectives of Islamic economics and finance may be better achieved. Therefore an exploratory study that examines various aspects of impacts is needed to ascertain the impacts of Islamic microfinance on the lives of the poor and financially excluded Muslims who constitutes a large part of the world poor.
- (iii) The government of Thailand has identified Islamic microfinance as part of a strategic plan to solve the long-standing conflict in southern Thailand in which Muslims form the largest part of the population. A study to explore the possible

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<sup>2</sup> In this research, 'the financially excluded' refers to people who do not have access to financial market due to religious reasons.

success of IsMFIs in terms of fulfilling the needs and improving lives of Muslims is urgently needed. This might help to direct effectively economic policies towards the southern Muslims and solve the conflict in the near future.

## **1.6 RESEARCH METHODOLOGY**

This research employs a combination of quantitative and qualitative methods in which explanatory and descriptive approaches to research are adopted. Firstly, a questionnaire-based survey is conducted to examine the perceptions and opinions of IsMFIs' clients on demand and welfare impacts of Islamic microfinance. Information is also gathered using interview sessions with IsMFIs' customers to investigate in more depth the complicated features of welfare impacts of Islamic microfinance in Thailand.

Secondly, financial information from annual reports of IsMFIs during 1997-2008 is collected to compute relevant financial ratios, illustrating the outreach and sustainability of IsMFIs. Based on these ratios, the researcher describes trends and growth from which conclusions about outreach and sustainability can be meaningful. The research methodology used in this research is described in detail in Chapter 5.

## **1.7 STRUCTURE OF THE THESIS**

This thesis consists of eleven chapters. The introduction chapter (Chapter 1) provides the research background, statement of the problem, research aim and objectives, research questions, research motivation, a brief research methodology, and the structure of the thesis.

**Chapter 2** reviews the relationship between poverty and microfinance. Issues related to concepts of poverty, the poor and financial markets, definitions and characteristics of microfinance, its development, and the role of microfinance in poverty alleviation and financial inclusiveness are discussed. Furthermore, the literature on demand and performance of microfinance programmes, i.e. outreach, sustainability and welfare impacts including measurements and experiences of microfinance projects across the globe, is presented.

**Chapter 3** explores the basic understanding of Islamic development of which Islamic finance forms a key part. It discusses the framework of Islamic development, *Shariah* provisions relevant to finance, and development and trends of Islamic finance; and finally, it highlights the short experience of Islamic microfinance in terms of demand and performance.

**Chapter 4** attempts to allocate the need for Islamic microfinance in Thailand. It discusses issues concerning economic development and poverty alleviation efforts in the country, the socio-economic conditions of Muslims in the southern region, the Southern unrest, Thailand's financial system, and the development of Islamic financial institutions in the country. These provide a comprehensive overview of the need for Islamic financial products and services to improve the welfare and financial inclusion of Muslims in Thailand's financial system.

**Chapter 5** discusses the research methodology employed in this research to answer the research questions. It focuses on research methods, research method instruments, sampling process, pilot testing procedures, data collection process, research method for data analysis, and data quality and reliability.

**Chapter 6** answers research objective (i) and research question (i). It describes the empirical results on the demand for Islamic microfinance in Thailand. It also provides a brief descriptive analysis of the characteristics of the respondents and their households. Other sections focus on the relationship between the respondent clients and IsMFIs, and their demand for Islamic microfinancial products and services.

**Chapter 7** provides the results of statistical analysis of the impacts of Islamic microfinance on the respondents' households. It answers research objective (ii) and research questions (ii) and (iii). The statistical results include descriptive and inferential analysis, i.e. as percentage, mean, standard deviation, Kruskal-Wallis Test, Mann-Whitney Test, Spearman Rank Order Correlation, and binary logistic regression. These techniques are employed to explore impacts of various Islamic microfinancial services on the lives of the respondents' households.

**Chapter 8** presents the results of the interviews which were designed to further investigate the demand and impact structures of Islamic microfinance in Thailand. It also covers issues related to achievements and challenges faced by IsMFIs in the view of the customers. This chapter therefore attempts to answer research objectives (i), (ii), and (iv); and research questions (i), (ii) (iii) and (vi).

**Chapter 9** provides outreach and sustainability conditions based on financial data collected from financial reports of IsMFIs. It provides an answer to research objective (iii) and research questions (iv) and (v). Relevant indicators are described and compared among the IsMFIs. This chapter also highlights some efficiency and profitability as the IsMFIs are initially proved to fulfil outreach and sustainability ambitions. The amount of *zakah* contributions of the IsMFIs is also provided at the end of the chapter.

**Chapter 10** critically reflects on the findings in this research. Each section attempts to address an objective presented in Chapter 1 by answering the corresponding research question(s). Key findings on current status, demand for, impacts, outreach, sustainability and achievements and challenges facing IsMFIs in Thailand are summarised and appraised.

**Chapter 11** concludes this research by providing concluding remarks based on the research findings. It also highlights practical and policy recommendations for stakeholders of Islamic microfinance. The final section of this chapter presents the limitations of the research and recommendations for future research.

## **Chapter 2**

### **MICROFINANCE: A LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

Microfinance, which is characterised by innovative financial arrangements tailored to the socio-economic environment of poor and excluded households, is believed to be an effective tool for poverty eradication (Adams and Fitchett, 1992). Experiences of MFIs in the developing countries seem to suggest that it may not be a magic bullet to solve the problem of poverty; country-specific factors such as infrastructure, transport and education system may play an important role in the success of microfinance intervention. Several paradigm shifts in rural development finance reveal that the success of a rural finance project such as a microfinance programme depends a great deal on the understanding of the concepts, causes, and different dimensions of poverty. With the right understanding and operational definition of poverty in a local context, measurement and alleviation policies can be effectively designed and implemented (IPC, 2006). In fact, these factors influence microfinance institutions' (MFIs) performance and prospects, the topic of this study. This chapter therefore describes poverty, the role of microfinance as a poverty eradication tool, and the performance of MFIs in performing this role.

The first part of the chapter introduces the concept, causes and measurement of poverty, and then presents the definitions, characteristics, development and role of microfinance in poverty alleviation. This will explain the readers the basic nature and understanding of microfinance and its role in influencing the outreach, sustainability and welfare impact. The next section discusses the demand for microfinance and identifies the limitations of demand studies. The section aims at revealing the current stage of demand studies of microfinance, which has been largely neglected by academic discussions. Information on the demand allows a microfinance project to design products and delivery systems that suit its clients and is vital for the success of a microfinance programme.

The following section reviews the concept of the triangle of microfinance proposed by Zeller and Meyer (2002b). In this section, performance indicators of outreach and sustainability are discussed in detail. This is followed by a comprehensive discussion on

the impact of microfinance on the welfare of the poor and excluded, the main theme of this study. It offers theoretical discussions and practical experiences of performance of MFIs, identifies gaps in the previous studies, and pinpoints where the main contributions of this study lie. A summary section then concludes this chapter.

## **2.2 POVERTY AND MICROFINANCE**

### **2.2.1 Concept, Causes and Measurement of Poverty**

Poverty can be conceptualised and analysed in many ways. These lead to a different understanding of meanings and causes of poverty, which subsequently brings about distinct methods of measurements and alleviation policies and solutions (Chambers, 2006, Laderchi *et al.*, 2003). Townsend (1993) suggested that the discussion on poverty has been based principally on three correlated conceptions of subsistence, basic needs and relative deprivation. A household is poor based on the concept of subsistence if its income is insufficient to satisfy biological needs which are the means of survival such as food, water, clothing and shelter; this overlooks other dimensions of poverty that cannot be basically assigned monetary values (Rao, 1981, Lipton, 1983, MacPherson and Silburn, 1998).

Poverty based on the concept of basic needs comprises specific minimum requirements of a family for private consumption and essential services provided by and for the community as a whole (Townsend, 1993). The essential services include, for example, clean water, public transportation, healthcare, education and cultural facilities. The concept of relative deprivation describes situations where a person possesses less of some desired attribute than do other people in the same society. The attributes may consist of income, employment conditions and social status. This concept thus takes into consideration the element of judgement in determining poverty level (Wedderburn, 1974, Townsend, 2006). The concepts of poverty discussed above tend to be a result of various stages of economic development; and all have certain strengths and weaknesses. Sen (1981, p.22) contends that absolute notion of poverty ‘deserves substantial reformation but not rejection. It relates to core of the absolute deprivation, keeping issues of starvation and hunger as the centre of

the concept of poverty'. Relative deprivation 'supplement[s] the earlier approach of absolute dispossession'.

Poverty is a result of the organisation of the economic, political and social system of a particular society; it can thus be analysed from macro and micro perspectives. At the macro-level, poverty and growth are interconnected (Townsend, 2006). It is suggested that the main issues in growth involve capital accumulation, savings and investment finance. Adam Smith, for instance, emphasizes the role of capital accumulation in economic development. Capital can be invested so that the entire economy can benefit from these investment activities. The benefits can be in terms of goods and services available in the economy. Neoclassical models tend to focus on investment, particularly the role of interest rates in determining investment. Schumpeterians focus on the role of entrepreneurs in economic development (Baldwin, 1972). The poverty level of a country will be reduced if there is an increase in capital accumulation, savings and investment. The country's economy then experiences high productivity of goods and services and higher aggregate income of households. These lead to higher rates of economic growth (Alcock, 2006).

Causes of poverty from a micro-level can be understood from the lack of resources in the forms of human, physical and financial capital. Sen (1981, p. 45) identifies 'entitlements of household', which are determined by ownerships and the institutional arrangements, as factors affecting income levels of households. The entitlement approach to poverty 'concentrates on the ability of people to command food through the legal means available in the society, including the use of production possibilities, trade opportunities, entitlements *vis-a-vis* the state, and other methods of acquiring food'. Entitlements can be trade-based, production-based and own-labour-based, as well as through inheritance and transmittance.

As a result of conceptual uncertainties, poverty can be measured in many ways, depending on its use and applicability to the person measuring it (Alcock, 2006). Ravallion (1996) suggested that, despite the fact that distinctions have been recognised between absolute and relative definitions of poverty, in research practice a mixture of the two is employed. The process of poverty measurement starts by finding a single monetary indicator of household



welfare which could be either total expenditure on consumption or total income in a period. The next step is to define a set of poverty lines that estimate the cost to the household of the level of welfare required to avoid poverty. Finally, an aggregate poverty measure is estimated. Although most countries refer to absolute poverty in defining the countries' poverty lines, various methods and measurements are utilised, leading to different results and difficulty in cross-country comparison (IPC, 2006, Alcock, 2006). It does, however, reflect the core concept and definition of poverty that have been appreciated.

### **2.2.2 The Poor and Financial Markets**

Credit markets, especially in most developing countries, are characterised by inefficiency caused by various factors. Chief among them are enforcement problems and imperfect information. The enforcement issue is related to repayment of loans. Individual borrowers may be unwilling or unable to repay the loans. The credit markets therefore have a system in place to legally enforce repayment. Besley (1994) points out that enforcement problems inherited in rural credit markets are of two kinds: ability to ensure benefit exceeding costs after default, and poor development of property rights. Enforcing repayments in such markets involves not only costs of sanctions in seizing collateral, but also political costs, especially for rich farmers. Governments sometimes provide debt forgiveness programmes which make borrowers reluctant to repay or use loans wisely. Property rights are usually required for a borrower as collateral. The poor in underdeveloped countries seldom have such rights and are landless. Collateral is therefore unavailable, if not impossible (Hulme and Mosley, 1996). Both enforcement problems make rural loans unattractive to financial institutions.

Credit market failure, which occurs when a competitive credit market cannot produce an efficient allocation of credit, can also originate from imperfect information. The main categories of imperfect information are asymmetric information, moral hazard, and adverse selection. Asymmetric information depicts situations in which one party to a transaction has more or better information on the transaction than the other (Arrow, 1968, Hillier and Ibrahim, 1993, Arrow, 1963). In credit markets for the poor, banks have little information about their potential rural poor clients. They keep no accounting records of their

investments. Only the potential poor borrowers then have relevant information about their investment projects. In addition, transactions costs of lending to the poor are prohibitive because of the small loan size demanded by them. Information flows in rural areas 'are typically established over relatively close distances and within social groups'; financial institutions tend to deal with small groups whose members' characteristics are well-known and monitoring their behaviour is rather inexpensive (Besley, 1994, p. 40).

Another key issue regarding imperfect information is moral hazard which originated from Arrow's contribution to insurance. Arrow (1963) argues that moral hazard may occur where an agent who acts on a principal's behalf may have a different preference from the contract they entered into. He may then act not in favour of his principal but accordingly to his own desire. In credit markets, banks are considered principals and the borrowers are agents. The lenders may not be able to determine the borrowers' actions, as such, they may lessen their efforts to make the project funded by the banks successful (Arrow, 1968). Project failure increases the risk of default. Increased interest rate results in the borrowers taking on riskier projects and may lead to reduced profitability of the banks. They may then choose to set an interest rate that does not clear the market in order to partially influence unobservable behaviour of the borrowers; this is called credit rationing (Hillier and Ibrahim, 1993, Besley, 1994).

All those issues are highly relevant to rural financial markets. It is clear that the loan contract of the poor and financially excluded may not be easily and effectively enforced. When financial institutions have little knowledge about their characters, they are not granted loans. Collateral and savings, which are alternative ways to solve the enforcement issue, are not possible for this group of clients as most of the poor are landless, and in developing countries property rights are scarce. These people are too poor to save. Moreover, collecting information on and screening poor borrowers is costly for a number of reasons. Financial institutions are therefore reluctant to offer credit to the poor. Borrowing from friends and relatives and other informal financial institutions is then the only way to finance their financial needs. As a result of that, many poor households remain

deep in the poverty trap for generations (Hulme and Mosley, 1996, Hoff and Stiglitz, 1990, Braverman and Guasch, 1986).

### **2.2.3 Definition and Characteristics of Microfinance Institutions**

Even though microfinance in various forms has been evolving over a few decades, definitions of microfinance proposed by scholars and organisations seem to differ from one another. Those definitions tend to change significantly in various stages of its development (Smolo, 2007). This section explores some of those definitions and attempts to provide a clearer idea of what microfinance involves. Johnson and Rogaly (1997, p.1) state that microfinance is ‘the provision of financial services dealing with very small deposits and loans’. Otero and Brand (2001, p. 1) assert that ‘microfinance is the provision of financial services to low-income and very poor self-employed people’. The above definitions tend to indicate that the early era of microfinance involved providing small loans or credits to the poor for their micro-enterprise investments. There is limited discussion on other types of financial services. After this initial period, the definition of microfinance appears to change significantly.

Zeller and Meyer (2002b, p.1) define microfinance as the ‘supply of formal financial services to poor people shunned by banks because their savings were tiny, their loan demand was small, and they lacked loan collateral’. According to the Asian Development Bank, ‘microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households and their micro-enterprises’ (Coleman, 2003, p.1). The World Bank describes microfinance as ‘the provision of financial services, including savings, credit, insurance and payment services, to low-income people’ (WB, 2009). At the current stage of the microfinance industry, it can be concluded that microfinance is the provision of small loans, savings facilities and other financial services designed for the poor and excluded who cannot access the financial market for various reasons.

The World Bank (1999) identifies a number of designs and features of microfinance in the underdeveloped countries. Loans and other financial products provided by MFIs are small

and have short repayment periods. It is reported that amounts of loans to individual clients in all pioneer microfinance institutions such as BancoSol of Bolivia averaged of USD92-USD361 from 1987 to 1994. The Regional Rural Bank of India had an average loan size of USD136.3 in 1991. The successful Bank Rakyat Indonesia (BRI) Unit Desa, for instance, does not follow this general practice. The microfinance arm of the BRI offers both small and large loans depending on the needs of its clients. Its loan amounts may be as small as USD15 and as large as USD 2,700. The bank also provides loans over longer repayment times (Hulme and Mosley, 1996).

Another main feature of microfinance programmes is that they target the poor and landless group of people. Evidently, MFIs' main clients are poor women and they have good repayment records (Johnson and Rogaly, 1997). The Grameen Bank, for example, reported as at the end of the year 2009 that its loan recovery rate was 96.55 per cent and the total number of borrowers was 7.97 million, 97 per cent of whom were women (GB, 2011). FINCA, which is a village banking method, reported a repayment rate in excess of 96 per cent (Brau and Woller, 2004). The high recovery rate of the bank is always attributed to the group-lending technology. Some scholars argue that women's participation in microfinance programmes is a kind of empowerment tool for those regarded as socio-economically and politically excluded groups in developing countries. High interest rates imposed by MFIs barely seem to affect the repayment behaviour of this group of clients (D'Espallier *et al.*, 2011).

Unlike commercial banks, where procedures for obtaining loans and other financial services are lengthy and bureaucratic, MFIs provide a quick and easy procedure for accessing loans and other services. Group technology and personal reference are used to obtain the necessary information for loan and financial service approval. Many microfinance schemes, especially the Grameen model, require group members to either approve or propose the loan application of any member of that group. In the individual lending technology approach, heads of villages, respected personalities and assigned persons provide alternatives. Timely and fair information obtained by these alternative arrangements makes it possible for MFIs to process financial service requests faster and

more effectively. The clients of MFIs may gain access to repeat loans and other financial services on the merit of a good repayment history (Hulme and Mosley, 1996).

The final feature of MFIs is mobile branches and other means of reaching borrowers. Most MFIs have branches in neighbourhoods that are close to their clients. This offers several advantages to the MFIs. The Grameen Bank has branches in most rural areas. As at the end of 2009, the bank had 2,562 branches serving 83,458 villages in the country and its field officers visit client groups in all villages on a regular basis (GB, 2011). This allows the field officers to communicate with the clients directly, to collect loan repayments, and to give training on various aspects of the microfinance programme to its clients. The BRI Unit Desa has reportedly established many new branches in rural areas closer to its main client groups (Hulme and Mosley, 1996).

Bennett (1998) and Ledgerwood (1999) proved that playing the role of financial intermediation is not the only task of successful MFIs. Many MFIs offer social intermediation services such as group formation, development of self-confidence, and education and training to their clients (Bennett, 1998, Ledgerwood, 1999). Such programmes aim at developing skills and confidence in the poor and excluded to access formal financial services provided by MFIs. Evidence suggests that many eligible clients of microfinance programmes do not utilise microfinancial services partly because they do not have skills and confidence to engage in such contracts. Education programmes may provide them with knowledge on their rights and responsibilities in the programmes which may increase their readiness for successful programme participation. In such a way microfinance can be expected to successfully achieve the ultimate goal of poverty alleviation and improve the institutional capacity of rural financial systems through the provision of cost-effective financial services to the poor and financially excluded (Ledgerwood, 1999, Morduch, 1999, Morduch, 2000, Otero, 1999).

Microfinance programmes are pioneered by NGOs through various donations and subsidies. As microfinance develops and spurs interest from many parties, new entrants emerge to tap the microfinance market. Microfinance services can now be supplied by various forms of organisations including private commercial banks, government specialised

banks, cooperatives, self-help groups, NGOs, and non-bank financial institutions. These can also be categorised into formal, semi-formal and informal sectors. ‘Various combinations of these providers are available in the financial sectors of less-developed countries’ (Ledgerwood, 1999, p.13). Each form of MFI offers different advantages and may be suitable for social structure and context. Private commercial banks have the advantage of being able to provide various types of financial services such as loans, savings, insurance and payments. Government-owned banks can benefit from a large branch network which often covers rural areas where most poor households live. The cooperative, a kind of semiformal financial institution, provides a strong sense of ownership and can provide multiple services under one roof. The Grameen Bank and BangcoSol are successful microfinance providers in the form of specialised banks. SANASA in Sri Lanka is an example of a cooperative involved in providing microfinance to the poor and financially excluded.

#### **2.2.4 Microfinance Development**

Microfinance has changed significantly during the past few decades. The evolution of rural finance began with agricultural finance, followed by micro-credit and finally microfinance (Matin *et al.*, 2002). This development shows the conception of poverty and poverty alleviation strategies in various countries, with the World Bank as the main sponsor. According to Harper (2003), the main assumption behind the rise of agricultural finance is the dominance of agricultural production in underdeveloped countries. Most poor are involved in agriculture as farm owners or labourers. Access to finance for investment in assets and technology for agricultural production is essential to provide food security and possibly to fight against poverty. Agricultural finance schemes, provided mainly by donors and government agencies, targeted the male heads of households who were viewed as the main breadwinners of families (Hulme and Mosley, 1996). Evidence shows that agricultural credit programmes have achieved limited success. This has paved the way for micro-enterprise finance.

After a certain period of time, it was discovered that, in addition to agricultural finance, the poor and vulnerable need microenterprise finance for off-farm business. This is based on

three main assumptions: rural micro-entrepreneurs are not capable of organising themselves; they are too poor to save for their business investment; and they thus need subsidised credits for their micro-enterprises (Seibel and Parhusip, 2003). Provision of small loans largely to micro-entrepreneurs will increase their income-generating activities and eventually they will escape poverty. McKernan (2002) states that micro-credit programmes offer not only credit for the purchase of capital inputs in order to promote self-employment, but also non-credit services and incentives. The latter includes vocational training, information sharing and monitoring among members, and awareness on health issues and civil responsibilities and rights. Recent practices of micro-credit, however, tend to include other types of financial services, apart from small loans, which are considered parts of the succeeding, microfinance revolution (Seibel and Parhusip, 1990, Harper, 2003, Rutherford, 2003).

The terms micro-credits and microfinance are used interchangeably by development researchers, donors and practitioners. This tends to cause confusion and misunderstandings among them. Elahi and Rahman (2006) demonstrate that the difference between the two is a fine one. At a functional level, micro-credit programmes primarily offer loans and other financial and organisational activities related to loan operations. Microfinance schemes, on the other hand, offer a range of financial and organisational services which may include, but are not limited to, credit, savings, insurance etc. At a conceptual level, micro-credit is operated by NGOs and relies on external financial support. Microfinance organisations, however, pursue financial self-sustainability.

In addition to that it has been suggested that microfinance services should be wide enough to satisfy the short-, medium- and long-term needs of the poor and excluded. These services must be delivered in a convenient, appropriate, safe and affordable manner (Seibel and Parhusip, 2003, Martin *et al.*, 2002). In this stage, microfinance requires a more market-oriented approach where increased emphasis on innovations to diversify financial products and institutional arrangements is aimed for. Questions of both poverty alleviation and sustainability are now becoming increasingly important (Zeller and Meyer, 2002b, Zeller and Sharma, 2002a, Jackelen and Rhyne, 2003, Harper, 2003).

### **2.2.5 The Role of Microfinance Institutions in Poverty Alleviation**

The experience in developing countries tends to suggest that formal financial markets and institutions have not fulfilled the role of providers of financial services to the poor and excluded. Microfinance institutions fill this gap as a poverty alleviation mechanism. An earlier study on macroeconomic approaches to poverty reduction conducted by Adams and Von Pischke (1992) concluded that modern microfinance is not a viable mechanism. Buckley (1997) contended that the capital injection in the form of microfinance cannot solve the problems faced by microentrepreneurs in Africa. This is also found in a rich country *i.e.* Netherland (Deneweth *et al.*, 2013). The fundamental structural changes are needed before microfinance can be an effective tool for poverty reduction. This finding is supported by the findings from India where microfinance finance programmes did not change the lives of the poor in Madhya Pradesh due to poor infrastructure (Rather and Lone, 2012) Schreiner (1999) indicated that microfinance programme has a small impact on household income. Bhatta (2001) further showed that Grameen Bank model does not have any impact on income of the poor in Nepal. Factors such as hostile topography and hence lack of markets may reduce the effectiveness of a microfinance programme. Legal restriction might also affect microfinance programmes negatively (Britzelmaier *et al.*, 2013).

Some other studies, however, confirm the effectiveness of microfinance programmes as a poverty alleviation policy. Weijland (1999) proved that clusters of extremely poor Indonesians succeeded in rural development programmes. He further argues that successful rural development programmes can be the basis for the subsequent stage of industrial development in the country. Waller and Woodworth (2001) assert that microfinance has proved to be an effective tool for fighting poverty in the developing world. MFIs improve the quality of life of weak and poor households in many ways, some of which are discussed below. Microfinance programmes in Pakistan tend to effectively help the poor to improve the lives of the poor by smoothing their consumption, managing risks, building their productive assets and enhancing earning ability (Durrani *et al.*, 2011).



Studies have shown that, in microfinance intervention for the poor, poverty tends to be a multidimensional phenomenon. Reducing poverty means increasing household income, improving nutrition and health, achieving opportunities for children's education, decreasing vulnerability and empowering the powerless. Mosley and Hulme (1998) found that microfinance schemes in various parts of the globe increased incomes of household recipients. Nevertheless, the impact on increased income is at a decreasing rate in proportion to improved income and assets of households. Mosley (2001) concluded that MFIs in Bolivia increased the incomes of microfinance beneficiaries depending on their initial poverty levels. Chowdhury *et al.* (2003) affirm that the poverty level of clients of BRAC in Bangladesh was reduced by enabling them to participate in microfinance projects. Kondo *et al.* (2008) point out that microfinance programme loans have positive impact on *per capita* income of poor households in the Philippines. A study by Nghiem *et al.* (2007) in Vietnam suggested that microfinance has a positive impact on household income and consumption. Studies by Mahjabeen (2008) and Waheed (2009) also support the above claims.

When the poor and excluded gain access to finance and production in various forms, they tend to have better nutrition, health practices and health outcomes than non-client groups of poor people. Zeller and Sharma (2002a) claim that access to microfinance help to ensure food security of poor households by expanding production activities, allowing effective management of asset portfolios, and permitting consumption smoothing. A Ghana case showed that clients of a microfinance programme, Freedom from Hunger, had better breast-feeding practices and their children were healthier than non-client children (MkNelly and Dunford, 1998). A study in Bangladesh by Chowdhury and Bhuiya (2001) proved that fewer member clients of MFIs suffered from serious malnutrition relative to the control group. Pitt *et al.* (2003) and Mohindra *et al.* (2008) concluded that microcredit in Bangladesh and India could help to improve the health of poor women by protecting them against exclusion from healthcare and could arguably aid in enhancing their mental health.

It has been argued in the literature on poverty that lack of education is one of the main factors that reduce the opportunity for households to seek better employment and better

incomes. Evidence has shown that children of MFIs' clients gain more access to education and the school dropout rate is lower in these households. A longitudinal study of clients of BRAC in Bangladesh indicated that the number of children of the members who passed the competency test among children aged 11-14 almost doubled during the 4 years study period (Chowdhury and Bhuiya, 2001). Using data from South India, Holvoet (2004) found that the financial and social interventions of women members of microfinance groups brought about higher inputs and outputs for their children, especially for girls. A study in Honduras reported that clients' participation in microfinance programmes improved their income levels, enabled them to send many of their school-aged children to school and reduced dropout rates (Marcus *et al.*, 1999).

Another dimension of poverty that MFIs emphasise is powerlessness (D'Espallier *et al.*, 2011). This dimension of poverty can exist within households as a result of gender and age and within the community due to differences in social class, ethnicity and wealth. Johnson and Rogaly (1997) argue that, although women can be targeted by microfinance interventions on the ground of efficiency, the interventions may initiate their empowerment by raising their income and their control over it, improving their ability in micro-enterprises, and allowing them to become more involved in the household decision-making process. Using data from Bangladesh, Amin *et al.* (1998) insist that women's empowerment is one of the determinants of participation in microfinance projects. Has hemi *et al.* (1996) and Mustafa *et al.* (1996) suggested that participation of women in microfinance programmes empowers women in various areas. In addition, Muslim clients, who are religiously sensitive to interest-based financial institutions, are empowered by Islamic microfinance programmes of Islami Bank Bangladesh. They could participate in financial market and significantly improve their lives (Ahmed, 2002, Rahman, 2010).

The above discussion demonstrates that microfinance intervention is an effective tool in fighting poverty, especially in the developing world, where formal financial markets are ineffective. The application of microfinance depends on the meaning and measurement of poverty used by policy-makers for microfinance intervention purposes. In the past decades, MFIs in various forms have been established to provide small financial services to the poor

and excluded. MFIs are considerably successful in filling the gap left behind by the formal financial markets. Microfinance programmes in certain countries may not however have any impacts on the lives of the poor due to lack of infrastructure such as markets and transportation. These infrastructures need to be improved so that microfinance may effectively change the lives of the poor and financially excluded households.

## **2.3 DEMAND FOR MICROFINANCE AND THE LIMITATIONS OF CURRENT DEMAND STUDIES**

Studies on microfinance focus on the supply side of microfinance. The studies concentrate on the management of MFIs, methods of sustainability assessment and comparison, scale and outreach of microfinance programmes and welfare impacts on the poor and excluded. A limited number of studies offer some insights into various aspects of demand for microfinancial services. Many scholars in the field are of the opinion that the poor can be best served if the aspects of their demand are assessed and identified. The key aspects are the poor's financial behaviour of the poor and the financial environment in which they live. Furthermore, access to and participation in the programmes is equally relevant for efficient, suitable and affordable financial services to satisfy the unmet financial demands of the poor and vulnerable. Hence, this section provides the basis of the demand for microfinance in various countries, how demand for microfinance services is measured, and limitations of the current demand studies.

### **2.3.1 Demand for Microfinance**

Many studies on microfinance conclude that there is a gap between access to and demand for financial services by low-income groups in various countries. The matter is more serious in developing countries where financial markets are inefficient and most segments of countries' populations do not have access to formal financial services. A study conducted in Burkina Faso where the poor are exposed to highly seasonal income and demand patterns, crop yield uncertainty and unfavourable market conditions confirms this fact (Nguyen *et al.*, 2002). Zeller and Sharma (2002b) reveal that poor households in Bangladesh had less access to credit than the 'near poor' households. The gap existed

partly due to the fact that practitioners and policy-makers previously had little knowledge and information about the financial behaviours of the poor and the environments in which they live (Wright, 2005). A number of subsequent studies have shown that their demand 'proved to be varied, universally and intensively used, of high aggregate value, and connected to every aspect of life' (Rutherford, 2001, p. 5). Guangwen (2008) reported that there are some 249 million rural households, over 8 million registered unemployed workers, and more than 42 million SMEs and micro-enterprises who are potential clients of MFIs in China alone.

Zeller and Sharma (2002b) and Wright (2005) argue that the poor are no different from the non-poor. They require a range of financial services which are driven by different needs. They have on-going needs for working capital for their micro-enterprises, productive assets for their farms, investment opportunities such as purchase of land, asset protection, health, and shocks. In different stages of life they need financial services to finance various events such as birth, education, marriage, old age, death, household formation etc. Their financial needs therefore include not only credit for farming and micro-enterprises, but also savings and insurance against risks of different natures (Wright, 2005, Nguyen *et al.*, 2002, Seibel and Parhusip, 2003, Harper, 2003). With this understanding, suitable products can be designed and offered to the poor around the world and their lives will be improved.

The economic conditions of the poor can be improved if they voluntarily demand and seek the financial services offered to them. Nonetheless, they have their own perceptions of the costs and benefits of utilising financial services (Stanton, 2002). Zeller and Sharma (2002a) suggest that poor households have inadequate liquidity. They therefore fear that their unpredictable income stream will not match the repayment requirements of MFIs. More often, when the poor have low education levels or are illiterate, profitable investment opportunities available to them are limited or non-existent. Datta (2004) discovered that the poor are unable or unwilling to bear the risk, which is a key factor in becoming successful entrepreneurs. Their current and future income may not be enough to cover their bad loans and satisfy their much needed consumption. Churchill (2002) claims that the poor exclude themselves from taking loans and other financial services because they fear public censure

if they fail to repay. This commonly applies in most microfinance institutions using group technology.

It has been suggested that MFIs can serve the poor and financially excluded effectively if they are able to clearly understand their financial behaviours, and the socio-economic factors and environment influencing household access to financial services. Effective financial interventions can be designed to respond to their needs (Wright, 2005, Jackelen and Rhyne, 2003). Rutherford (2001) reported that poor households in Bangladesh used thirty-eight different types of services and devices of formal, semi-formal and informal financial institutions. On average, poor households used between nine and ten different kinds of services in a year. In addition, the study shows that their financial transactions are daily tasks. Although these individual transactions are small, their annual value is sizeable. Wright (2005) argues that the poor need a variety of financial services including credit, savings and insurance to serve their life cycle events, emergency cases and available opportunities for investment in land, business, buildings and comforts.

Zeller and Sharma (2002a) and Nguyen *et al.* (2002) suggested that the MFIs, which are equipped with detailed information on the poor, should emphasise innovations to diversify their financial products and institutional arrangements aimed at the risk-bearing ability of the poor (Zeller and Sharma, 2002a, Nguyen *et al.*, 2002). This will lead to a market-approach to microfinancial services for the poor and will improve their access to financial services (Rutherford, 2001, Stanton, 2002, Jackelen and Rhyne, 2003, Wright, 2005). Guangwen (2008, p.3) stated that ‘the credit capacity of individuals at this level of demand has very distinct characteristics, and their different requirements should be met through different types of financial institutions and supply models’.

### **2.3.2 Measurement of Demand**

Initially, most microfinance programmes are supply-driven in that governments, donors and practitioners assume that the poor need loans for their small business and other productive purposes. Consequently, products and delivery techniques in the earlier stage of microfinance development were narrow, standardised and inflexible (Zeller *et al.*, 2003).

They eventually come to understand that the poor are not homogenous. They have diverse financial needs. Estimation of demand becomes crucial for ensuring that the microfinance services offered can reach, are demanded by, and truly benefit the targeted poor households. Conceptual studies of demand for microfinance, although limited, has continued to increase (Lyne and Darrach, 2002, Wright, 2005, Zeller and Sharma, 2002a, Nguyen *et al.*, 2002, Stanton, 2002). Materials on measurement of demand for microfinance services are limited and mostly prepared by practitioners. They usually estimate demand for microfinance from readily available data from secondary sources, primary research using surveys, and potentially detailed financial diaries of households. These methods are briefly discussed in this section.

Available data from government and non-government sources, which are collected for other purposes, may be used to estimate demand for microfinance services. The estimated figures may provide overall information about the demand for microfinance services of countries under study and are used for policy formulation. Guangwen (2008) estimated the demand for microfinance in China from data on the unemployed, rural households and small and medium-sized enterprises (SMEs). Data on unemployed people and rural households were collected from the State Statistics Bureau and surveys conducted by other researchers. Data on SMEs were obtained from the Administration of Industry and Commerce and the SME Department of the National Development and Reform Commission. Poor people with an annual net income of less than 785 Yuan and the real number of unemployed were included as potential microfinance clients. The number of registered SMEs and micro-enterprises completed the potential figures. The size of the microfinance market was then estimated on the basis of statistics on the number of potential users.

Mezzera (2002) used household data available from the National Household Survey and the Urban Informal Economy obtained from the National Statistical Office to measure demand for microfinance in Brazil. A proxy for the capital-poor sector, which is the number of own-account workers and the number of employers of up to five workers, is used to produce the estimated figures. In Daniels (2004), household indebtedness data from

Statistics South Africa's Income and Expenditure Survey were used to arrive at demand for the formal microcredit sector in South Africa.

Another method increasingly employed by practitioners is the household or population-based survey. This involves a poor-household population survey in which financial needs, access to financial services, financial behaviours, and financial environment of the poor are assessed using a questionnaire. Adams and Evans (1999) employed a household population survey in Bangladesh. The questionnaire was designed to collect health, demographic and socio-economic information on households, and to assess their access to and participation in microfinance programmes. In Kritikos *et al.* (2009), demand-side of the micro-lending market in Germany was identified using interviews. Retail business owners, foreign business owners and persons who had previously received private loans, were asked to provide information on their funding needs, intended use of funds, and financial sources typically used. Agar and Oliva (2006) employed questionnaire survey to assess demand for financial services, including microfinance, in the tea sector in Malawi. The questions were constructed to identify the quantity of the level of credit accessed and the extent to which financial needs were not being met in households in which existing demand for and access to financial services, mainly micro-credit, was identified.

Apart from the above two methods, a financial diary is an increasingly recognised method of estimation of demand for microfinance. The method requires the gathering of information on financial transactions of poor household respondents for a certain period of time. In Rutherford's (2001) study, financial diaries of poor and near-poor households in Bangladesh were taken for a year. This was done by visiting each household twice a month to record the financial transactions of those households. All financial transactions from every form of financial institution and of any amount were recorded. The information collected suggested the diversity, size and composition of the market for financial services among poor households. This aspect of demand is relevant for microfinance providers, donors and government agencies in improving access to, demand for and potential market for microfinance in particular countries and societies.

### 2.3.3 Limitations of Current Demand Studies

The earlier, supply-driven microfinance programmes to a great extent leads to the limited earlier writings, research and literature on demand for microfinance (Schreiner and Colombet, 2001, Schreiner, 2001, Helms, 2006). The trends in the microfinance industry has gradually shifted as clients' financial behaviours and environment in which they live viewed as important factors in identifying financial products and services used by the poor. Demand-side studies are becoming part and parcel of practitioners' activities and are gaining ground in the development finance literature (Matin *et al.*, 2002, Meyer, 2002, Zeller and Sharma, 2002b, Churchill, 2002, Honohan, 2005). There are, however, some limitations and gaps that will be discussed in this section.

A number of demand studies have focused on the conceptual understanding of various financial needs of the poor as a result of the outreach problem. Adam and Evans (1999) urge that, apart from microfinance expansion, other factors such as diverse conditions, restricted opportunities, and efficient and equitable participation criteria be taken into consideration by potential clients when deciding to participate in a microfinance programme. Financial demand can be linked to life cycle needs, emergencies, current opportunities, and coping with seasonality of income and expenditure patterns. It can also serve a number of purposes apart from micro-enterprise investment. These may include production expansion, efficient management of asset portfolios and consumption smoothing (Zeller and Sharma, 2002a, Johnston and Morduch, 2007, Rutherford, 2003, Hasan and Iglebaek, 2004). Perhaps the main finding of conceptual works on demand for microfinance is that the poor need many types of financial products and devices to manage their lives (Churchill, 2002, Harper, 2003, Seibel and Parhusip, 2003, Wright, 2005).

Subsequent studies on demand for microfinance primarily cover access to and participation in microfinance programmes by the poor. The main assumption behind these studies is there are barriers, price and non-price, to access to financial services among the poor. Financial exclusion can be a result of those barriers and voluntary exclusion by the poor themselves (Demirgüç-Kunt *et al.*, 2008). The aforementioned study involves household interviews or questionnaires concerning demographic characteristics of households, their



sources and uses of financial transactions, statements related to factors influencing programme participation etc. Bokosi (2004) used household characteristics such as sex of household head, marital status, education of the household head, age of participants, and land-holding size as hypothesized factors influencing demand for microfinance services in Malawi. Additionally, sources of credit, loan types by source, uses of credit, and seasonal pattern in use of credit are tested to the extent of credit market participation.

Zaman (1996) employed a complete village survey to identify determinants of participation in BRAC microfinance programmes in Bangladesh in addition to land ceilings, occupational criteria and asset valuations. Factors such as number of adult females in households, number of adult males in households, age of household head, average years of education in households, earner ratio<sup>3</sup>, total amount of land owned, and distance to market-place were integrated into the survey as membership-determining factors. The study found that the earner ratio and female-headed households were the two variables that influenced the decision to participate in microfinance programmes. These two criteria can be used for microfinance targeting criteria so that microfinancial services might reach people who are really in need.

Adams and Evans (1999) tested risk factors for non-participation, employing a survey that contained questions concerning client-related barrier items. The items were insufficient resources, ill-health or vulnerability to crisis, female-head of household, lack of education, and individual or household preference. These kinds of statements or questions shed light on reasons for non-participation and barriers to access to financial services for the poor. However, they do not give a clear picture of the potential demanded in terms of value for microfinance services needed by the poor.

Most quantitative and non-conceptual demand studies rely on rough estimations of demand from secondary data on potential poor people and other potential users of microfinance products and proxies. This gives an overall picture of demand for microfinance services that is arguably suitable for macro-level policy, but it may not give a true picture of

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<sup>3</sup> Earner ratio refers to ratio of earners in households to number of household members.

demand required for micro-level decision-making due to voluntary and non-voluntary exclusion. Guangwen (2008) assessed the potential size of demand for the microfinance market in China by collecting secondary data sources from government statistics. Daniels (2004) estimated the demand for formal microcredit in South Africa using household indebtedness data from Statistics South Africa's Income and Expenditure Surveys which are conducted by a government agency. In Germany, Kritikos *et al.* (2009) explored the demand for microcredit by assessing potential financial needs of retail business owners, foreign business owners, and persons who have previously received private loans.

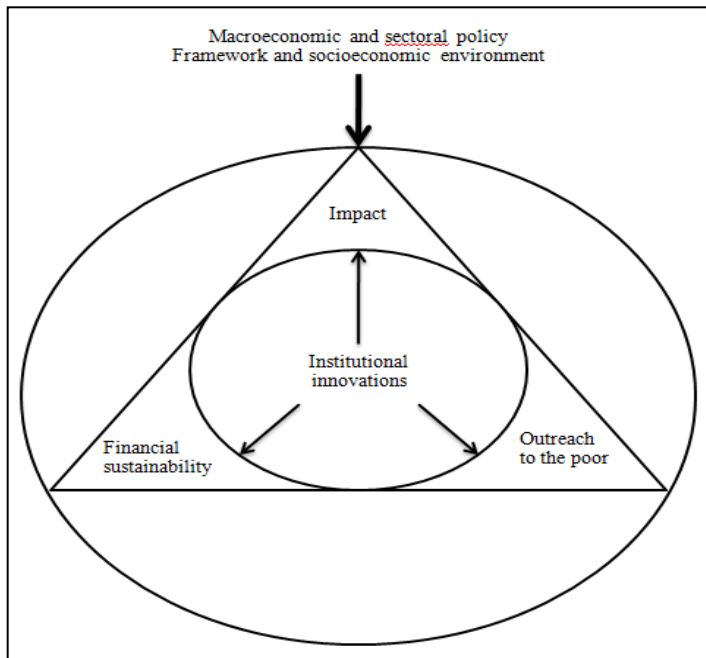
Some notable exceptions to these trends are the demand studies conducted by Rutherford (2001), described earlier in this section, by Oliva and Agar (2006) and by Johnston and Morduch (2007). In general, these demand studies are conducted by practitioners principally for marketing objectives. Oliva and Agar (2006) designed a questionnaire to assess information on the need for small credit by key stakeholders in the tea sector in Malawi. They then used the information to estimate the demand for microcredit by the poor in the sector. Johnston and Morduch (2007) employed household-level data to assess demand for microfinance in Indonesia. A questionnaire was designed to collect data on credit needs and supply of credit. Detailed qualitative and estimated quantitative findings obtained from household surveys give clearer information on financial behaviours and size of demand for microfinance services by the poor. This specialised household or financial survey has now become very relevant as microfinance is arguably moving towards market-led financial solutions for the poor and excluded (Honohan, 2005).

The discussion in this section reveals the importance of demand in microfinance. The assumptions made about earlier microfinance by donors and governments that the poor and excluded only need micro-credit to form their own businesses, may no longer be applicable and may lead to unsuccessful microfinance programmes. Knowing the characteristics of the demand and the ability to estimate it and satisfy it effectively is vital for effective microfinance programmes.

## 2.4 PERFORMANCE OF MICROFINANCE INSTITUTIONS

In the past few decades, studies on financial performance of MFIs have focused on three main policy-correlated issues comprising outreach, sustainability and impacts. Proposed by Zeller and Meyer (2002b), the conceptual framework of the triangle of microfinance (Figure 2.1) suggests that the simultaneous management of the three objectives can be effectively used by policy-makers and practitioners to develop broad working principles to plan and evaluate decisions. Empirical studies have further established that these three objectives of microfinance can be complementing one another and, in certain cases, there is the possibility of a trade-off between them. Successful microfinance programmes appear to be a result of choosing the right mixture of these important objectives. Unfortunately, many MFIs now concentrate on financial performance, leaving social performance unfulfilled (Daher and Le Saout, 2013).

**Figure 2.1: The Triangle of Microfinance**



Source: Zeller and Meyer (2002, p.6)

### **2.4.1 Client Outreach**

The ultimate goal of microfinance is to serve groups of people who are economically or socially excluded from the main financial system. Thus, one of the main objectives of MFIs is outreach - reaching these target groups which are not served or underserved by the formal and semi-formal banking and financial institutions. Outreach tends to depend on the targeting strategies of MFIs (Ledgerwood, 1999, Paxton and Cuevas, 2002, Navajas *et al.*, 2002, Zeller *et al.*, 2003). In developing countries, where most MFIs operate, land-less poor households in rural areas are identified as the main potential receivers of microfinance services. Ledgerwood (1999) asserts that some people are excluded from formal financial services due to their culture, norms and religious principles. Muslims are among those reluctant to participate in formal interest-based financial systems because their religious teaching does not allow them to do so. The number of Muslims participating in microfinance programmes is an appropriate indicator for the outreach of an MFI that targets them.

Schreiner (2002) describes outreach in terms of worth, cost, depth, breadth, length and scope. Two key aspects of outreach are breadth and depth. The studies on outreach of microfinance projects have shown that the main target clients of MFIs appear to be the poorest of the poor and women (UNDP, 1999, Fox, 1995). Grameen Bank, for example, is known to target poor women and empowers them to take charge of their economic activities and households. The outreach of Grameen Bank is identified as the number of poor women served by the bank. The Unit Desa of Village Banking in Indonesia, however, offers its financial services to everyone regardless of their economic and social status. Its outreach indicator is thus the number of clients it serves. Outreach is concerned with enabling a large number of people who traditionally do not participate in formal financial markets, mostly the poor and women, to gain access to quality financial services.

Most discussions on outreach of microfinance relate to different aspects of outreach, measures of outreach, and the meaning of outreach to poor people. Breadth or the extent of outreach refers to the number of beneficiaries that a microfinance programme serves

(Schreiner, 2002, Zeller and Meyer, 2002a, Navajas *et al.*, 2002, Paxton and Cuevas, 2002).

Empirical evidence reveals that MFIs around the world can reach the unserved segment of financial markets. The Grameen Bank, for instance, served 7.97 million members throughout Bangladesh in 2009 (GB, 2011). BancoSol of Bolivia, another reputable microfinance institution, reports serving 161,626 clients in 2008, an increase of 33.35 per cent on the year 2007. The portfolio of the bank reached USD296.325 million at the end of 2008 (Maldonado and Gonzalez-Vega, 2008). The number of micro borrowers of Bank Rakyat Indonesia reached 1.34 million people in 2009.

Depth of outreach 'indicates how deep into the pool of the underserved the institutions or programme has been able to reach' (Paxton and Cuevas, 2002, p.141). Depth of outreach is in line with target groups of microfinance programmes-target strategies, which may differ across programmes (Schreiner, 2002, Zeller *et al.*, 2003). Although direct measurement of depth through income is difficult, depth can be estimated using proxies which will be discussed later in this section.

Schreiner (2002) and Navajas *et al.* (2002) maintain that improved social welfare from microfinance services additionally depends on factors such as worth, cost, length, and scope of outreach. 'Worth of outreach to clients is defined as their willingness to pay'. It focuses on 'the terms of the financial contract and on the tastes, constraints, and opportunities of clients' (Schreiner, 2002, p.592). This implies that loans should match clients' demand otherwise they are worth little to the client. Cost of outreach to clients refers to all costs incurred in obtaining the microfinance services. Apart from price of the microfinance services, costs incorporate transaction costs such as costs of transport, documents, and other costs which are paid by clients. Length of outreach is the time or duration of the supply of microfinance services. This implies that, in order to improve the welfare of people, microfinance programmes should be able to offer financial services to the poor well into the future. The final aspect of outreach is scope which refers to the number of products and services offered by microfinance programmes. A greater the

variety of products tailored to the clients' needs, the wider the scope of outreach of microfinance programmes (Schreiner, 2002).

Outreach is measured using various methods, the most widely-used of which are discussed in this section. Outreach is assessed on the basis of the type of clientele served and the variety of financial services offered. Proxies from data collected from MFIs' clients are utilised to arrive at the breadth of outreach-number of clients served by them and the depth of outreach-types of clients reached and their level of poverty (Yaron, 1994, Ledgerwood, 1999). Breadth of outreach represents the number of clients who are served by MFIs. It may be represented by average loan size or average loan size as a percentage of GDP per capita. Although there are some problems with the depth of outreach indicators, they are useful for performance assessment of MFIs. In order to ensure that the indicators are consistent, the objectives and targets of MFIs must be clearly identified. Therefore depth of outreach can be categorised from the beginning (Ledgerwood, 1999, Von Pischke, 1991, Yaron *et al.*, 1997, Fruman and Paxton, 1998).

The literature on outreach tends to show three important arguable facts: most MFIs fail to reach the poorest of the poor; MFIs which use group-lending technologies seem to reach the poor better; and non-governmental microfinance organisations are more likely to perform well in many countries (Zeller and Meyer, 2002b). MFIs tend to serve a considerable number of the near-poor and the rich segments of society. In Bolivia, most MFIs only reach people who are just above and just below the poverty line. The hard-core poor hardly benefit from them at all. When they are reached, the poorest usually benefit less compared to the non-poor (Navajas *et al.*, 2002, Harper, 2003). Microfinance might make the very poor group even worse off when it reaches them (Hulme, 2003). This is because the poorest of the poor may not have the ability in terms of education, infrastructure and skills to utilise capital and the microfinancial services provided (Zeller and Meyer, 2002b). Wright and Dondo (2001) argue that, even though microfinance programmes may not reach the extreme poor, they benefit people by reducing vulnerability and therefore prevent them from slipping into extreme poverty. The poorest of the poor may need special savings facilities and relief.

Another aspect of outreach is the effectiveness of different types of lending technologies in reaching the potential clients. Navajas *et al.* (2002) proved that, in Bolivia, MFIs that use group-lending technology can reach the poorest better than individual lenders, and the share of the poorest in loan portfolios is highest in rural areas. Zeller *et al.* (2003) revealed that group-lenders are successful in reaching the poor households in South Asia. Hulme and Mosley (1996) found that individual lending by Unit Desa of BRI was successful in reaching large numbers of clients, poor and non-poor. Heidhues *et al.* (2002) suggest that credit unions lending directly to individuals have the lowest transaction costs and tend to be effective in reaching the target clients. These studies seem to suggest that group-lending technology, when utilised together with poverty-targeting, is preferred, and may even be necessary, for making small loans to the very poor because lender transaction costs are high for individual lending.

The final aspect of outreach is related to type of organisation. Park and Ren (2001) stated that non-government MFIs appear to reach the poorest of the poor better compared to governmental programmes. The main reasons for this are overly rapid expansion without proper preparation and the inheriting of incentive conflicts when local government officials manage microfinance programmes. However, regulations do not directly affect the performance of MFIs in terms of outreach. They may, however, indirectly benefit MFIs, especially if regulation is the only possible way to access savings (Hartarska and Nadolnyakb, 2007). This view contradicts evidence from microfinance programmes in Indonesia which suggested that outcomes of microfinance programmes may be reliant on the accountability of local leaders to the populations or the role of bank supervision. The possibility of the agency problem should be recognised and managed effectively (Morduch, 1999).

#### **2.4.2 Sustainability**

The second policy objective of microfinance programmes is the ability to cover their costs and sustain the programmes for long period of time or permanently (Zeller and Meyer, 2002b). In a financial sense, an MFI is said to be sustainable if it can generate enough revenues to cover all costs incurred from its operations, which is, financial sustainability.

This implies that the MFI can continue its operations without any assistance from outside parties in the form of gifts, subsidies or debt relief (Yaron, 1994, Ledgerwood, 1999). Moreover, MFIs must ensure that their products and services can benefit the poor into the foreseeable future (Schreiner, 1996, Harper, 1998). This is termed 'institutional sustainability'. As more poor people start to need access to formal financial services for the first time, the objective of both financial and institutional sustainability is essential for the accomplishment of microfinance initiatives.

Most microfinance institutions rely on donors' funding. The sustainability of these institutions hence becomes one of the main issues facing them (Ledgerwood, 1999). Recent discussions on sustainability concentrate on how best to achieve and measure sustainability of microfinance institutions. Many researchers argue that wider scale and outreach can be only accomplished if MFIs are able to stand on their own feet, covering all costs incurred in their lending and savings activities (Fox, 1995, Harper, 2003, Pollinger *et al.*, 2007). The pursuit of sustainability and eventual self-sufficiency is commonly considered as best practice in the microfinance industry. It helps ensure MFIs' survival, which subsequently brings about long-term provision of financial services to poor households. Sustainable MFIs that price their products at market levels will be able to attract the target population of non-bankable borrowers who do not have access to cheaper products. Traditional lenders may be deterred from competing with MFIs that enjoy large subsidies. Moreover, sustainability may enable MFIs to raise capital from different sources and, finally, a focus on self-sufficiency could prompt MFIs to control and reduce costs (Pollinger *et al.*, 2007).

To determine financial sustainability, revenues which are generated when the assets of a MFI are invested or put into productive use are compared to total expenses which are incurred to earn those revenues. If revenues of the MFI are greater than expenses, that MFI is said to be self-sufficient (Devereux, 1999, Ledgerwood, 1999, Otero and Brand, 2001). Sustainability is widely categorised into two levels: operational sustainability and financial sustainability. Operational sustainability refers to ability to cover operating costs, including provision for loan losses. Some practitioners may include financing costs in the calculation of operational self-sufficiency. Financial self-sufficiency represents the ability to cover



both direct and indirect costs. Direct costs include operating costs, financing costs, and provision for loan losses. Indirect costs consist of the adjusted cost of capital, covering the cost of maintaining the value of equity relative to inflation and the cost of accessing commercial rate liabilities rather than concessional loans (Ledgerwood, 1999, UNDP, 1999, Park and Ren, 2001, Rauf and Mahmood, 2009).

A number of methods can be employed to calculate the sustainability of an MFI. Financial spread, operational self-sufficiency, financial self-sufficiency and subsidy dependence index are among the commonly-used indicators. Financial spread represents the difference between the revenues earned from outstanding portfolios and the average cost of funds. It is expressed as a percentage of portfolios outstanding. If an MFI finances its portfolios with debt or liabilities, the average cost of debt must be deducted from the average revenue in calculating the spread. Operational self-sufficiency is determined by dividing operating income by operating expenses, financing costs and provision for loan losses. This is accurate if, apart from donations and grants, MFIs fund their lending activities using funds from deposits and borrowed funds. However, some MFIs fund all their loans from donors' funds, and operational self-sufficiency must not include financing costs in the calculation of operational sustainability (Ledgerwood, 1999).

Financial sustainability is determined by dividing operating income by all costs, including operating expenses, financing costs, provision for loan losses and cost of capital. An increasing trend of self-sufficiency indicators illustrates that an MFI is more sustainable and is better able to cover costs from its revenues (Ledgerwood, 1999). Yaron (1992) has developed another mechanism to determine sustainability suitable for MFIs with the subsidies, namely - subsidy dependence index (SDI). It measures the degree to which an MFI relies on donations or grants for its continual operations. SDI is determined by dividing total annual subsidies received by average annual interest income; and 'is expressed as a ratio that indicates the percentage increase required in the on-lending interest rate to completely eliminate all subsidies received in a given year' (Ledgerwood, 1999, p.218).

The microfinance sector is now heading toward the maturity stage. Sustainability has been widely regarded as one of the main factors contributing to wider outreach of financial services to the poor and excluded (Yaron, 1994, Seibel and Parhusip, 1998, Harper, 2003, Ingham *et al.*, 2013). Rauf and Mahmood (2009) reported that MFIs in Pakistan are leading institutions that are neither operationally nor financially self-sufficient. Many MFIs cannot survive without raising additional resources from grants and donations (Pollinger *et al.*, 2007). In Tanzania, microfinance programmes are found to be unsustainable and unprofitable (Kipasha, 2013). Other studies, however, have shown that some achieve self-sufficiency in diverse settings from rural Bangladesh to urban Bolivia and with a range of clientele (Fox, 1995). De Crombrughe *et al.* (2008), using evidence from India, indicate that sustainability of MFIs can be met without increasing the size of the loans or raising monitoring cost. Seibel and Parhusip (1990) claim that MFIs that employ individual technology are more profitable and self-sufficient than the ones that use group technology. The debate on sustainability is still on-going and will be increasingly important when microfinance, as expected, becomes an efficient market-led financial institution for poor households.

#### **2.4.3 Welfare Impact**

The last component of the Triangle of Microfinance is impact on welfare of the clients. Financial services provided by MFIs must bring net benefits to the target groups. The benefits yield must be higher than both the costs of the programme and the opportunity costs of other welfare projects (Park and Ren, 2001). Impacts of microfinance activities can be categorised into three broad categories: economic, socio-political or cultural, and personal or psychological (Ledgerwood, 1999). The objectives of microfinance programmes are eradication of poverty, increase of income, improvement of productivity and employability, and reduction of dependence on seasonal agricultural production (Webster *et al.*, 1996). The microfinance programme also needs to determine what demands for microfinance services have not been met and tries to fulfil them. Hence, a good microfinance programme must be able to provide financial services that fulfil a set of development objectives initially set to have significant impact on the lives of the poor and their families (Harper, 2003).

Poor people are subject to liquidity constraints which limit their portfolio mix. They need external financial resources from either formal or informal financial institutions to enable them to expand the portfolio and consequently positively affect outcomes at household level. In microfinance, these outcomes are assessed to identify the impact of microfinance interventions on poor households (Ledgerwood, 1999, Hulme and Mosley, 1996, Zeller and Meyer, 2002b). Khalily (2004) maintains that the end and the ultimate outcome of microfinance is alleviation of poverty. Some 'intermediate outcomes' which have a compounded impact on that ultimate outcome comprise increase in income, asset accumulation, consumption expenditures, savings, child education, nutrition and health and employment. Khandker (1998) and Hulme (2000b) argue that some spill-over impacts of 'intermediate outcomes' such as women's empowerment and increased wages and investment, are also equally important impact components. Hence, the following discussion will draw attention to empirical evidence of the impact of microfinance on the poor, and the debate on methodological options of impact assessment.

Microfinance is well-recognised as an effective tool which may enable the poor and excluded to access formal financial services for the first time. As a result, they might be able to increase their risk-taking ability and to escape from poverty. Microfinance interventions, however, show mixed results (Bhatta, 2001). Miyashita (2000) showed that MFIs in Indonesia play a significant role in poverty reduction. Chowdhury (2008) proved that the poverty of microfinance clients in Bangladesh and the Philippines declines when the membership duration and loan size increase. Chowdhury *et al.* (2005) found that micro-credit in Bangladesh reduces poverty, and the impact of microfinance is particularly strong in the first six years and diminishes from that point onwards. Amin and Sheikh (2011), Khandker (2005) and Vatta (2003) suggested that microfinance can reduce poverty, especially for women and their communities. From the above studies, it is not clear that microfinance can effectively reduce poverty levels of households because the concept of poverty can be viewed in terms of different dimensions. Numerous indicators are required to capture those dimensions of poverty effectively. For this reason, most writers tend to analyse indirect or 'intermediate' indicators of microfinance rather than poverty level in general.

One of the frequently-used indicators of impact is income level of microfinance participants. Empirical evidence from various countries tends to lead to mixed results. Copestake *et al.* (2001) found that the clients of Zambian MFIs who have received two loans recorded a higher growth in profit and household monthly income compared to the non-clients. In Bangladesh, microfinance programmes are reported to enhance income levels of all types of households including the rural poor (Mahjabeen, 2008, Chowdhury *et al.*, 2003). Park and Ren (2001) showed that NGO-led microfinance programmes in China improved income levels of the rural poor people. This finding is also supported by Waheed (2009), Afrane (2003) and Kondo *et al.* (2008). However, Braverman and Guasch (1986) found that subsidised programmes failed to improve rural incomes or alleviate poverty. Chavan and Ramakumar (2002) reported that the clients of Indian microfinance programmes recorded a marginal increase in incomes. Ullah and Routray (2007) found no significant improvement of the clients' income level after they participated in microfinance programmes in Bangladesh.

Another important indicator is increased consumption expenditures. Pitt and Khandker (1998) showed that women participants of the Grameen Bank and two other group-based MFIs in Bangladesh increased their household expenditure: annual household consumption expenditure increases by BDT18 for every additional BDT100 borrowed by them from these credit programmes. Durrani *et al.* (2011), Kondo *et al.* (2008), and Menon (2006) suggested that participation in a microfinance programme keeps poor people busier and enables them to improve their consumption-smoothing capabilities, but it has little impact on total and food expenditures. Mahjabeen (2008) concluded that microfinance increases consumption by all communities in a study conducted in Bangladesh. Ullah and Routray (2007), to the contrary, revealed that households' participation in microfinance programmes does not result in improved economic conditions, including increased food and non-food expenditures.

Other indicators of impact are assets accumulation, child education, nutrition and health, and employment. It is argued that loans from MFIs enable poor households to accumulate assets for productive and non-productive purposes. Pitt and Khandker (1998) found that

participation in microfinance programmes allowed women to acquire more non-land assets, led to increased labour supply, and improved children's schooling rate. Chowdhury *et al.* (2003) affirm that joining a microfinance programme makes it possible for the clients to accumulate more assets and, increase their employment opportunities, and also creates more assets for the clients compared to non-clients. Hulme and Mosley (1996) stated that it is unusual for credit to produce a continuous increase in technical sophistication, output and employment. Ullah and Routray (2007) conversely proved that there was no evidence of increased non-productive assets of microfinance clients in Bangladesh. Mohindra and Haddad (2005) found that microcredit can be an important complement to health promotion and prevention programmes. Basher (2007) maintains that participation in a microcredit programme results in reduced fertility rate of participants.

Microfinance can produce spill-over impacts such as the empowerment of women, increased wages and increased investment. Hashemi *et al.* (1996) maintain that microfinance programmes can empower women by enhancing their economic roles within their households, strengthening their ability to support their families, allowing them to control assets and incomes, assisting them to establish an identity outside their families, and providing them with experience and self-confidence in unfamiliar society outside their homes. Amin *et al.* (1998) assert that the longer rural women involved in credit-related activities, the greater their probable empowerment compared to non-members of MFIs in the same areas. The results of a study in Ghana and South Africa confirm that the impact of microfinance schemes on the empowerment of women is significant. Rural women who participate in microfinance tend to outperform their male counterparts in business enterprises. Therefore, they can enhance their ability to contribute to family finances, reduce their dependence on their husbands, and increase their self-esteem. This arguably justifies the targeting of women by microfinance schemes in many parts of the developing world (Afrane, 2003).

Another debatable topic of impact studies is methodological options for impact assessment of microfinance. Impact assessment is difficult due to selection bias, endogeneity and fungibility of money (Khalily, 2004). Hulme (2000a) evaluated the scientific method, the

humanities tradition, and participatory learning and action approaches, and indicated that an optimal impact assessment method should be a mixture of available methods. The method must be suitable for the objectives, programme context, human resources and timing. According to Karlan (2001), cross-sectional impact assessments that compare new members and veterans may be useful only if the assessor has a genuine understanding of the selection process, economic environment, and institutional dynamics of MFIs. Wright and Copestake (2004) prefer a qualitative impact assessment protocol (QUIP). This method facilitates the revealing of rich information on direct and indirect impacts of microfinance programmes.

Assessing the social performance of MFIs in Peru, Copestake *et al.* (2005) preferred qualitative in-depth interviews as they help MFI managers to monitor impact at the client level. An econometric impact assessment model is still very important for public policy purposes, but it is too complex, time-consuming and expensive for regular use by MFIs. Khalily (2004) revealed that advantages and disadvantages of each impact assessment option generally produced no significant difference in findings. Descriptive studies and case-studies may be able to provide a useful understanding of the nature and process of impact-creation of microfinance. These methods, however, derive no major policy implication because they do not provide the degree of impact - outcomes. Econometric method has serious limitation in addressing the problem of fungibility of money. The above discussion seems to suggest that different methods of impact assessment can be suitable for different purposes and contexts; as such, they need to be taken into consideration when one method is chosen and applied.

The three policy objectives of microfinance - outreach, sustainability, and impact on welfare are vital for the survival of microfinance programmes. The empirical evidence has shown that these objectives are compatible in some cases, but not in others. A trade-off between two of these three key objectives is reported in which the relationship between outreach and sustainability is a controversial one. Otero and Rhyne (1994) and Christen *et al.* (1995) assert that increasing the depth of outreach and sustainability are compatible objectives. Hulme and Mosley (1996) found a trade-off between improving outreach and

accomplishing sustainability across continents. It becomes more serious when an MFI tries to reach the poorest groups of communities.

According to Navajas *et al.* (2002), sustainability affects outreach because permanency tends to lead to structures of incentives and constraints that prompt all the groups of stakeholders in lenders to act in ways that increase the difference between social value and social cost. Sustainability tends to expand breadth of outreach; the institutions, however, tend to face a trade-off between depth of outreach and sustainable MFIs. As microfinance is moving towards a more market-led financial solution for the poor, it has been argued that MFIs should be sustainable, especially at the beginning of their operations, so that they can reach and assist more poor people and improve their lives. In other words, large-scale outreach to the poor on a long-term basis cannot be attained unless MFIs are able to stand on their own feet, financially and institutionally (Jackelen and Rhyne, 2003, Hermes and Lensink, 2007, Rauf and Mahmood, 2009).

As both outreach and sustainability are equally important for MFIs, Wright and Dondo (2001) propose that a mix of clients, very poor and near poor, might be appropriate for MFIs to better achieve their goal and objectives. Paxton and Cuevas (2002) reported that the deeper the outreach to marginalised clients, the more reliant the institutions on subsidies in order to cover costs. However, they argue that this may not imply that outreach and dependence on subsidies are mutually exclusive goals. MFIs with high sustainability can and do serve the poor while MFIs which provide deeper outreach may approach sustainability as they gain experience and scale.

To conclude, MFIs must be able to reach substantial numbers of the poor and excluded. MFIs must be sustainable or pay for themselves so that they can reach more potential clients and help to improve the welfare of the clients. Complementarity and trade-off of these policy objectives may occur, in which case, the right balance between the objectives should be chosen taking into consideration the contexts and country-specific factors. These findings are expected to contribute to answering a number of research questions of this study in which the country's legal and financial environments are hostile to Islamic microfinance and other similar institutions.

## 2.5 LIMITATIONS OF CURRENT IMPACT STUDIES

All impact assessment methodologies are supported by underlying conceptual frameworks. Three elements essential to the conceptual framework are a model of impact chain, the specification of the unit or levels, and the specification of the types of impact to be assessed. Most impact studies that aim at policy-making decisions demand a scientific method with quantitative analyses. This is because MFIs, donors and impact assessors need to verify findings on impact at high levels of statistical confidence. This also allows cross-country comparison which is important for policy interventions (Hulme, 2000a). Most academic research on impact studies of microfinance is dominated by this approach.

Copestake *et al.* (2005) argue that these methods are complicated, expensive, and time-consuming for repeated use by microfinance managers. Qualitative methods arguably offer in-depth understanding of a phenomenon. Recently, researchers and practitioners have begun to realise that integrated methods are relevant in impact studies as they can tap the breadth of quantitative methods together with the depth offered by qualitative counterparts (Ledgerwood, 1999).

Microfinance has now been transformed from the provision of microcredit to microfinancial services that include micro-loans for small enterprises, savings, remittance and, recently, insurance. This wider definition of microfinance requires a wider framework of impact study. Zohir and Matin (2004, p.301) argue that microfinance programmes operate among many landscapes; their ‘engagements and impacts are iterative in nature having feedbacks involving adjustments, new arrangements and distributional consequences’. These should be taken into consideration when impact assessment is conducted. Conventional impact studies however fail to take into account factors beyond households and the subsequent feedback effects on clients and non-clients. They are of the opinion that cultural, economic, social and political effects as well local, regional and national levels should be included in the wider impact study of microfinance.



## 2.6 CONCLUSION

From the literature review, it is evident that microfinance has become an increasingly important tool for poverty alleviation in developing countries. Country-specific environments affecting poverty are to be taken into account when poverty is measured and microfinance intervention is planned and implemented. Diverse and unique microfinance arrangements therefore fill the gap left by formal financial markets in developing countries. In addition, the development of microfinance reveals that changes have taken place in the industry in the past three decades. From rural finance targeting male-heads of households, microcredit for women entrepreneurs has now been implemented with the new understanding of poverty. Currently, microfinance which provides tailored financial services for the poor has been perfectly relevant. It is now understood that the poor and excluded, like the non-poor, need financial products to manage different stages of their lives.

The performance of MFIs around the world confirms that microfinance can reach poor households in developing countries and help them to improve their welfare in a sustainable way. Although a trade-off between outreach and sustainability is occasionally found, it is the matter of balance between the two that is important. In the long-run, MFIs may not rely on grants from donors, and sustainability becomes increasingly significant during the later stage of development. Only sustainable MFIs may be able to reach more poor households and excluded in the less-developed world. Microfinance programmes arguably have impacts on the welfare of their clients in terms of increased income, accumulation of assets, increased consumption etc, as a consequence leading to the eradication of poverty, the ultimate goal of microfinance projects. It has been discovered that impact of microfinance is mixed; some programmes have improved the lives of their clients and some have failed. Many tend to agree that mediating factors such as infrastructure, transport and other country-specific environments may have played a role in the welfare impact of microfinance programmes.

## Chapter 3

### ISLAMIC FINANCE AND MICROFINANCE

#### 3.1 INTRODUCTION

Microfinance is an emerging field that may bring the poor and financially excluded into development process, possibly making an impact on the lives of the people in developing and developed countries across the globe (IPC, 2006). As a matter of fact, the Muslim population represents a substantial part of the world's poor and deprivation groups (Helms, 2006). In any attempt to bring them into formal financial systems and improve their welfare, their religious values and principles that shape Muslims' economic behaviour must be given due emphasis (Helms, 2006, Ledgerwood, 1999). It is an alternative solution of Islamic finance to fulfil social objectives of development emphasised by Islam. This chapter thus explores these basic understandings of economic development and Islamic finance in which microfinance forms an integral part, as well as, the performance of existing experiments of Islamic microfinance institutions (IsMFIs).

The chapter begins with a discussion of the Islamic framework of development, followed by a brief introduction to *Shariah* and Islamic injunctions relevant to finance. The discussion of the prohibition of *riba*, *gharar* and Islamic contracts is included here. The development and trends of Islamic finance and the operational framework of Islamic microfinance will then be highlighted. In order to provide the current outlook of Islamic microfinance, the performance of the recent experiments of IsMFIs in terms of outreach, sustainability and impacts is presented. A summary section concludes the chapter.

#### 3.2 ISLAMIC FINANCE AND ECONOMIC DEVELOPMENT

Traditional economic development studies are concerned with the levels and growth rates of per capita income in less-developed nations, the main issues of which include savings, investment finance and capital accumulation (Baldwin, 1972). Cypher and Dietz (2009) argue that the studies do not capture an accurate picture of development in the developing world as they do not portray physical realities and states of minds in which society has secured the means for obtaining a better life. The prime objectives of development may

include increasing the availability and widening the distribution of basic life-sustaining goods, raising standards of living, and expanding the range of economic and social choices (Todaro and Smith, 2009). Interestingly, although the development agenda aims at improving the standards of living of poor people, the poor are often excluded from the development process due to lack of access to formal financial services. Countless attempts have been made to enable them to participate in the process. Most of these attempts aim at material wellbeing and interest plays the central role (Karim et al., 2008a, Ahmed, 2002). Islam has a different view on these and accordingly produces a distinctive development agenda.

### **3.2.1 Economic Development in Islam**

In Islam, the problem of economic development is given due emphasis. Development is treated as an essential component of a wider development agenda which is human development and relates directly to the Islamic worldview. The philosophical foundations of development, both legal and social, are inherent in the Islamic belief system and emanate from the two main sources of Islam, the Holy *Qur'an* and the *Sunnah* of the Prophet Muhammad (peace be upon him). These two sources provide legal frameworks on which Islamic economic development is based and the shape the development process, inspiring the achievement of the ultimate goal of wellbeing in this world and the hereafter (Hasan, 1995, Chapra, 1993, Mannan, 1987).

According to Al-Ghazali, wellbeing lies in safeguarding people's life (*nafs*), faith (*din*), intellect (*aqal*), posterity (*nasl*) and wealth (*mal*), collectively termed *maqasid al-Shariah* or the objectives of *Shariah* (Chapra, 2008). Protection of life is important to each and every individual in the society. Some major needs including dignity, justice, spiritual and moral uplift, freedom, education and good governance must be satisfied to enable humans to sustain their development and effectively act as vicegerents of God. Faith is essential in ensuring the reform of humans in a way that will fulfil all spiritual as well as material needs of humans. It does this by providing a meaning and purpose to life, giving direction to human efforts, and transforming individuals into better human beings (Laldin, 2008b).

In addition, humans need to protect their intellect by utilising it for the benefit of all mankind. It enables humans to respond to the changing socio-economic environment in such a way that wellbeing can be realised. To ensure future human prosperity, the future generation must be brought up with good qualities of character. This requires, among others, a proper upbringing, freedom from fear and insecurity, and family integrity. Finally, the wealth and property of humans must be protected. One should not therefore transgress and acquire the property of another person without a proper contract and legitimate reasons. In all activities of human life, including in the development process, violating the *maqasid al-Shariah* is deemed to be unlawful and unaccepted in Islam (Laldin, 2008a, Chapra, 2008).

According to Ahmad (1994), the foundations of development in Islam, which may ensure the utilisation of *maqasid al-Shariah*, should be based on the fundamental concepts of *tawhid*, *rububiyyah*, *khalifah* and *tazkiyah*. *Tawhid* (God's unity and sovereignty) is the most important of these concepts. It implies that the universe has been consciously created by God. Humans, as part of His creatures, are granted freewill, rationality, moral consciousness and divine guidance, and are obliged to live in exclusive worship of and obedience to Him. In the context of development efforts, humans must understand that all resources available for their utilisation are ultimately owned by God. They are encouraged to exploit the available resources for the benefits that can be shared equitably among mankind (Chapra, 1993, Farah, 1970, Ghazali, 1990).

The second foundation is *rububiyyah* or divine arrangements for nourishment, sustenance and directing things towards their perfection (Ahmad, 1994). *Rububiyyah* provides that God is the only one who determines the sustenance and nourishment of His creation and will guide those who believe in Him towards success in this world and the hereafter. In development endeavours, humans must realise that they need not only their own intellect and efforts, but also an inherent acknowledgement of God's help to accomplish targeted development goals and objectives. Belief in humans' efforts alone or fatalistic attitudes to development are condemned and must be avoided (Ghazali, 1990, Chapra, 1993).

*Khalifah* (humans' role as God's vicegerent on earth) is another key concept. It implies that humans are God's agents on earth and have been provided with the guidance that is in harmony with their nature and needs. Humans who follow this guidance are additionally responsible for demonstrating a model example for their fellow human beings to follow. In the context of development, humans are entrusted with the resources and directed to utilise them in accordance with God's guidance towards achieving the goals of wellbeing, brotherhood and justice. They are held accountable to God and are rewarded or punished in the hereafter accordingly (Chapra, 1993, Ghazali, 1990).

Finally, *tazkiyah*, purification plus growth, is an essential requirement before humans perform their responsibilities as agents of God in this world. Any development endeavours undertaken by them are proper only if they are for the good of other members of society and not for the sake of their self-interest alone. When there is a divergence of individual and societal goals in a decision-making process, the societal goal must be upheld. Furthermore, all kinds of activities and processes are permissible unless they are prohibited under Islamic teachings and against the moral values and ethical considerations of Islam (Ghazali, 1990).

### **3.2.2 Features and Objectives of Development in Islam**

In Islam, the Holy *Qur'an* and the *Sunnah* of the Prophet Muhammad are the two basic frames of reference of all development efforts. The basic value patterns provided in the two sources form the basic guidelines in the construction of development policies, goals and the decision-making process at all levels. Because of the ethical guiding principles and foundations, development in the Islamic framework produces features and goals that differ from those of the mainstream economic systems. Some of the main features and goals are briefly surveyed in this section.

The first feature of development in the Islamic framework is that it focuses on humans who are the agents of all development endeavours. In this respect, development signifies development of humans and their socio-cultural environment. Islam supplies them with effective guides that direct human development along the correct lines and in the right

direction (Ahmad, 1994). Production of goods and services, their distribution and other economic concerns are only the means, not the end in themselves, to subsequent development of human dignity, which also includes moral degradation (Ghazali, 1990).

Economic development in Islam is not simply materialistic. The spiritual and moral aspects are assigned great importance. The moral, spiritual and material dimensions are integrated into the very concept of *tazkiyah*. As humans are equipped with and have committed themselves to the universal moral and ethical values, there is a guarantee that they will be accountable to God and society in their struggle to achieve the development goals. As such, unpleasant economic behaviours such as corruption, dishonesty and bribery are expected to be minimised, if not eliminated (Ghazali, 1990, Ahmad, 1994, Chapra, 1993).

In the words of Sadeq (1990, p.2), development is a multi-dimensional process involving ‘improvement of welfare through advancement, reorganisation and reorientation of entire economic and social systems, and through spiritual upliftment’. Since the concept of development in the Islamic framework predominantly focuses on humans, their attributes, incentives and aspirations are thus parts of policy variables alongside physical resources, capital, labour, education, skill, technology and organisation included in a conventional Western development policy (Ahmad, 1994, Ghazali, 1990, Iqbal, 1991).

In view of the above, development policy in Islam aims towards some well-defined goals. Chief among them are human resource development, expansion of useful production, equitable distribution of income and wealth, and international cooperation and understanding. In response to the focus of development, human development is the most important goal of development. Ghazali (1990, p.63) stated, ‘this goal is defined as the attainment of human potentialities, developed and imbued with the necessary qualitative and quantitative attributes’. Production of goods and services must be sufficient to fulfil basic necessities and if possible, may form parts of international trade and capital goods for investment. They must satisfy the moral and physical wellbeing of human beings (Ahmad, 1994, Chapra, 1993).

Equitable distribution of income and wealth is another goal of development. Islam recognises the very fact that human beings are not equal, in terms of abilities and contributions to society. They are not expected to be rewarded equally but, rather, equitably in accordance with their contributions. Every individual in society is expected to be assured a standard of living concomitant with their status as God's agent on earth (Sadeq, 1987). International cooperation and understanding between Muslim and non-Muslim countries is also encouraged. The cooperation should aim at righteousness and piety and must not transgress the limits set by Islamic principles (Chapra, 1993). In order to achieve these development goals, Islamic finance should play a significant role.

### **3.2.3 Socio-economic Goals of Islamic Economics and Finance**

An Islamic economic system is ethically-based and value-loaded. According to Kahf (1989) and Arif (1989), the ultimate goal of Islam and Islamic economic systems is wellbeing (*falah*) in this world and the hereafter. In the light of these, it aims at promoting the moral values and objectives of Islam. Chapra (1996) maintains that key socio-economic objectives are economic wellbeing within the framework of the moral norms of Islam, universal brotherhood and justice, equitable distribution of income and freedom of individual choice.

The concept of wellbeing (*falah*) in Islam includes both the wellbeing in this worldly life and the eternal life in the hereafter. As vicegerents of God on earth, Muslims are entrusted with resources and are required to explore them and to strive to achieve material progress and perfection. They are also urged to earn their livelihood in accordance with their abilities. The moral foundations, simultaneously stressed by Islam, provide a spiritual orientation to material endeavours. Stressing only one of the two will lead either to increased social problems such as crime, alcoholism, divorce, mental illness and suicide, or to a dichotomy, jeopardising the societal value system (Chapra, 1996, Zarqa, 1980, Arif, 1989).

The second objective is universal brotherhood and justice. This implies that individuals in a society are like one single family. There must be equal opportunity for every individual

in society in all phases of economic activities (Kahf, 1989, Mirakhor, 1989, Chapra, 1996). The concept also brings about mutual co-operation and assistance among members of society and subsequently eliminates all forms of economic disorder such as corruption, exploitation, transgression and wrongdoing. As all resources would be fully exploited, benefits would be shared among the members of society. Minimum needs of all members in society can be fulfilled (Chapra, 1992a, Khan, 1995).

Closely linked to this is equitable distribution of income and wealth. Islam incorporates this concept into the Islamic faith and through some distributive programmes. Islam provides that God-given resources are not only gifts but also trusts which man must utilise for his own welfare and societal benefits. Islam, however, tolerates some inequities of income due to the inequality in people's characters, ability and service to society. Islam also provides some measures, such as *zakah*, to remedy possible inequality in Muslim society (Zarqa, 1980, Chapra, 1996).

The final socio-economic goal of Islam is freedom of individual choice within the context of social welfare. According to Islam, man is created by the Mighty God and is submissive to Him alone. He is restricted only by the self-imposed values and norms deriving from his belief system and the *Shariah*. This self-imposition indicates that he can exercise his freedom as long as his interest does not contradict the interest of the larger society or violate other individual's rights. Buyer and seller are left to decide on a price agreeable to both parties. However, one may not exercise one's freedom against the provisions of the *Shariah*, in particular in certain economic operations such as interest (*riba*) and uncertainty (*gharar*) (Chapra, 1996, al-Hasani, 1989, Khan, 1995). The next section is allocated to further exploration of the key principles of the *Shariah* related to finance.

#### **3.2.4 Role of Islamic Finance in Economic Development**

A financial system aids economic development by increasing savings and promoting capital accumulation and technological innovation. Levine (1997) and Fohlin (1998) argue that a well-functioning financial system significantly promotes growth and development of the real economy. In an Islamic economy, no major changes are required in the institutional



structure of the financial system. However, the Islamic concept of development and tools will be adopted. Many Islamic economists argue that, theoretically, the Islamic financial system will lead to better implications for growth, stability and equity (Iqbal, 1991, El-Karanshawy, 1992).

Islamic finance can be a successful tool for inclusive growth and improvement of conditions of people in Muslim countries. In an Islamic finance system, it is expected that major parts of development efforts will be financed by profit-sharing instruments. Entrepreneurs are willing to take on a riskier project with great prospects as they do not have a fixed obligation to a bank as compared to conventional finance arrangements (Hussain, 2007). The financier has to evaluate the potential productivity, rather than the creditworthiness, of the fund seeker. This reduces information asymmetry and increases innovative activities and efficient economic undertakings necessary for economic development (Iqbal, 1991).

Moreover, Islamic contracts can be used effectively to mobilise resources from households and surplus sectors. Many Muslims who did not initially participate in development processes by keeping their money idle for religious reasons may be included in development processes. This financial deepening increases the availability of financial resources for development purposes. Ahmad (2005) suggested that all Islamic modes of finance are suitable for financial resource mobilisation and financing. They can be applied to significantly improve the livelihood of many poor Muslims.

Furthermore, Islamic finance also makes the economic system more stable as it is linked directly to the real economy and physical transactions (Al-Jarhi, 2005). An Islamic bank offers a guarantee to only demand deposits. Investment deposits are subject to the profit-loss-sharing principle. In periods of economic crisis, the investment depositors will automatically share the risk. As a result, the bank is less likely to go bankrupt. In addition to that, debt-like instruments in Islamic finance are tied to real goods and they are not tradable. As such, the credit market is segmented, allowing no room for sudden and mass movement of funds. This reduces the possibility of instability and crisis in the economic system (Iqbal, 1991).

More importantly, Islamic finance offers suitable tools for poverty eradication and equitable distribution of income. Profit-sharing instruments, although arguably risky, can be employed to finance small and medium-sized enterprises for the poor and near poor. These enable them to increase their income and prevent them falling into extreme poverty. Alternatively, Islamic debt instruments can be used in small productive activities. Acquisition of productive assets will allow the poor to become involved in productive activities that accordingly increase their income level. As for most of the extreme poor who need relief rather than a loan, *zakah* is prescribed to assist them to live comfortably and possibly help them to attain better economic conditions (Ahmed, 2002, Obaidullah and Khan, 2008).

As an Islamic economy aims at a more balanced development, bringing moral, ethical and material changes into life, quality human capital is a prerequisite. Islamic microfinance can play a vital role in improving education and skills of Muslims. Traditionally, governments in most countries subsidise basic education. However, higher and technical education is expensive and may not be available for children of poorer groups of the population. Islamic financial institutions may directly offer qualified individuals educational funds in the form of *qard hasan* and indirectly help to increase investment in the children of their clients (Saleem, 2008, Ahmad, 2005). As such, the human capital needed for process of development can be produced and may contribute to the socio-economic goals of Islam. However, the experience of Islamic finance show that there is the divergence between the aspiration of Islamic economics and the current Islamic finance practices (Asutay, 2007, Siddiqi, 2006). Issues related to efficiency and cost making it difficult for the poor and excluded Muslims to access to Islamic financial products. The largest amount of the wealth associated with Islamic finance has been distributed among the large corporate interest in the oil rich countries, does not reach the needy Muslim communities across the globe (Asutay and Zaman, 2009). Furthermore, a number of Islamic banking products are designed to circumvent Shariah and violate broader principles associated with the prohibition of *riba* (Hassan and Lewis, 2007, Hasan, 2005). Profit-sharing products which have been urged to be a better alternative have not been utilised. For those reasons, social justice and human-centred growth and development have not been materialised (Asutay,

2007). Islamic microfinance might be a possible solution to the existing problems and can improve the lives of the poor and financially excluded Muslims (Dhumale and Sapcanin, 1999, Ahmed, 2002, Ahmed, 2007, Al Asaad, 2008, Wilson, 2007, Dusuki, 2008a, Seibel, 2008, Smolo and Ismail, 2011).

### **3.3 SHARIAH PRINCIPLES RELATED TO FINANCE**

In order to have a clearer understanding of Islamic finance, one should appreciate the legal foundations that shape it, the *Shariah*. *Shariah*, which literally means ‘to introduce,’ ‘to enact,’ and ‘to prescribe’, covers both the interactions between man and the Creator and between man and man. It deals with the questions of faith (*aqidah*), of ethics and morality (*akhlak*), and of interactions (*muamalat*) (Nomani and Rahnema, 2003, Abdul-Rahman, 2010). This section reviews some important aspects of the *Shariah* to offer an overview and set the direction for financial activities.

#### **3.3.1 Interest (*riba*)**

In order to avoid any exploitation and injustice, the *Shariah* prohibits any form of *riba* in economic dealings (Iqbal and Mirakhor, 2007). *Riba* literally means increase, addition and surplus. In a financial sense, *riba* refers to ‘the premium that must be paid by the borrower to the lender along with the principal amount as a condition for the loan or for an extension in its maturity’ (Chapra, 2009, p.4). Even though the prohibition of *riba* is the most eminent characteristic of Islamic economics, the meaning of *riba* is not particularly clear (Nawawi, 2009).

Most Islamic jurists agree that *riba* is used in the *Shariah* in two senses, namely *riba al-nasi'a* and *riba al-fadl*, and both are prohibited. *Riba al-nasi'a* refers to the interest on loans in which deferment is allowed in return for an additional amount (Chapra, 2009). *Riba al-fadl* relates to barter transactions which arise when the same variety or two different varieties of the same genus are exchanged in unequal measures at spot or with a time lag (Chapra, 2009, Ayub, 2002, Nawawi, 2009). Muslim jurists have interpreted the term ‘*riba*’ differently and their interpretations have led to diverse practices. A majority of Islamic jurists seem to unambiguously agree that *riba* includes all gains from loans and

debts and anything over and above the principal of loans and debts and covers all forms of interest on commercial or personal loans. As such, conventional interest is *riba* (Ayub, 2007).

### 3.3.2 Uncertainty (*gharar*)

Another key prohibition by the *Shariah* in business transactions is *gharar*. In the Islamic legal terminology, *gharar* is the sale of probable items whose existence or characteristics are not certain. It could a result of one or two parties to the contract and intentional or unintentional incompleteness of information (El-Gamal, 2001, El-Gamal, 2006, Ayub, 2007). In general, if there is an element of uncertainty and lack of knowledge, whether in full or in part, of the subject matter and speculation or unwarranted result of the contract, that contract is said to involve *gharar* (Vogel and Hayes, 1998). Due to its risky nature, *gharar* has been considered as similar to gambling, as mentioned in *Qur'an* (El-Gamal, 2001, Buang, 2004).

From the understanding of *gharar*, jurists have developed some conditions for a valid contract and some exemptions from materials in *Qur'an* and *ahadith*. Some contracts which are said to have a small element of *gharar* such as *ijarah* and *salam*, are therefore permitted. They further propose that there are various levels of *gharar* and only excessive *gharar* is forbidden (Buang, 2004). Islamic Contracts

Most Sunni Schools agree that the underlying principles in contracts and stipulations are permissibility and validity, unless there is provision from *Qur'an* and *Sunnah*, *ijma* and *qiyas* proving otherwise. However, the scholars in these Schools have tended to confine themselves to nominating contracts which have been pre-designed and derived from the *Shariah* and *ijma*, the reason being that it is very difficult to avoid the prohibition of *riba* and *gharar* (Vogel and Hayes, 1998). In finance, a number of new or specific contracts have been created and have proved to be useful for the emerging socio-economic conditions facing Muslims today (Ayub, 2007).

In contemporary Islamic finance, a number of contracts have been created and have survived a wide web of rulings related to *riba* and *gharar* and other principles. These

contracts provide practical solutions to ever-changing and complex financial innovations. Examples of the contracts include *sharikah* derived from the law of partnerships. The construction services (*muqawalah*) combined the sale of materials and the hire of constructions services with a fixed period of performance or the relationship from contract of silent partnership (*mudarabah*). Other contracts may derive from combinations between two exchange contracts, between sale and gratuitous contracts and between sale and accessory contracts (Vogel and Hayes, 1998, Ayub, 2007).

### **3.4 DEVELOPMENT AND TRENDS OF ISLAMIC FINANCE**

Islamic finance practices have their roots in the time of the Prophet, and it took a number of political and economic developments before the idea could be put into modern practice. It was, however, the rise in oil prices, the emergence of political Islam and the independence of Muslim nations that allowed the financial system consistent with the *Shariah* to exist (Warde, 2000). Islamic finance is now over forty years old, growing rapidly, performs satisfactorily and represents an emerging sector that attracts great interest from Western and Muslim practitioners, academia and scholars alike.

#### **3.4.1 Historical Development**

The early initiatives of Islamic finance in the form of interest-free savings and loan societies began in the early 1940s on the Indian sub-continent (Siddiqi, n.d., Warde, 2000). The high-profile, modern experiment was the establishment of Mit Ghamr Savings Bank in Egypt in the early 1960s. Although the bank made no any reference to Islam or the *Shariah*, its services were interest-free. Despite great success, the bank operated for only four years. In Malaysia, Tabung Haji was created in 1967 to help Malaysians save in order to go to *haj* (pilgrimage to Mecca). It invested the savings of its customers in accordance with Islamic law (Lewis and Algaoud, 2001, Warde, 2000).

After these experiences, many other Islamic banks and financial institutions were formed in the 1970s, among them the Nasser Social Bank of Egypt (1971) and the Islamic Development Bank, an inter-governmental bank (1974) and Dubai Islamic Bank (1975). The International Association of Islamic Banks was created to provide additional

coordination and an advice mechanism for the new banks. These Islamic banks were pioneered by influential individuals, among them Prince Mohammed al-Faisal al-Saud and Sheikh Saleh Kamal, a Saudi businessman. During this period, efforts were made to lay national foundations for Islamic banking and finance, exploiting the strategic alliance between economic and *Shariah* scholars, bankers, and businessmen. The key issue that the founders of Islamic banks needed to address during this period was the operational feasibility of the interest-free banking model. The academic bodies created during this time were the First Conference on Islamic Economics held in Makkah in 1976 and the Centre for Research in Islamic Economics at Al-Azhar University in Egypt (Warde, 2000, Siddiqi, n.d., Henry and Wilson, 2004).

During the 1980s, Islamic finance experienced the growth period. In 1979, Pakistan started transforming her financial system to conform to Islamic precepts. Iran and Sudan followed this route in 1983. Malaysia and Bahrain chose to adopt a dual system with conventional and Islamic financial institutions operating side by side (Lewis and Algaoud, 2001). In order to facilitate the creation of Islamic banks, the Islamic *Fiqh* Academy, bringing together intellectuals, practitioners and *Shariah* scholars, was established in Jeddah, Saudi Arabia. Islamic Research and Training Institute and International Institute of Islamic Banking and Economics were created in 1981. Another initiative was the pioneering of the financing modes of *salam* and *istisna* to permit Islamic bank participation in forward sales of commodities and manufacturing contracts (Siddiqi, n.d., Warde, 2000).

Islamic finance was further developed and refined throughout the 1990s. During this period, many Islamic banks in Muslim countries forced greater local efficiency and began to compete with conventional banks for deposits and investment spaces. The Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) was established in 1991. Furthermore, liabilities-side frameworks were set up to facilitate and handle venture capital and trust funds. The Dow Jones Islamic Market World Index, DJIM, and FTSE Global Islamic Index Series, FTSE GIIS were launched in 1999 as benchmarks of Islamic equity. These emerging trends led to great interest of academia, especially among Western academic circle, and the creation of centres of education and publications on Islamic

finance. Competition had also increased at both national and international levels. A number of Islamic banks and financial institutions were established in other Muslim countries such as Indonesia, and a model of Islamic investment banking was initiated. At the global level, giant banks like Citi Bank and HSBC entered the Islamic finance market, creating their own Islamic banking window or subsidiaries (Lewis and Algaoud, 2001, Warde, 2000).

### **3.4.2 Current Stage of Development**

In the new millennium, Islamic finance has been characterised by product richness, competitive industry and mainstream relevance. As the GCC retail market had been largely tipped, the industry reached the maturity stage. There was some growth in investment funds, other types of Islamic finance products such as *takaful* (Islamic insurance), securitisation, and treasury and risk management products. *Sukuk*<sup>4</sup> asset class was offered internationally for the first time in 2002 in Malaysia. The industry has also been very competitive, recording a large number of new entrants (Warde, 2000, Lewis and Algaoud, 2001). In non-Muslim countries, the Islamic Bank of Britain (2004), the European Islamic Investment Bank (2005), and the lesser-known Islamic Bank of Thailand (2003) were introduced.

Since its inception in 1963, Islamic finance has become a near fifty-year-old industry and has grown steadily. As at the end of 2009, Standard and Poor's reported that the size of Islamic finance was estimated to be USD 1 trillion. The assets of the top 500 Islamic Banks, from a total of 600 retail, commercial and investment banks, insurance companies and asset managers, expanded by 28.6 per cent to a total of USD882 billion compared with \$639 billion in 2008. It was reported that Islamic finance has been expanding by 20 per cent per annum. It is noted that the industry is a market-driven proposition in which retail customers, particularly in GCC, historically form the backbone of the industry. Moreover,

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<sup>4</sup> Sukuk refers to investment products that constitute certificates of equal value representing, after closing of subscription, receipt of the value of the certificates and putting them to use as planned, common title to shares and rights in tangible assets, usufructs and services, or equity of a given project or equity of a special investment activities (Rosly 2005: 473).

the industry has self-regulating organisations, standards bodies, and research and training institutes that help the industry to grow efficiently.

In the words of Al-Qorchi, 'Yet despite this rapid growth, Islamic banking remains quite limited in most countries and is tiny compared with the global financial system. For it to take off and play a bigger role, especially in the Middle East, policymakers must tackle enormous hurdles - notably on the regulatory front.... Nevertheless, building confidence in a new industry is fundamental for the development of Islamic finance'. A number of issues need to be addressed for Islamic finance to expand. The main issues are the size of demand for Islamic financial products in non-Muslim countries, regulatory and tax environments, the support of the political and financial communities, sovereign *sukuk* issuance, the scarcity of qualified human resources in the sector, discussion on the framework for *Shariah* compliance, and the resolution of *sukuk* defaults (El Qorchi, 2005, p.1).

As pointed out by Khan and Mirakhor (1987), the operations of Islamic banks have two aspects: the 'mechanics of it' and the 'spirit of it'. The former relates to the Islamic legal requirements with which the operations must comply. The latter relates to the Islamic faith represented by social justice and benevolence. Islamic banking, hence, must relate its activities to faith if it is to differentiate itself from conventional institutions. According to the aforementioned author, the social role of Islamic banking can be exemplified by activities such as *qard-hasan*, financing housing, meeting basic needs, and promoting and financing small enterprises.

The review of Islamic banking and finance tends to indicate that the industry has fulfilled the role of provision of *Shariah*-compliant financial products to Muslims but is failing to fulfil its social objectives (Abdul Rahman, 2007). As mentioned in the previous section, the industry has grown continuously and drawn interest from the world's major banks. Major clients of the industry, as with many conventional banks and financial institutions, are the rich. The industry has fast become 'banking of the rich, by the rich, for the rich' (Ahmad, 2008). This is viewed by Asutay (2007) as the process of 'internationalisation of capitalist desires into Islamic finance'. It has been argued that, in the present stage of the Islamic finance industry, *maqasid al Shariah* may not be achieved and the poor segments of



Muslim community are being neglected. Consequently, many Islamic economists have now looked into other alternatives such as Islamic microfinance to help accomplish Islamic socio-economic objectives (Dusuki, 2008b, Abdul Rahman, 2007).

### **3.5 OPERATIONAL FRAMEWORK OF ISLAMIC MICROFINANCE**

Islamic microfinance is a relatively new phenomenon. Earlier advocates of Islamic microfinance believe that microfinance has a similar ideology and objectives as Islamic finance. Islamic financial institutions should therefore adopt microfinance activities to help improve the lives of poor Muslims worldwide (Dhumale and Sapcanin, 1999). The cultural and religious sensitivity of Muslims must be taken into consideration in the process of building financial inclusion for Muslim societies. This attempt will possibly bring a large segment of the world's poor groups into the fold of a formal financial system (Helms, 2006). Islamic microfinance development has been a top priority in the Islamic Financial Service Industry (IFSI) development in Kuwait in 2006. The following section provides an overview of Islamic microfinance and its role in poverty alleviation.

#### **3.5.1 Islamic Microfinance and Its Objectives**

Academics and practitioners involved in microfinance assert that poor Muslim populations are similar to the poor in other societies. They need financial services on various occasions and in a number of ways (Ledgerwood, 1999). They need loans for life cycle events such as birth, education of their children and harvest season. They also face occasional emergencies such as serious illness, death of head of the household and unexpected loss of employment. Sometimes, they have opportunities to enhance their economic standing by investing in business, buying land, or acquiring assets. Hence, they should have access to a variety of financial services probably comprising micro-credit, micro-savings, micro-transfer, and micro-insurance (Obaidullah and Khan, 2008). As an ideal, these financial services must be provided in accordance with Islamic principles.

Islamic finance and microfinance share many core theoretical and practical aspects. Both promote social and development goals of societies and encourage the poor segments of communities to take part in development activities (Dhumale and Sapcanin, 1999).

Besides, the two finances advocate entrepreneurship and risk sharing among participants. In practice, there are no fundamental contradictions in the global microfinance best practices and the Islamic approach to poverty eradication. In this regard, the basic operational format of main stream microfinance can be adopted by Islamic societies to fight against persistent poverty in the Muslim world (Ahmed, 2002, Obaidullah and Khan, 2008).

Nevertheless, the Islamic form of microfinance is created based on monetary and religious injections. Therefore, it differs in its business practices and the values that guide its operations and outlook. The empowerment targets and beneficiaries in Islamic microfinance, for example, must be families rather than women, in contrast to conventional microfinance projects. Women may be targets of an IsMFI due to ease of availability. Benefits and responsibility to repay accrue to the family as a whole. Islamic programmes are also expected to build on their injection of Islamic principles. People will be more comfortable adapting to these principles as they treat them as parts of their belief and worship. Social capital in the form of a feeling of brotherhood will increase the likelihood of debts being repaid (Ahmed, 2002, Wilson, 2007).

Other key distinctions are the prohibitions of *riba*, *gharar* and the promotion of Islamic-compliant financial instruments. Asset acquisition and financing, particularly contracts, of an IsMFI must not involve any of the prohibitions. Alternative financing such as *mudarabah*, *musharakah* and *murabahah* replace the *riba*-based conventional instruments. Islamic charitable sources such as *zakah*, *sadaqah* and *awqaf* can be explored to provide financial alternatives, particularly to the core poor (Obaidullah and Khan, 2008, Dusuki, 2008a). These alternative Islamic financial instruments relevant to microfinance are highlighted in the following sub-section.

### **3.5.2 Islamic Financial Instruments**

Islamic financial institutions, including microfinance institutions, operate on the basis of financial operations within the provision of the *Shariah* (Md Saad, 2012). Various *Shariah*-compliant financial instruments can be utilised to mobilise funds from the public,

to finance business activities and to manage risk and other purposes. On their liability side, an IsMFI may mobilise funds using charitable sources, deposits and participation modes. On the asset side, their business activities can be financed by participatory modes, sale-based mode, lease-based mode, and benevolent loans. Microfinance may also use Islamic-complaint modes for risk management and insurance (*takaful*). It is worthwhile therefore to provide more details on these financial concepts and instruments in the following paragraphs.

Among the charitable sources of microfinance, *zakah* and *awqaf* have special places in the Islamic financial system and have been governed by specific *fiqhi* rules. *Zakah* or mandatory almsgiving is a fixed proportion levied on property and distributed among the rightful beneficiaries. It is a means of assisting the poor and the needy and redistributing income in society (Warde, 2000, Ahmad, 2009). *Awqaf* - (plural of *waqf*), is a voluntary act of charity. It may include assets and properties that can be employed in income-generating activities for social welfare-enhancing activities. Funds also can be mobilized through *sadaqah*, charitable giving. All these charitable items are important for combating poverty and improving the economic wellbeing of people (Ahmed, 2004).

Participatory instruments consist of *mudarabah* and *musharakah*. *Mudarabah* (investment trust) is a contract between at least two parties whereby one party, the *rabb al-mal*, provides the entire necessary financial capital and the other, the *mudarib*, provides the human capital to undertake a business venture. The *mudarib* exercises complete control of the venture. If the project is successful, profits are shared between the two parties according to a predetermined ratio. In case of losses, the *mudarib* loses time and management 'unless negligence or mismanagement can be proven', while *rabb al-mal* loses the financial capital. *Musharakah* (equity participation) is a form of business arrangement in which a number of partners pool either their financial capital or their management together in a venture. They enjoy similar rights and liabilities. Profits are shared on a predetermined basis, and losses are shared in proportion to the capital contribution (Lewis and Algaoud, 2001). Both instruments can be used for acquisition of funds and financing of microfinance programmes.

IsMFIs can also use a sale-based instrument, *murabahah*, and a lease-based instrument, *ijarah* to finance their projects. *Murabahah* (cost plus sale) is a transaction in which one party, a client wishing to purchase goods, requests another party, the financial institution, to purchase the goods and resell them to him at cost plus a declared profit. Payment is to be made within a fixed period of time in a lump sum or by instalments, usually called *bai muajjal*. *Ijarah* (*leasing*) is a transaction in which a lesser acquires an asset and leases it to another party in exchange for a specific rent. The asset remains the property of the lesser and the lessee has possession and uses the asset. Leasing period, amount of rent, timing of lease payments, and the responsibilities of both parties during the life-time of the lease must be specified in the contract (Lewis and Algaoud, 2001, Ahmad, 2009).

Other concepts and instruments relevant to Islamic microfinance are *qard hasan*, *wadiah*, *takaful*, *kafalah* and *daman*. *Qard hasan* are non-interest-bearing loans made available to those who need them, individuals as well as businesses. The borrower is obliged to repay only the principal amount of the loans. IsMFIs may obtain funds using a *qard hasan* deposit account, similar to a current deposit account. This deposit account does not provide any return and, in some cases, incurs a charge. *Wadiah* is based on the concept of safe-keeping and refers to one who entrusts his property to another person for safe-keeping. It is ideally used for fund mobilisation. It is parallel to a savings account in the conventional framework, but provides no return, unlike in interest-bearing deposits (Obaidullah and Khan, 2008, Ahmad, 2009, Md Saad, 2012).

*Daman* (collateral) and *kafalah* (guarantee) can be applied for risk management. Guarantee to repay by individuals or groups of people can be applied and it is very much applicable for group-based microfinance. Alternatively, collateral in the form of physical assets may be required to obtaining loans. Participants may also benefit from *takaful* or Islamic insurance arrangements either from IsMFIs or members themselves. *Takaful* is structured as a charitable collective pool of funds based on the idea of mutual assistance. This concept can also be an instrument for welfare activities of microfinance participants in the case of emergency such as death, illness and education (Obaidullah and Khan, 2008).

### **3.5.3 The Role of Islamic Microfinance in Tackling Financial Exclusion**

Studies have confirmed that Muslims in both Islamic and non-Islamic countries have been excluded from formal financial systems of their countries due to their sensitivity to their religious principles and norms. Islamic banks and financial institutions which are expected to play the role of providing financial inclusiveness have been quite successful in tackling macro-level financial needs but have failed to further encourage poor Muslim households to play a part in the financial systems (Ledgerwood, 1999, Obaidullah and Khan, 2008). As conventional microfinance has been able to engage the poor with the formal financial systems, Islamic microfinance is, hence, expected to play a key role in tackling the problem in Muslim communities (Obaidullah and Salma, 2008).

It has been proposed that Islamic microfinance can be established by an Islamic bank, a conventional bank or an NGO. Islamic banks may offer Islamic microfinance products to poor Muslims utilising their existing branch network and units. They may create a separate new unit or a subsidiary to focus on microfinance initiatives. Those banks that have experience in handling Islamic financial products are in a good position to be successful. Conventional banks and NGOs may want to expand into the Islamic market as part of their business expansion plans. Other forms of financial institutions such as cooperatives may participate in Islamic microfinance programmes (Obaidullah and Khan, 2008).

A number of banks offer Islamic microfinance products. The Islamic Bank of Sudan, Faisal Islamic Bank of Egypt and the Jordanian Islamic Bank are reported to have succeeded in financing microenterprise projects using *musharakah* (Akhtar, 1997, Osman, 1999). Hassan and Alamgir (2002) report that a number of Islamic microfinance programmes have been available in Bangladesh. Islamic microfinance products offered by cooperatives can be found in Indonesia and Sri Lanka (Seibel, 2008, Obaidullah and Mohamed-Saleem, 2008). Microfinance based on *qard al-hasan* was used effectively to reduce poverty in Indonesia (Widiyanto *et al.*, 2011). The experiments show that microfinance applying Islamic principles can work and fulfil its role as a poverty eradication tool. The extent to which these IsMFIs fulfil their objectives will be investigated further in the next section.

Ledgerwood (1999) stated that Islamic microfinance can be used as a tool for financial inclusion among Muslims who are sensitive to Islamic principles and do not involve in interest-based financial transactions. This has been evident in Bangladesh where Ahmed (2002) found that interest-free Islamic microfinance of Islami Bank of Bangladesh allowed many poor Muslims to access to financial market for the first time. This finding is also supported by Rahman (2010).

### **3.6 PERFORMANCE OF ISLAMIC MICROFINANCE**

Islamic microfinance is a recent experiment. Materials on IsMFIs' performance in terms of outreach, sustainability and impact are limited. A major work to assess the Islamic microfinance experience in various countries was the First International Conference on Islamic Inclusive Financial Sector Development organised by the Islamic Research and Training Institute, a member of Islamic Development Bank Group in collaboration with the University of Brunei Darussalam in 2008. A limited amount of literature has appeared in international economics, finance and development journals. With some notable exceptions, most of these studies have been conducted in Islamic countries and have applied relatively basic methodologies. According to these studies, the performance of IsMFIs seems encouraging.

#### **3.6.1 Outreach**

As mentioned in Chapter 2, outreach is concerned with the ability of microfinance programmes to serve more of the poor and financially excluded. Outreach should be one of the objectives of IsMFIs. Muslim populations constitute a large proportion of the world's poor; therefore, the potential of Islamic microfinance is huge. The available researches on outreach have been either project-based or at the macro level. The studies cover the depth, scale or width of outreach. IsMFIs target both poor males and females and, like conventional MFIs, females dominate many IsMFIs. In general, the outreach of IsMFIs has been promising and has spurred interest from all parties involved in microfinance and Islamic finance in particular.

Analysis of IsMFIs' performance shows that there is a mixed result on the depth of Islamic microfinance outreach. Al Asaad (2008) reported that Village Funds at Jabal Al Hoss reach the poorest Syrians. This is due to the fact that the project operates in a very poor community with an average estimated annual per capita income of USD198, less than one sixth of the national average. Its average loan balance and average loan balance per borrower per capita suggest that there is possibility of elite capture. In Pakistan, Islamic microfinance programme of Akwat Foundation could reach a considerable number of Muslim clients (Babar, 2011). This is dissimilar to the performance of the celebrated Sudanese Islamic Banks whose Islamic microfinance programmes hardly benefit the core poor. It has been argued that this situation might be due to the regional inequality in the distribution of the banks' branches, which distorts the geographical distribution of banking facilities and the required monitoring and control activities making small *musharakah*-based projects less viable (Ahmed, 2008a).

Due to their recent establishment, IsMFIs have not reached a large scale at the economy-wide level. However, the institutions have served a considerable number of people in the areas where they operate. Seibel (2008) found that IsMFIs in the form of cooperatives account for only 7.2 per cent of microfinance cooperatives and reach less than 1 per cent of borrowers in Indonesia. Their loan portfolio represents merely 1.1 per cent and 0.19 per cent of the financial cooperative and microfinance sectors respectively. The Hodeidah Microfinance in Yemen attracts 1,770 members and has accumulated USD350,000 in outstanding loans in just three years (Al-ZamZami and Grace, 2001).

The Sodoq Village Funds in Syria has disbursed over 8,000 loans and serves 2,200 active borrowers and 7,500 active shareholders. As at the end of December 2003, over 15 per cent of the population of the villages with no age limitation were shareholders in the funds (Al Asaad, 2008). It is also noted that most IsMFIs target families rather than women. Although, in some IsMFIs in Bangladesh, women are still the main beneficiaries, both women and spouses are required to sign the contract. The IsMFIs rely on women because it is more convenient and efficient (Ahmed, 2002). The Sandoq at Jabal Al Hoss and the

Hodeidah Microfinance are dominated by males (Al-ZamZami and Grace, 2001, Al Asaad, 2008).

### **3.6.2 Sustainability**

As described in the preceding chapter, sustainability refers to the ability of microfinance programmes to cover their costs and to continue operating of the foreseeable future. Most IsMFIs are reliant on donations and funding from external sources. However, they show signs of sustainability. Ahmed (2002) compared the profitability and efficiency ratios of IsMFIs with Grameen Bank and found that IsMFIs performed relatively well. Some of the IsMFIs reported higher returns on assets, lower operating costs and better net interest/return margins as compared to the Grameen Bank. He argues that this might be due to the IsMFIs benefiting from the social capital derived from Islamic values and principles. These values urge the employees to work harder for the betterment of the Muslim poor and increase solidarity among participants, resulting in the quality of social collateral. Furthermore, debtors consider debt repayment part of a religious obligation and this improves the repayment rate of the IsMFIs.

Jabal Al Hoss microfinance programme, although subsidised, reported increasing trends in its sustainable indicators based on CGAP measures. Operational self-sufficiency was 30 per cent in 2001 and reached 91 per cent in 2004. Its financial self-sufficiency rose from 27 per cent in 2001 to 75 per cent in 2004. These figures are considered very good for a young microfinance programme (Al Asaad, 2008). In Yemen, Hodeidah Microfinance Programme recorded an increasing trend of self-sufficiency ratios. It recorded an operational self-sufficiency of 29 per cent in 1998, rising consistently, and reached 97.1 per cent in 2001. Financial self-sufficiency ratio rose from 22 per cent to 73.6 per cent in the same period (Al-ZamZami and Grace, 2001). It is reported that an innovative Islamic microfinance programme of Muslim Aid in Sri Lanka built a sustainable source of funds for poor farmers in the country (Obaidullah and Mohamed-Saleem, 2008).

From the above discussion, the present experiments in Islamic microfinance suggest that *Shariah*-compliant instruments can be used to effectively build sustainable microfinance



programmes and perhaps help to eradicate poverty in Muslim countries. Some writers on Islamic microfinance assert that *zakah*, *sadaqah* and *awqaf* can be explored as external sources of poverty alleviation in Muslim communities. These sources will increase sustainability and outreach of IsMFIs, especially to the core poor in society (Obaidullah and Mohamed-Saleem, 2008, Obaidullah and Khan, 2008, Ahmed, 2002). Whenever IsMFIs are sustainable, they may enhance the welfare of Muslim households.

### **3.6.3 Welfare Impact**

All microfinance programmes aim at increasing the welfare of participants in various ways. Like other MFIs, IsMFIs are expected to build on economic and social wellbeing of participants. Economic impacts of a microfinance programme include increased employment, economic activity and assets. Social impacts of an IsMFI may include improved religious knowledge, better relationship with spouse and other members and collective action and lobbying. IsMFIs appear to perform well in all these areas (Ahmed, 2002, Rahman and Ahmad, 2010, Babar, El-Gamal *et al.*, 2011, Bhuiyan *et al.*, 2011). A limited number of studies have been conducted on welfare impacts of IsMFIs. These studies are mostly conducted in Muslim countries and from supply-side or institutional perspective. Rahman (2010) and Rahman and Ahmad (2010) are two notable exceptions. These two studies surveyed the opinions and attitudes of the clients of IsMFIs in Bangladesh and found the IsMFIs to be successful in improving the wellbeing of the clients.

A comprehensive study conducted on Islami Bank Bangladesh's microfinance programme confirms that the IsMFIs microfinance programme offers better organisation of their economic activities and spurs more ethical and economically desirable behaviour (Rahman, 2010, Bhuiyan *et al.*, 2011). This brings about increased household income, expenditure, productivity of crops and livestock and employment. The average client's income, for example, is reported to have increased by more than 33 per cent. The Logit-Model shows that a client's age, number of family members in farming, total land size and their ethics and morals had significant influence on household income. Expenditure change was

observed for such items as food, furniture purchasing, and house repair and maintenance (Rahman and Ahmad, 2010).

Man-days involved in productive household activities increased by 7.14 per cent. This was recorded in both males and females in the households. In addition, the Islamic microfinance programme triggers a change in assets acquired by the clients including house, land, furniture, radio, television, cycle and cart. The livestock and crop productivity of the clients improves. Goat breeding (26.92 per cent) and vegetable production (28.83 per cent) registered the highest changes in livestock and crop productivity respectively (Rahman and Ahmad, 2010, Rahman, 2010).

Ahmed (2002) showed that three other IsMFIs in Bangladesh were able to increase the time spent on income-generating activities by the clients and their family members. The programmes also increased output and diversified production activity of the clients. The clients of an IsMFI, for example, saw their output increase by 53.8 per cent while another reported a 36 per cent increase in production diversification. A majority of the clients increased their asset base and improved their premises.

A study on the Sudanese Islamic Bank's rural development programmes for poor farmers confirms that Islamic microfinance projects can be effective tools for improving the food security and income of the poor. It was reported that most clients of the programmes, under *bai muajal* contracts, gained a monthly additional income of between 152 to 271 Sudanese pounds. Those involved in crop production, using *musaqqa*<sup>5</sup> and *musharakah*, received profits ranging from 10 to 20 per cent (Osman, 1999).

On top of economic impacts, Islamic microfinance can also provide social impacts for the beneficiaries. Rahman (2010) claims that clients of microfinance programmes of the Islami Bank of Bangladesh had improved their religious observations such as prayers and fasting. Many of them started reciting Qur'an and inviting other people to follow the Islamic way

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<sup>5</sup> Co-irrigation: the Sudanese Islamic Bank undertakes the provision of irrigation pumps and accessories installs them on the farm and authorises their operations by the farmer. The contract sanctioning the operation would stipulate payment by the farmer of a proportion of his produce, where the Bank undertakes to meet all expenses relating to the running maintenance including spare parts (Osman 1999: 225)

of life. All this was result of initiatives taken by the programme to increase clients' awareness of religious activities. Ahmed (2002) maintains that IsMFIs, through their social development programme, may also benefit clients in several other ways. A majority of the clients revealed that they had improved relationships with their spouses and group members. They also had a better understanding of Islam after joining the IsMFIs. As a result, they had a positive outlook on the IsMFIs that had provided financial services conforming to their Islamic values and principles.

In Muslim-minority communities, a few IsMFIs have been operating and they appear to benefit poor and non-poor Muslims in several ways. The Islamic microfinance programmes provided by Islamic financial institutions in Australia, for example, have been effective in providing house-financing and they recorded a positive growth rate. Their size, assets, profitability and number of shareholders are still small (Ahmad and Ahmad, 2008). The Muslim Aids of Sri Lanka, furthermore, was able to successfully provide a sustainable source of funds for poor farmers and also empowered them to be self-reliant and to become involved in collective action and lobbying for better outcomes for their efforts. The Islamic microfinance programme permitted them to create a win-win situation with local millers (Obaidullah and Mohamed-Saleem, 2008). These experiences indicate that Islamic finance in general and Islamic microfinance in particular can assist poor Muslims in Muslim-minority countries as advocated by many Muslim scholars (Chapra, 1992b, Malami, 1992, Ahmad, 2003).

### **3.7 CONCLUSION**

It has been highlighted in this chapter that Islamic microfinance is part and parcel of the economic development of Islam, which provides unique bases and a more comprehensive development agenda. It is viewed as a response to current Islamic finance which has arguably failed to serve the socio-economic goals of Islam. As a branch of Islamic economics and finance, it follows strict codes of Islamic principles among which the prohibition of *riba* and *gharar* form a major part. As a consequence, various types of Islamic financial instruments and contracts are derived and applied in development finance

programmes. However, some elements and practices of conventional microfinance that are not contrary to these principles can be retained.

Although Islamic microfinance is a new development project, it has enormous potential to become an effective tool for poverty alleviation in Muslim communities. The scale of outreach of IsMFIs appears to be reasonable while depth of outreach indicates a better result as compared to main-stream MFIs. The IsMFIs may also reach a sustainable stage should they manage to tap funds from Islamic sources such as *zakah*, *sadaqah* and *awqaf* which are currently inaccessible. Welfare of the IsMFIs' clients has improved after joining these programmes. It safe to conclude that Islamic microfinance programmes can play a vital role in building an inclusive financial system, consequently leading to poverty reduction for poor Muslims and non-Muslims on various continents.

**Chapter 4**  
**MUSLIM COMMUNITY IN THAILAND AND ECONOMIC DEVELOPMENT:**  
**LOCATING THE NEED FOR MICROFINANCE**

**4.1 INTRODUCTION**

Microfinance programmes have successfully provided financial services to the poor and financially excluded around the globe. The poor are usually landless, poorly educated, if at all, and often affected by natural disasters such as floods and drought (Convroy, 2003, GB, 2011). Their lives are therefore vulnerable. Their financial needs for emergencies, life cycle and other purposes may not be fulfilled by formal financial institutions which are not particularly interested in providing loans to these people (Hulme and Mosley, 1996). In Muslim societies, interest-based financial services may not be an option due to their religious sensitivity (Ledgerwood, 1999). The socio-economic environments of these people are important in order to allocate their need for financial services such as microfinance. This chapter therefore provides an overview of the socio-economic environment of Muslims in Thailand to ascertain their need for microfinance conforming to Islamic principles. One important point worth mentioning is that the data presented in this chapter are obtained from various economic reports on Thailand which are restricted to some years i.e. 2005 and 2009. The research therefore collected the data for these years so that the collected data can be compared and useful for discussion.

The following section describes an overview of economic development and poverty reduction in Thailand. This is followed by a brief discussion of Muslims in Thailand and the Muslims in the four provinces of Pattani, Yala, Narathiwat and Satun. Some important economic indicators of the four provinces, including economic growth rates, income disparities and poverty changes are compared with the national standards, the southern average, and two other wealthier provinces of Phuket and Songkhla. Other socio-economic factors such as education, occupation and employment in the four provinces are highlighted. Then, a brief discussion of the southern unrest is included. A section containing information on Thailand's financial system and the position of cooperatives is followed by a short review of Thai Muslims' experience with Islamic finance. The

background of the IsMFIs in Thailand under study is provided. A brief overview of Islamic microfinancial products and services offered by the IsMFIs is discussed before a conclusion is provided at the end of the chapter.

## 4.2 ECONOMIC DEVELOPMENT AND POVERTY REDUCTION

Thailand is one of the great development success stories, indicating strong growth and remarkable poverty reduction. Due to the progress in social and economic development, it was upgraded to an upper-middle-income economy in July 2011. However, due to a number of political and financial challenges, the country has experienced slow growth in the past few years (WB, 2012). Table 4.1 exhibits some important indicators of Thailand's economic structure for 2011 based on the World Bank databank.

**Table 4.1: Indicators of Thailand's Economic Structure**

Indicator	2011
GDP (million USD)	345,649.29
GDP growth (annual %)	0.05
GDP per Capita (USD)	4,972.04
GDP per capita growth (annual %)	(0.52)
GNI (million USD)	333,232.41
GNI growth (annual %)	0.76
Exports of goods and services (million USD)	268,321.49
Exports of goods and services (annual % growth)	9.79
Exports of goods and services (% of GDP)	77.63
Imports of goods and services (million USD)	243,689.31
Imports of goods and services (annual % growth)	11.21
Imports of goods and services (% of GDP)	70.50
Openness of economy ((X+M)/GDP)	1.48

Source:1) World Bank databank (WB, 2011)

2) Openness of economy was computed from the original data.

Thailand's economic record is impressive by any standards (Jitsuchon, 2004). Before the economic turmoil of 1997, Thailand's economy seemed to be performing well and meeting all the indicators of successful economic development (Jongudomkarn and Camfield, 2006). Gross national income (GNI) and gross domestic product (GDP), which have been adopted as indicators for development success by the National Economic and Social

Development Board (NESDB), have shown consistently encouraging signs. As depicted in Table 4.2, the average growth of GNI had been in the range of 4.3% to 10.4% during 1961-1995. After the 1997 financial crisis, Thailand registered a negative GNI growth of 0.3%. However, it picked up during 2000 to 2005, reporting an average GNI growth of 2.93%. The country's GDP illustrates the same trends during these periods. Consistent growth had been reported from 1961 to 1995, and slumping during the financial crisis. However, it started to increase again after the crisis, recording an average growth of 5.1% during 2000-2005.

**Table 4.2: Average Growth of GNI and GDP (%)**

Indicator	1961-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-00	2000-05
Gross national income (GNI)	8.4	9.3	5.1	7.5	4.3	10.4	8.8	-0.3	2.4
Gross domestic product (GDP)	7.2	9.2	5.8	8.0	5.5	10.3	8.6	0.6	5.1

Source: Computed from data available in the World Bank Website based on 5-year Geometrical average (WB, 2011)

Thailand has an impressive record in reducing the number of its poor (Jitsuchon, 2004). The number of poor people fell from 17.7 million in 1988 to 6.8 million in 1996. The national poverty headcount, defined as the share of people living in households with income below the poverty line, dropped from 32.6% to 11.4% over the same period. After the financial crisis the poverty rate increased to 14.2% until 2000. It then dropped below 10.0% in 2002. The number of the poor rose to 8.8 million in the aftermath of the crisis and fell to 6.2 million in 2002 (Jitsuchon and Richter, 2007). Thailand has achieved its Millennium Development Goals poverty target of halving the poverty headcount between 1990 and 2002 (NESDB, 2004).

Albritton and Mahakanjana (2000), however, argue that Thailand's development experience tends to show a direct trade-off between economic growth and income inequality. Rapid economic growth has brought about a sharp decline in poverty while income inequality has widened (Krongkaew and Kakwani, 2003, Krongkaew, 1985). The income distribution has become more unequal between urban and rural segments of Thai

society. The rural Northeast often accounts for the highest share of the poor in the country. It constituted about 3.8 million people in 2002. The poverty incidence of urban Bangkok and surrounding areas is low (Jitsuchon and Richter, 2007). The Southern region, on the other hand, has experienced the highest income inequality in the country (Krongkaew, 1985). Krongkaew and Kakwani (2003) contended that income inequality in Thailand can be partially explained by imperfect markets and unfair competition, unequal landownership and unsuccessful land reforms, as well as political and administrative structures that protect the positions and interests of the rich.

Apart from regional poverty deviations, living standards within provinces in the regions deviate severely. Provinces with low poverty rates can be found in the same region alongside provinces with high poverty rates. The Northeast, which includes the poorest provinces such as Buri Ram, Sa Kaeo and Si Sa Ket, contains the wealthy provinces of Chaiyaphum, Nong Khai and Ubon Ratchathani (Kakwani, 2000). In the South, Phuket and Surathani are among the wealthiest provinces in Thailand, while Narathiwat and Pattani are among the provinces registering the highest poverty incidence (UNDP, 2010). As the country's policy on poverty reduction has been based on regional information on poverty, poverty reduction in certain areas such as in southern provinces, has been comparatively slow. Income distribution has become imbalanced as Thailand continues on its development path. This causes severe poverty incidence in certain provinces (Krongkaew and Kakwani, 2003).

## **4.3 MUSLIMS IN THAILAND**

### **4.3.1 A Brief History of the Muslim Minority in Thailand**

Although Thailand is a predominantly Buddhist country, Muslims are found across the country and are regarded as the largest minority. There is no precise date of the introduction of Islam to Thailand. It is evident that Arabs and Persians were active in the ports of the Tenasserim and the Isthmus of Kra many centuries before the founding of the first truly Thai Kingdom of Sukhothai in 128 A.D (Forbes, 1982). At present, Muslim groups constitute Indian Muslims or *pathan*, Sulwesi Muslims who migrated from



Macassars, the Haw Chinese Muslims, and the largest group, the Malay Muslims in the deep south (Kersten, 2004).

In the southern border provinces of Pattani, Yala, Narathiwat and Satun (hereafter called the Four Provinces), Muslims represent a majority group of the total population. Apart from geographical closeness, they share very close social and cultural relationships and historical experience with Malay people in the Northern states of Malaysia (Klanarong, 2009, Kersten, 2004). The ethnic Malay inhabitants are believed to have converted to Islam during the 14<sup>th</sup> and 15<sup>th</sup> centuries A.D. through Arab merchants. Pattani, the most important vassal state in the Southeast at that time, was independent and only fully incorporated within Thailand in 1901; the people were finally severed from their Malay brethren to the south by the Anglo-Siamese Treaty of 1909 (Islam, 1998). Since 1938, when the regime of Pibul Songkhram came to power, sustained attempts have been made to forcibly assimilate the Thai Malay population and have arguably resulted in a series of rebellious activities in the South continuing to this day (Forbes, 1982).

#### **4.3.2 Muslims in the Four Southern Provinces**

As illustrated in Table 4.3, the total population of Thailand was 63.5 million in 2009, of which 8.8 million and 2.1 million people lived in the South and the Four Provinces respectively (DOPA, 2010). Muslims represent around 4.6% of the total population, around 27.8% in the South and 80.3% in Four Provinces. Sarntisart (2005) argues that the real size of the Muslim population is different from these official data. Some reports indicate that the total Muslim population in Thailand could be around 10.0% of the total population or around 6 million, i.e. more than three times the official figure. Another important fact is that the Muslim-populated provinces tend to be poorer than other provinces in Thailand. The per capita income of the southern region and the two wealthy southern provinces of Phuket and Songkhla (hereafter called Two Provinces) in 2009 was THB95,721 (USD2,856) and THB161,450 (USD4,817), respectively. The Four Provinces recorded

significantly low per capita income of THB76,387 (USD2,279). The national average per capita income was at THB135,281 THB (USD4,037)<sup>6</sup>.

**Table 4.3: Religious Background of Thai Population in 2009**

Population group	Whole Kingdom	South	Two Provinces	Four Provinces
Total population (million)	63.5	8.8	1.7	2.1
Per capita income (THB)	135,281	95,721	161,450	76,387
% share of Muslim population	4.6	27.8	28.5	80.3

Source:1) Calculated from information available from provincial offices  
2) NESDB(2011b)

#### 4.4 IMPORTANT ECONOMIC INDICATORS OF THE FOUR PRIVINCES

##### 4.4.1 Economic Growth

The economic performance of the South has been dominated by the performance of the two wealthy provinces, i.e. Phuket and Songkhla. Table 4.4 illustrates average gross provincial product (GPP) per capita at constant 1988 price by area. GPP of the Four Provinces is compared with that of the Two Provinces, gross regional product (GRP) of the southern region as a whole, and the average GDP of the Kingdom. It is noted that only during pre-1997 financial crisis was the economic growth of the Four Provinces in harmony with other provinces of Thailand. During 1981 to 1986, the annual average growth rate of Thailand's GDP, GRP of the southern region, and GPP of the Two Provinces and the Four Provinces was around 5.0%-6.0%. During 1986 to 1991, the performance varied slightly, recording growth of between 8.0% and 11.0%. The Four Provinces performed better than the national average during 1991 to 1996, reporting an average GPP of 8.9% as compared to 8.1% growth GDP.

All except the Two Provinces recorded negative growth during 1996-2001. The Four Provinces reported higher negative growth in relation to the country as a whole. The performance picked up after 2001, although the Four Provinces grew at a slower rate,

<sup>6</sup> The amounts in USD are calculated based on exchange rate of the last day of December 2009:  
USD1=33.5144 Baht: [www.bot.or.th](http://www.bot.or.th)

3.9%, than the GDP of 5.7%. The poor performance of these provinces had significant consequences for their income, especially that of the poor segment who usually live in rural areas (Sarntisart, 2005).

**Table 4.4: Average per Capita GPP Growth Rate at Constant 1988 Price (%)**

Area	1981-86	1986-91	1991-96	1996-2001	2001-06
Whole Kingdom	5.4	11.0	8.1	-0.1	5.7
South	5.6	9.0	9.3	-1.0	4.8
Two Provinces	6.2	11.6	10.1	0.3	3.6
Four Provinces	6.0	8.1	8.9	-2.0	3.9

Source: 1) Calculated from information available from provincial offices  
2) NESDB (2011b)

#### **4.4.2 Regional Income Disparities**

As mentioned earlier, Thailand income inequality has widened as the country has followed its development path. This has been a primary concern for Thailand's development. Changes in income inequality explain how the benefits of economic growth of a country are circulated among regions and provinces. The changes might be acceptable insofar as the process of change brings about benefits for all (Adelman and Robinson, 1989, Sarntisart, 2005).

Table 4.5 shows that average per capita income of the southern region and the Four Provinces is much lower than in other regions of Thailand. The income gap tends to illustrate an ever widening trend. GPP per capita of the South was 77.8% of the national average in 1981, slumping to 72.2% in 1986. Then, it reduced further and fluctuated around 66.0% – 68.0% during 1991 to 2001. An increase was recorded in 2006 to 75.2%. The income gap is larger if Phuket and Songkhla are excluded. The Two Provinces' average was much higher than the national average. In 2006, for example, the Two Provinces' average per capita income was 130.3% of Thailand's average.

The average per capita income of the Four Provinces points to a more severe picture. The provinces recorded an average of 64.0%, rising slightly to 65.0% in 1986. It then dropped sharply to 55.5% in 1991. Although it increased a little to just over 58.0% in 1996, the income per capita of the provinces shrunk again to 55.6% in 2001. In 2006, it climbed to

58.7% of the national average per capita income. Sarntisart (2005) contends that this ever widening income gap indicates an urgent need for special attention from the central Thai government.

**Table 4.5: Per Capita GPP at Current Prices (THB) and Regional Per Capita Income Index (%)**

Area	1981	1986	1991	1996	2001	2006	2009
Whole Kingdom	15,933 (100.0)	21,586 (100.0)	44,307 (100.0)	76,847 (100.0)	81,915 (100.0)	119,715 (100.0)	135,281 (100.0)
South	12,401 (77.8)	15,593 (72.2)	29,345 (66.2)	52,588 (68.4)	55,703 (68.0)	89,968 (75.2)	95,721 (70.7)
Two Provinces	24,314 (152.6)	26,277 (121.5)	67,537 (152.4)	111,185 (144.7)	115,332 (140.8)	155,970 (130.3)	161,450 (119.3)
Four Provinces	10,194 (64.0)	14,028 (65.0)	24,521 (55.5)	44,764 (58.3)	45,521 (55.6)	70,228 (58.7)	70,429 (52.1)

Note: Figures in parenthesis are index of which the national figure equals 100

Source: NESDB (2011b)

#### 4.4.3 Poverty Changes

Southern Thailand has never been viewed as the poorest region in Thailand. The Northeast region is regarded as the poorest region in the country. The percentage of poor of the total population of the region has been much smaller than in the Northeast (Sarntisart, 2005). Nevertheless, the poverty incidence in the Four Provinces has been among the highest in the country. As presented in Table 4.6, the number of poor people in these provinces was 314,900 persons in 2007, representing 12.4% of the total population. This figure is much lower than the 2,830,300 poor people of the Northeast, representing 13.1% of the total population. However, the percentage of poor in the Four Provinces was still higher than the average of the Two Provinces and the national average.

Deeper examination of individual provinces provides a clear picture of the poverty incidence in the South. Phuket had no poverty incidence at all in 2007 while Songkhla had 14,600 poor people, representing 1.1% of its total population. The poverty incidence of Pattani and Narathiwat was more severe, representing around 20.0% of both provinces' total population. In 2007, Narathiwat recorded 162,200 poor people while 108,000 poor

people lived in Pattani. The poverty line<sup>7</sup> of these two provinces was lower than other provinces in the South at THB1,307 and THB1,311 respectively. The poverty incidence in Narathiwat was among the five largest in the country (UNDP, 2010), while Satun and Yala had a better picture of poverty incidence in relation to the national average. The percentage of the poor in the Two Provinces was 2.3% and 7.5% correspondingly.

**Table 4.6: Poverty Indicators in 2007**

Area	Number of poor ('000)	% of poor	Poverty line (THB/Person/Month)
Whole Kingdom	5,421.7	8.48	1,443
Northeast	2,830.30	13.1	1,316
South	512.8	5.9	1,383
Two Provinces	14.6	0.6	1,426
Four Provinces	314.9	12.4	1,328

Source: Computed based on statistical information in Human Development report (UNDP, 2010)

## 4.5 OTHER SOCIO-ECONOMIC INDICATORS

### 4.5.1 Education in the Four Southern Border Provinces

Educational attainment in the Four Provinces is low compared to other parts of Thailand. Most young Muslims enrol in the government primary schools and later attend the Islamic private schools for their secondary education or informal traditional Islamic schools called '*pondok*'. The main reason for this is that Muslim parents want their children to learn Islamic knowledge and preserve their Islamic identity. In addition, a small number of young people reach higher education. Thus, government and professional jobs seem out of reach for them. Many of these young people do not have proper jobs; some are involved in drugs and cause a lot of problems in the communities (Kersten, 2004, Madmarn, 1999, Narongraksakhet, 2006).

As shown in Table 4.7, around 13.0% of the population living in the Four Provinces have no formal education, which is much larger figure than that of the South (6.6%) and the national average (4.9%). The performance of the provinces clearly declines at the higher

<sup>7</sup> Poverty line reported in this study refers to amount of income in THB per person per month.

level of education. Only 10.8% of the population received upper secondary education compared to those of the South (13.1%) and the whole country (12.8%). The percentage of the population of the Four Provinces who obtained university education was 6.0% while the South recorded 7.4% and the average for Thailand was 8.5%. The Two Provinces performed much better than the Four Provinces in terms of educational attainment. Over 11.4% of the population of the Two Provinces gained university qualifications.

**Table 4.7: Educational Attainment of Population Aged 15 Years and Over 2007 (%)**

Area	No education	Less than primary	Primary	Lower second.	Upper second.	Diploma	Uni.
Whole Kingdom	4.9	31.8	20.4	17.7	12.8	3.5	8.5
South	6.6	27.6	21.8	18.8	13.1	4.2	7.4
Two Provinces	5.1	21.4	16.1	20.5	17.2	5.9	11.4
Four Provinces	13.2	23.4	25.6	17.5	10.8	2.7	6.0

Source: Calculated from Thailand's Human Security Index 2009 (UNDP, 2010)

Average number of years of schooling and the quality of education of people in the Four Provinces seem to lag behind the population of other regions in the country. As illustrated in Table 4.8, the average number of years of schooling in the Four Provinces was 6.88 years in 2007, far below the national average (7.68 years). Furthermore, Narathiwat province was ranked among the bottom five provinces with an average number of years of schooling of 6.30 years. The quality of education in the Four Provinces was, therefore, neither encouraging nor up to the national standards. The average O-Net Score<sup>8</sup> of the Four Provinces was 36.3 %, far below the national average (41.2%) and the other southern provinces (39.7%). In fact, the average scores of Narathiwat, Pattani and Yala were the lowest three in the South and in the country in 2007. Phuket and Songkhla recorded an average of 44.1%, much higher than the national average. As a matter of fact, Phuket reported the second best score in the country behind Bangkok Metropolis.

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<sup>8</sup> O-Net refers to Thailand Ordinary National Education Test conducted by NIETS. The test is for grade 6, grade 9, and grade 12 students to assess their academic proficiency. It comprises 8 major areas specified under the national education curriculum including Thai Language, Mathematics, Science, Social Science, Religion and Culture, Health and Physical Education, Art, Career and Technology, and Foreign Language.

**Table 4.8: Mean year of Schooling and Average O-Net Score 2007 (%)**

Area	Mean years of schooling of people aged 15 years or over	Average O-Net Score
Whole Kingdom	7.7	41.2
South	7.7	39.7
Two Provinces	8.9	44.1
Four Provinces	6.9	36.3

Source: 1) National Statistical Office (NSO) (2007)

2) National Institute of Educational Testing Services (NIETS) (2007)

#### 4.5.2 Occupation and Unemployment

Economic growth in Thailand has seen increasing dominance by the manufacturing sectors at the expense of the agricultural sectors in at least four decades (Sarntisart, 2005). At the national level, the share of agriculture in GDP declined from 21.4% in 1981 to 15.7% and 12.7% in 1986 and 1991 respectively. It continued to decrease from 9.5% in 1996 to its lowest level of 9.1% of GDP in 2001. In 2006, the share increased to 10.8% and reached 11.6% in 2009. The share of agriculture in GRP of the South and Two Provinces followed a relatively similar trend to that of the national level.

Nonetheless, the process of industrialisation appears to be dissimilar in the Four Provinces. The relative dominance of agriculture, which involved crops, livestock, fisheries, forestry, agricultural services and simple agricultural processing, in the Four Provinces increased while it declined in other parts of Thailand. The share was between 34.0% and 37.0% from 1981 to 1996. Then, it rose significantly to 39.6% in 2001 and reached 50.0% in 2006. After that, it slightly declined to 49.0% which was still much higher than the national average. It has been argued that the slow process of industrialisation explains the failure to reduce poverty in this region (Sarntisart, 2005).

**Table 4.9: Percentage Share of Agriculture in GDP at Current Prices**

Area	1981	1986	1991	1996	2001	2006	2009
Whole Kingdom	21.4	15.7	12.7	9.5	9.1	10.8	11.6
South	37.1	35.0	36.1	30.1	29.9	37.9	36.6
Two Provinces	21.0	20.8	24.7	17.0	18.4	18.4	16.8
Four Provinces	36.8	35.7	37.3	34.9	39.6	50.0	49.0

Source: NESDB (2011a)

Another important issue for the southern border provinces is unemployment. The unemployment rate in this area has been high compared to the national average. As shown in Table 4.10, the unemployment rate was initially 2.3%, which was better than the national average (3.3%) in 2001. The rate had been reduced, but at a slower rate relative to the national average until 2007. It increased to 1.8% and 2.0% in 2008 and 2009 correspondingly. High unemployment implies that people in the Four Provinces do not enjoy the benefits of economic recovery in Thailand (Sarntisart, 2005).

**Table 4.10: Unemployment Rate**

Area	2001	2002	2003	2004	2005	2006	2007	2008	2009
Whole Kingdom	3.3	2.4	2.2	2.1	1.8	1.5	1.4	1.4	1.5
South	2.1	2.1	1.9	1.9	1.7	1.5	1.3	1.5	1.8
Two Provinces	1.4	1.6	1.5	2.6	1.6	1.5	1.5	1.8	2.2
Four Provinces	2.3	2.4	2.3	2.3	2.0	1.7	1.6	1.8	2.0

Source: Report of the Labour Force Survey, (NSO, 2010)

Note: Based on population aged 15 and over

### 4.5.3 Natural Disaster and Crime

Living standards in the Four Provinces have also been affected by natural disaster and violent crime. Over 5.0% of the population of the Four Provinces was affected by flood in 2007. This was much higher than the national figure (3.7%). Narathiwat reported 9.9% of the population being affected while Pattani recorded 8.8%. Furthermore, the people in these provinces have been subjected to violent crimes. It was reported that 51 out of every 100,000 people in the provinces are affected by crime. This is alarming when compared to the national level (13 people). In fact, Yala (64 people), Pattani (63 people) and Narathiwat (57 people) were the provinces reporting the largest number of violent crimes in the country. Floods and violent crime damage land and agricultural products, and prevent people from pursuing their agricultural activities, causing poverty and life insecurity for the people in this area.



**Table 4.11: Population Affected by Flood (%) and Violent Crime 2007**

Area	Population Affected by flood	Violent Crime/100,000 people
Whole Kingdom	3.7	13
South	2.3	32
Two Provinces	0.2	28
Four Provinces	5.1	51

Sources: 1) Thailand Disaster Statistics 2007 (DODPM, 2007)

2) Crime Statistics of Thailand 2007 (RTP, 2007).

#### 4.6 SOUTHERN UNREST

The tension and violence in southern Thailand, especially in Pattani, Yala, Narathiwat and certain parts of Songkhla, can be traced back to more than a hundred years. The levels of violence were quite high during the 1970s, when the separatist movement peaked. The high level of conflict erupted again in 2004 and has continued until now (Jitpiromsri and Sanyasak, 2006). Unlike the earlier so-called southern separatist group, the latest resurgence is led by an educated and Islamically conscious group of people who are pursuing diverse causes (Pitsuwan, 1987). Between January 2004 and October 2010, 4,453 people had been killed and 7,239 people had been injured. Over 59.0% (2,628 persons) the victims were Muslims while Buddhists accounted for 38.2% (1,699 persons) of the victims. Buddhists were reported to comprise 60.1 % (4,353 persons) of the injured people while Muslims accounted for 32.7 % (2,352 persons) of the injured (Jitpiromrsi, 2010).

The real perpetrators of the southern violence have not been clearly identified. Perceptions and interpretations of the situation vary from one group of people to another. The causes may range from the acts of the separatist movement, international terrorist attacks, a resurgence of historical consciousness on the part of local Malay Muslims, and the outcomes of the government's mishandling of the southern problems to long-standing grievances related to poverty, unemployment, lack of educational opportunities, drug abuse, vice, crime and social deprivation (Jitpiromsri and Sanyasak, 2006, Walker, 2005, Kersten, 2004, Pitsuwan, 1987, Jitpiromsri *et al.*, 2010).

A survey conducted by Deep South Watch reveals that people perceive economic grievance to be one of the main causes of the southern unrest. It forms an important part of the

problem at village level, provincial level, regional level and national level (Jitpiromsri, 2010). Although, Muslims in the Deep South of Thailand benefit from Thailand's long-standing economic prosperity and recent economic recovery, the region has fared poorly compared to other regions, other provinces in the South and neighbouring Malaysia. These provinces have also performed poorly in terms of economic growth and have received no favours from the government's expenditure allocation. A poverty reduction gap has therefore occurred (Jitpiromsri and Sanyasak, 2006, Sarntisart, 2005).

The poverty reduction gap of the Four Provinces tends to be a result of specific socio-economic factors. Demographic differences such as lower degree of urbanisation, lower percentage of labour force in the total population, language barriers and less education have negative impacts on the poverty reduction process (Sarntisart, 2005, Walker, 2005). Moreover, the process of industrialisation in these provinces seems slow. Most people still rely on agricultural activities for their incomes. Unemployment has been comparatively high in these provinces. These difficult socio-economic conditions are contributory factors to increasing crime and drug problems in the area (Jitpiromsri and Sanyasak, 2006).

Believing that the southern unrest is an inevitable outcome of underdevelopment and poverty, Thaksin's government poured a huge amount of funds into the area after the January 2004 explosion of violence. Halal Food Industrial Zone in Pattani was part of the two-year strategic programme to alleviate poverty in the southernmost provinces of Thailand (Jitpiromsri and Sanyasak, 2006). The Abhisit's government followed the same course of action. In April 2009, it adopted a development plan for the five southern border provinces which aims, among other things, improving the wellbeing of the people and developing the regional economy based on people's culture, identity and beliefs (OSPMT, 2011). It approved a THB1,150 million microfinance programme specifically for these provinces in 2009. The programme has been implemented by the Islamic Bank of Thailand with the cooperation with the United Nations Development Programme (BOT, 2009). It is still too early to judge the success or failure of these development programmes.

## **4.7 AN OVERVIEW OF THAILAND'S FINANCIAL SYSTEM AND COOPERATIVES**

Formal financial activities, especially conventional banking, started in Thailand in 1888 when a British-owned bank was introduced. The Chartered Bank and a French bank, Banque de l'Indochine, were then opened in the late 1890s. The first local bank, the Siam Commercial Bank, formally known as Thai Commercial Bank, was set up in 1906 (BOT, 1992). After the Second World War, eleven other local banks were established and seven other foreign banks opened offices in Bangkok. Branches of these banks were subsequently opened throughout the country. However, from the 1950s the government exercised strict control over the granting of bank licenses (Shanmugam and Perumal, 2007).

### **4.7.1 The Bank of Thailand and Other Financial Institutions**

The financial structure of Thailand is broad. The major constituents of the country's financial system comprise commercial banks, special financial institutions, non-bank financial intermediaries and capital markets (Shanmugam and Perumal, 2007). The financial institutions are classified based on business activities and supervised by the Central Bank (Bank of Thailand), the Ministry of Finance, the Ministry of Agriculture and Cooperatives etc. (Haron and Yamaruding, 2003).

The history of the Bank of Thailand began in 1939 as the Thai National Banking Bureau attached to the Ministry of Finance with a limited central bank role (BOT, 1992). In 1942, the government changed its status to the central bank which is responsible for broader activities covering the following: promoting monetary stability and formulating monetary policies; promoting financial institutions' stability and supervising financial institutions; providing bank facilities and recommending economic policies to the government; providing banking facilities for the financial institutions; managing the country's international reserves; and printing and issuing banknotes.

The commercial banking industry is dominated by the local commercial banks along with some foreign banks' branches. In the past few years, the country's commercial banks have been allowed to expand their business from traditional banking activities to include

providing information and financial consultancy services, underwriting sales of government and state enterprise securities, managing mutual funds, acting as debt-collecting agents, etc. (Haron and Yamaruding, 2003).

Specialised financial institutions, established under specific registration and for specific objectives, are owned by the government and play a very important role in social development. Major players among the specialized institutions include the following: the Government Savings Bank (GSB) with the objective of mobilising small savings from lower- and middle-income groups; the Bank of Agriculture and Agricultural Cooperatives (BAAC) for providing credit to the agricultural sector; the Government Housing Bank supplying long-term loans at low interest rates to assist low- and middle-income groups in purchasing houses; and the Export-Import Bank of Thailand providing financial support for international trade and foreign investment (Haron and Yamaruding, 2003). The Islamic Bank of Thailand also falls under this category.

The Islamic Bank of Thailand (IBank) was established under the Islamic Bank of Thailand Act 2002 which was approved by the Thai Parliament in October 2002. However, it commenced its operations in June 2003 with paid-up capital of THB1 billion. The bank is currently a state-owned enterprise and regulated by the Ministry of Finance. In addition to that, the bank has appointed its *Shariah* supervisory council to ensure its *Shairah* compliant status. In 2005, IBank marked its expansion by the acquisition of *Shariah* financial services of Krung Thai Bank Plc which resulted in an increased number of branches from 18 to 27. Since February 2011, the bank has been offering *Shariah*-compliant financial services in 56 branches across the country. Its services range from financing and, deposits, to cash management and trade finance (Ibank, 2010).

Finance companies, finance and securities companies, and credit foncier companies are authorised by the Acts on the Undertaking of Finance Business, Securities Business and Credit Foncier Business of 1979. They normally raise capital from the issuance of promissory notes, bills of exchange and certificates of deposit. Finance businesses are under the supervision of the Bank of Thailand, while securities businesses are supervised by the Securities and Exchange Commission (SEC).

#### **4.7.2 Cooperatives in Thailand**

According to the Cooperatives Act B.E. 2542 (1999), a cooperative is defined as ‘a group of persons who jointly conduct affairs for socio-economic interests on the basis of self-help and mutual assistance, and are registered under the Cooperatives Act’. Until 1934, the cooperative department had been supervised by the Ministry of Commerce and is one of the oldest government departments in Thailand (CPD, 2011b). Currently, two main government agencies in charge of cooperatives in the country are the Cooperative Promotion Department and the Cooperative Auditing Department. Both departments are under the Ministry of Agriculture and Cooperatives. The Cooperative Promotion Department is responsible for the survey and establishment, and promotion and guidance of cooperative societies in order to enable them to carry out their business activities according to cooperative regulations. The Cooperative Auditing Department’s main functions consist of cooperative auditing and providing practical guidance on financial and accounting management to cooperatives (CAD, 2004).

Other national cooperative organisations which have been established under the Cooperative Act B.E. 2511 (1968), the first cooperative act, are the Agricultural Cooperative Federation of Thailand Ltd., Federation of Savings and Credit Cooperative of Thailand Ltd., Consumer Cooperative Federation of Thailand Ltd., and Bus Service Cooperative Federation of Thailand Ltd. These national cooperative organisations are functioning mainly in business activities for the benefit of their member cooperatives respectively. Another organisation created under the same Act is the Cooperative League of Thailand (CLT). This is the national apex body of the cooperative movement which comprises all cooperatives at every level. Its major functions are to develop and promote all cooperatives’ affairs without sharing profit or income (CLT, 2011).

The cooperative movement in Thailand began in 1916 when a cooperative was established among small paddy farmers in Phitsanulok Province in Northern Thailand (CAD, 2004). Since then, many types of cooperatives have been created: agricultural cooperatives, fishery cooperatives, land settlement cooperatives, consumer cooperatives, thrift and credit cooperatives, service cooperatives and credit unions (CAD, 2008). Most cooperatives

which operate in compliance with Islamic principles are service cooperatives, thrift and credit cooperatives and agricultural cooperatives (CAD, 2010).

Service cooperatives are formed by persons engaged in the same occupation to deal with common concerns including building up employment security and maintaining the members' existing occupation. Agricultural cooperatives are established to enable farmer members to engage in business together, thus helping one another in times of crisis as well as gaining for themselves a better livelihood and quality of life. Thrift and credit cooperatives are those whose members are people having the same occupation or living in the same community. Their main purpose is to promote savings among members and provide loans for productive investment. This type of cooperative is sometimes referred to as a savings and credit cooperative (CLT, 2011).

All cooperatives in Thailand operate under the Cooperative Act B.E. 2542 and the Cooperatives Act (No.2) B.E. 2553 in which some sections of the Cooperative Act B.E. 2542 have been amended to suit current operations of the cooperatives in the country. Apart from these main Cooperatives Acts, there are Ministry Regulations, the Registrar Regulations and many other legal requirements with which cooperatives must comply. These regulations and legal requirements are mainly to ensure that the cooperatives operate for the full benefits of the members. Each cooperative is also required to draft its own regulations to be agreed upon at its general meeting (CPD, 2011a).

#### **4.8 THAI MUSLIMS AND ISLAMIC BANKING AND FINANCE**

The idea of forming an Islamic financial institution had long been discussed among Muslims in Thailand. The documented proposal of such initiative was made in the early 1980s by the then *Chularajamuntri*<sup>9</sup> who initiated the idea of a separate charitable fund for the poorer sections of the Muslim community (Pitsuwan, 1988). Subsequently, the idea spread rapidly; by the end of the year 2003, various *Shariah*-compliant financial

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<sup>9</sup> *Chularachamontri* is the official head of Muslims in Thailand.

institutions had been established in various parts of Thailand, mainly Islamic cooperatives, Islamic windows and a fully-fledged Islamic bank.

During the early 1980s, for certain political and socio-economic reasons, a fully-fledged Islamic financial institution could not be created. Muslim communities, on the initiative of local Muslim leaders turned to the next available alternative, the cooperative. After a long discussion with the authorities involved, the first Islamic savings cooperative, the Islamic Savings Cooperative of Pattani Ltd., was established in Pattani province in 1987. The success of this *Shariah*-compliant cooperative encouraged the establishment of similar financial institutions in southern Thailand (Haron and Yamaruding, 2003).

With the great potential of *Shariah*-compliant banking products, the Government Savings Bank (GSB) started operating an Islamic window on its premises in 1998 to attract Muslims' savings. The earlier experiment was limited to a number of branches in the Muslim areas. In 1999, the Bank for Agriculture and Agricultural Co-operatives (BAAC) offered its *Shariah*-compliant products through an Islamic window for the first time. The success story of this experiment encouraged a state-owned commercial bank, Krung Thai Bank, to enter the market by establishing its fully-fledged Islamic branches in 2002. This is considered major progress for Islamic banking in Thailand.

In 1994 the Thai Government signed the Indonesia-Malaysia-Thailand Growth Triangle-IMT-GT. In this plan, Islamic banks became very important as financial institutions providing *Shariah*-compliant products for Muslim communities in the area. In 2002, the Islamic Bank of Thailand Act B.E. 2545 was passed and the Islamic Bank of Thailand started operating in June 2003 (BOT, 2009). According to Haron and Jamaruding, Islamic banking in Thailand has bright prospects as support from Muslim communities is overwhelming. 'The programme to develop Southern provinces as a hub for *halal* foods as outlined in the government master plan creates opportunities for Islamic banks to participate in the programme by providing capital to entrepreneurs' (Haron and Yamaruding, 2003, p.7).

## **4.9 BACKGROUND OF ISMFIs**

### **4.9.1 The Pattani Islamic Savings Cooperative Ltd.**

The Islamic Savings Cooperative of Pattani Ltd. (hereafter called the Islam Pattani) began its operations on January 1, 1988. The cooperative was formed as a result of an effort by influential Muslim leaders, prominent Muslim intellectuals and well-known Muslim politicians. This initiative was a kind of influence from a neighbouring country, Malaysia, in which an Islamic bank was established in 1983. Among those people was Mr. Den Tohmeena who was at that time Pattani's Member of Parliament.

A meeting was organised at the Prince of Songkhla University, Pattani Campus attended by two thousand people from Pattani, Yala, Nathiwat and some parts of Songkhla. The speakers, including Dato' Dr. Abdul Halim Haji Ismail, the then Managing Director of Islamic Bank of Malaysia, Director of Cooperative Promotion Department, Deputy Cooperative Registrar and Mr. Den Tohmeena, discussed the possibility of establishing an Islamic financial institution in Thailand. After the meeting, a steering committee was formed and their representatives travelled to Bangkok to discuss further details of the proposed Islamic savings cooperative.

Even though the Pattani Cooperative Promotion Office was deeply concerned about the feasibility of an interest-free cooperative, the office played a supportive role in forming the first ever Islamic financial institution in Thailand. The committee had to clearly explain to those officers how the cooperative could function. Eventually, they were convinced and granted savings cooperative status under the Cooperative Act B.E. 2511 on October 28, 1987, with 360 members. The first cooperative board of directors comprised well-known Muslim politicians, Islamic community leaders, Islamic scholars from the Pattani Islamic Committee, and Muslim professionals.

The Islamic Pattani currently has a head office and two branches. The head office located in Muang district covers Muang, Yaring and Yarang districts. The Palas office situated in Mayo district provides services to customers in Mayo, Panareh, Thongyangdeang, Saiburi, Maikhen, and Kapo districts, while Khokpo branch is responsible for Khokpo, Nongchik



and Mealan. The branches provide basic financial services such as receiving deposits, accepting loan requests and withdrawal facilities. The main office, apart from providing all those basic services, handles all administration, finance and accounting activities (PISC, 2005).

#### **4.9.2 Ibnu Affan Savings Cooperative Ltd.**

Ibnu Affan Savings Cooperative Ltd. (hereafter called Ibnu Affan) was formed by former Thai Muslim students who were studying at the universities in southern Thailand in the late 1990s. Some members of the group participated in a leadership training programme in Chonburi province and discussed the idea of establishing an Islamic financial institution with a Muslim economics lecturer. An Islamic savings cooperative model was then proposed.

They then conducted an exploratory study and found that there was only one interest-free financial institution in Thailand while the demand for *Shariah*-compliant financial services was huge. So the establishment of an Islamic savings cooperative was agreed upon by the members. They began by forming a small savings fund group which offered the opportunity for them to assess the possibility of the success of an Islamic financial institution in an unfriendly financial environment such as Thailand.

It was because of the rapid growth and increased interest from non-members during the first year that they decided to establish a savings cooperative. Their challenging task then was to explain to the government officers how an interest-free cooperative could function, on the one hand, and how to enable an Islamic savings cooperative to operate in line with the country's cooperative law on the other. Eventually, they came to a conclusion that satisfied both parties. The cooperative license was granted on June 1992.

Ibnu Affan currently has six offices. The main office located in Pattani town houses all its activities. The office is also the only office that conducts all the accounting, recording and reporting of the cooperative. The branches include Saiburi, Narathiwat, Yala, Ruesah and Chana. The cooperative uses modern facilities and now has its own website; it employs thirty-three managerial and administrative staff.

#### **4.9.3 Ibnu Auf Cooperative Ltd.**

Islamic religious teachers and committed Muslims who were living around Sang Prateep Witataya Islamic School in Chalung, Satun, formed Ibnu Auf Islamic Cooperative Ltd (hereafter called Ibnu Auf). They began by establishing an Islamic funds group as a means of helping one another financially. A year later, some members made a field visit to an Islamic savings cooperative in Pattani province. Finding the Islamic cooperative model feasible, they thus decided to establish an Islamic cooperative.

When they applied to the Satun Cooperative Promotion Office to form an Islamic cooperative, the authority was very concerned about the feasibility of an interest-free cooperative. After a lot of discussions and enquiries between the two parties, the application was finally approved. The cooperative launched its operations as a service cooperative on June 9, 1993, with total funds of THB117,000 and 117 members.

Ibnu Auf presently occupies three offices, all located in Satun province. The main office is located in Chalung, housing thirteen staff and all the business activities of the cooperative. Other offices located in Langu and Thapea are mainly for depositing and withdrawal purposes. The members may also apply for purchase of goods at this office. The applications for purchase will be forwarded to the main office for approval and arrangement.

#### **4.9.4 As-Siddeek Savings Cooperative Ltd.**

As-Siddeek Savings Cooperative Ltd. (hereafter called As-Siddeek) was the result of cooperation and commitment of Muslim leaders, Islamic religious teachers and young professionals in Songkhla province who saw the need for an Islamic financial institution that served Muslims in the upper south of Thailand. After a few visits to an Islamic savings cooperative in Pattani, this group finally formed a savings group in 1994 and, subsequently registered under the Thailand Cooperative Act B.E. 2511 as a savings cooperative on December 12, 1997, with 106 founding members and THB47,160 initial operating funds. It started operating a year later.

The cooperative main office now occupies a THB12 million building just outside Hat Yai city centre. In 2005, Nathawee branch was opened to capture the Muslim market in Nathawee and the nearby districts of Songkla. In order to reach a larger market-base, the cooperative also provides services through a mobile unit for Muslims in Phatthalung province, beginning from 2002. This unit was established to receive deposits and members' funds. The members from Phatthalung need to travel to Hat Yai, which is about 100 kilometres away, to access other services. As-Siddeek is now administrated by ten full-time managerial and administrative staff, and utilises modern facilities in its day-to-day operations.

**Table 4.12: Basic Information about the Cooperatives**

<b>Cooperative</b>	<b>Type</b>	<b>Location</b>
The Pattani Islamic Savings Cooperative Ltd.	Thrift and credit cooperative	Pattani
Ibnu Affan Savings Cooperative Ltd.	Thrift and credit cooperative	Pattani, Yala, Narathiwat and Songkhla
Ibnu Auf Cooperative Ltd.	Service cooperative	Satun
As-Siddeek Savings Cooperative Ltd.	Thrift and credit cooperative	Songkhla

## **4.10 ISLAMIC MICROFINANCE PRODUCTS AND SERVICES**

### **4.10.1 *Murabahah* Micro-financing**

Micro-financing on the basis of a *murabahah* contract is a sale-based contract in which a client of IsMFIs who wishes to purchase goods requests the IsMFIs to purchase the goods and resell to him/her at cost plus a declared profit (Lewis and Algaoud, 2001). The client is required to repay this by lump sum, several instalments, or monthly instalments.

In practice, *murabahah* micro-financing is implemented in different ways. A client can check the price of the goods and request IsMFIs to buy the goods. IsMFIs' staff will be responsible for buying the goods and reselling them to the client. In some cases, IsMFIs may give cash to the client and appoint him/her as an agent to buy the goods and provide a receipt to the IsMFIs. Many IsMFIs have contracts with suppliers of main goods such as motorcycles and construction hardware, allowing the client to collect the goods from

contracted suppliers directly. Ibnu Auf owns subsidiaries to provide construction hardware and used cars which are the two types of goods that many clients want to purchase. This provides convenience for both the IsMFI and the clients. Collateral in the form of member shares, personal guarantor and assets may be required depending on the amount of micro-financing and credit history of the clients.

#### **4.10.2 Wadiah Savings Account**

*Wadiah* savings account is an account for safe-keeping and regular deposits and withdrawals. IsMFIs pay no return on this account. In practice, clients are required to become members before they can open accounts. This means they have to first contribute to members' shares.

#### **4.10.3 Mudarabah Investment Account**

The IsMFIs also offer a *mudarabah* investment account. The investment account targets those having reasonably high income and who can invest a large amount of money for a certain period of time. Most IsMFIs offer three-month, six-month, nine-month, and twelve-month *mudarabah* investment accounts. In this account, the clients provide the capital whilst the IsMFIs provide human capital to undertake business ventures. A large part of investment account contributions is used for micro-financing. Some of the contributions are utilised to venture into business projects such as fisheries, transport and retailing. The clients receive a return on a pre-determined ratio in accordance with the terms of the contract.

#### **4.10.4 Pilgrimage (haj) Account**

Another finding is that the IsMFIs in Thailand offer a pilgrimage (*haj*) account. This account is based on a *mudarabah* contract in which the account holders receive returns annually.. The service is intended to satisfy the needs of a specific group of clients. The clients may go to Makkah even before the required amount in their accounts has been reached.

#### **4.10.5 Pawn Service (*ar-rahn*)**

The findings in Chapter six indicate that Islam Pattani is the only IsMFI in Thailand providing this service to the clients. As pawn services are not permitted in cooperatives on legal grounds, the IsMFI offers this service as part of its emergency loan. In terms of reporting, the figures on this service are separately reported. In practice, the clients are required to pledge gold or jewellery which will be returned after they have repaid the whole amount taken out plus a small fee.

#### **4.10.6 Insurance Scheme (*takaful*)**

Another main service is insurance schemes which are mainly to assist the clients with medication and funeral expenses. The clients are required to contribute a small annual fee as part of the insurance fund. It is a kind of cooperative assistance for the member clients. Islam Pattani, additionally, offers *takaful* for its members where their premiums are pooled and paid to a *takaful* company in Malaysia. The IsMFI plays the middleman role between its members and the *takaful* company.

### **4.11 Conceptual Framework**

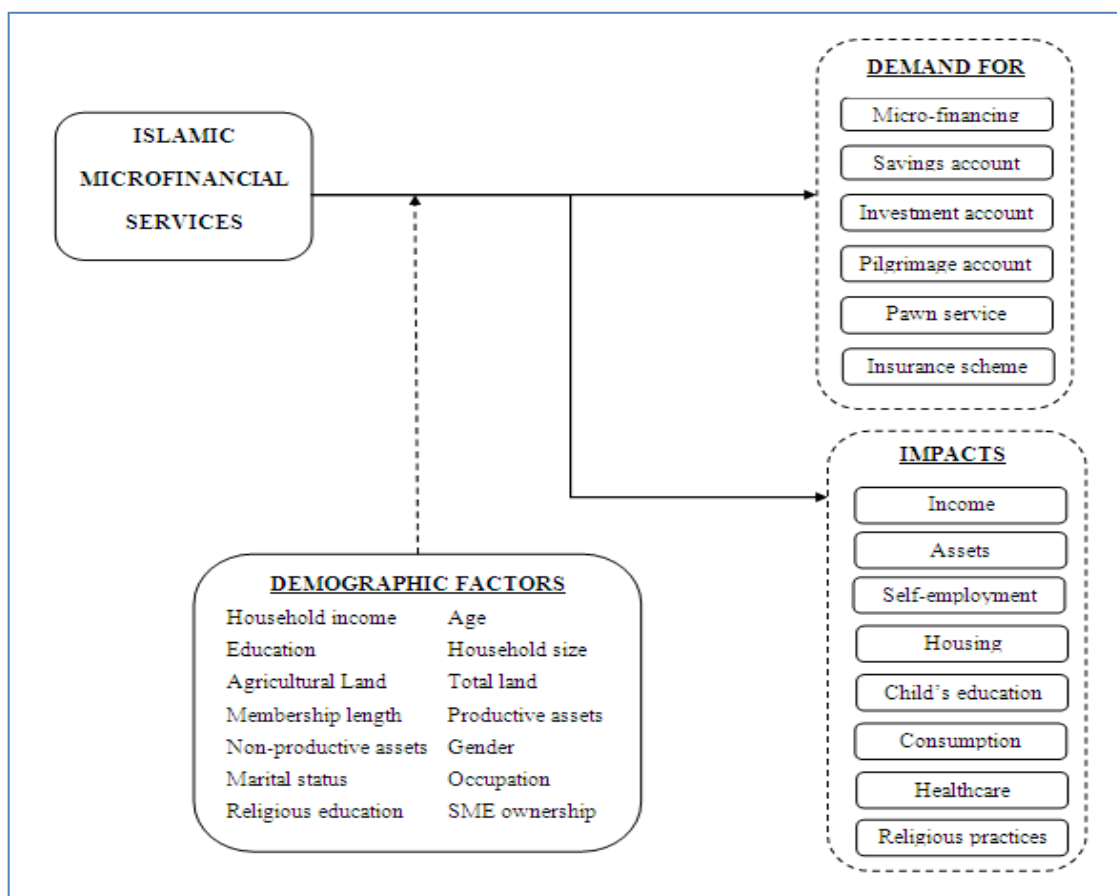
Based on the discussion in Chapters 2, 3 and 4, a conceptual framework on the demand for and impacts of Islamic microfinancial products and services in Thailand has been derived. It is expected that Islamic microfinance programmes in the form of Islamic cooperative shall have impacts on the lives of the Muslim poor and financially excluded i.e. income, productive and non-productive assets, housing, self-employment, children's education, household's consumption, healthcare, and finally religious activities. The impacts are, however, influenced by certain respondents' demographic characteristics, including initial household's income, age of respondent, educational level, household's size, agricultural land size, total land size, membership length, productive assets and non-productive assets held, gender, marital status, occupation, religious education, and SME ownership.

This research should reveal whether there are any differences in terms of impacts of Islamic microfinancial services on the lives of the poor and financially excluded who have different demographic characteristics. Furthermore, it will also ascertain whether there are

relationships or associations between these demographic variables and the levels of impacts of individual Islamic microfinancial service offered at IsMFIs in Thailand. Finally, it will identify the predictive power of these demographic variables on the levels of impacts.

In addition, the study will also examine the demand for Islamic microfinancial services, including micro-financing, savings account, investment account, pilgrimage account, pawning and insurance services. It is hypothesised that there are differences in the demand for Islamic microfinancial services among the clients of different demographic characteristics. The study will reveal the groups which may have the higher level of demand among the clients. It will further investigate the predictors for the demand for each Islamic microfinancial services. The conceptual framework of this study is exhibited in Figure 4.1.

**Figure 4.1: Conceptual frame work for demand for and impacts of Islamic microfinance in Thailand**



#### **4.12 CONCLUSION**

Thailand appears to have been successful in terms of economic development and poverty reduction in the past few decades. This success, however, has not been achieved without income inequality in different regions of the country. This implies that Thai people have not enjoyed the country's economic prosperity equally. People who live in urban areas such as in the capital, Bangkok, and the surrounding provinces benefit rather more from the economic growth. Rural people, on the other hand, seem to benefit less. Among those who have benefited less are Muslims who reside in the Four Provinces.

A number of socio-economic factors can be regarded as contributing to the situation. The four southern border provinces have experienced slow economic growth as compared to other regions and provinces. Wider income disparities are observed in these provinces. These partly contribute to the slow progress in poverty changes and poverty reduction. As a result of that, those people whose income is below the poverty line are spread widely throughout the country.

Most Muslims living in these provinces do not have higher education attainments that might have enabled them to gain employment in government offices and private sectors. This causes the employment rate in the area to be very high. Moreover, natural disasters, especially floods, and the southern unrest further affect them negatively. The people may not work on their farms and orchards and may not gain enough income to lead an effective life. The Muslims in the four southern border provinces of Thailand are therefore considered poor and vulnerable. Financial services such as microfinance may benefit them if they have access to those services. As religiously-sensitive people, those financial services must correspond with Islamic principles. This may allow them to escape from their current poverty and hardship. IMFI will thus play an important role in this process.

## **Chapter 5**

### **RESEARCH FRAMEWORK AND METHODOLOGY**

#### **5.1 INTRODUCTION**

The preceding chapters give a synthesised review of literature that focuses on several issues related to poverty and microfinance and Islamic microfinance in many parts of the world, and highlights the needs of Islamic microfinance and current implementations of Islamic microfinance in the Thai Muslim community. In this chapter, the study focuses on elaborating the research methodology designed to investigate the perceptions, attitudes, and behaviours of Thai IsMFIs' customers about the demand for and impacts of Islamic microfinance on poverty alleviation and economic development. Furthermore, the methodology provides a broad explanation on methods for the supply-side study, *i.e.* outreach and sustainability which was conducted to support the main findings on demand and impacts. The following sections in this chapter provide the discussion on the actual procedures undertaken by the researcher in conducting this study.

#### **5.2 RESEARCH FRAMEWORK AND QUESTIONS**

This study aims at assessing the demand for and impacts of Islamic microfinance from a demand-side or clients' perspective. It also examines the prospects and challenges facing Islamic microfinance in a non-Muslim country, Thailand, with a view to providing policy recommendations for inclusive finance for Muslims in the country and beyond. In particular, the research seeks to answer the following research questions.

- (i) What are the income and non-income factors affecting the demand for IsMF products and services?
- (ii) How do different IsMF products and services affect the economic wellbeing of the poor and financially excluded?
- (iii) How do different IsMF products and services affect the non-economic variables of the poor and financially excluded?
- (iv) How successful the IsMFIs are in reaching the poor and financially excluded?
- (v) What is the extent of the sustainability, efficiency and profitability of the IsMFIs?



- (vi) What are the prospects and challenges facing the IsMF in a non-Muslim country, Thailand?

The literature discussed in the preceding chapters has answered questions (i) and (ii). The empirical parts of the study in later chapters were designed to answer questions (iii) to (vi).

### **5.3 RESEARCH METHODOLOGY AND STRATEGY**

‘A knowledge claim means that researchers start a project with certain assumptions about how they will learn and what they will learn during the inquiry’. The claim may be called a research methodology which can also be defined as ‘techniques that are an abstraction of reality and which are used in an orderly manner to reveal the dimension of reality’ (Creswell, 2003, p.6). It is a wider research framework which may be inclusive of research design, theoretical frameworks, the selection and analysis of relevant literature, and justified preferences for particular types of data-gathering activities (Saunders *et al.*, 2003). Identifying an appropriate research methodology will help researchers in developing a clear research framework which will provide the advantages of achieving the research aims and objectives set out in Chapter 1.

In social research, methodologies can be broadly classified into quantitative methodology and qualitative methodology, and each carries different epistemological and ontological considerations (Bryman, 2004). In this research, qualitative research methodology is adopted.. As mentioned earlier, the focus of this research is to ascertain the impacts of Islamic microfinance in Thailand, exploring people’s attitudes, behaviours, and motivation based on the conventional theories on the subjects. Various aspects of impacts which have been greatly examined in microfinance literature are to be tested and explained. The results provide qualitative explanation of different aspects of impacts and demand for Islamic microfinance in Thailand. It is therefore said to utilise qualitative methodology and employed a combination of quantitative method and qualitative methods of data collection and analysis.

Research philosophy relates to paradigms, ontological and epistemological considerations and assumptions of researchers. As such, the way researchers think about the development of acceptable knowledge in a discipline affects the way they conduct their research. Three views on the research process are predominant: positivism, realism and interpretivism (Bryman, 2004, Easterby-Smith *et al.*, 2008). Positivists believe that the authentic and acceptable knowledge about social reality must be based on sense, experience and positive verification. They tend to 'assume the role of an objective analyst, coolly detached interpretations about those data that have been collected in an apparently value-free manner' (Saunders *et al.*, 2003, p.83). They rely heavily on structured methodology, facilitating replication and on quantifiable observations in which statistical analysis can be employed. Thus, the methods of the natural sciences are applicable to the study of social sciences and beyond (Bryman and Bell, 2003).

Proponents of realism believe that there are a number of social forces and processes which may have a significant influence on people's behaviours and interpretations. These social forces and processes are external to individuals in society (Schlick, 1948). This implies that realists share this philosophical vision with positivists but they reject the notion of the similar style of natural sciences (Bryman, 2008). They rather 'recognise the importance of understanding people's socially constructed interpretations and meanings, or subjective reality, within the context of seeking to understand broader social forces, structures or processes that influence, and perhaps constrain, the nature of people's views and behaviours' (Saunders *et al.*, 2003, p.85).

Interpretivism argues that in order to understand a social reality, researchers must uncover the details of situations or a reality working behind them (Easterby-Smith *et al.*, 2008). They develop subjective meanings of their experiences that are varied and multiple, guiding them to the complexity of views of participants. These meanings are formed through interaction of individuals in society and through individual values and norms. The researchers' background affects the way they interpret the meanings expressed by others about the world. They hence generate a theory or pattern of meaning, rather than testing a

theory. Qualitative enquiry is often employed by interpretivists in studying social reality (Creswell, 2003).

As stated by Saunders *et al.* (2003), research rarely falls neatly into only one of these philosophical domains. The choice of philosophical application will be influenced by the research questions the researchers seek to answer. In this research, a post-positivism or critical realism stance is applied. This stance recognises that researchers cannot be positive about their claims to knowledge of human beings' actions and behaviours. The main focus of the study is the demand for and impacts of IsMFIs on the lives of people in Thailand. Their knowledge, behaviour and perception of the Islamic financial services they have received from the IsMFIs form a major part of the objectives of this research. Some related theories are used in the formulation of variables, which reflects the orientation of positivism. The attitudes and perceptions of participants are considered to be socially constructed and influenced by their social process and structure.

Bryman and Bell (2003) maintain that research methodology and research approach are interrelated and cannot be studied in isolation. Two research approaches comprise the deductive approach and the inductive approach (Black, 1999). In the deductive approach, researchers aim at testing theories by deducing them into hypotheses. These hypotheses are then operationalised and tested to confirm or modify a theory in the light of the findings. This approach is associated with quantitative research and positivism (Bryman, 2008). The inductive approach 'involves drawing generalisable inferences out of observations. Collection of further data may be carried out in order to establish the conditions in which a theory will or will not hold' (Bryman, 2004, p.9). This is the process of generation of theories. This approach is associated with qualitative research and interpretivism (Easterby-Smith *et al.*, 2008). In order to study clients' perceptions and attitudes, this research relies on both approaches. The deductive process is employed when testing theories on impacts of microfinance i.e. household income, productive assets, housing, employment etc. The inductive approach is utilised mainly to find out the possible religious aspects of the impacts and other hidden elements of demand and impacts which may not be found in the previous literature.

## 5.4 RESEARCH DESIGN

Another important aspect of research is the research design, which is concerned with putting all the research questions into perspective and formulating a general plan in which the research objectives can be met (Saunders *et al.*, 2003). Research design ‘represents a structure that guides the execution of a research method and the analysis of the subsequent data’ (Bryman, 2004, p.27). In other words, it is ‘a master plan specifying the methods and procedures for collecting and analysing the needed information’ (Zikmund, 1991, p.42). Hence, when undertaking a research project, a proper research design must be prepared, using appropriate tools. As each one of the methods and tools has its own advantages and disadvantages, a proper process of method selection will facilitate the researcher to achieve the research aims and objectives.

As stated by Bryman (2008), there are five main research designs: experimental design; cross-sectional or survey design; longitudinal design; case-study design; and comparative design. The brief descriptions of research designs are summarised in the following table:

**Table 5.1: Types of Research Design**

Research design	Description
Experimental design	A design employed to determine whether any changes in one or more independent variables cause one or more dependent variables.
Cross-sectional design	A design entailing the collection of data on more than one case at a single point in time in connection with two or more variables to detect patterns of association.
Longitudinal design	A process where the collection of data is made at several points in time.
Case study design	A design entailing the detailed and intensive analysis of a single case such as a single community and a single school.
Comparative design	A design involving the study of two contrasting cases using more or less identical methods, for example, cross-cultural research.

Source: Bryman (2008)

Before the process of research design can be undertaken, researchers must decide on the purpose of their study. Research is often classified as ‘exploratory’, ‘explanatory’ and

‘descriptive’(Sekaran, 2003). An exploratory study is ‘undertaken when not much is known about the situation at hand, or no information is available on how similar problems or research issues have been solved in the past’ (Sekaran and Bougie, 2009, p.103). These studies permit researchers to better comprehend and clarify the nature of the problem since very few studies have been conducted in that area (Zikmund, 1991). Meanwhile, an explanatory study or hypothesis-testing emphasises a problem in order to explain the relationships between variables, or ‘to establish the differences among groups, or the independence of two or more factors in a situation’(Sekaran and Bougie, 2009, p.104). This study is also used to predict outcomes of certain situations or problems. Finally, a descriptive study ‘is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation’ (Sekaran and Bougie, 2009, p.105). ‘This may be an extension of, or a forerunner to, a piece of exploratory research’(Saunders *et al.*, 2003, p.97).

The present research adopts a combination of exploratory and descriptive purposes of research. In connection with exploratory research, the researcher attempts to find out the knowledge, behaviour and perceptions of the IsMFIs’ clients on the impacts of the Islamic microfinance programmes. To the best of the researcher’s knowledge, few studies have been conducted on the clients of IsMFIs which have different philosophical and operational aspects from mainstream microfinance. Moreover, hardly any studies have been conducted on IsMFIs’ clients in non-Muslim countries. This is similar to the study on demand for Islamic microfinance products and services. As for descriptive research, this study makes a substantial contribution to the existing literature on the impacts of microfinance on the lives of the poor and financially excluded. In order to achieve the objectives of the research, a combination of design strategies is adopted. A survey technique that uses cross-sectional design and case-studies of IsMFIs in Thailand is employed. These IsMFIs have been identified to be studied in details due to the availability of data and their operational experience and size which will be discussed in the sampling design section. It is suggested that one of the advantages of using multi-methods is that they enable triangulation to take place. This ‘refers to the use of different data collection methods within one study in order

to ensure that the data are telling you what you think they are telling you' (Saunders *et al.*, 2003, p.99).

## **5.5 RESEARCH METHODS**

Another important element of research methodology is research methods which refer to 'the specific methods of data collection and analysis' (Creswell, 2003, p. 17). As discussed earlier in the previous section, there are two main types of research approaches that could achieve the data collection process, namely the quantitative approach and the qualitative approach. A quantitative study involves the collection of quantifiable data that can be analysed using statistical tools. It involves the collection of data of a few variables and many cases. The amount of data collected is usually huge. Quantitative research is therefore concerned predominantly with quantity (Grix, 2001, Creswell, 1998). Qualitative studies, on the other hand, entail an approach where the data collected are descriptive and non-quantified. Hence, they are concerned with interpreting subjective experiences (Grix, 2001). Researchers must be able to identify the most suitable approach so that they can choose the right data collection techniques and analysis to achieve the research objectives (Easterby-Smith *et al.*, 2008).

Another increasingly popular method is the triangulation method, entailing 'the process in which the researcher employs two or more research methods to investigate the same phenomenon'(Grix, 2001, p.84). This can be done either sequentially or at the same time. Johnson and Onwuegbuzie (2004) affirm that due to its methodological pluralism, a mixed method will frequently result in superior research. Furthermore, it allows researchers to be more confident about the results and helps them to discover abnormal dimensions of a particular event (Jick, 1979, Mathison, 1988). The main purposes of employing this method are to expand an understanding from one method to another and to confirm findings from different data sources (Creswell, 2003).

In the context of this study as described earlier a combination of exploratory and descriptive research using a cross-sectional design is employed. Thus, the most suitable method will be mixed method where both quantitative and qualitative data are collected

and analysed in a single study. In fact, there has been growing interest in using mixed methods in social science research in recent years. The researcher will use a concurrent triangulation strategy where the survey method using a questionnaire is employed to collect quantitative data while semi-structured interviews to collect qualitative data. The two methods are used in an attempt to confirm, cross-validate and corroborate findings within a single study. This strategy is also a means of off-setting the weaknesses inherent within one method with the strengths of the other method (Creswell, 2003).

## **5.6 RESEARCH METHOD INSTRUMENTS**

### **5.6.1 Data Collection Tools**

In research, a number of factors should be considered when choosing the most appropriate research instruments available ranging from questionnaire to in-depth interview. The researcher should consider the possibility of obtaining good response rate and data analysis tools when deciding and formulating the research instruments. Two categories of data are normally utilised in any study, namely, primary data and secondary data. The former 'refer to information obtained firsthand by the researcher on the variables of interest for the specific purpose of the study', while the latter represent 'information gathered from sources already existing' (Sekaran, 2003, p.219). Examples of primary data sources are individuals, focus groups, and panels of respondents specially set up by the researcher for the study. Sources of secondary data may include government publications, industry analysis, companies' financial reports etc. In case of this research, both primary and secondary data are utilised. The secondary data are collected from IsMFIs' financial reports and publications, journals, magazines, and internet sources to obtain relevant and up-to-date information mainly on Islamic finance and banking, microfinance and Islamic microfinance.

The main focus of this study, the impacts of Islamic microfinance, primarily use data obtained from clients of IsMFIs. This is due to considerations of the nature and objectives of this study and because no appropriate secondary data are available. This research studies knowledge, behaviour, opinions, perceptions, motivations and demographic characteristics

of the respondents; thus, primary data are most suitable (Churchill, 1983, Bechhofer and Paterson, 2000). Churchill (1983) further divides primary data choices into two main categories: communication and observation. In communication data collection, the respondents are asked to respond to different questions so that data can be gathered. The researcher, however, needs appropriate individuals or units of interest from whom relevant behaviours, facts and actions can be recorded (Sekaran and Bougie, 2009).

Moreover, communication data collection may be further divided into two main methods: interview method and survey or questionnaire method. Grix (2001) suggests that four broad types of interview techniques can be used for data-gathering purposes: the structured, the semi-structured, the unstructured, and group interviews or focus groups. The structured interview involves asking the interviewee questions in a specific order and recording the responses. It can be carried out by the researcher, face-to-face with the interviewee or via e-mail or telephone. In semi-structured or in-depth interviews, the researcher has a number of questions in mind, but does not have to follow any predetermined order. In an unstructured interview, in contrast, the researcher has a random list of concepts or loose questions, which he or she changes into spontaneous questions during the interview session. Saunders *et al.* (2003) state that surveys using questionnaires may be classified into two techniques: self-administered and interviewer administered techniques. The self-administered questionnaires can be further broken down into on-line questionnaire, postal questionnaire, and delivery-and-collection questionnaire. The interviewer-administered interview comprises telephone questionnaires and structured interviews.

In the present research in which a triangulation method is employed, a self-administered survey and semi-structured interview are employed to obtain primary data. The self-administered survey, which is the most popular survey method dealing with behavioural aspects of human beings, are utilised due to its ability to reach the respondents (Saunders *et al.*, 2003). As briefly discussed in Chapter 4, the unrest in southern Thailand where all ISMFIs are operating has been ongoing since 2004, making it very risky for the researcher to meet the respondents individually. Most respondents live in rural areas which are the targets of the insurgents. Furthermore, the self-administered questionnaire reduces the cost



involved in the survey and it provides an opportunity to the respondents to control the amount of time taken to complete the questionnaire. This will make the respondents more comfortable and honest in answering the questions (de Vaus, 1990).

Taking into consideration the above situation, the researcher employs a self-administered questionnaire using the delivery-and-collection or drop-off method. The questionnaires were delivered to the branches of the IsMFIs and arrangements were made with the branch managers to pass them on to respondents. Duration of one month, which is normally the frequency with which the respondents or their representatives visit the branches and conduct transactions, is given to the respondents to return the questionnaires to the branch offices. The researcher then collected them from the branch offices. In order to ensure a good response rate and completeness of the answer, the researcher explained the branch managers and staff about the items in the questionnaire and their importance to enable the staff to provide explanations to the respondents if needed.

The semi-structured interview are conducted to identify various aspects of demand for and impacts of Islamic microfinance on the poor and financially excluded. A list of questions was prepared to guide the researcher and was put to the interviewee during the interview in no particular order. This interview technique ‘allows a certain degree of flexibility and allows for the pursuit of unexpected lines of enquiry during the interview’ (Grix, 2001, p.76). As a consequence, the results and findings of the interview can be compared and contrast. The researcher identified those respondents living in less risky areas in southern Thailand so that the interviews could take place in the respondents’ locality. This offered the opportunity for the researcher to observe the economic and non-economic wellbeing of the respondents.

### **5.6.2 Levels of Measurement**

In formulating a questionnaire, the researcher must select the measurement and scaling since both will affect the data analysis and interpretation, consequently ensuring that the research objectives are achieved. There are four levels of measurement: nominal, ordinal,

interval, and ratio (de Vaus, 1990, Proctor, 2005, Malhotra and Birks, 2007). These are briefly explained as follows;

**Nominal scale:** This is a scale, where numbers or letters are assigned to objects so that one category can be distinguished from another. The categories cannot be ranked in any order (de Vaus, 1990, Zikmund, 1991). Some examples of variables being assigned to a nominal scale are gender, marital status, and occupation. A dichotomous variable, which is a type of variable that has only two categories, is commonly adopted in social research.

**Ordinal scale:** This is a scale that arranges an object by order, but the distances between categories of the object are not equal across the range (Bryman, 2008). An example of a variable with ordinal scale is level of education, i.e. primary or lower, secondary, undergraduate, and postgraduate. Strictly speaking, Likert scales belong to ordinal scales, but many researchers argue that they can be treated as interval or ratio scales (Pallant, 2004).

**Interval scale:** This is a scale in which numbers are used to rank objects where the distances between categories in the objects are identical across the range (Malhotra and Birks, 2007, Bryman, 2008). An example of an interval scale is to rate a training course on a scale from one (1) to seven (7) where number one represents the lowest rating and number seven indicates the highest rating.

**Ratio scale:** This is a scale that provides a natural ranking and it is possible to quantify precisely the differences between categories in objects. Hence, this scale allows researchers to classify the objects, order the objects by rank, and compare intervals (de Vaus, 1990, Sekaran and Bougie, 2009). Common examples of variables that have ratio scales are income in dollars, age, household size, and years in education.

Different levels of measurement are adopted in designing the questionnaire depending on the nature and objectives of the questions. Additionally, the scales adopted in this research can be easily understood by the respondents, who may be uneducated. This might yield a better response from them.

### 5.6.3 Questionnaire Content

The questionnaire comprises 67 questions and covers two (2) main themes. The first part (sections 4, 5 and 9) accesses the demand and customers' selection criteria of Islamic microfinance products and services. Part two (section 6, 7 and 8) deals with the impacts of various Islamic microfinance services on clients' households. The questions are grouped into nine (9) sections according to the objectives of the research. A sample of the questionnaire used in this study is provided in Appendix 5.1.

The following table provides information on the definitions of scale forms defined by de Vaus (1990), Sekaran (2003) and Bryman (2008) discussed in the previous section, and shows the corresponding question number used in the questionnaire.

**Table 5.2: Levels of Measurement Used in the Questionnaire**

Scale	Definition	Question number
Nominal-Dichotomous	It is used to obtain data that have only two categories.	Questions 1, 5, 16, 19, 22, 23, 24, 25, 26,
Nominal	It is a scale where numbers or letters are assigned to objects, in which one category can be distinguished from another.	Questions 3, 6, 13, 18, 20,
Ordinal	A scale that arranges an object by order, but the distances between categories of the object are not equal across the range.	Questions 27-32, 62-67
Ordinal-Likert	Multiple-items measures of concepts.	Questions 33-61
Interval	The distances between the categories are identical across the range.	None, but some questions in the ordinal scale are treated as interval in some analysis techniques.
Ratio	A scale that provides a natural ranking and it is possible to quantify precisely the differences between categories in objects.	Questions 2, 4, 7, 8, 9, 10, 11, 12, 14, 15, 17, 21, 22

The description of each section of the questionnaire is as follows:

**Section 1:** This section consists of seven (7) questions which are related to personal information of the household head or the respondents. The variables in this section are used as control variables for the research.

**Section 2:** This section contains eight (8) questions measuring households' information. The variables in this section are used as main control variables in this study and primarily assess demand for and impacts on clients' households.

**Section 3:** This section consists of questions 16 to 19; these questions relate to the clients' involvement in small and medium-sized enterprises. These enable the researcher to evaluate whether or not the clients of IsMFIs are involved in SMEs as established in microfinance literature.

**Section 4:** This section assesses the clients' relationship with IsMFIs and their opinions on the applicability of main-stream financial institutions in their lives. It consists of seven (7) questions and provides some useful information on clients' behaviours.

**Section 5:** This section consists of six (6) questions which deal with clients' other behaviours, i.e. the factors affecting the selection of Islamic microfinance services. It comprises questions 27 to 32.

**Section 6:** This contains four (4) questions which measure the economic impacts of Islamic micro-financing on the clients' households as perceived by the respondents. The economic impact factors include income, productive assets, housing, and self-employment.

**Section 7:** This section deals with non-economic impacts of Islamic micro-financing and consists of nine (9) questions (questions 37 to 45). The questions assess the impacts of this service on food and non-food consumption, children's education, healthcare, and Islamic religiosity.

**Section 8:** This section consists of sixteen (16) questions dealing with economic and non-economic impacts of other Islamic microfinancial services on clients' households. The

services include savings account, investment account, pilgrimage account, pawn service, and insurance scheme. These questions are grouped into one section because they contain a few questions on each service; thus separate sections for each service may not be necessary.

**Section 9:** The final section consists of questions 62 to 67 assessing another aspect of consumer behaviour in microfinance programmes, i.e. order of service the clients choose in various life cycle events.

The final version of the questionnaire was prepared in two versions: one was in English and another was in Thai. The Thai version was translated from the English version using a direct translation technique. This technique is easy to implement, but may lead to many discrepancies (Lewis *et al.*, 2009). In order to reduce the discrepancies, the source questionnaire and the target questionnaire were reviewed by two experts at Prince of Songkla University in Thailand. Following the review process, minor discrepancies were found between the two versions. The discrepancies were corrected accordingly. This ensures that the questionnaire serves the objectives of the study and can be easily understood by those respondents with low educational levels.

#### **5.6.4 Interview Content**

The interview questions consist of eight (8) sections. Each section contains two to four questions which aim to obtaining detailed information to support quantitative analysis and answer the research questions. These sections include the following:

**Section 1:** This section comprises three (3) questions which assess participation of clients' households in IsMFIs and the purposes of their participation. The responses expand the knowledge about consumer behaviour in regard to Islamic microfinance programmes.

**Section 2:** This section consists of three (3) questions which are intended to gauge the clients' use of conventional financial products and services and the purposes of these products and services. This section ascertains another important behaviour of Islamic microfinance clients.

**Section 3:** There are three (3) questions which expand the information about demand for Islamic microfinancial services obtained from the survey. The questions cover additional microfinance services that the clients need in their daily lives, but which are not available at the IsMFIs in which they have been participating.

**Section 4:** This section consists of four (4) related questions which primarily explain how Islamic micro-financing affects the economic wellbeing of the clients' households. The responses and explanations obtained from these questions verify the nature of the impact i.e. direct or indirect.

**Section 5:** This section which consists of two (2) questions ascertains the nature of non-economic impacts of Islamic micro-financing on the lives of clients and their households.

**Section 6:** This section consists of four (4) questions dealing with impacts of other Islamic microfinancial products on clients' households. The researcher grouped questions on impacts of other services together following suggestions by the respondents during the pilot testing process. They felt that these services provide specific direct impacts depending on the purpose for which they are used.

**Section 7:** This section aims at identifying the perception of the clients on achievements and expectations of IsMFIs in Thailand. It consists of three (3) questions.

**Section 8:** This section consists of three (3) questions which are intended to gauge the opinions of the clients on challenges facing IsMFIs in Thailand.

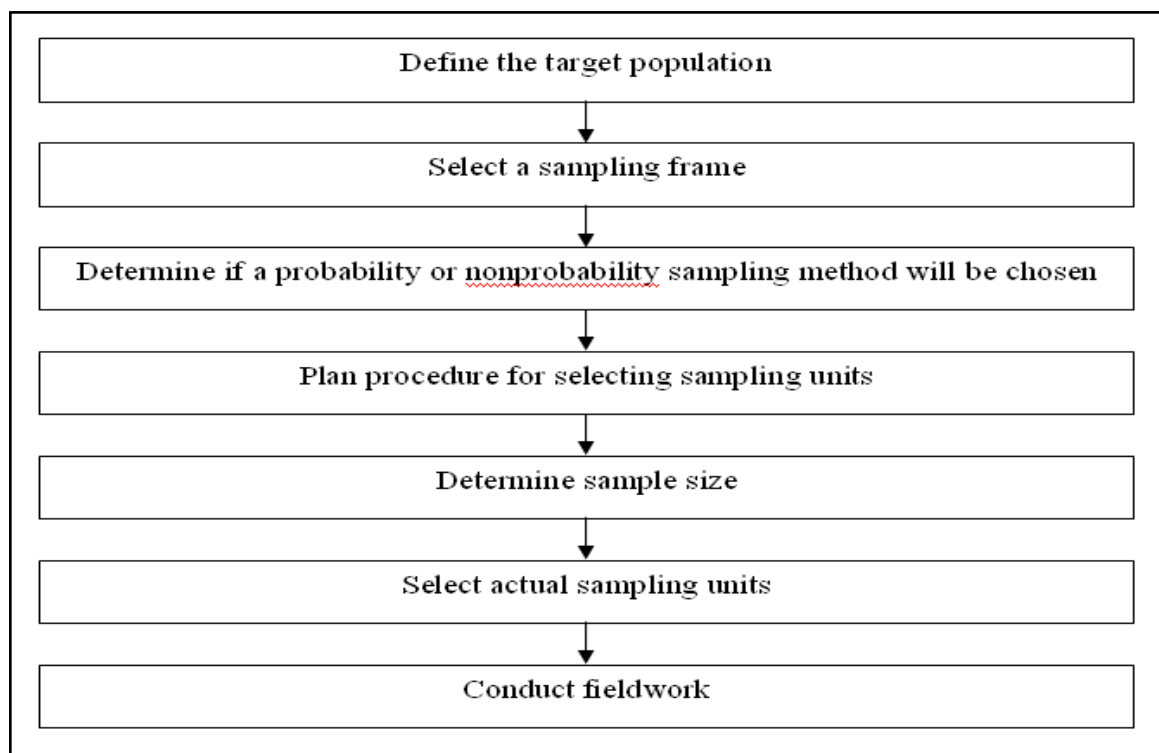
The interview questions have been translated from the English version to the Thai version using the direct translation technique as discussed in detail in the previous section. The sample of the list of interview questions is provided in Appendix 5.2.

## **5.7 SAMPLING PROCESS**

'Sampling is the process of selecting a sufficient number of elements from the population, so that a study of the sample and an understanding of its properties or characteristics would make it possible for us to generalise such properties or characteristics' (Sekaran, 2003, pp.

266-267). A census, the collection and analysis of data from every possible case, can be conducted if the population is small and known to the researcher. In real life, this may be prohibitive. Sampling cuts costs, reduces human resource and man power requirements and allows data to be gathered more quickly. These are very important for quantitative research in social sciences where a huge amount of quantified data are required (Zikmund, 1991, Bryman and Bell, 2003). Furthermore, the study of samples, if properly selected, is likely to produce more reliable results. This is mostly because ‘fatigue is reduced and fewer errors will therefore result in collecting data, especially when a large number of elements is involved’ (Sekaran and Bougie, 2009, p.264). If the population elements, the elements of the full set of cases, are highly homogenous and the samples are highly representative of the population, a study of a small sample accurately portrays the characteristics of interest (Zikmund, 1991). Figure 5.1 depicts the sampling procedures that will be used by the researcher for this study.

**Figure 5.1: Stages in Selection of a Sample**



Source: (Zikmund, 1991, p.333)

### **5.7.1 Research Population**

The research population ‘refers to the entire group of people, events, or things of interest that the researcher wishes to investigate’ (Sekaran and Bougie, 2009, p.262). In the context of this study, the researcher has identified the individual members or clients of Islamic cooperatives and IsMFIs as the research population. The cooperatives’ members are those who have paid shares to the cooperatives and received financial and non-financial services from the cooperatives. They are expected to have some knowledge about the IsMFIs and their products and have firsthand experience in terms of the benefits that they obtain from the IsMFIs. Thus, they will be in a position to provide informative responses on the various products and services they demand and the impacts of IsMFIs on their wellbeing.

### **5.7.2 Sampling Frame**

A sampling frame or working population entails ‘the listing of all units in the population from which the samples will be selected’ (Bryman and Bell, 2003, p.93). In an ideal study, all elements in the population are known, so the sampling frame can be selected properly from the population. In reality, it is very difficult to obtain a complete listing of elements, especially in a large population and in situations where legal restrictions make the complete list of element unavailable. Although the population frame is available in many cases, it may not be totally correct or complete. If the complete list of elements is not accessible, the researcher could utilise other materials such as maps or aerial photographs as a sampling frame (Zikmund, 1991).

In the present study, several frames have to be selected, namely, organisational sampling frame, client sampling frame for survey and client sampling frame for interview. The organisational sampling frame includes all IsMFIs operating in Thailand. The exact number of such institutions is not known due to the fact that Islamic cooperatives are not recognized as a separate type of cooperative, hence, no accurate information can be obtained from the Department of Cooperative Promotion and the Department of Cooperative Auditing. However, it is reported that twenty four Islamic cooperatives form the Association of Islamic Cooperatives and this can be used as a sampling frame for



IsMFIs. As a consequence of the absence of information on the number of Islamic cooperatives in Thailand, accurate sampling frames for survey and interview cannot be obtained. However, after choosing the samples from organisations, the researcher considered that the number of clients from all those institutions can be used as a sampling frame for survey and interview. Although the total number of the clients can be obtained, most institutions do not allow access to the complete list of the population. The researcher therefore had to modify the sampling strategy to walk-in clients based on geographical locations of branches of the IsMFIs.

### **5.7.3 Determination of Sampling Methods**

Having identified the sampling frame, the researcher should choose the most appropriate sampling method to be employed in selecting samples from the sampling frame. The sampling methods are classified into two major types: probability and non-probability sampling. In probability sampling, 'the elements in the population have some known chance or probability of being selected as sample subjects' (Sekaran, 2003, p.269). It is suitable if all elements in the population are known. For non-probability sampling, the probability of each case being selected from the population is unknown. This is suitable in situations where the sampling frame is not available or the population is widely dispersed (Zikmund, 1991, Grix, 2001).

In the context of this research, the population frame is unavailable, therefore, it is appropriate to use a non-probability sampling technique. The most common non-probability sampling techniques include convenience sampling, purposive sampling, quota sampling and snowball sampling (Saunders *et al.*, 2003). Zikmund (1991) suggests that, among other things, time, cost, resources and the possibility of receiving cooperation should be considered in selecting sampling techniques. Taking these factors into consideration, the research will employ a multi-stage technique that combines both purposive and convenience sampling. The purposive sampling technique involves the selection of samples from specific target groups who can provide the desired information, either because they are the only people who have the said information, or because they conform to specific criteria set by the researcher (Sekaran, 2003). In this research, the

technique is used to devise the IsMFIs as samples. The selection is based on the availability of information such as financial reports and the length of time the IsMFIs have been operating. Meanwhile, convenience sampling will be used in the process of selecting the desired samples from walk-in clients for survey and interview. As stated by Bryman (2004), this method is often utilised in exploratory research, such as the current study.

As mentioned earlier, the research takes into consideration several factors in the process of selecting the sampling method. The research does not have enough manpower to distribute questionnaires nationwide. The researcher therefore narrows down the samples to include only four IsMFIs operating in southern provinces of Thailand. These are the provinces where Muslims represent the majority or constitute a large religious group and where most IsMFIs are operating. The individual samples are selected from all branches of the IsMFIs due to the fact that the IsMFIs have only a few branches, and surveys and interviews from these IsMFIs will accurately represent the population of the research. Another constraint is the cost and time involved in nationwide sampling. All costs of conducting this research are borne by the researcher, making it impossible to obtain nationwide samples. In addition to that, the researcher has been sponsored by the Higher Education Commission of Thailand which stipulates only a certain period of data collection in the home country is allowed, thus making it impossible to conduct a nationwide sampling research.

#### **5.7.4 Sample Size**

As stated earlier, this study is based on non-probability sampling methods, so the process of sample size determination may not be as rigorous as the probability sampling methods. The non-probability sampling methods, however, can provide a sensible alternative in order to select cases to answer the research questions and meet the research objectives, especially when time, costs and resources are limited (Saunders *et al.*, 2003). Nevertheless, an adequate number of samples are still needed in order for the researcher to interpret the results accurately.

Roscoe (1975) proposes that 'sample sizes larger than 30 and less than 500 are appropriate for most research' as a rule of thumb (Quoted in Sekaran and Bougie, 2009, p.296). Krejcie

and Morgan (1970) simplify the sample size decision by providing a table that ensures a good decision model. According to these authors, a sample size of 384 is appropriate for a population of one million elements or more. These two opinions will be adopted for this research.

As pointed out in the preceding section, purposive and convenience sampling are employed in this research. Four IsMFIs are chosen purposively for inclusion in the study. The researcher targeted a minimum of 400 complete questionnaires for the survey, and each IsMFI was allocated 100 questionnaires. On the other hand, the sample size of semi-structured interviews will be 40 people, breaking down to 10 interviewees from each IsMFI.

## **5.8 PILOT TESTING**

It is always advisable to carry out pilot testing of the first draft of the questionnaire before the actual survey is conducted (de Vaus, 1990). The test which is administered using the same procedures which is to be employed in the actual study is to ensure that the survey questions operate well and to prove that the research instruments as a whole function well (Bourque and Fielder, 2003). The researcher can find out the time taken to answer the questions, the clarity of instructions, unclear questions, difficult questions, major topic omissions, and unclear and unattractive layout so that he or she can make necessary amendments before the actual survey is administered. However, before the pilot testing is conducted, the researcher may also consult experts or groups of experts, asking them to comment on the representativeness and suitability of the questions. Moreover, the experts may also make suggestions on the structure of the questionnaire (Zikmund, 1991).

For this research, the first draft of the questionnaire was translated into the Thai language by the researcher and both the English and Thai versions were sent to two Thai experts to comment on various aspects, including content, sequence and layout issues. As suggested by Saunders *et al.* (2003), the researcher should pay special attention to lexical meaning, idiomatic meaning, grammar and syntax, and experiential meaning of the questions. The experts are also well-versed in the English and Thai languages and provided comments on

the translation. After obtaining the complete questionnaire from the experts, the amendments were made accordingly. The next step is the pilot testing conducted on twenty clients of an IsMFI in Thailand on a convenience basis. The questionnaires were sent to the head office of the IsMFI and a manager of that IsMFI assisted administering the questionnaires to the clients. The returned questionnaires were again amended based on the results of the pilot test, and the final questionnaire is constructed.

As for the interview questions, the researcher tested them with five interviewees who provided some useful feedback on the length and the wordings of the interview questions. Most of them suggested that the researcher group the questions on impacts of savings account, investment account, pilgrimage account, pawn service, and insurance scheme together in one section. They were of the opinion that some services may provide only one specific purpose, while others could provide different impacts depending on the purpose for which the clients use the service. The questions were amended based on their suggestions before being used in the interview process.

## **5.9 DATA COLLECTION**

The actual data collection processes for both survey and interview were conducted over a period of about two months from late June to mid of August 2011. As discussed earlier, this study employs a self-administered survey and semi-structured interview. In the self-administered survey, the potential respondents were given a copy of the questionnaire and completed it individually at their own pace before returning the completed questionnaire to the researcher or an assistant. During this period, the researcher conducted interviews with a number of clients who were willing to cooperate and had adequate time at IsMFIs branches. The researcher adopted a drop-off survey mode as it is the most suitable, economical, and viable mode, considering the unrest in southern Thailand. A semi-structured interview was chosen because it offers flexibility for the interviewees to frame and understand issues and events, consequently permitting them to reflect on and explain the events, patterns and forms of behaviour (Bryman, 2008). The researcher prepared a list of questions or interview guide which was formulated based on the research objectives and aimed at expanding the knowledge and behaviours of the clients' households.

### **5.9.1 Drop-off Survey**

As mentioned in the preceding section, this study employed a drop-off survey mode. The researcher or research assistants approach the potential respondents and introduce the general objectives of the study. The potential respondents are then left to complete the questionnaires on their own. The completed questionnaires can be returned to the researcher on the same day or at a later date (Burns and Bush, 2003).

In this study, ten research assistants were recruited and trained mainly in the various related concepts of Islamic microfinance that appeared in the questionnaire. They were final-year students at a local university and had prior experience of conducting survey research. One of the main requirements was that the ability to communicate in the local Malay language so that they could explain the purpose and details of the questionnaire to those respondents who could not speak Thai. Two research assistants were assigned to different branches of IsMFIs during the data collection processes.

On the data collection days, the potential respondents were randomly selected from the walk-in clients. The researcher or research assistants approached the clients and asked whether they were clients of the IsMFIs or were visiting the branch on behalf of other clients. After the prospective respondent was identified, the researcher explained the purpose of the research. The respondent was asked about his/her willingness to participate in the survey. With his/her agreement, a copy of the questionnaire was given to the respondent. The respondent was allowed to ask questions if they need clarification. Some customers in rural areas did not understand the Thai language; the research assistants helped to translate and explained individually. This was to ensure that the respondents understood the questions in the questionnaire and could provide the answers as intended. The completed questionnaires were then returned to the researcher/research assistants. Some respondents, however, preferred to return the questionnaire at a later date.

### **5.9.2 Response to Survey**

A total of 500 questionnaires were distributed, of which 445 were completed and returned to the researcher, yielding a response rate of 89.0%. Out of 445 questionnaires, 400 were

usable<sup>10</sup>. As suggested by Sekaran and Bougie (2009), this number of responses is sufficient for statistical analysis; no further attempt to increase the response rate was therefore necessary. The summary of the sample profile is provided in Table 6.1 in Chapter 6.

### **5.9.3 Semi-Structured Interview**

Semi-structured interviews with the help of an interview guide were conducted by the researcher during the data collection process. With the help of staff of the IsMFIs, the interviewees were identified and approached by the staff. The researcher ensured that the potential interviewees had adequate experience of dealing with the IsMFIs so that they could provide useful and detailed information about the demand for and impacts of Islamic microfinancial services on their households. After receiving agreement from the potential interviewee, the researcher led the interviewee to a separate room provided by the IsMFIs so that noise and distractions could be reduced.

A total of 40 interviewees were interviewed during the data collection process. However, only 37 interviews were usable. Some key responses in the other three interview records were not clear and, hence, unusable. The researcher reviewed the interview records and found that a series of similar responses were identified which were sufficient for qualitative analysis. Hence, no additional interview sessions were conducted.

### **5.9.4 Secondary Data Collection**

The secondary data needed for the analysis of outreach and sustainability are financial data. The data were collected from annual reports and newsletters of the IsMFIs. Some data were obtained from websites of the Cooperative Promotion Department and the Account Auditing Department. The financial data obtained from Islam Pattani were from 1988 to 2008, from Ibnu Affan from 1992 to 2008. Ibnu Auf and As-Siddeek provided financial reports from 1993 to 2008, and 1997 to 2008, respectively.

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<sup>10</sup> Test of response bias was not conducted due to the fact that no detailed information has been collected on this and only a few questionnaires were returned late in which the research viewed that there was not need for response bias

## **5.10 RESEARCH METHOD FOR DATA ANALYSIS**

Data analysis is another key stage of primary research. Choosing appropriate data analysis techniques enables the researcher to arrive at valuable results that answer the research objectives (Kumar *et al.*, 2002). Essential steps for the analysis of quantitative and qualitative data are described as follows:

### **5.10.1 Quantitative Data Analysis**

To analyse the quantitative data from the survey, the researcher opted for SPSS software and adopted the steps suggested by Pallant (2004) to include the following steps: (1) preparing codebook, (2) setting up structure for data file, (3) entering data, (4) screening data file for errors, (5) exploring data using descriptive statistics and graphs, (6) modifying variables for further analyses, and (7) conducting statistical analyses to answer research questions.

#### **Step 1: Preparing a codebook**

A codebook is ‘a summary of the instructions you will use to convert the information obtained from each subject or case into a format that SPSS can understand’ (Pallant, 2004, p.11). The process involves defining and labelling each of the variables and assigning numbers to each of the possible responses.

#### **Step 2: Setting up structure for data file**

This step consists of defining variables and coding instructions as per the codebook. In this research, the researcher defined the variables in full as they appeared in the questionnaire. However, the names of variables were abbreviated. Value labels were also assigned according to the information in the codebook.

#### **Step 3: Entering data**

After the variables and coding instructions were set in the system, the researcher converted the data, which were keyed into an Excel worksheet earlier during the fieldwork into the

SPSS programme. The researcher ensured that the data in the Excel worksheet were coded in accordance with the codebook.

#### **Step 4: Screening data file for errors**

In order to ensure the correctness and completeness of the data, the researcher screened the data to identify errors. Descriptive statistics such as frequencies, mean, and standard deviation were employed. Values that fell outside the range of possible values of each variable and missing cases were identified in this process. The data were corrected by referring to the questionnaire.

#### **Step 5: Exploring data using descriptive statistics and graphs**

After the errors in the data file were corrected, the researcher employed descriptive statistics and graphs to explore the characteristics of the data and violations of assumptions underlying the statistical techniques to be used to answer the research questions. At this stage, the researcher was considering two alternative methods of analysis: parametric or non-parametric. Some researchers claim that parametric statistics can still be used for studies employing non-probability sampling as long as the sample is relatively large (Siegel, 1957, Baker *et al.*, 1966, Cohen *et al.*, 1990), like this research. The results showed that the assumption of normality seemed to have been violated. The researcher then opted for non-parametric techniques. Moreover, the data were tested to ensure reliability and validity. In this research, the researcher employed Cronbach's Alpha reliability test. This test is discussed in detail in Section 5.11 of this chapter.

#### **Step 6: Modifying variables for further analyses**

Some variables were modified to suit the statistical techniques employed in the analysis. Ratio variables such as age, years in education, annual household income, and total land size were transformed into categorical data, i.e. different groups, to accommodate the Kruskal-Wallis test. In addition, questions in sections 6-8 which were earlier entered as ordinal data (strongly disagree, disagree, neutral, agree, and strongly agree) were considered to be suitable for ordinal regression analysis. The trail tests of the data indicated



that the data were not appropriate for ordinal regression analysis. The data were transformed into dichotomous variables which were used for binary logistic regression analysis. The process of transformation is explained in detail in Section 7.2.4. of Chapter 7.

### **Step 7: Conducting statistical analyses to answer the research questions**

After necessary modification of variables, the final data set was ready for analysis. The researcher needed to identify appropriate statistical tests which would produce the required results to fulfil the objectives of the study. In this study, the researcher has opted for the following descriptive and empirical techniques:

***Descriptive analysis:*** The researcher employed frequency distributions, mean, and standard deviation. These analyses were used to summarise, organise, and describe the data (Pallant, 2004). The results of these analyses are discussed mainly in the demand analysis chapter (Chapter 6) and in some parts of the impact analysis chapter (Chapter 7).

***Inferential Empirical analysis:*** Based on the discussion in step 5 in which the non-parametric method was found to be appropriate for the analyses, the researcher has identified suitable inferential statistical techniques including cross-tabulation, Mann-Whitney U-test, Kruskal-Wallis test, correlation, and logistic regression. These statistical techniques can be classified into two groups: exploring difference between groups and exploring relationships. The statistical tools for exploring differences between the groups include the following:

***Cross-tabulation:*** Also known as contingency table, this technique organises data into diverse groups and shows the relationship between two variables (de Vaus, 1990, Bryman, 2008). In this research, cross-tabulation was used to compare the services used among the clients of various IsMFIs.

***Mann-Whitney U-test:*** This technique ‘is used comparing two groups, but the basis for comparison is data in ordinal form’ (Proctor, 2005, p.289). It is similar to the independent t-test in parametric alternatives. In this research, the test was used to examine whether there are differences in level of demand for and impacts of Islamic microfinancial services

among the clients of different gender, religious education, and SME ownership. The mean rank results can reveal the direction of difference (Pallant, 2004).

***Kruskal-Wallis test:*** This is similar to the Mann-Whitney U-test, but it is used when more than two independent samples are involved (Pallant, 2004, Proctor, 2005). It is ‘the non-parametric alternative to a one-way between-group analysis of variance’ (Pallant, 2004, p. 226). In this research, the technique was employed to determine the differences in level of demand for and impacts of Islamic microfinancial services among the clients of more than two categories such as income levels, age-groups, marital status, education, and household size. The mean rank results can also identify which group has higher scores.

In addition to the statistical tools used to explore the difference between the groups, the researcher employed some statistical techniques to explore relationships between variables. The techniques consist of the following:

***Correlation:*** This is a statistical tool to measure the relationships between a dependent variable and one or more independent variables. However, bivariate correlation was employed in this study. It describes strength and direction of relationship between two variables (Proctor, 2005). Spearman’s rank order correlation is appropriate for the analysis in this research as it can accommodate ordinal data which are obtained from the survey (Pallant, 2004).

***Logistic regression analysis:*** This is a technique to assess the impact of a set of predictors on a dependent variable that is categorical. The independent variables may be continuous, categorical, dichotomous or a mix (Tabachnick and Fidell, 1996, Hosmer and Lemeshow, 2000, Menard, 2002). In this research, binary logistic regression to determine which dependent variable is dichotomous was used to assess demand for and impacts of Islamic microfinancial services. It is used to identify significant and strong predictors of the use of the services and their impacts on the lives of the clients and their households. The details of the analysis are discussed extensively in Chapter 6 and Chapter 7.

### **5.10.2 Qualitative Data Analysis**

The qualitative analysis is basically intended to complement the quantitative analysis by providing a deeper understanding of demand for and impacts of Islamic microfinancial services on the clients' households. It particularly attempts to uncover the pathways in which these services affect the lives of the clients, and other underlying operational issues of the IsMFIs from the clients' perspectives. The information from the interviews is important as it can validate the findings from the survey in which direct and indirect impacts cannot be identified. This information can be obtained only by directly approaching the clients and requesting them to explain their views in more detail. By triangulating quantitative analysis, qualitative analysis and the literature review, the aim and objectives of this study can be met.

In this study, the qualitative analysis framework is based on coding method. In particular, this research employed thematic analysis in which emphasis is placed on what is said rather than on how it is said (Riessman, 1993). As semi-structured interviews were used in this study, the interview questions were designed to stimulate discussion so that the required information was collected.

The researcher recorded the interviews and also, made notes during the interview sessions. The records were then transcribed in Thai and translated into English by the researcher. The researcher then transferred the transcribed file into the NVivo programme for coding.

The analysis of the qualitative data was performed using a coding technique. Firstly, the main themes were created to provide basic meanings and categories of words and phrases used by the interviewees and the main interview questions. The focused codes were created for each sub-theme to provide interpretive meanings of those words and phrases. Eventually, final-level codes were assigned to give explanatory power to each sub-theme. For each sub-theme, a brief analysis was provided to interpret and connect each sub-theme to the main theme.

### **5.10.3 Secondary Data Analysis**

Secondary data analysis is a descriptive process in which outreach and sustainability indicators were calculated from financial data. Outreach indicators include the number of clients, financing outstanding and growth, and total balance of deposits. Sustainability indicators consist of financial spread and operational self-sufficiency. Some other indicators such as efficiency ratios, profitability ratios, and Islamic-related indicators are also included in Chapter 9. Descriptive comparisons are made across the IsMFIs.

## **5.11 DATA QUALITY AND RELIABILITY**

Validity and reliability of data are important if the research is to fulfil its objectives. Validity refers to ‘an estimate of the accuracy of an instrument or of the study results’ (Peat *et al.*, 2001, p.105). In other words, do the questions in a questionnaire measure what they are intended to measure? There are many types of validity that a researcher must take into consideration, including external validity, internal validity etc. Reliability refers to ‘the degree to which a measure of a concept is stable’ (Bryman, 2008, p. 698). This implies that the same results must be obtained if the question is put to the same respondent at different times, provided that there are no changes in the facts about the subject (Proctor, 2005, Silverman, 2005).

### **5.11.1 Data Quality and Reliability of Quantitative Analysis**

In a research study, data validity and reliability are important to ensure that interpretation and conclusion of the research are accomplished. In a survey, pilot testing of the questionnaire is the best technique or tool to overcome validity and reliability issues (de Vaus, 1990, Bryman and Bell, 2003). To ensure validity and reliability of the questionnaire, the researcher was careful with the wording of the questionnaire, particularly the Thai version. Pilot testing and comments from experts gave the researcher the chance to revise the questionnaire. Furthermore, the research assistants were trained to ensure that they fully understood the contents and what each question was intended to measure. Cronbach’s Alpha test was employed to test internal consistency of itemised types and Likert scales. The results show that the Cronbach’s Alpha coefficient for the respondents

groups was .828. This is higher than 0.7 which is suggested by most researchers (de Vaus, 1990, Pallant, 2004).

### **5.11.2 Data Quality and Reliability of Qualitative Analysis**

The researcher ensured validity of the data by using careful wording during the interview and attempting to find another case to test the main provisional themes and sub-themes. This is referred to as the constant comparative method (Silverman, 2005). The number of interviewees, which was forty, was sufficient to identify the repeated themes. Reliability can be ensured by tape-recorded interactions (Silverman, 2005). The researcher made notes of relevant reactions by the interviewees during the interview sessions and ensured that the notes were available when transcribing the interview records. Silences and rephrasing, for instance, were recorded in the notes. These notes were also referred to in the coding process using NVivo.

## **5.12 CONCLUSION**

This chapter has thoroughly discussed the research framework and methodology employed in this research. Firstly, it describes the research framework and questions developed in order to meet the research objectives. The research design and research strategy are then discussed. The research adopts a combination of quantitative and qualitative methods in which primary data are collected through a questionnaire-based survey and semi-structured interview. Additionally, secondary data are also used in the analysis in order to meet the research objective on outreach and sustainability of Islamic microfinance programmes. This is followed by a discussion on instrument design, sampling process, pilot testing, data collection, data quality and reliability, and data analysis in which non-parametric techniques are preferred. Based on the research design and planning, the collected data are found to be appropriate for statistical analysis, which is illustrated in detail in the next chapters.

## **Chapter 6**

### **EXPLORING DEMAND FOR ISLAMIC MICROFINANCE**

#### **6.1 INTRODUCTION**

From this chapter onwards, this study will describe the empirical findings and analyse the research findings of the questionnaire and interviews based on the data collected from the fieldwork in Thailand and the secondary data as defined in the research methodology chapter (Chapter 5). This chapter, in particular, will present and discuss the questionnaire's items that assess the demand for Islamic microfinance services. It covers the first objective: to identify the factors affecting the demand for IsMF services. This includes a descriptive analysis which will provide readers with some insight into the data and characteristics of the respondents' profiles, and an inferential analysis which gives a comparative analysis of various identified groups such as gender, age, and education. The results will give useful information on the financial behaviours and needs of IsMFIs' clients which is crucial for effective microfinance programmes. The data were analysed using SPSS software which is often utilised in social science research in which questionnaire-based surveys are adopted. Descriptive analysis tools employed in this chapter consist of frequency distribution, mean, and standard deviation. As for inferential analysis tools, this chapter employs statistical tools for non-parametric data analysis, including Mann-Whitney U-Test, Kruskal-Wallis Test, cross-tabulation, and logistic regression.

This chapter is divided into three key parts for the analysis. The first part (Sections 6.2, 6.3, and 6.4) describes respondents' profiles, their characteristics, and their households' characteristics. It provides an introductory analysis for further analysis in the subsequent sections. The second part (Sections 6.5, 6.6, 6.7, 6.8, and 6.9) focuses on the respondents' relationship with IsMFIs, ranging from the services they use, purposes of micro-financing, use of conventional financial institutions, their engagement in SMEs, and patronage factors and ranking order of Islamic microfinance services in key events. The third part (Section 6.10, and 6.11) explores various groups of respondents who frequently demand Islamic microfinance services, and predictors of the likelihood of them using these services. This chapter concludes with a summary of the overall analysis and findings.

## 6.2 SUMMARY OF SAMPLE PROFILE

This section provides a snapshot overview of the respondents' profiles according to the survey. As mentioned in Chapter 5, out of a total of 445 collected questionnaires, 400 were deemed suitable for analysis. Table 6.1 illustrates the statistics of respondents' profiles according to the IsMFIs they have joined. The distribution of the respondents was almost equal, with 102 respondents (25.5%) from Islam Pattani, 100 respondents (25.0%) from Ibnu Affan, 97 respondents (24.3%) from Ibnu Auf, and 101 respondents (25.3%) from As-Siddeek.

**Table 6.1: Sample Profile by IsMFIs**

		<b>Questionnaire distributed</b>	<b>Questionnaire returned</b>	<b>Questionnaire Usable</b>	<b>Frequency</b>	<b>Percent</b>
Valid	Islam Pattani	110	110	102	102	25.5
	Ibnu Affan	115	115	100	100	25.0
	Ibnu Auf	110	110	97	97	24.3
	As-Siddeek	110	110	101	101	25.3
	<b>Total</b>				<b>400</b>	<b>100.0</b>

## 6.3 DEMOGRAPHIC PROFILE

This section describes the demographic characteristics of the respondents to the survey. These comprise gender, age, marital status, occupation, and education, both formal and religious. The frequency and percentage distribution will be utilised as a tool for describing the data. As reported in Table 6.2, the respondents were closely divided between males (58.5%) and females (41.5%).

In terms of age, the respondents came from the middle-age with 78.8% of the respondents being aged 45 or below. The majority (37.5%) of the respondents were from the '26-35' years age group, followed by the '36-45' (29.3%), and '46-55' age groups (14.5%). The other two age groups were deemed insignificant as they made up only 12.0% and 6.8% for '≤25' and '>55' respectively.

Another background variable is marital status. From the survey results, out of all 400 respondents, 79.5% of them claimed to be married, 18.5% were single, and 2.0% held other statuses. These results suggest that married respondents actively deal with Islamic microfinance financial institutions.

The next variable is main occupation. The majority of the respondents (45.5%) were from the private sector employee category, followed by agriculture which constitutes 23.3%. Those respondents involved in small enterprises consisted of 15.5% of the sample. Government sector employee and cottage industry categories made up 6.8% and 1.8% of the sample respectively. 7.3% of the respondents reported engaging in other occupations including retired government employees and students.

In terms of education, 95.5% of the respondents had Bachelor's degrees or lower. Out of the total of 400 respondents, 22.0% stated that they had primary education or lower, 5.3% had lower secondary certificate, and 19.3% obtained upper secondary certificate. The majority (49.0%) of the respondents held Bachelor's degree and 4.5% had Master's degrees or higher. Among the total of 400 respondents, 86.8% claimed that they had religious education, while 13.3% had no religious education, formal or informal<sup>11</sup>.

In short, the results of the survey show that the majority of the respondents were male, middle-aged, married, and working in the private sector. They held Bachelor's degrees and had a religious education in some form. Interestingly, the results appear to suggest that the clients of the IsMFIs in Thailand may not be the poor and uneducated group, but rather a well-educated group. However, the poorest and uneducated group constitutes a significant proportion of the clients. The results may reflect the position of male household heads in Muslim communities and highlight the needs and ability to acquire various types of microfinancial services of active working groups.

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<sup>11</sup> Formal Islamic education refers to Islamic education provided by Islamic private schools and public schools. Informal Islamic education includes Islamic education provided at *Pondok* or informal Islamic private schools which are available in Southern Thailand.



**Table 6.2: Respondents' Demographic Profile**

<b>Gender</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Male	234	58.5	58.5
	Female	166	41.5	41.5
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Age</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	≤ 25	48	12.0	12.0
	26-35	150	37.5	37.5
	36-45	117	29.3	29.3
	46-55	58	14.5	14.5
	> 55	27	6.8	6.8
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Marital Status</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Single	74	18.5	18.5
	Married	318	79.5	79.5
	Other	8	2.0	2.0
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Occupation</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Agriculture	93	23.3	23.3
	Small enterprise	62	15.5	15.5
	Cottage industry	7	1.8	1.8
	Government sector	27	6.8	6.8
	Private sector employee	182	45.5	45.5
	Other	29	7.3	7.3
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Education</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	≤ Primary certificate	88	22.0	22.0
	Lower secondary	21	5.3	5.3
	Upper secondary	77	19.3	19.3
	Bachelor degree	196	49.0	49.0
	> Bachelor degree	18	4.5	4.5
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Islamic Education</b>		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Yes	347	86.8	86.8
	No	53	13.3	13.3
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>

## 6.4 HOUSEHOLD CHARACTERISTICS

This section provides the household characteristics of the respondents, including kinds of house, household size, annual household income, agricultural land, total land, total productive assets and total non-productive assets. The objective of this section is to understand the economic and non-economic backgrounds of households that are the main interest of this research. The frequency and percentage distribution will be used to explain the results.

**Table 6.3: Respondents' Household Characteristics**

<b>Kind of House</b>		Frequency	Percent	Valid Percent
Valid	Cement or brick	115	28.8	28.8
	Wood and cement or brick	77	19.3	19.3
	Wood	208	52.0	52.0
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Household Size</b>		Frequency	Percent	Valid Percent
Valid	< 3 people	2	.5	.5
	3-5 people	167	41.8	41.8
	6-9 people	211	52.8	52.8
	> 9 people	20	5.0	5.0
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Annual Household Income</b>		Frequency	Percent	Valid Percent
Valid	≤ 40,000	3	.8	.8
	40,001- 100,000	28	7.0	7.6
	100,001-300,000	187	46.8	50.5
	300,001-500,000	91	22.8	24.6
	> 500,000	61	15.3	16.5
	<b>Total</b>	<b>370</b>	<b>92.5</b>	<b>100.0</b>
Missing	System	30	7.5	
<b>Total</b>	<b>400</b>	<b>100.0</b>		

Table 6.3 (continued)

<b>Agricultural Land Size</b>		Frequency	Percent	Valid Percent
Valid	$\leq 2$ rai	89	22.3	27.1
	2.01-5.00 rai	89	22.3	27.1
	5.01-10.00 rai	80	20.0	24.4
	$> 10.00$ rai	70	17.5	21.3
	Total	328	82.0	100.0
Missing	System	72	18.0	
<b>Total</b>	<b>400</b>	<b>100.0</b>		
<b>Total land size</b>		Frequency	Percent	Valid Percent
Valid	$\leq 2$ rai	50	12.5	15.2
	2.01-5.00 rai	72	18.0	22.0
	5.01-10.00 rai	88	22.0	26.8
	$> 10.00$ rai	118	29.5	36.0
	Total	328	82.0	100.0
Missing	System	72	18.0	
<b>Total</b>	<b>400</b>	<b>100.0</b>		
<b>Productive assets</b>		Frequency	Percent	Valid Percent
Valid	$\leq 40,000$	90	22.5	28.7
	40,001- 100,000	53	13.3	16.9
	100,001-300,000	58	14.5	18.5
	300,001-500,000	37	9.3	11.8
	$> 500,000$	76	19.0	24.2
	Total	314	78.5	100.0
Missing	System	86	21.5	
<b>Total</b>	<b>400</b>	<b>100.0</b>		
<b>Non-productive assets</b>		Frequency	Percent	Valid Percent
Valid	$\leq 40,000$	33	8.3	11.1
	40,001- 100,000	42	10.5	14.1
	100,001-300,000	62	15.5	20.8
	300,001-500,000	61	15.3	20.5
	$> 500,000$	100	25.0	33.6
	Total	298	74.5	100.0
Missing	System	102	25.5	
<b>Total</b>	<b>400</b>	<b>100.0</b>		

The first household variable is kind of house. The results of the survey show that the majority (52%) lived in wooden houses, followed by 28.8% living in houses made of cement or brick, and another 19.3% with houses made of wood and cement or brick. Interestingly, 71.3% of the respondents stated that their houses were made of some kind of wood and this type of house is often occupied by average income groups. This is broadly in line with the Thailand Population and Housing Census 2000 which reported that 67.0% of people in Thailand had houses made of wood and permanent materials.

The next household variable is household size. Out of 400 respondents who answered this question, 378 people or 95.6% stated that their household size was 3-9 people. The largest part (52.8%) claimed that their household had 6-9 members. Another 41.8% had 3-5 people in their households, 5.0% had more than 9 people in their households, and 0.5% had less than 3 people in their households. This is dissimilar to the Household Economic Survey 2007 which reported that approximately 68.5% of southern households have 3-9 members. This is not surprising because most Muslim households have more children compared to mainstream Thai households.

The third household variable is annual household income<sup>12</sup>. Out of 370 respondents who responded to this question, the majority of the households (75.1%) earned a reasonably average-to-high amount or in the range of THB100,001 to THB500,000. The biggest group (50.5%) comprised those households that earned in the range of THB100,001 to THB300,000, followed by those earning in the range of THB300,001 to THB500,000 (24.6%), and those who earned more than THB500,000 (16.5%). 7.6% were recorded as earning under '40,001-100,000', and 0.8% stated that their household earned THB40,000 or less. These results suggest that the respondents are from average and near-rich groups, not the poor and the near-poor. The outcome of this survey fairly represents the people of southern Thailand based on the Household Economic Survey 2007. According to this survey, 83.5% of southern households earned annual incomes of between THB60,000 and THB600,000 baht with an average annual household income of around THB270,000.

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<sup>12</sup> In this research, the exchange rate is based on the rate of 1 1st September 2011: USD1 = THB30.5529

The next two variables (agricultural land size and total land size) can be illustrated simultaneously as they seem to have a significant relationship with each other. Out of 328 respondents answering this question, the majority of the households (27.1% each) represented households with less than 2 *rai*<sup>13</sup>, and in the range of 2.01 *rai* to 5.00 *rai*, followed by the households having agricultural land in the range of 5.01 *rai* to 10.00 *rai*. It is worth noting that a substantial proportion of the households (21.3%) had more than 10 *rai* of agricultural land. With regard to total land size, 36.0% stated that their household owned more than 10 *rai*, 26.8% had total land in the range of 5.01 *rai* to 10.00 *rai*, and 22.0% owned 2.01 *rai* to 5.00 *rai* of land. Those who had a land size of less than 2 *rai* constituted the smallest group (15.2%). The results clearly show that most households had a land size, both agricultural and total, in the range of 2 *rai* to 10 *rai*.

The other household background variable is total productive assets, and 314 respondents answered this question. 28.7% of the respondents claimed that their households possessed productive assets worth THB40,000 or less, while 24.2% had over THB500,000. 18.5% had total productive assets in the range of THB100,001 to THB300,000, 16.9% owned between THB40,001 to THB100,000, and 11.8% held THB300,001 to THB500,000 of productive assets. The results were quite varied depending on the types of occupation in which they were engaged.

In terms of non-productive assets, 33.6% of the 298 people who responded acknowledged that their households had over THB500,000; subsequently, 20.8% owned between THB100,001 and THB300,000, and 20.5% had between THB300,001 and THB500,000. The households that owned non-productive assets in the range of THB40,001 to THB100,000 made up 14.1% of the responses. Interestingly, 11.1% of the respondent households held less than THB40,000 of non-productive assets. The results tend to suggest that most Muslim households have substantial amounts of non-productive assets which may include household appliances, furniture and other necessary tools and equipment.

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<sup>13</sup>  
1 *rai* is equivalent to 0.3954 acre

In summary, the household background variables point out that IsMFIs' client households represent those who lived in wooden houses, consisted of 6-9 people, earned in the range of THB100,001 to THB300,000, owned between 2.01 *rai* and 5 *rai* of agricultural land size, and had more than 10 *rai* of total land area. The households possessed less than THB40,000 of productive assets and more than THB500,000 of non-productive assets. As such, they are not the poorest of the poor. However, they are considered as being among the lower-income group in Thai society, as discussed in Chapter 4.

## **6.5 RELATIONSHIP WITH IsMFIs**

In this section, variables related to respondents' financial relationship with IsMFIs will be further analysed. The objectives of this section are to identify the duration of the respondents' financial relationship, and the different services they use. In the relationship analysis, cross-tabulation will be employed so that any differences among IsMFIs can be identified. A Chi-square test for independence at significance level of .05 will also be used to assess the association between two variables. Cramer's V, which provides the strength of the relationship will be also reported. Most of the cross-tabulation tables in this section have two categories; the criteria are: .01 (small association), .30 (medium association), and .50 (large association).

### **6.5.1 Membership Length by IsMFI**

Table 6.4 shows IsMFIs' clients according to their length of membership. Approximately 38.3% of the respondents had been with IsMFIs for 2 years or less, followed by the '3-5 years' group (32.3%), '6-10 years' group (18.3%), and those who had been involved for 10 years or more (11.3%). In terms of relatedness, a Chi-square test for independence indicated no statistically significant difference among membership length groups by IsMFI,  $\chi^2(9, n=400) = 5.558, p = .783, \text{Cramer's } V = .068$ <sup>14</sup>. In other words, IsMFIs should not be considered an important determining factor of membership length. Based on horizontal frequencies, i.e. the breakdown of IsMFIs according to membership length, most clients of

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<sup>14</sup> Cramer's V measures the strength of the relationship. For cross-tabulation table with four categories, the criteria are: .06 (small), .17 (medium), and .29 (large).

all IsMFIs had been with them for 2 years or less. Interestingly, a significant proportion of Islamic Pattani’s clients had been with the IsMFI 10 years ago. A possible reason is that it was the first Islamic cooperative, and has been established since 1987. It is therefore expected that a substantial proportion of its members had joined the IsMFI more than 10 years earlier.

**Table 6.4: Cross-tabulation: Membership Length by IsMFI**

			Membership Length				Total
			≤ 2 years	3-5 years	6-10 years	>10 years	
<b>IsMFI</b>	Islam Pattani	Count	38	28	19	17	102
		% within IsMFI	37.3%	27.5%	18.6%	16.7%	100.0%
	Ibnu Affan	Count	38	35	17	10	100
		% within IsMFI	38.0%	35.0%	17.0%	10.0%	100.0%
	Ibnu Auf	Count	38	30	20	9	97
		% within IsMFI	39.2%	30.9%	20.6%	9.3%	100.0%
	As-Siddeek	Count	39	36	17	9	101
		% within IsMFI	38.6%	35.6%	16.8%	8.9%	100.0%
<b>Total</b>		<b>Count</b>	<b>153</b>	<b>129</b>	<b>73</b>	<b>45</b>	<b>400</b>
		<b>% within IsMFI</b>	<b>38.3%</b>	<b>32.3%</b>	<b>18.3%</b>	<b>11.3%</b>	<b>100.0%</b>
Chi-square: 5.558			df: 9	Sig: .783	Cramer’s V: .068		

### 6.5.2 Micro-financing by IsMFI

In terms of micro-financing use, a majority of the respondents (67.8%) used micro-financing. Most of Islam Pattani’s clients (60.8%), Ibnu Affan’s clients (87%), and Ibnu Auf’s clients (73.2%) made use of micro-financing services provided by the IsMFIs. Approximately 50.5% of As-Siddeek’s clients had utilised this service. A Chi-square test for independence showed a statistically significant difference between micro-financing use by IsMFI,  $\chi^2(3, n = 400) = 34.305, p < .001, \text{Cramer’s } V = .293$ . In other words, there is an association between micro-financing use and IsMFIs. It can therefore be concluded that IsMFIs are an important determinant of micro-financing utilisation. The results of cross-tabulation are depicted in Table 6.5.

**Table 6.5: Cross-tabulation-Micro-financing by IsMFI**

			Micro-financing		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	62	40	102
		% within IsMF	60.8%	39.2%	100.0%
	Ibnu Affan	Count	87	13	100
		% within IsMFI	87.0%	13.0%	100.0%
	Ibnu Auf	Count	71	26	97
		% within IsMFI	73.2%	26.8%	100.0%
	As-Siddeek	Count	51	50	101
		% within IsMFI	50.5%	49.5%	100.0%
<b>Total</b>		<b>Count</b>	<b>271</b>	<b>129</b>	<b>400</b>
		<b>% within IsMFI</b>	<b>67.8%</b>	<b>32.3%</b>	<b>100.0%</b>
Chi-square: 34.305 df: 3 Sig: <.001 Cramer's V: .293					

**6.5.3 Savings Accounts by IsMFI**

Table 6.6 shows the use of savings accounts according to IsMFI. The results of the survey reveal that a majority of the respondents (74.5%) deposited in savings accounts. Most (91.8%) of Ibnu Auf's clients had used the accounts, followed by Islam Pattani (76.5%), As-Siddeek (67.3%), and Ibnu Affan (63.0%). The results clearly indicate the importance of savings accounts in Islamic microfinance programmes. In terms of relatedness, a Chi-square test showed a statistically significant difference between savings accounts usage by IsMFIs. In other words, there is a significant association between savings account use and IsMFIs,  $\chi^2(3, n = 400) = 25.103, p < .001$ , Cramer's V = .251. As such, the IsMFI that the respondents join may determine whether they will open savings accounts with that IsMFI.



**Table 6.6: Cross-tabulation-Savings Accounts by IsMFI**

			Savings account		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	78	24	102
		% within IsMFI	76.5%	23.5%	100.0%
	Ibnu Affan	Count	63	37	100
		% within IsMFI	63.0%	37.0%	100.0%
	Ibnu Auf	Count	89	8	97
		% within IsMFI	91.8%	8.2%	100.0%
	As-Siddeek	Count	68	33	101
		% within IsMFI	67.3%	32.7%	100.0%
<b>Total</b>	<b>Count</b>		<b>298</b>	<b>102</b>	<b>400</b>
	<b>% within IsMFI</b>		<b>74.5%</b>	<b>25.5%</b>	<b>100.0%</b>
Chi-square: 25.103			df: 3	Sig: <.001	Cramer's V: .251

**6.5.4 Investment Accounts by IsMFI**

Table 6.7 shows investment account use by IsMFI. A majority of the respondents (81.3%) did not deposit their money in investment accounts. Only 18.8% of them had used them before. Ibnu Affan's clients substantially preferred this account, with 28.0% claiming to have ever deposited into these accounts, followed by As-Siddeek (19.8%), Ibnu Auf (14.4%), and Islam Pattani (12.7%). A Chi-square test reported a statistically significant association between investment account use and IsMFIs,  $\chi^2(3, n = 400) = 9.291, p = .026$ , Cramer's V = .152. The results imply that investment account use is dependent on IsMFIs.

**Table 6.7: Cross-tabulation-Investment Accounts by IsMFI**

			Investment Account		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	13	89	102
		% within IsMFI	12.7%	87.3%	100.0%
	Ibnu Affan	Count	28	72	100
		% within IsMFI	28.0%	72.0%	100.0%
	Ibnu Auf	Count	14	83	97
		% within IsMFI	14.4%	85.6%	100.0%
	As-Siddeek	Count	20	81	101
		% within IsMFI	19.8%	80.2%	100.0%
<b>Total</b>		<b>Count</b>	<b>75</b>	<b>325</b>	<b>400</b>
		<b>% within IsMFI</b>	<b>18.8%</b>	<b>81.3%</b>	<b>100.0%</b>
Chi-square: 9.291			df: 3	Sig: .026	Cramer's V: .152

**6.5.5 Pilgrimage Accounts by IsMFI**

As reported in Table 6.8, a small number of the respondents (4.3%) had used the pilgrimage account service. The service was preferred by a substantial number of Ibnu Affan's clients (13.0%). Approximately 2.1% of Ibnu Auf's clients used the service, whilst barely 1.0% of Islam Pattani's clients and As-Siddeek's clients had ever utilised the service. In terms of relatedness, the Chi-square results show a statistically significant difference between pilgrimage account use by IsMFI,  $\chi^2(3, n = 400) = 25.273, p < .001$ , Cramer's V = .251. Thus, IsMFIs may be an important factor in determining whether the respondents use pilgrimage accounts or not.

**Table 6.8: Cross-tabulation-Pilgrimage Accounts by IsMFI**

			Pilgrimage Account		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	1	101	102
		% within IsMFI	1.0%	99.0%	100.0%
	Ibnu Affan	Count	13	87	100
		% within IsMFI	13.0%	87.0%	100.0%
	Ibnu Auf	Count	2	95	97
		% within IsMFI	2.1%	97.9%	100.0%
	As-Siddeek	Count	1	100	101
		% within IsMFI	1.0%	99.0%	100.0%
<b>Total</b>	<b>Count</b>		<b>17</b>	<b>383</b>	<b>400</b>
	<b>% within IsMFI</b>		<b>4.3%</b>	<b>95.8%</b>	<b>100.0%</b>
Chi-square: 25.273			df: 3	Sig: <.001	Cramer's V: .251

**6.5.6 Pawn Services by IsMFI**

Pawn services have been offered only by Islamic Pattani. Most of the clients (56.9%) of Islamic Pattani had enjoyed the pawn service. This accounted for 14.5% of the total number of respondents. It is obvious that a Chi-square test result will show a statistically significant difference between pawn service use among the clients of different IsMFIs,  $\chi^2 = (3, n = 400) = 198.188, p < .001, \text{Cramer's } V = .704.$

**Table 6.9: Cross-tabulation-Pawn Services by IsMFI**

			Pawn service		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	58	44	102
		% within IsMFI	56.9%	43.1%	100.0%
	Ibnu Affan	Count	0	100	100
		% within IsMFI	.0%	100.0%	100.0%
	Ibnu Auf	Count	0	97	97
		% within IsMFI	.0%	100.0%	100.0%
	As-Siddeek	Count	0	101	101
		% within IsMFI	.0%	100.0%	100.0%
<b>Total</b>	<b>Count</b>		<b>58</b>	<b>342</b>	<b>400</b>
	<b>% within IsMFI</b>		<b>14.5%</b>	<b>85.5%</b>	<b>100.0%</b>
Chi-square: 198.188			df: 3	Sig: <.001	Cramer's V: .704

### 6.5.7 Insurance Schemes by IsMFI

As reported in Table 6.10, a majority of the respondents (72.3%) did not use insurance or welfare schemes (hereafter ‘insurance schemes’), which they can voluntarily participate in. Approximately 50.0% of Ibnu Affan’s clients had used the service, followed by Islamic Pattani (31.4%), As-Siddeek (15.8%), and Ibnu Auf (13.4%). The relationship was supported by the Chi-square test which indicated a statistically significant difference in insurance scheme use among respondents from different IsMFIs,  $\chi^2 = (3, n = 400) = 42.463$ ,  $p < .001$ , Cramer’s  $V = .326$ . One of the possible reasons why a relatively small number of the respondents had applied for this service was because many of them work in public and private organisations that, by law, must provide employee provident funds. They can therefore be reimbursed from this fund for medication and hospitalisation expenses.

**Table 6.10: Cross-tabulation: Insurance Schemes by IsMFI**

			Insurance Scheme		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	32	70	102
		% within IsMFI	31.4%	68.6%	100.0%
	Ibnu Affan	Count	50	50	100
		% within IsMFI	50.0%	50.0%	100.0%
	Ibnu Auf	Count	13	84	97
		% within IsMFI	13.4%	86.6%	100.0%
	As-Siddeek	Count	16	85	101
		% within IsMFI	15.8%	84.2%	100.0%
<b>Total</b>		<b>Count</b>	<b>111</b>	<b>289</b>	<b>400</b>
		<b>% within IsMFI</b>	<b>27.8%</b>	<b>72.3%</b>	<b>100.0%</b>
Chi-square: 42.463    df: 3    Sig: <.001			Cramer’s V: .326		

The above discussion reveals three key findings. The first one is that most clients have been members for 5 years or less. This is the time when IsMFIs have proved to be sustainable and successful as alternative financial service providers. The second finding is that a larger proportion of the respondents utilises micro-financing and savings facilities, but not insurance schemes, pawn services, investment accounts, pilgrimage accounts, and other services. Micro-financing is considered to be a main and popular Islamic

microfinance service because it can be used for various purposes including working capital, purchase of productive and non-productive assets, and consumption, which will be discussed further in the next section. As for savings accounts, they are part of daily financial management tools for IsMFIs' clients. Thus, most of the clients utilise this service. The second group of services are not popular, perhaps, due to the fact that these services are targeted at a specific group of the clients, and for specific needs. Only those who fulfil the conditions and prefer the services apply for those services. The final finding is that there is a significant difference of service use across IsMFIs. A majority of Ibnu Affan's clients, for example, utilise micro-financing, insurance schemes, investment accounts, and pilgrimage accounts, but not many use the savings facility. Ibnu Auf's clients prefer savings facility, micro-financing, and pilgrimage accounts. Islam Pattani's clients, on the other hand, utilise the pawn service, savings, and insurance schemes. As-Siddeek's clients tend to utilise for investment account deposits. Interestingly, a substantial number of clients of IsMFIs who have introduced a form of group lending tend to apply for insurance schemes. The summary of services used by the respondents is reported in Table 6.11.

**Table 6.11: Summary of Services Use**

<b>Service</b>	<b>% of respondent use</b>
Micro-financing	67.8%
Savings account	74.5%
Insurance scheme	27.8%
Pawn service	14.5%
Investment account	18.8%
Pilgrimage account	4.3%

## **6.6 PURPOSE OF MICRO-FINANCING**

Table 6.12 illustrates the purposes of micro-financing use by the respondents (details are provided in Appendix 6.1). The majority of the respondents claimed that their micro-financing was for the purchase of productive assets (33.5%). 31.5% stated that they used the micro-financing to purchase non-productive assets, followed by 19.8% for working capital, 10.0% for consumption, and 1.5% for other purposes. It is worth noting that the IsMFIs categorised productive assets to include cars, motorcycles, agricultural and small

industrial tools and equipment, and other assets that can be used to earn income. Non-productive assets consist mainly of furniture, household appliances, gold, and household tools and equipment. None of the IsMFIs actually offer micro-financing for consumption purposes, but some of the clients stated that they had used the micro-financing for consumption. This might be a case of inappropriate use of micro-financing.

**Table 6.12: Use of Micro-Financing**

<b>Use of micro-financing</b>	<b>Frequency</b>	<b>Percent</b>	<b>N</b>
Working capital	79	19.8	400
Purchase productive assets	134	33.5	400
Purchase of non-productive assets	126	31.5	400
Consumption	40	10.0	400
Other purposes	6	1.5	400

## **6.7 USE OF ALTERNATIVE CONVENTIONAL FINANCIAL SERVICES**

In order to access the financial needs of the respondents, two questions were asked in regard to the use of alternative conventional financial services in the event of Islamic financial institutions being unavailable, and otherwise. As reported in Table 6.13, most respondents (66.3%) stated that they would use conventional financial services if no Islamic financial alternatives were available, whilst 33.8% would not use financial services at all. 37.3% would continue using conventional financial services, even if, Islamic financial institutions were available. 62.8% would use only Islamic financial services, an increase of almost 30% as compared to the situation where Islamic financial institutions are not available. The results suggest that a specific group of the respondents is very sensitive to religious aspects of finance, and may be excluded from the financial system altogether if Islamic financial services are not available. Conversely, some may choose to continue using conventional services, perhaps due to their working needs for and for convenience. Cross-tabulation results show that those in small enterprises and cottage industries tend to continue using conventional financial institutions, even when, Islamic alternatives are available. Detailed results are provided in Appendix 6.2.

**Table 6.13: Use of Conventional Financial Services**

<b>No Islamic financial services available</b>				
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Yes	265	66.3	66.3
	No	135	33.8	33.8
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>
<b>Islamic financial services available</b>				
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
Valid	Yes	149	37.3	37.3
	No	251	62.8	62.8
	<b>Total</b>	<b>400</b>	<b>100.0</b>	<b>100.0</b>

## 6.8 IsMFIs' CLIENTS AND SMEs

This section describes the involvement of the respondents with small and medium-sized enterprises (SMEs). The analysed variables will include SME owned by IsMFI, number of years involved in SMEs, types of SME, and training received from IsMFIs. The objectives of this section are to identify SME ownership of the clients of different IsMFIs, the length of their involvement, main types of SMEs that they own, and whether or not the respondents have received a form of SME management training from IsMFIs or through their cooperative efforts.

### 6.8.1 SME by IsMFI

Table 6.14 shows the respondents who own SMEs by IsMFI. It indicates that 68.5% of the respondents did not own SMEs, and 31.5% had SMEs. In terms of individual IsMFIs, 44.0% of Ibnu Affan's clients claimed that they had SMEs, followed by Islam Pattani's clients (33.3%), As-Siddeek's clients (29.7%), and Ibnu Auf's clients (18.6%). The clients may however claim them as a main occupation or as part-time work. The results are supported by the Chi-square test value of 15.083 which is much higher than the critical Chi-square statistics (7.815) at .05 level of significance. It can hence be concluded that there is statistically significant difference between SME ownership and IsMFIs as the computed significance value (.002) is lower than .05 significance level.

**Table 6.14: SME Owned by IsMFI**

			Own SME		Total
			Yes	No	
<b>IsMFI</b>	Islam Pattani	Count	34	68	102
		% within IsMFI	33.3%	66.7%	100.0%
	Ibnu Affan	Count	44	56	100
		% within IsMFI	44.0%	56.0%	100.0%
	Ibnu Auf	Count	18	79	97
		% within IsMFI	18.6%	81.4%	100.0%
	As-Siddeek	Count	30	71	101
		% within IsMFI	29.7%	70.3%	100.0%
<b>Total</b>	<b>Count</b>		<b>126</b>	<b>274</b>	<b>400</b>
	<b>% within IsMFI</b>		<b>31.5%</b>	<b>68.5%</b>	<b>100.0%</b>
Chi-square: 15.083    df: 3    Sig: .002 Cramer's V: .425					

**6.8.2 Number of Years Involved in SMEs**

From 126 respondents who claimed that they own SMEs, 39.7% stated that they had done so in the range of either 1-3 years or more than 6 years. Approximately 20.6% had been involved in SMEs for 4-6 years. Most of the respondents (16.5%) owned petty trades, 5.0% had been involved in cottage industries, 4.0% owned agriculture and fishery businesses, and 6.8% had other types of SMEs. In addition, most respondents (84.8%) revealed that they did not receive any form of training from IsMFIs, whilst 15.3% of them received training from IsMFIs. The results of the survey analyses are presented in Table 6.15.



**Table 6.15: Years in SME, Types of SME and Training received**

Years in SME				
		Frequency	Percent	Valid Percent
Valid	1-3 years	50	12.5	39.7
	4-6 years	26	6.5	20.6
	> 6 years	50	12.5	39.7
	Total	126	31.5	100.0
Missing	System	274	68.5	
<b>Total</b>		<b>400</b>	<b>100.0</b>	
Types of SME				
		Frequency	Percent	N
Petty trade		66	16.5	400
Transportation		11	2.8	400
Cottage industry		20	5.0	400
Agriculture and fishery		16	4.0	400
Other SME		27	6.8	400
Training from IsMFIs				
		Frequency	Percent	Valid Percent
Valid	Yes	61	15.3	15.3
	No	339	84.8	84.8
<b>Total</b>		<b>400</b>	<b>100.0</b>	<b>100.0</b>

## 6.9 PATRONAGE FACTORS AND RANKING OF SERVICES FOR IsMFIs' CLIENTS

This section describes the respondents' inclination towards certain patronage factors and the ranking order of various products and services of IsMFIs that they prefer to use during their different life-cycle events. The patronage factors consist of return, quality of services, confidence in IsMFIs, close distance, *Shariah*-compliance (interest-free), and social responsibility. The respondents were required to rate each of the factors according to their preference (ranging from 'not at all important' to 'of utmost importance'). The results of the analysis are presented in Table 6.16 in which the ranking is presented based on the highest mean value. Tables 6.18 - 6.22 show the rankings of the services that the clients prefer when facing a wide range of events such as income shock, purchase of productive assets, purchase of non-productive assets, death of a household member, housing, and

children's education. Only the three services with the highest frequency scores of a particular event are described in this section because these services are viewed as the most important ones. As a consequence, frequency and percentages displayed in the tables may not add up to the total respondents and 100 per cent respectively.

## **6.9.1 IsMFIs Patronage Factors**

### ***6.9.1.1 Shariah Compliance (Interest-free)***

The mean value of this factor is 4.49 with a low standard deviation of 0.971. The results generally suggest that the majority of the respondents acknowledge that all products and services of IsMFIs must be free from any element of 'interest' which is forbidden by *Shariah* principles. 72.0% of the respondents rated this factor as 'of utmost importance' while 12.5% regarded it as 'very important'. This factor has the highest percentage of 'of utmost importance' among the listed factors.

### ***6.9.1.2 Social responsibility***

The second highest ranking according to mean value is the 'social responsibility' factor and activities initiated by IsMFIs, with the mean value and standard deviation of 3.99 and 0.955 respectively. The results imply that the IsMFIs should be socially responsible organisations, and implement various activities and programmes that benefit society. Percentages of 37.0% and 31.0% of the respondents stated the factor as 'very important' and 'very important' respectively.

### ***6.9.1.3 Confidence in IsMFIs***

This is the third highest ranked factor, with a mean value of 3.91 and a small standard deviation of 0.942. The results indicate that the respondents feel that IsMFIs are able to provide services and manage their money effectively. The IsMFIs can sustain them in the unforeseeable future. 40.5% of the respondents rated this factor as 'very important' and 31.5% indicated that the factor was 'important'.

#### 6.9.1.4 Quality of services

The mean value for ‘quality of service’ is 3.87, with a low standard deviation. This indicates that a good quality of services is essential in attracting people to join IsMFIs. About 40.5% and 31.5% stated that this factor was ‘very important’ and ‘important’ correspondingly. This factor has the highest percentage of ‘very important’ among the listed factors.

#### 6.9.1.5 Close distance

With a mean value of 3.82 and standard deviation of 0.975, this factor was indicated by 65.0% of the respondents as ‘very important’ and ‘important’. This implies that the closer the IsMFIs’ location is to the respondents’ workplace and home, the easier it is for them to travel to the location and access their services.

#### 6.9.1.6 Return

The mean value for ‘return’ is 3.13, with a moderately high standard deviation of 1.024. In general, the results suggest that the majority of the respondents’ return in the form of dividend is important to them in deciding to join IsMFIs. Approximately 41.8% and 22.3% of the respondents rated this factor as ‘important’ and ‘very important’ respectively.

**Table 6.16: IsMFIs Patronage Factors**

Factors	Not at all important	Slightly important	Important	Very important	Extremely important	Mean	SD
<b>Return</b>	21 (5.3%)	80 (20.0%)	167 (41.8%)	89 (22.3%)	43 (10.8%)	3.13	1.024
<b>Quality of services</b>	2 (.5%)	10 (2.5%)	126 (31.5%)	162 (40.5%)	100 (25.0%)	3.87	.834
<b>Confidence in IsMFIs</b>	8 (2.0%)	15 (3.8%)	103 (25.8%)	152 (38.0%)	122 (30.5%)	3.91	.942
<b>Close distance</b>	10 (2.5%)	20 (5.0%)	112 (28.0%)	148 (37.0%)	110 (27.5%)	3.82	.975
<b>Interest-free</b>	14 (3.5%)	3 (.8%)	45 (11.3%)	50 (12.5%)	288 (72.0%)	4.49	.971
<b>Social responsibilities</b>	5 (1.3%)	16 (4.0%)	107 (26.8%)	124 (31.0%)	148 (37.0%)	3.99	.955

## 6.9.2 Ranking of Services Used in Various Events

### 6.9.2.1 Income shock

Based on the survey outcome, 66.9% of the respondents ranked using savings accounts as their first choice whilst 27.3% rated taking micro-financing as a second option whenever they suffered short-term income shocks. A percentage of 26.8% preferred insurance schemes. The survey results imply that the respondents tend to prefer to use up their own available money before applying for other services when they do not have enough cash for consumption. In other words, they are less inclined toward debt. It is interesting to note that 25.5% of the clients of Islam Pattani, which offers a pawn service, would use the pawn service to ease their income shocks.

**Table 6.17: Income Shock and Islamic Microfinance Services**

Event/Service/Ranking		1	2	3
<b><u>Income Shock</u></b>				
<b>Micro-financing</b>	Freq	81	<b>50</b>	27
	%	44.3	<b>27.3</b>	14.8
<b>Savings</b>	Freq	<b>178</b>	34	32
	%	<b>66.9</b>	12.8	12.0
<b>Insurance scheme</b>	Freq	23	31	<b>40</b>
	%	15.4	20.8	<b>26.8</b>

### 6.9.2.2 Purchase of productive assets

The majority of the respondents (81.8%) claimed that they would apply for micro-financing to finance the purchase of productive assets, followed by pawning (28.5%) as the next best alternative. 18.0% of the respondents choose to use the money in their savings accounts. The results suggest that the purchase of productive assets may tie money down for a reasonably long period of time, while micro-financing, which allows instalment payments, would suit the respondents' needs. Again, it should be noted that 54.9% of Islam Pattani's customers would use the pawn service to purchase productive assets for their households.

**Table 6.18: Purchase of Productive Assets and Islamic Microfinance Services**

Event/Service/Ranking		1	2	3
<b>Micro-financing</b>	Freq	<b>234</b>	39	4
	%	<b>81.8</b>	13.6	1.4
<b>Savings</b>	Freq	110	<b>53</b>	41
	%	48.2	<b>23.2</b>	18.0
<b>Pawn</b>	Freq	37	47	<b>56</b>
	%	22.4	28.5	<b>33.9</b>

**6.9.2.3 Purchase of non-productive assets**

As reported in Table 6.17, 69.1% of the respondents of the four IsMFIs preferred to buy non-productive assets with the money available in their savings accounts. Pawning was ranked as the next best alternative (32.1%), followed by micro-financing (5.8%). The results indicate that when it comes to non-productive assets which may not require a lot of cash, they prefer to use cash from their savings accounts. Interestingly, 50.0% of Islam Pattani's clients, considered separately, would use money from pawning to buy non-productive assets.

**Table 6.19: Purchase of Non-Productive Assets and Islamic Microfinance Services**

Event/Service/Ranking		1	2	3
<b>Micro-financing</b>	Freq	188	63	<b>16</b>
	%	68.6	23.0	<b>5.8</b>
<b>Savings</b>	Freq	<b>172</b>	35	24
	%	<b>69.1</b>	14.1	9.6
<b>Pawn</b>	Freq	28	<b>51</b>	54
	%	17.6	<b>32.1</b>	34.0

**6.9.2.4 Death of a family member**

The largest percentage of the respondents favoured insurance or welfare schemes (78.5%). Approximately 33.0% rated savings the second best option, and finally pawning (32.8%) which represents 55.9% of the clients of Islam Pattani which is the only IsMFI offering pawning. The results highlight the importance of insurance and welfare schemes to the respondents, especially those who do not have access to the government's provision funds because they are not employed by governmental and private organisations.

**Table 6.20: Death of a Member and Islamic Microfinance Services**

<b>Event/Service/Ranking</b>		<b>1</b>	<b>2</b>	<b>3</b>
<b>Savings</b>	Freq	74	<b>62</b>	29
	%	39.4	<b>33.0</b>	15.4
<b>Pawn</b>	Freq	50	41	<b>57</b>
	%	28.7	23.6	<b>32.8</b>
<b>Insurance scheme</b>	Freq	<b>248</b>	25	13
	%	<b>78.5</b>	7.9	4.1

**6.9.2.5 Housing**

Most respondents (86.8%) would use micro-financing facilities for repairing, expanding, and building houses. The second best alternative was the pawn service which was chosen by 32.9% of the total respondents (or 51.0% of Islam Pattani's customers), and savings (16.2%). The results imply that micro-financing can be the most suitable financing service for acquiring housing among the respondent households.

**Table 6.21: Housing and Islamic Microfinance Services**

<b>Event/Service/Ranking</b>		<b>1</b>	<b>2</b>	<b>3</b>
<b>Micro-financing</b>	Freq	<b>237</b>	27	4
	%	<b>86.8</b>	9.9	1.5
<b>Savings</b>	Freq	118	<b>55</b>	37
	%	51.5	<b>24.0</b>	16.2
<b>Pawn</b>	Freq	29	49	<b>52</b>
	%	19.5	32.9	<b>34.9</b>

**6.9.2.6 Children's education**

Lastly, the respondents were asked to rank the order of their service preference in supporting their children's education. The majority preferred to use money available in their savings accounts before any other services. Pawn services were ranked as the second best facility (37.3%), while micro-financing was third (31.2%). The respondents' behaviour reflects their lower inclination towards debt and their ability to manage their financial needs without falling into debt. It is worth noting that 64.7% of Islam Pattani's clients would use pawning to pay for their children's education expenses.

**Table 6.22: Children’s Education and Islamic Microfinance Services**

<b>Event/Service/Ranking</b>		<b>1</b>	<b>2</b>	<b>3</b>
<b>Micro-financing</b>	Freq	55	22	<b>49</b>
	%	35.0	14.0	<b>31.2</b>
<b>Savings</b>	Freq	<b>230</b>	30	15
	%	<b>78.5</b>	10.2	5.1
<b>Pawn</b>	Freq	60	<b>66</b>	31
	%	33.9	<b>37.3</b>	17.5

To sum up this section, two main points regarding the behaviour of IsMFIs’ clients can be derived. The outcome of the survey clearly shows that the clients consider not only *Shariah*-compliant factors but also other factors which are viewed as important in conventional finance in selecting Islamic microfinance products. Factors such as quality of services, confidence in the IsMFIs, and location can play a very important role in financial inclusiveness through Islamic microfinance. The second point is that the clients tend to have less inclination to debt-based products such as *murabahah* micro-financing, provided that their financial needs do not require a substantial amount of money. As a result, money available in savings accounts and from pawn services often take precedence in the event of short-term income shock, purchase of non-productive assets, death of a family member, and children’s education. However, micro-financing is preferred for events requiring large amounts of money such as purchase of productive assets, and building or repairing of houses. It is also important to note that pawn services could play important role in Muslim’s household financial management.

## **6.10 EXPLORING DEMAND FOR ISLAMIC MICROFINANCE SERVICES**

This section describes the demand for various Islamic microfinance services among IsMFIs’ clients. As discussed in Section 6.5, IsMFIs’ clients’ needs different products including micro-financing, savings accounts, investment accounts, pawn services, insurance schemes and pilgrimage accounts. This section expands the investigation into whether there are any significant differences in the use of Islamic microfinance financial services across subgroups of the respondents. For this purpose, the Mann-Whitney U-test (U-Test) has been employed to examine ‘gender’, ‘religious education’, and ‘SME

ownership’, and the Kruskal-Wallis Test (K-W Test) will examine ‘annual household income’, ‘age group’, ‘marital status’, ‘education’, ‘household size’, ‘agricultural land size’, ‘total land size’, ‘occupation’, ‘membership length’, and ‘SME ownership’. The test results that show significant differences at the critical p-value of .05 are reported and elaborated. Detailed results are provided in Appendix 6.3.

### **6.10.1 Demand for Micro-financing**

In Section 6.5.2, it was revealed that 67.8% of the respondents have acquired micro-financing from the IsMFIs. This section enquires further into different groups of respondents who frequently apply for micro-financing. Table 6.23 depicts the demand for micro-financing according to the selected categories of the respondents’ demographic profile. The results from the U-Test and the K-W Test indicate that ‘gender’ (p-value < .001), ‘age group’ (p-value < .001), ‘marital status’ (p-value = .001), ‘household size’ (p-value = .017), ‘membership length’ (p-value < .001), and ‘SME ownership’ (p-value = .004) have p-values smaller than the critical p-value of .05. The results suggest that there are significant differences in terms of the amount of micro-financing acquired across groups in these categories.



**Table 6.23: Demand for Micro-Financing**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	Df	Asymp. Sig.
<b>Number of micro-financing taken</b>	<b>Gender</b>		<b>U-Test</b>			
	Male	234	217.92	Z= -3.726		.000
	Female	166	175.94			
	<b>Total N</b>	<b>400</b>				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2= 9.991$	4	.000
	≤ 25	48	132.65			
	26-35	150	192.80			
	36-45	117	210.79			
	46-55	58	232.33			
	> 55	27	250.94			
	<b>Total N</b>	<b>400</b>				
	<b>Marital status</b>		<b>K-W Test</b>	$X^2= 13.835$	2	.001
	Single	74	157.16			
	Married	318	210.38			
	Other	8	208.63			
	<b>Total N</b>	<b>400</b>				
	<b>Household size</b>		<b>K-W Test</b>	$X^2= 10.138$	3	.017
	≤ 3	2	273.50			
	3-5	167	182.12			
	6-9	211	210.22			
	>9	20	244.08			
<b>Total N</b>	<b>400</b>					
	<b>Membership length</b>		<b>K-W Test</b>	$X^2= 58.228$	3	.000
	≤ 2 years	153	151.80			
	3-5 years	129	212.64			
	6-10 years	73	235.46			
	>10 years	45	274.56			
<b>Total N</b>	<b>400</b>					
	<b>SME ownership</b>		<b>U-Test</b>	Z= -2.858		.004
	Own	126	223.90			
	Not own	274	189.74			
	<b>Total N</b>	<b>400</b>				

The first category is ‘gender’. The results also suggest that male respondents (mean = 217.92) have a higher likelihood of using micro-financing more frequently compared to female respondents (mean = 175.94). In terms of ‘age groups’, the observations of the

mean rank scores further suggest that older respondents, i.e. 36-45 (mean = 210.79), 46-55 (mean = 232.33), and > 55 (mean = 250.94), are likely to borrow more often.

Another category is 'marital status'. The detailed analysis reveals that married respondents (mean rank = 210.38) are expected to borrow more frequently compared to 'single' (mean rank = 208.63), and 'other' (mean rank = 157.16) categories. As for 'household size', the mean value scores imply that respondents whose household size is ' $\leq 3$ ' (mean = 273.50) tend to utilise micro-financing services more frequently compared to other groups. This is followed by the respondents from households that have more than 9 members (mean = 244.08).

'Membership length' is another significant category. The mean rank scores further indicate that respondents who have a longer relationship duration, i.e. '>10 years' (mean = 274.56), and '6-10 years' (mean = 235.46) have a high probability of applying for more micro-financing.

In terms of SME ownership, the U-Test results suggest that there is a statistically significant difference between the respondents who own SMEs, and those who do not. Based on the mean value scores, respondents with SMEs (mean = 223.90) are more likely to utilise the lending facilities of the IsMFIs compared to those who do not own SMEs (mean = 189.74).

Based on the above results, there are six factors (gender, age groups, marital status, household size, membership length, and SME ownership) that contribute to the extent of micro-financing usage by IsMFIs' clients. A possible reason for male participation is related to the male position in the household as highlighted earlier. Other factors are broadly related to information exposure and specific financial needs. The clients who are likely to demand more micro-financing are older males who are married and have a household size of at least 3 members. Their membership length therefore tends to be long. They therefore have more information about the products and services offered by the IsMFIs, and more experience in dealing with the IsMFIs. This group of respondents possibly apply for more micro-financing if they are involved in SMEs.

### 6.10.2 Demand for Savings Accounts

The next IsMFI service is savings accounts which are based on *wadiah* contract. As discussed in Section 6.5.3, 74.5% of the respondents claimed that they use savings facilities provided by the IsMFIs. This section therefore ascertains whether there are differences in terms of the extent of savings account usage across subgroups in selected respondents' categories, and who are most likely to use savings accounts more often. As depicted in Table 6.24, the results of the U-test and the K-W test indicate that 'gender', 'membership length', and 'SME ownership' categories have statistically significant differences at a significance level of .05.

**Table 6.24: Demand for Savings Accounts**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	Df	Asymp. Sig.
<b>Number of times using savings account</b>	<b>Gender</b>		<b>U-Test</b>			
	Male	234	211.97	Z= -2.380		.017
	Female	166	184.33			
	<b>Total N</b>	<b>400</b>				
	<b>Membership length</b>		<b>K-W Test</b>			
	≤ 2 years	153	164.56	$X^2= 25.347$	3	.000
	3-5 years	129	220.98			
	6-10 years	73	216.99			
	>10 years	45	237.22			
	<b>Total N</b>	<b>400</b>				
	<b>SME ownership</b>		<b>U-Test</b>			
	Own	126	179.22	Z= -2.521		.012
	Not own	274	210.28			
	<b>Total N</b>	<b>400</b>				

The first significant category is 'gender'. The U-Test results suggest that there is a significant difference between male and female respondents in terms of savings account usage, as the p-value of .017 is lower than the critical p-value of .05. The male respondents (mean = 211.97) tend to use savings more frequently compared to the female respondents (mean = 184.33).

Based on the K-W Test results, there is enough evidence to conclude that there is a significant difference across membership length groups. The observed p-value of  $<.001$  is well below the critical p-value of  $.05$ . The mean value scores further indicate that the respondents who have longer relationship, especially those who have been with the IsMFIs for more than 10 years (mean = 237.22), use savings account facilities frequently.

In terms of SME ownership, the U-Test results suggest that there is a significant difference in terms of savings account usage between respondents who own SMEs and those who do not, as the p-value of  $.012$  is lower than the critical p-value of  $.05$ . The observations of the mean value scores confirm those who do not own SMEs (mean = 210.28) use savings facilities more often compared to SME owners (mean = 179.22).

In short, the U-Test and the K-W Test results tend to point out that, in general, there are no differences among the respondents in terms of number of deposits into and withdrawals from savings accounts. However, a male respondent who has been a member of an IsMFI for at least 3 years has a higher likelihood of using the savings facilities more frequently. Those who do not own SME businesses tend to be more active in using savings accounts.

### **6.10.3 Demand for Investment Account**

Investment accounts are special accounts made available to those who have the ability to deposit a larger amount of money for a longer time period, such as 3 months, 6 months, 9 months, and 12 months. As discussed in Section 6.5.4, 18.8% of the respondents use this service. This section examines whether there are differences in demand for this account in demographic categories. The K-W Test and the U-Test results will also identify which subgroup is more likely to use investment accounts. The results are illustrated in Table 6.25.

The results of the survey show that only 'total land size' and 'membership length' reach a statistically significant level. The K-W Test results for 'total land size' and 'membership length' are  $.043$  and  $.021$  respectively, which are smaller than the critical p-value of  $.05$ . The results imply that there are significant differences in the extent of investment account used across the groups in the two categories.

For the ‘total land’ variable, the results indicate that respondents who have a total land area 10 *rai* or higher deposit their money in investment accounts. This claim is substantiated by the mean rank score of 176.79, which is larger than other groups, for example the ‘ $\leq 2$  *rai*’ group which records the mean rank score of 165.90.

The next significant category is ‘membership length’. The K-W Test results show that the respondents who have been with the IsMFIs longer tend to use more investment accounts. This statement is supported by, for instance, the mean rank score of the ‘6-10 years’ group at 222.29, which is significantly higher than that of ‘ $\leq 2$  years’ group.

In short, the results point out that those who have larger land size and longer membership length are more likely to deposit in investment accounts. An argument that may be put forward is that the respondents who have more total land often enjoy better economic wellbeing. They often work in government and private offices in which salaries are stable; they are therefore able to save income from their cultivation in investment accounts. As for membership length, the same argument mentioned in the previous section is also applicable in the present result analysis: the more experience and information accessible by the experienced clients, the better their ability to choose suitable products.

**Table 6.25: Demand for Investment Accounts**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Number of times using investment account</b>	<b>Total land size</b>		<b>K-W Test</b>	$X^2 = 8.162$	3	.043
	$\leq 2$ <i>rai</i>	50	165.90			
	2.01-5.00 <i>rai</i>	72	157.44			
	5.01-10.00 <i>rai</i>	88	153.00			
	> 10.00 <i>rai</i>	118	176.79			
	<b>Total N</b>	<b>328</b>				
	<b>Membership length</b>		<b>K-W Test</b>	$X^2 = 9.747$	3	.021
	$\leq 2$ years	153	190.86			
	3-5 years	129	195.14			
	6-10 years	73	222.29			
	>10 years	45	213.30			
	<b>Total N</b>	<b>400</b>				

#### 6.10.4 Demand for Pilgrimage Accounts

Another main service provided by IsMFIs is pilgrimage accounts. It is a *muadarabah* account designed especially for those who want to go on pilgrimage to Mecca in Saudi Arabia. The descriptive Section 6.5.5 reports that 17 out of 400 respondents (4.3%) have deposited into this account. This section further investigates the use of this account among the client respondents. Again, the K-W Test and the U-Test are employed as tools of analyses. The results are presented in Table 6.26.

The results of K-W Test and U-Test indicate that four categories are statistically significant, as the p-values of these categories are higher than the critical p-value of .05. These imply that there are significant differences among groups in those variables. These variables include 'age groups' (p-value < .001), 'education' (p-value = .005), 'household size' (p-value < .001), and 'occupation' (p-value = .046).

In Table 6.26, the results show that those respondents aged more than 55 years are more likely to use pilgrimage accounts. The results are supported by the mean rank score of 243.72, which is larger than the mean ranks of other groups. As for the other groups, the '36-45' group recorded the mean rank score of 202.23, followed by the '46-55' group (mean rank = 198.88), the '26-35' group (mean rank = 194.72), and the '≤ 25 years' group (mean rank = 192.00).

The second variable which produced a significant result is 'education' which has the p-value of .005. The observations of the K-W Test results also suggest that the respondents who hold a Bachelor's degree or higher have a higher likelihood of using pilgrimage accounts. This statement is substantiated by the mean rank score of 225.25 which is well above the mean rank scores of other groups. Interestingly, '≤ primary certificate', and 'upper secondary certificate' groups are the next two highest mean rank categories with the mean scores of 207.87 and 202.36 respectively.

The third variable is 'household size'. The K-W Test results indicate that respondents whose household size is larger than 9 people are more likely to deposit in pilgrimage account. This respondent group recorded a p-value of 242.30 which is higher than that of

the '6-9' group (mean rank = 198.62), '3-5' group (mean rank = 197.97), and ' $\leq 3$ ' group (192.00).

The final variable that produced a significant result is occupation'. The K-W results show that the respondents who own small enterprises are most likely to open pilgrimage accounts, as the mean rank of this group (mean rank = 214.52) is bigger than those of other groups.

**Table 6.26: Demand for Pilgrimage Account**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Number of times using pilgrimage account</b>	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 36.414$	4	.000
	$\leq 25$	48	192.00			
	26-35	150	194.72			
	36-45	117	202.23			
	46-55	58	198.88			
	$> 55$	27	243.72			
	<b>Total N</b>	<b>400</b>				
	<b>Education</b>		<b>K-W Test</b>	$X^2 = 14.813$	4	.005
	$\leq$ Primary certificate	88	207.87			
	Lower secondary certificate	21	201.50			
	Upper secondary certificate	77	202.36			
	Bachelor degree	196	194.08			
	$>$ Bachelor degree	18	225.25			
	<b>Total N</b>	<b>400</b>				
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 22.612$	3	.000
	$\leq 3$	2	192.00			
	3-5	167	197.97			
	6-9	211	198.62			
	$>9$	20	242.30			
	<b>Total N</b>	<b>400</b>				
	<b>Occupation</b>		<b>K-W Test</b>	$X^2 = 11.269$	5	.046
	Agriculture	93	200.58			
	Small enterprise	62	214.52			
	Cottage industry	7	192.00			
	Government services	27	199.39			
	Private sector employee	182	195.34			
	Other	29	205.76			
	<b>Total N</b>	<b>400</b>				

Based on the above results, it can be concluded that four factors (age group, education, household size, and occupation) influence demand for pilgrimage accounts. The respondents with higher education, especially the '>bachelor degree' group, may be able to obtain information about services of IsMFIs via participation in meetings, reading books and leaflets, and attending seminars. In addition, returns from this account may be attractive to them. Those with primary and upper secondary certificates may deposit small amounts in pilgrimage accounts for their once-in-a-life-time pilgrimages. Greater age and more members in the household imply an immediate need for pilgrimage. They therefore use this service. In terms of occupation, a possible reason for higher demand by people involved in small enterprises is that these people receive profits from their businesses frequently. They deposit part of their profits for both religious aims and returns on their investment.

#### **6.10.5 Demand for Pawn Service**

As reported in Section 6.5.6, Islam Pattani is the only IsMFI offering a pawn service, and 56.9 % of its clients who responded to the questionnaire have used the pawn service. The current section further investigates the respondents' opinions on demand for a pawn service across the demographic categories. This will further demonstrate the financial behaviour of the respondents and their households in regard to pawn services. The results will also suggest which subgroup of each category is more likely to use pawn services if there are significant differences among these subgroups. The results of the K-W Test and the U Test are depicted in Table 6.27.



**Table 6.27: Demand for Pawn Service**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	Df	Asymp. Sig.
<b>Number of times using pawn</b>	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 13.812$	4	.008
	≤ 25	48	176.50			
	26-35	150	195.88			
	36-45	117	207.69			
	46-55	58	228.27			
	> 55	27	178.02			
	<b>Total N</b>	<b>400</b>				
	<b>Education</b>		<b>K-W Test</b>	$X^2 = 13.329$	4	.010
	≤ Primary certificate	88	208.24			
	Lower secondary certificate	21	233.26			
	Upper secondary certificate	77	214.92			
	Bachelor degree	196	191.80			
	> Bachelor degree	18	157.50			
	<b>Total N</b>	<b>400</b>				
	<b>Membership length</b>		<b>K-W Test</b>	$X^2 = 33.225$	3	.000
	≤ 2 years	153	181.62			
	3-5 years	129	191.80			
	6-10 years	73	222.27			
	>10 years	45	254.30			
		<b>Total N</b>	<b>400</b>			
	<b>SME ownership</b>		<b>U-Test</b>	Z= -3.198		.001
	Own	126	220.08			
	Not own	274	191.50			
	<b>Total N</b>	<b>400</b>				

As reported in Table 6.27, four categories, namely, ‘age groups’ (p-value = .008), ‘education’ (p-value = .010), ‘membership length’ (p-value < .001), and ‘SME ownership’ (p-value = .001), showed significant results. The p-values of these categories are smaller than the critical value of .05. The results suggest that there are significant differences in the likelihood of the respondents using pawn services across groups in these categories.

In the ‘age groups’ category, the K-W Test results also indicate that respondents in the ‘46-55’ age range are more likely to apply for pawn services. This can be seen as the ‘46-55’ subgroup has a higher mean rank value of 228.27 as compared to the ‘≤ 25’, ‘26-35’, ‘36-

45' and '> 55' subgroups which have the mean rank values of 176.80, 195.88, 207.69, and 178.02 respectively.

The next category is 'education'. The K-W Test results show that the respondents with 'lower secondary certificate' are more likely to request pawn services. This can be identified since the mean rank value of 233.26 is larger than those of other subgroups. This is followed by 'upper secondary certificate' (mean rank value 214.92), and '≤ primary certificate' (mean rank value = 208.24). Interestingly, the subgroup with the lowest mean rank value is the '> bachelor degree' subgroup with the mean rank value of 157.50.

Another category that has a significant p-value result is 'membership length'. In general, the longer the membership length, the more likely the respondents are to apply for pawn services. The mean rank results show that the respondents with more than 10 years' experience have the highest mean score (254.30), followed by '6-10 years' (mean rank=222.27), '3-5 years' (mean rank = 191.800, and '≤ 2 years' (mean rank = 181.62) respectively.

As for 'SME ownership', the U-Test results suggest that the respondents who own SMEs are more likely to use pawn services compared to those who do not. The mean rank score of the 'own SME' of 220.08 is higher than that of the 'do not own' subgroup (191.50). One possible reason is the need for short-term additional working capital for liquidity and business expansion by the respondents with SMEs.

The overall conclusion to be derived from the above discussion is that four factors (i.e. age group, education, membership length, SME ownership) contribute to greater demand for pawn services. These factors can be reclassified into 'exposure' and 'needs'. In this context, those who are older and have longer membership length have more opportunity to attend training and meetings, and acquire brochures provided by the IsMFIs. They therefore gain more exposure to the products and services provided, and are more confident about applying for them. As for educational level and SME ownership, those who have lower education such as lower secondary school certificates are often involved in agriculture and labouring; they are therefore prone to short-term income shock. They

therefore need pawn services to satisfy their financial needs. This also applies to SME owners, who often need cash for liquidity and business expansion.

#### **6.10.6 Demand for Insurance Schemes**

The objective of this section is to determine the differences in demand for insurance schemes among the respondents' groups. The analysis will expand the descriptive results which indicate that 111 (27.8%) of 400 respondents make use of this service. Table 6.28 shows that 'annual household income' (p-value = .003), 'age group' (p-value < .001), 'marital status' (p-value < .001), 'membership length' (p-value = .001), and 'SME ownership' (p-value = .001) recorded statistically significant differences among subgroups in these categories at .05 level of significance.

The first significant category is 'annual household income'. The K-W results suggest that there is a significant difference in terms of insurance across household annual income groups. The mean rank scores further indicate that the respondents with household annual incomes in the range of '100,001-300,000' Baht (mean = 201.12) often apply for these services, followed by the '40,001-100,000' group (mean = 192.84), and '≤ 40,000' group (mean = 191.00).

In terms of 'age groups', which has a p-value of .000, the observations of the K-W Test results reveal that the respondents whose age is the range of '46-55' (mean = 237.19) tend to use this service more frequently, followed by '> 50' group (mean = 230.74).

Another significant category is 'marital status'. The K-W Test results indicate that there is a significant difference across 'marital status' groups, as the p-value of .000 is lower than the critical value of .05. The mean scores moreover suggest that the respondents who are married (mean = 209.75) apply for insurance more often compared to other groups.

The next category is 'membership length' which is supported by the p-value of .001. The observations of the mean scores suggest that respondents who have longer membership length are more likely to apply for insurance or welfare schemes. The '>10 years' group for

example recorded a mean rank of 238.60, followed by ‘6-10 years’ group (mean rank = 221.40), and ‘3-5 years’ group (mean rank = 191.16).

The final significant category is ‘SME ownership’. The U-Test results suggest that there is a difference in terms of the number of insurance schemes acquired, between respondents who own SMEs and those who do not. The results are supported by the p-value of .025 which is lower than the critical p-value of .05. Detailed investigation indicates that SME owners (mean rank = 215.48) have a higher likelihood of using insurance schemes compared those who are not SME owners (mean rank = 193.61).

**Table 6.28: Demand for Insurance Schemes**

Variable	Subgroup	N	Mean Rank	Z, $X^2$	Df	Asymp. Sig.
<b>Number of times using insurance</b>	<b>Annual household income</b>		<b>K-W Test</b>	$X^2 = 15.914$	4	.003
	Poor ( $\leq 40,000$ baht)	3	191.00			
	Near poor (40,001-100,000)	28	192.84			
	Average (100,001-300,000)	187	201.12			
	Near rich(300,001-500,000)	91	166.22			
	Rich ( $> 500,000$ baht)	61	162.75			
	<b>Total N</b>	<b>370</b>				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 23.967$	4	.000
	$\leq 25$	48	164.48			
	26-35	150	204.64			
	36-45	117	184.80			
	46-55	58	237.19			
	$> 55$	27	230.74			
	<b>Total N</b>	<b>400</b>				
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 16.626$	2	.000
	Single	74	166.73			
	Married	318	209.75			
	Other	8	145.00			
	<b>Total N</b>	<b>400</b>				
	<b>Membership length</b>		<b>K-W Test</b>	$X^2 = 16.535$	3	.001
	$\leq 2$ years	153	187.20			
	3-5 years	129	191.16			
	6-10 years	73	221.40			
	$>10$ years	45	238.60			
	<b>Total N</b>	<b>400</b>				
	<b>SME ownership</b>		<b>U-Test</b>	$Z = -2.244$		.025
	Own	126	215.48			
	Not own	274	193.61			
	<b>Total N</b>	<b>400</b>				

In summary, the K-W Test and U-Test results point out that the respondents who are most likely to apply for insurance more often have household annual incomes lower than 300,000 baht, are married, are at least 46 years of age, and may possibly have been members for longer. The demand for insurance will be greater if they own an SME business. The main reason would be the fact that the married respondents whose annual household income is less than 300,000 baht often do not have other welfare schemes such as employee provident funds, social security funds, and government official reimbursement programmes to cover their medical expenses and costs associated with the deaths of household members. This also applies for those who own SMEs. As these respondents have more experience with the IsMFIs, they may have realised that insurance schemes are available for them to support their financial needs in certain eventualities.

## **6.11 PREDICTOR FACTORS FOR USE OF ISLAMIC MICROFINANCIAL SERVICES**

In order to strengthen the robustness of the findings in Section 6.10, logistic regression is employed in this section to determine good predictors of the use of Islamic microfinancial services among the clients. As discussed in the methodology chapter (Chapter 5), this technique is more appropriate for analysing those dependent variables that involve categorical data (Pallat, 2007, Wright, 1995, Tabachnick and Fidell, 1996). In this analysis, the respondents had to indicate whether they use the Islamic microfinancial services by answering 'yes' or 'no'. For continuity purposes, the researcher has included all factors which were used as independent variables in the previous section as independent variables in the regression. Coefficients and significance levels of independent variables on each service, and goodness-of-fit are summarised in Table 6.29.

An important aspect in evaluating the value of independent variable coefficients is whether the sign of each value is positive or negative. A positive value coefficient suggests a positive relationship between independent variable and dependent variable, and vice versa (Pallat, 2007, Tabachnick and Fidell, 1996). The significance level used in this analysis is .05. The goodness-of-fit, which indicates whether the overall regression model is fit for testing, includes the Omnibus Tests of model coefficients, Cox and Snell  $R^2$ , Nagelkerke

$R^2$ , and overall accuracy. The Omnibus Tests of model coefficients provides Chi-square and significance values which indicate overall goodness-of-fit of the model. A value of below .05 is desirable. Cox and Snell  $R^2$  and Nagelkerke  $R^2$  indicate the amount of variation in dependent variables explained by the model. Theoretically, a high value is desirable. The overall accuracy value provides the indication of how well a logistic regression model is able to predict the correct category for each case. Another key value is an odds ratio which illustrates the magnitude of changes in dependent variables that may be caused by changes in an independent variable (Pallant, 2007, Tabachnick and Fidell 1996).

The first category is the use of micro-financing. As reported in Table 6.29, the full model containing all predictors was statistically significant,  $X^2 = 47.419$ ,  $P < .001$ , suggesting that the model was able to distinguish between who used and did not use micro-financing. The model as a whole explained between 14.4% (Cox and Snell  $R^2$ ) and 20.1% (Nagelkerke  $R^2$ ) of variance in the use of micro-financing status, and correctly classified 71.8% of cases. Only four of the independent variables made a unique, statistically significant contribution to the model (gender, household size, membership length, and SME ownership).

The use of savings accounts and investment accounts can be discussed simultaneously as both offer small significant results. The full model was not statistically significant,  $X^2 = 17.494$ ,  $P = .132$ , indicating that the model was not fit for testing. As for investment accounts, the full model was statistically significant,  $X^2 = 27.386$ ,  $P = .007$ . The model as a whole explained between 8.6% (Cox and Snell  $R^2$ ) and 13.8% (Nagelkerke  $R^2$ ) of the variance in the use of investment account, and correctly classified 82.3% of cases. However, no independent variable made a unique, statistically significant contribution to the model.

As regards pilgrimage account use, the full model was statistically significant,  $X^2 = 36.283$ ,  $P < .001$ . The whole model explained between 11.2% (Cox and Snell  $R^2$ ) and 39.7% (Nagelkerke  $R^2$ ) of variance in the use of pilgrimage accounts, and correctly classified 97.6% of the cases. Three of the independent variables significantly contributed to the predictive ability of the model (age, marital status, and household size). Marital status is the strongest predictor of the model, recording an odds ratio of 14.359. This implied that

married respondents were over 14 times more likely to use pilgrimage account services, all other factors being equal.

The logistic regression model of pawn service use reported a statistically significant result,  $X^2 = 27.432$ ,  $P = .007$ . The model explained between 8.6% (Cox and Snell  $R^2$ ) and 15.5% (Nagelkerke  $R^2$ ) of variance in the pawn service use, and correctly classified 85.9% of the cases. The results showed that three independent variables significantly contributed to the predictive ability of the model (education, occupation, and membership length). Interestingly, the coefficient value of education years had a negative sign, indicating that the higher the respondents' level of education, the less likely they were to use pawn services.

The final model is insurance schemes which recorded a statistically significant result,  $X^2 = 52.229$ ,  $P < .001$ . The overall model explained between 15.7% (Cox and Snell  $R^2$ ) and 22.7% (Nagelkerke  $R^2$ ) of variance in the insurance scheme use, and correctly classified 73.8% of cases. The regression results suggested that four independent variables significantly contributed to the predictive ability of the model (annual household income, age, agricultural land size, and membership length). Interestingly, the coefficient value of annual household income showed a positive sign, indicating that there was a positive relationship between this variable and the use of insurance schemes. The coefficient, however, was less than .001, suggesting a small change in the use of insurance scheme with a unit change of annual household income.

**Table 6.29: Summary of Logistic Regression Results**

Independent Variables	Dependent Variables											
	Micro-Financing		Savings Account		Investment Account		Pilgrimage Account		Pawn Service		Insurance Scheme	
	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
Annual household income	.000	.783	.000	.926	.000	.230	.000	.682	.000	.432	.000	.001*
Gender	.700	.011*	.426	.134	.423	.224	1.049	.274	-.237	.530	.142	.651
Age	.029	.137	-.003	.855	.027	.204	.103	.031*	-.038	.136	.058	.003*
Marital status	.525	.121	-.545	.143	.367	.407	2.664	.028*	.432	.349	-.037	.928
Education	.050	.203	.013	.737	.087	.063	-.047	.608	-.138	.003*	.020	.617
Household size	.168	.030*	.087	.251	.131	.096	.478	.002*	-.011	.908	.070	.366
Agricultural land size	.033	.192	.015	.561	.035	.146	.046	.170	-.014	.680	.069	.026*
Total land size	-.012	.425	.001	.950	.001	.931	-.015	.505	.009	.561	-.044	.099
Occupation	.051	.570	-.049	.599	.082	.458	.182	.468	.245	.046*	.026	.788
Membership length	.097	.013*	.020	.553	.023	.509	.025	.719	.147	.000*	.066	.041*
Religious Education	-.443	.270	-.420	.342	-.526	.242	.668	.614	.359	.544	.185	.682
SME ownership	.660	.036*	-.669	.024*	.171	.625	.938	.229	.373	.329	.565	.069
Chi-Square	47.419		17.494		27.386		36.283		27.432		52.229	
(Sig)	(.000)		(.132)		(.007)		(.000)		(.007)		(.000)	
Cox and Snell R <sup>2</sup>	.144		.056		.086		.112		.086		.157	
Nagelkerke R <sup>2</sup>	.201		.082		.138		.397		.155		.227	
Overall accuracy	71.8		73.8		82.3		96.7		85.9		73.8	



## 6.12 CONCLUSION

This chapter has provided information on the characteristics of the respondents, and also discussed the findings on financial behaviours and needs, and demand for Islamic microfinance services by different comparative groups based on the results of the survey. The analysis of demographic characteristics of the respondents suggests that middle-aged married males who work in the private sector represent the main clients of the IsMFIs. They are considered to be near-poor or average working-class, not poor people like most conventional microfinance clients. The results also indicate that a majority of these clients have been dealing with the IsMFIs for at least 2 years. They are therefore well-exposed to Islamic microfinance operations, and have adequate knowledge about the services provided by the IsMFIs. .

The analysis of the respondents' relationship with the IsMFIs tends to suggest that the main services which are utilised by most respondents are micro-financing and savings accounts. Micro-financing is utilised to purchase productive assets, and for house-building and repairs which often require larger amounts of money. Whenever the clients need cash in the event of income shocks, purchase of non-productive assets, and children's education, they prefer to withdraw it from their savings accounts. However, there is great potential for pawn services which have been offered by only one IsMFI in Muslim household financial management. These services, however, are needed by those groups to manage their financial needs more effectively. Unlike conventional microfinance clients, a small number of the IsMFI's clients are involved in SMEs. The respondents tend to believe that Islamic factors such as interest-free finance and socially responsible finance are main patronage factors of Islamic microfinance services. Other factors such as service quality, close location, and returns are also important in choosing these Islamic-compliant services.

**Table 6.30: Summary of Findings on Demand for Islamic Microfinance Services**

<b>Variables</b>	<b>Significant results in favour of groups with</b>	<b>Significant predictive contribution</b>
Use of Micro-financing	<ul style="list-style-type: none"> <li>• Gender (Male)</li> <li>• Age (Higher Age)</li> <li>• Marital Status (Married)</li> <li>• Household Size (Larger Household Size)</li> <li>• Membership Length (Longer Membership Length)</li> <li>• SME Ownership (Own SME)</li> </ul>	<ul style="list-style-type: none"> <li>• Gender (Male)</li> <li>• Household Size (Larger Household Size)</li> <li>• Membership Length (Longer Membership Length)</li> <li>• SME Ownership (Own SME)</li> </ul>
Use of Savings account	<ul style="list-style-type: none"> <li>• Gender (Dhumale and Sapcanin)</li> <li>• Membership Length (Longer Membership Length)</li> <li>• SME Ownership (Own SME)</li> </ul>	<ul style="list-style-type: none"> <li>• SME Ownership (Own SME)</li> </ul>
Use of Investment account	<ul style="list-style-type: none"> <li>• Total Land Size (Larger Total land size)</li> <li>• Membership Length (Longer Membership Length)</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
Use of Pilgrimage account	<ul style="list-style-type: none"> <li>• Age (Higher Age)</li> <li>• Education (Higher Level of Education)</li> <li>• Household Size (Larger Household Size)</li> <li>• Main Occupation (Involved in SME)</li> </ul>	<ul style="list-style-type: none"> <li>• Age (Higher Age)</li> <li>• Marital status (Married)</li> <li>• Household Size (Larger Household Size)</li> </ul>
Use of Pawn Service	<ul style="list-style-type: none"> <li>• Age (Higher Age)</li> <li>• Education (Lower Level of Education)</li> <li>• Membership Length (Longer Membership Length)</li> <li>• SME Ownership (Own SME)</li> </ul>	<ul style="list-style-type: none"> <li>• Education (Lower Level of Education)</li> <li>• Main Occupation (Cottage industry)</li> <li>• Membership Length (Larger Membership Length)</li> </ul>
Use of Insurance Scheme	<ul style="list-style-type: none"> <li>• Annual Household Income (Average Annual Household Income)</li> <li>• Age (Higher Age)</li> <li>• Marital Status (Married)</li> <li>• Membership Length (Longer Membership Length)</li> <li>• SME Ownership (Own SME)</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Household Income (Larger Annual Household Income)*</li> <li>• Age (Higher Age)</li> <li>• Agricultural Land Size (Larger Agricultural Land Size)*</li> <li>• Membership Length (Longer membership Length)</li> </ul>

\*Coefficients are small.

The results depicted in Table 6.30 show that there are associations between gender, membership length and SME ownership variables with the demand for most services, including the two main Islamic microfinancial services: micro-financing and savings. Male

respondents who have been involved in Islamic micro-financing for longer periods tend to demand more micro-financing and savings facilities. This might be due to their exposure to IsMFIs' operations and their ability to identify financial services that suit their needs and life cycle events. The results of the survey suggest that respondents who are married and aged over 36 years with a household size of more than three apply for more micro-financing. The logistic regression results further strengthen these findings as all except 'age' were statistically significant predictors of the use of micro-financing. However, 'SME ownership' is the only significant predictor for savings account usage.

Investment accounts are greatly utilised by those who have larger land areas due to the fact that they can keep their income from the land for investment while using income from their main occupation for daily use. They are possibly involved in SME businesses. Neither of these two variables is a significant predictor of investment account usage. Pilgrimage accounts are required by older people, with a high level of education and larger household size. Surprisingly, their main occupation is small businesses. Only 'age', 'marital status', and 'household size' are statistically significant predictors for pilgrimage account usage. Pawn services are greatly needed by aged, lowly-educated groups who are involved in SMEs, whilst membership length and SME ownership are still important criteria. The regression results confirm the predictive ability of all but 'age'. As expected, insurance schemes are preferred by married, aged respondents with lower incomes. Longer membership length and involvement in SMEs are also important factors in the use of insurance schemes. The regression results confirm the predictive ability of all variables except, 'SME ownership'. The coefficients of both 'annual household income' and 'agricultural land size' tend to be very small.

This chapter therefore concludes that a variety of Islamic microfinancial services are needed by clients in accordance with their financial needs and events in their lives. In many cases, a combination of services is utilised to fulfil those needs which may involve larger amounts of money. More importantly, these services must not only fulfil the requirements of *Shariah* principles, but must also meet conventional criteria of high quality and the provision of some returns.

## **Chapter 7**

# **ASSESSING THE IMPACTS OF ISLAMIC MICROFINANCE IN THAILAND**

### **7.1 INTRODUCTION**

This chapter presents and discusses the empirical results of the questionnaire-based survey related to assessment of the impacts of Islamic microfinancial services. It covers the second objective: to evaluate impact of IsMFIs on client households. The respondents were asked to rate each statement based on five scales ranging from ‘strongly disagree’ to ‘strongly agree’. Throughout this chapter, demographic variables are tested against levels of impacts, for instance impact on income, not income itself. The analytical tools and methods used in this chapter comprise descriptive techniques, Kruskal-Wallis Test, Mann-Whitney U-Test, Spearman rank order correlation, and binary logistic regression. Based on the literature, another two variables, i.e. productive assets and non-productive assets, have been included in the demographic factors in addition to those used in the previous chapter. The demographic factors are tested to discover the differences in terms of impacts of different products. In addition, correlation analysis further determines which demographic factors are associated with the impact outcome. Finally, important determinant factors are examined in order to identify the sources of impacts of the Islamic microfinance services in question.

The chapter is divided into four main parts of analysis in accordance with the four main products offered at the four IsMFIs in Thailand. The first part (Section 7.2) focuses on the impacts of micro-financing on respondents’ households. The second part (Section 7.3) considers the impacts of savings accounts on respondents’ households. The third part (Section 7.4) concentrates on the impacts of Islamic pawn services on respondents’ households. The final analysis part deals with the impacts of Islamic insurance schemes on respondents’ households. In each part, the results of descriptive analysis, K-W Test and U-Test, Spearman rank order correlation, and binary logistic regression are discussed consecutively.

## **7.2 IMPACTS OF MICRO-FINANCING ON RESPONDENTS' HOUSEHOLDS**

This section describes the respondents' opinions on economic and non-economic impacts of micro-financing on respondents' households. The economic factors comprise income, productive assets, housing and self-employment (LO1-LO4). The non-economic impact factors contain food consumption, non-food consumption, children's education, access to healthcare, and five items on Islamic religiosity (LO5-LO13).

### **7.2.1 Descriptive Analysis for Economic and Non-economic Impacts of Micro-financing**

The presentation of the analysis shows frequency, percentage, mean, and standard deviation of the impact factors based on the responses of 400 respondents. Table 7.1 presents descriptive analysis of the data gathered during the fieldwork.

**Table 7.1: Descriptive Analysis: Impacts of Micro-financing on Respondents' Households**

Impact	Factor	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean Ranking
Economic	(1) Micro-financing improves your household's income (LO1).	4 (1.0%)	16 (4.0%)	127 (31.8%)	211 (52.8%)	42 (10.5%)	9
	(2) Micro-financing increases accumulated productive assets in your household (LO2).	4 (1.0%)	4 (1.0%)	67 (16.8%)	232 (58.0%)	93 (23.3%)	2
	(3) Micro-financing enables you to build, buy or repair a house (LO3).	2 (0.5%)	9 (2.3%)	82 (20.5%)	223 (55.8%)	84 (21.0%)	3
	(4) Micro-financing increases self-employment within your household (LO4).	3 (0.8%)	6 (1.5%)	103 (25.8%)	226 (56.5%)	62 (15.5%)	5
Non-economic	(5) Micro-financing increases amount of food consumption in household (LO5).	5 (1.3%)	46 (11.5%)	122 (30.5%)	208 (52.0%)	19 (4.8%)	13
	(6) Micro-financing enables household to provide non-food items such as clothing (LO6).	2 (0.5%)	44 (11.0%)	107 (26.8%)	220 (55.0%)	27 (6.8%)	11
	(7) Micro-financing makes possible for household to allocate more money for children to school (LO7).	1 (0.3%)	22 (5.5%)	99 (24.8%)	226 (56.5%)	52 (13.0%)	7
	(8) Micro-financing increases household access to healthcare (LO8).	4 (1.0%)	44 (11.0%)	113 (28.3%)	196 (49.0%)	43 (10.8%)	11
Religiosity	(9) Micro-financing allows household to attend more congregation prayers (LO9).	13 (3.3%)	14 (3.5%)	117 (29.3%)	187 (46.8%)	69 (17.3%)	8
	(10) Micro-financing enables household pay more <i>zakah</i> and <i>sadaqah</i> (LO10).	7 (1.8%)	9 (2.3%)	85 (21.2%)	216 (54.0%)	83 (20.8%)	4
	(11) Micro-financing enhances household ability to go for pilgrimage (LO11).	6 (1.5%)	13 (3.3%)	99 (24.8%)	214 (53.5%)	68 (17.0%)	6
	(12) Micro-financing allows household to avoid interest ( <i>riba</i> ) and prohibited activities (LO12).	7 (1.8%)	12 (3.0%)	61 (15.3%)	181 (45.3%)	139 (34.8%)	1
	(13) Micro-financing makes you to participate in Islamic lectures and Islamic study circle (LO13).	15 (3.8%)	27 (6.8%)	108 (27.0%)	198 (49.5%)	52 (13.0%)	10

### ***7.2.1.1 Economic impacts of micro-financing: a descriptive analysis***

Based on the results, it can be concluded that the majority of the respondents perceive that Islamic micro-financing could provide an impact on their economic wellbeing by increasing their households' income, enabling them to accumulate assets, build or buy houses, and enhance their self-employment opportunities. The impacts on productive assets (mean = 4.01) and the impacts on housing (mean = 3.95) were ranked the highest two statements in economic impact factors. Nevertheless, high responses of 'neutral' on the impacts on income and self-employment suggest that the link between micro-financing and economic wellbeing of the respondents' households could not only be different within respondents' categories, but could also be an indirect one.

### ***7.2.1.2 Non-economic impacts of micro-financing: a descriptive analysis***

The descriptive analysis reveals that the majority of the respondents support the view that Islamic micro-financing has positive impacts on food and non-food consumption, children's education, healthcare, and a number of Islamic-related activities. The impacts on children's education registered the highest mean value (3.76) among non-economic impact factors (LO5-LO8). As for religiosity factors (LO9-LO13), avoidance of *riba* and prohibited activities recorded the highest mean value (4.08). Nevertheless, a considerable proportion of the respondents have some doubt about these impacts causing them to rate many statements as 'neutral'.

### **7.2.2 Kruskal-Wallis Test and Mann-Whitney U-Test for Economic and Non-economic Impacts of Micro-financing**

This section further investigates the significant impacts of demographic characteristics on impacts of micro-financing on households. The U-Test has been employed to examine clients' gender, marital status, main occupation, religious education, and SME ownership, and the K-W Test to analyse annual household income, age, highest education, household size, agricultural land size, total land size, membership length, total productive assets, and total non-productive assets. The (Asymp. Sig.) values from the test outputs indicate p-value

which is to be compared with the critical p-value (.05). If the value is less than .05, then a conclusion can be made that there is a statistically significant difference across subgroups in those variables. Furthermore, if a statistically significant difference has been established, the direction of the difference can be identified by referencing to the highest rank in the mean rank table.

In view of that, Table 7.2 exhibits a reflection of the variables that have achieved a significant level (Sig. <.05) between demographic variables and impact variables. The subgroups that provide the highest mean rank score have also been provided to aid discussions in this section. However, full details of the K-W Test and the U-Test can be found in Appendix 7.1.



**Table 7.2: Significant Statistical Results between Clients' Demographic Characteristics and Households' Impact Variables for Micro-financing**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>												
	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13
<b>AHI</b>	≤ 40 <sup>*</sup>	-----	-----	-----	-----	≤ 40 <sup>*</sup>	-----	-----	-----	300 <sup>*</sup> -500 <sup>*</sup>	-----	-----	-----
<b>AGE</b>	-----	-----	46-55 <sup>*</sup>	-----	26-35 <sup>*</sup>	≤25 <sup>*</sup>	-----	-----	-----	-----	≤25 <sup>*</sup>	-----	36-45 <sup>*</sup>
<b>EDU</b>	-----	-----	-----	-----	>Bach. <sup>*</sup>	>Bach. <sup>*</sup>	Bach. <sup>*</sup>	-----	-----	-----	Bach. <sup>*</sup>	-----	-----
<b>HME</b>	-----	-----	-----	-----	>9 <sup>*</sup>	≤3 <sup>*</sup>	-----	-----	-----	-----	-----	-----	-----
<b>ALA</b>	-----	-----	-----	-----	5-10 <sup>*</sup>	-----	-----	5-10 <sup>*</sup>	-----	-----	5-10 <sup>*</sup>	-----	-----
<b>TLA</b>	-----	-----	-----	≤ 2 <sup>*</sup>	-----	-----	>10 <sup>*</sup>	-----	-----	-----	≤2 <sup>*</sup>	-----	-----
<b>JOI</b>	-----	-----	-----	>10 <sup>*</sup>	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>APR</b>	-----	-----	-----	-----	-----	-----	-----	40 <sup>*</sup> -100 <sup>*</sup>	-----	40 <sup>*</sup> -100 <sup>*</sup>	40 <sup>*</sup> -100 <sup>*</sup>	300 <sup>*</sup> -500 <sup>*</sup>	40 <sup>*</sup> -100 <sup>*</sup>
<b>ANP</b>	-----	-----	-----	-----	-----	40 <sup>*</sup> -100 <sup>*</sup>	-----	40 <sup>*</sup> -100 <sup>*</sup>	40 <sup>*</sup> -100 <sup>*</sup>	40 <sup>*</sup> -100 <sup>*</sup>	40 <sup>*</sup> -100 <sup>*</sup>	-----	≤ 40 <sup>*</sup>
<b>SEX</b>	Male <sup>*</sup>	Male <sup>*</sup>	Male <sup>*</sup>	Male <sup>*</sup>	Male <sup>*</sup>	-----	-----	-----	Male <sup>*</sup>	-----	-----	-----	-----
<b>MARI</b>	-----	-----	-----	-----	Single <sup>*</sup>	-----	-----	-----	-----	-----	-----	-----	-----
<b>OCC</b>	Govt. <sup>*</sup>	-----	-----	-----	Govt. <sup>*</sup>	Govt. <sup>*</sup>	-----	-----	-----	-----	Govt. <sup>*</sup>	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Yes <sup>*</sup>	-----
<b>SME</b>	-----	-----	-----	-----	-----	No <sup>*</sup>	-----	-----	-----	-----	-----	Yes <sup>*</sup>	-----

- (1) **LO1** Micro-financing improves income, **LO2** micro-financing increases productive assets, **LO3** Micro-financing enables housing, **LO4** Micro-financing increases self-employment, **LO5** Micro-financing enhances food consumption, **LO6** Micro-financing enhances non-food consumption, **LO7** Micro-financing improves children's education, **LO8** Micro-financing increases access to healthcare, **LO9** Micro-financing increases congregation prayers, **LO10** Micro-financing enables us to pay *zakah* and *sadaqah*, **LO11** Micro-financing enhances ability to go on pilgrimage, **LO12** Micro-financing avoids *riba*, **LO13** Micro-financing provides chance to attend Islamic lectures and study circles.
- (2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.
- \* The star sign indicates a reported statistical significance at .05 significance level.

### ***7.2.2.1 Economic impact of micro-financing: K-W Test and U-Test***

As reported in Section 7.2.1, the majority of the respondents claim that Islamic micro-financing helps them to improve their economic wellbeing including income (LO1), productive assets (LO2), housing (LO3), and self-employment (LO4). Accordingly, this section investigates whether there are differences in their opinions on these variables. As illustrated in the Table 7.2, the results of the K-W Test and the U-Test suggest that gender, annual household income, age, total land size, membership length, and occupation can cause the differences across subgroups of the economic impact factors.

The results of the tests indicate that there are statistically significant differences across gender subgroups for all economic impact factors. The investigation of the mean-value scores reveals that the male subgroup registered the highest mean ranks in all variables, suggesting that households of male clients have a higher likelihood of improving their income, productive assets, housing and self-employment after acquiring micro-financing.

Moreover, a significant result is reported for annual household income for income, indicating that there are differences across income groups as regards improved household income from micro-financing. Detailed observation of mean rank indicates that the households that earn an annual THB 40,000 or lower (poor group) register the highest mean rank score. A conclusion can be made that the poor tend to improve their household income from micro-financing.

The results also confirm that there is a statistical difference in terms of housing ability from the micro-financing across age groups. The mean value scores point out that the '46-55' age group recorded the largest score, suggesting that this group of clients are more likely to buy, build, or expand houses from the micro-financing.

Statistically significant differences are also reported for total land size and membership length in the self-employment variable. The mean rank scores of total land size reveal that clients who own 2 *rai* of land or less are most likely to improve self-employment opportunities in households. As for membership length, the mean scores indicate that the

clients who have participated in IsMFIs over 10 years are more likely to use micro-financing for self-employment.

The final category in which a statistically significant difference has been found is occupation for annual income category. Detailed observation of mean value scores reveals that government employees greatly enhance household incomes from micro-financing.

In summary, the results of the K-W Test and U-Test indicate that many factors tend to differentiate levels of economic impacts of Islamic micro-financing. These factors can be categorised into two main categories, i.e. exposure and needs. Male (gender), government (occupation), and over 10 years (membership length) are viewed as having better exposure to products and services as well as procedures of IsMFIs; they are therefore able to utilise micro-financing to improve their households' economic wellbeing. Accordingly, the evidence shows that the clients whose household incomes are lower than THB 40,000 can increase their incomes whilst those aged in the range 46-55 years acquire housing from micro-financing. The clients who have 2 *rai* of land or less can seek self-employment opportunities from micro-financing. These items relate to 'needs' of the clients at that stage and conditions of households.

#### ***7.2.2.2 Non-economic impacts of micro-financing: K-W Test and U-Test***

As for non-economic impact factors, the variables contain two subgroups, i.e. non-economic variables containing food consumption (LO5), non-food consumption (LO6), children's education (LO7) and access to healthcare (LO8), and religiosity comprising congregation prayers (LO9), *zakah* and *sadaqah* (LO10), pilgrimage (LO11), avoidance of *riba* (LO12), and lectures and study circles (LO13). Under the non-economic variables, the results of the K-W Test and U-Test show that seven categories each for LO5 and LO6, two categories for LO7, and three categories for LO8 have reached a significant level ( $p < .05$ ). The results of analysis for religiosity variables suggest that two categories for LO9, three categories for LO10, seven categories for LO11, and three categories each for LO12 and LO13 have achieved statistically significant differences across subgroups.

Education shows a statistically significant difference for ‘food consumption’, ‘non-food consumption’, and ‘children’s education’ factors. The mean value scores suggest that the clients with postgraduate degrees can enhance food and non-food items from micro-financing whilst Bachelor’s degree holders can increase ability to send children to, perhaps, university as a result of micro-financing.

Another significant category is occupation which reports significant differences for food, and non-food impact variables. Detailed investigation of the results reveals that government job registers the largest mean rank in both variables. The second highest category is the private sector category. These results suggest that the clients who receive regular income may greatly improve food and non-food consumption for their households after acquiring micro-financing.

In line with the preceding category, age, household size, annual household income and marital status have also reached statistically significant differences. The mean value scores of age demonstrate that households of the clients in the ‘26-35’ age group are most likely to increase food consumption whilst those aged 25 or under enhance non-food items as a result of micro-financing. The household size category reports a significant difference for two variables, i.e. food consumption and non-food items. Investigation of the mean values suggests that the ‘>9’ subgroup and the ‘ $\leq 3$ ’ subgroup register the highest values for food consumption and non-food items respectively. The result tends to confirm different levels of needs in households of diverse sizes. This conclusion can also be reached for annual household income in which the ‘ $\leq 40,000$ ’ THB group reports the largest mean rank value for non-food variable. As for marital status, the mean value scores reveal that the single group records the highest score

The next significant results are for productive assets and productive assets categories. The mean value scores are highest for the ‘40,000-100,000’ worth of productive assets for healthcare variable, and the same subgroup for non-productive assets for non-food items and healthcare. The results suggest the need for non-food and healthcare in the households possessing that amount of both productive and non-productive assets.

The results of the test also suggest a statistically significant difference across agricultural land size category. The mean value scores indicate that the households owning 5-10 *rai* of agricultural land record the highest scores for food consumption and healthcare, suggesting that these households have the highest likelihood of enhancing levels of food consumption and healthcare from the Islamic micro-financing.

A significant difference can also be found in gender and SME ownership categories for food consumption and membership length categories for children's education. The mean scores support the male, the non-SME owners and '>10' year subgroups respectively. The results of analysis suggest that households of male clients who do not own SME businesses may improve food consumption as compared to female clients whilst households of the clients who have participated in IsMFIs longer may be able to send children to universities as a result of micro-financing.

The study also sought to explore whether Islamic micro-financing is viewed by the respondents as a way to enhance their ability to follow Islamic principles, norms and values. The results of the tests show that productive and non-productive assets have achieved statistically significant differences for many religiosity variables. Under the productive assets category, statistical differences can be found for ability to pay *zakah* and *sadaqah*, pilgrimage, avoidance of interest, and participation in Islamic lectures and study circles. Detailed observation of the mean value scores suggests that the '40,000-100,000' subgroup records the highest scores for ability to pay *zakah* and *sadaqah*, pilgrimage, and participation in Islamic lectures and circles variables. The '300,000-500,000' subgroup is highest for avoidance of interest and prohibited activities.

As for non-productive assets, the mean value scores indicate that the '40,000-100,000' group register the largest mean rank score for participation in congregation prayers, *zakah* and *sadaqah*, and pilgrimage, implying that clients' households that possess this worth of productive assets are more likely to improve their participation in congregation prayers, ability to pay *zakah* and *sadaqah*, and ability to go on pilgrimage as a result of micro-financing. The ' $\leq 40,000$ ' group records the highest mean score for ability to participate in Islamic lectures and study circles.

Age is another variable registering few significant results, i.e. ability to go on pilgrimage and participation in Islamic lectures and study circles. The highest mean value scores are found in the ' $\leq 25$ ' and '36-45' groups in these two variables respectively. The results demonstrate that micro-financing may indirectly influence the ability to go on pilgrimage among the households of clients aged 25 or under and the participation in Islamic lectures and study circles among the households of clients in the 36-45 age range.

Interestingly, gender and occupation, which are reported to be significant for economic variables, achieve only one significant result each, for religiosity variables. A significant difference in the gender category is reported for ability to participate in congregation prayers, in which the male group records the highest mean value score. As for the occupation category, a significant result is found for ability to go on pilgrimage where government employees record the largest mean value score. The results of the test hence suggest that households of male respondents and government officers are more likely to attend congregation prayers and to increase their ability to go on pilgrimage after taking micro-financing.

Unsurprisingly, significant results are recorded in religious education and SME ownership categories for the avoidance of *riba* and prohibited activities variable. The largest mean value scores are recorded for the clients who have received religious education and own SME businesses, indicating that households of these clients are the most likely to feel that they can avoid *riba* and prohibited undertakings by taking Islamic micro-financing.

Other categories reporting significant results are annual household income for ability to pay *zakah* and *sadaqah*, and education, agricultural land size and total land size for ability to go on pilgrimage. The largest mean values in these categories include the '300,000-500,000', 'Bachelor's degree', '5-10' *rai*, and ' $\leq 2$ ' *rai* subgroups for annual household income, education, agricultural land size and total land size, respectively. The households that have these characteristics are more likely to benefit from micro-financing in respective aspects.

In summary, the results of K-W Test and U-Test tend to reveal a number of significant findings. Households of male respondents seem to have the most likelihood of enhancing

economic factors through Islamic micro-financing. Lower income groups tend to improve income from the micro-financing. As for non-economic variables, level of education, occupation, and household size show significant differences. Variables on religiosity reveal significant differences, mainly in the productive and non-productive assets categories. Overall results of the survey outcome tend to suggest that the different levels of economic and non-economic impact factors are broadly linked to different levels of knowledge on products and services and experience in dealing with IsMFIs (terms as exposure), the levels of needs to be satisfied at various occasions and stages of life (terms as needs), and suitable knowledge and skills (terms as affordability) of the households to take advantage of Islamic micro-financing. It is therefore interesting to further investigate whether there is in fact an association between the categorical variables and impact variables for micro-financing. The next section will venture into this aspect.

### **7.2.3 Correlation Analysis for Impacts of Micro-financing**

This section expands the analysis into the relationship among characteristic variables and impact variables of Islamic micro-financing. Correlation analysis, which describes the strength and direction of relationships, will be employed to fulfil this objective. The correlation coefficients can only take on values from -1 to +1. The sign at the front indicates whether there is a negative correlation or positive correlation. The size of the absolute value gives an indication of the strength of the relationship (Pallant, 2004). The coefficient values of .10 to .29 are considered small correlations; .30 to .49 are medium correlations; and .50 to 1.0 are large correlations (Cohen, 1988). As the data used in this section involved dichotomous and ranked data, Spearman rank order correlation is therefore suitable for the analysis. The results of correlation analysis which are significant at 1% and 5% are presented in Table 7.3 and the detailed results can be found in Appendix 7.2.

**Table 7.3: Spearman Rank Order Correlation Results: Impacts of Micro-financing on Households**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>												
	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11	LO12	LO13
<b>AHI</b>	.160**	-----	-----	-----	.103*	-----	-----	-----	-----	-----	-----	-----	-----
<b>AGE</b>	-----	-----	-----	-----	- .245**	-.229**	-.136**	-----	-----	-----	-.139**	-----	-----
<b>EDU</b>	.110*	-----	-----	-----	.285**	.330**	.144**	-----	-----	-----	.151**	-----	-----
<b>HME</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>ALA</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>TLA</b>	-----	-----	-----	-.113*	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>JOI</b>	.109*	-----	-----	.193**	-----	-----	-----	-----	.113*	-----	-----	-----	-----
<b>APR</b>	-----	.140*	-----	-----	-----	-----	-----	-----	-----	-----	-----	.130*	-----
<b>ANP</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>SEX</b>	-.241**	-.212**	-.164**	-.167**	-.117*	-----	-----	-----	-.140**	-----	-----	-----	-----
<b>MARI</b>	-----	-----	.101*	-----	-.123*	-----	-----	-----	-----	-----	-----	-----	-----
<b>OCC</b>	-----	-----	-----	-----	.218**	.239**	.101*	-----	-----	-----	.147**	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-.197**	-----
<b>SME</b>	-----	-----	-----	-----	-----	.157**	-----	-----	-----	-----	-----	-.148**	-----

(1) **LO1** Micro-financing improves income, **LO2** micro-financing increases productive assets, **LO3** Micro-financing enables housing, **LO4** Micro-financing increases self-employment, **LO5** Micro-financings enhances food consumption, **LO6** Micro-financing enhances non-food consumption, **LO7** Micro-financing improves children’s education, **LO8** Micro-financing increases access to healthcare, **LO9** Micro-financing increases congregation prayers, **LO10** Micro-financing enables us to pay *zakah* and *sadaqah*, **LO11** Micro-financing enhances ability to go on pilgrimage, **LO12** Micro-financing avoids riba, **LO13** Micro-financing provides chance to attend Islamic lectures and study circles.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)



### ***7.2.3.1 Economic impacts of micro-financing: Spearman Rank Order Correlation Analysis***

The Spearman rank order correlation (*rho*) results examined in this section are between all characteristic variables and micro-financing impact variables (LO1-LO4). The results show that there are positive correlations between gender and all 4 impact variables, i.e. income ( $rho = -.241, p < .01$ ), productive assets ( $rho = -.212, p < .01$ ), housing ( $rho = -.164, p < .01$ ), and self-employment ( $rho = -.167, p < .01$ ). The absolute values of the coefficients fall within the range of small correlation. As gender coding is '1' for male and '2' for female, the overall results of correlation suggest that low levels of impact relate to female respondents and the strength of the relationship is small in all cases.

As for membership length, there are significant results for 2 impact variables, namely income ( $rho = .109, p < .05$ ) and self-employment ( $rho = .193, p < .01$ ). The results suggest that the relationships between membership length and those variables are positive. Again the correlations are reported to be small as the absolute values of *rho* are lower than .29.

The results of correlation also show that there are positive relationships between annual household income and income ( $rho = .160, p < .01$ ), and education and income ( $rho = .110, p < .05$ ). This implies that high levels of income are associated with high levels of both annual household income and education of the respondents. The association, which can be noted from the absolute values of correlation coefficients, i.e. .160 and .110, is rather small.

Other positive associations have been found between marital status and housing ( $rho = .101, p < .05$ ), and total productive assets and micro-financing impact on productive assets ( $rho = .140, p < .140$ ). The results imply that married clients are associated with higher levels of impact of micro-financing on housing ability of households while clients with higher total productive assets are correlated to micro-financing impact on productive assets. However, the strength of the associations is low. The final significant relationship is between total land size and impact on self-employment ( $rho = -.113, p < .05$ ). As the relationship is negative, it suggests that smaller total land size relates to higher level of micro-financing impact on self-employment.

In summary, the results of correlation tend to confirm the initial analysis of the K-W Test and U-Test that there is a relationship between economic impact factors and gender. The male respondent group has a positive relationship with these factors. Other factors such as membership length, annual household income, and total land size, which have been found to have statistically significant differences in section 7.2.2.1, are found to be associated with some economic impact variables. In general, the results seem to suggest that elements of exposure from the role of males in Muslim society and diversity of needs within households are likely to be associated with the levels of economic impacts that households may receive from micro-financing acquisition.

### ***7.2.3.2 Non-economic impacts of micro-financing: Spearman Rank Order Correlation Analysis***

The results of correlation analysis for non-economic impact factors are categorised into non-economic impact variables (LO5-LO8) and religiosity variables (LO9-LO13). Under the non-economic variables, the results show that age, education and occupation have each achieved significant relationships with three impact variables. Annual household income, gender, marital status and SME ownership have each been found to be significant in one impact variable. As for religiosity impact variables, one association each has been found for age, education, membership length, total productive assets, gender, occupation, religious education, and SME ownership.

The results reveal that there are negative relationships between age and three impact variables, i.e. food consumption ( $\rho = -.245$ ,  $p < .01$ ), non-food consumption ( $\rho = -.229$ ,  $p < .01$ ), and children's education ( $\rho = -.136$ ,  $p < .01$ ). The absolute values of coefficients are reported to be small. The results generally imply that lower age relates to higher perceived levels of impact on food consumption, non-food consumption and children's education, although the strength of the relationships is small.

As for education, a positive association has been found on three occasions, namely with food consumption ( $\rho = .285$ ,  $p < .01$ ), non-food consumption ( $\rho = .330$ ,  $p < .01$ ) and children's education ( $\rho = .144$ ,  $p < .01$ ). The coefficient for non-food consumption (.330)

has reached a medium level of association. The overall results suggest that higher education is associated with higher levels of perceived impact on food-consumption, non-food consumption and children's education. The strength of association between education and non-food consumption is medium, whilst the strength of the other two is low.

Another important variable is occupation, which has recorded a significant positive correlation for three impact variables, i.e. food consumption ( $\rho = .218$ ,  $p < .01$ ), non-food consumption ( $\rho = .239$ ,  $p < .01$ ) and children's education ( $\rho = .157$ ,  $p < .01$ ). It can be concluded that a regular paying job correlates with the impacts on food consumption, non-food consumption and children's education, and the strength is found to be small.

Apart from the three above-mentioned characteristic variables, annual household income has been discovered to have a positive relationship with the impact on food consumption ( $\rho = .103$ ,  $p < .05$ ), indicating that higher income relates to the impact on food consumption. Gender ( $\rho = -.117$ ,  $p < .05$ ) and marital status ( $\rho = -.123$ ,  $p < .05$ ) have a negative relationship with the impact on food consumption. This suggests that female and married respondents are related to lower impact on food consumption. The final significant result is a positive relationship between SME ownership and impact on non-food consumption ( $\rho = .157$ ,  $p < .01$ ), proposing that non-SME ownership relates to higher impact on non-food consumption. The strength of these relationships is small.

The correlation results of religiosity factors are discussed together here. There are positive relationships between membership length and congregation prayers ( $\rho = .113$ ,  $p < .05$ ), total productive assets and avoidance of *riba* and prohibited activities ( $\rho = .130$ ,  $p < .05$ ), and occupation and pilgrimage ( $\rho = .147$ ,  $p < .01$ ). These results indicate that higher membership length, total productive assets, and regular paying jobs relate to more regular congregation prayers, higher perceived avoidance of *riba* and prohibited activities, and greater ability to go on pilgrimage, respectively. Adversely, negative correlations have been established between gender and food consumption ( $\rho = -.140$ ,  $p < .01$ ), religious education ( $\rho = -.197$ ,  $p < .01$ ), SME ownership ( $\rho = -.148$ ,  $p < .01$ ) and *riba* and prohibited activities. This suggests that having a religious education and owning SMEs

correlates with higher perceived opinion that Islamic micro-financing enables households to avoid *riba* and some other prohibited activities.

In short, the correlation analysis for non-economic impacts reveals that age, education, and occupation are important factors in determining micro-financing's non-economic impacts in terms of food consumption, non-food consumption and children's education. Negative correlations for age and impact factors seem to highlight the immediate needs of younger clients for IsMFIs for food and non-food items, and money to support their children's education. Accordingly, obtaining higher education tends to provide better ability to search for and benefit from Islamic micro-financing. This can also be said for occupations that provide regular incomes such as government and private jobs, although occupation perhaps shows a stronger ability to acquire micro-financing due to regular income streams. As for religiosity factors, religious education and SME ownership have relatively strong relationships with avoidance of *riba* and prohibited activities. This is expected, as the clients with religious education are assumed to be concerned about this. Moreover, SME owners are expected to prefer to avoid *riba*. These two groups of the clients turn to Islamic micro-financing to serve their financial needs.

#### **7.2.4 Binary Logistic Regression Analysis for Impacts of Micro-financing**

This section explores the influence of demographic variables on impacts of Islamic micro-financing, expanding the findings in Section 7.2.3. One thing worth mentioning in relation to logistic regression used in this chapter is the transformation of impact variables. Originally, the impact variables are measured as ordinal variables, and ordinal logistic regression was assumed to be suitable. However, the test results of ordinal logistic regression were found to be inappropriate for the objectives of this study<sup>15</sup>. The researcher therefore employed binary logistic regression in this analysis. The ordinal dependent variables were therefore transformed into dichotomous variables suitable for the analysis. The data '1', '2', and '3', which represent 'strongly disagree', 'disagree', and 'neutral'

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<sup>15</sup> Model-fit results of some variables such as impacts of micro-financing on consumption, healthcare and religiosity did not show significant results. See Hosmer and Lemeshow (2000) and Menard (2002) for details.

respectively, have been recorded as '0' indicating 'no impact'. The 'neutral' responses have been included in this group to ensure that the results of this analysis are not overestimated to prefer impact outcome. Accordingly, the data originally coded as '4' and '5' standing for 'agree' and 'strongly agree' respectively have been transformed into '1' for 'yes'- there is an impact of an independent variable on a dependent variable. The categorical variables that have been transformed to make them suitable for this analysis are gender (0=female, 1=male), marital status (0=otherwise, 1=married), religious education (0=no, 1=yes), SME ownership (0=no, 1=yes), and occupation (0=otherwise, 1=regular income).

As mentioned in Section 7.11, the key values of logistic regression output are the independent variable coefficient, goodness-of-fit, the Omnibus Tests of model coefficients, Cox and Snell  $R^2$ , Nagelkerke  $R^2$ , and overall accuracy. These values are provided in Table 7.4. In addition to the independent coefficients that achieve significance levels of .05, the coefficients significant at .10 significance level are also provided in this table. The results of logistic regression are depicted in Table 7.4 and Table 7.5.

**Table 7.4: Binary Logistic Regression for Respondent Characteristic Predictors and Economic Impacts**

INDEPENDENT VARIBALES <sup>(2)</sup>	DEPENDENT VARIABLES <sup>(1)</sup>													
	LO1		LO2		LO3		LO4		LO5		LO6		LO7	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
Annual household income	.000	.186	.000	.377	.000	.537	.000	.492	.000	.680	.000	.787	.000	.814
Age	.006	.792	.052	.049**	.055	.027**	.021	.342	-.037	.068*	.002	.914	-.047	.029**
Education	.043	.307	.031	.550	.044	.359	.029	.515	.067	.087*	.083	.037**	-.029	.499
Household size	.012	.885	-.039	.696	-.039	.680	-.075	.387	.038	.640	-.087	.296	.185	.055*
Agricultural land size	-.003	.921	-.005	.890	.044	.300	-.055	.056*	.028	.252	.002	.950	-.069	.202
Total land size	.003	.877	.004	.872	-.018	.407	.024	.196	-.025	.126	.017	.562	.088	.078*
Membership length	-.008	.818	-.027	.522	-.070	.066*	.032	.413	.010	.741	-.022	.498	-.038	.252
Total productive assets	.000	.559	.000	.100*	.000	.010**	.000	.437	.000	.655	.000	.642	.000	.358
Total non-productive asset	.000	.618	.000	.492	.000	.381	.000	.360	.000	.552	.000	.753	.000	.859
Gender	1.434	.000**	1.268	.001**	.905	.012**	.915	.005**	.707	.017**	.620	.042**	.732	.025**
Marital status	.546	.214	.463	.359	.467	.349	.530	.233	-.255	.558	.045	.919	.559	.230
Religious education	.145	.747	-.446	.442	-.876	.164	-.345	.482	-.568	.199	-.262	.556	.095	.833
SME ownership	-.201	.555	.131	.752	-.463	.220	.471	.208	.304	.347	-.351	.277	.502	.166
Occupation	.808	.035**	1.523	.002**	1.735	.000**	1.026	.014**	.485	.166	.891	.011**	.949	.016**
<b>Overall model goodness-of-fit</b>														
Chi-Square	45.786		32.885		45.657		31.642		36.238		42.472		35.424	
(Sig)	.000		.003		.000		.005		.001		.000		.001	
Cox and Snell	.165		.121		.165		.117		.133		.154		.130	
Nagelkerke	.226		.199		.252		.172		.178		.208		.186	
Overall percentage predicted	72.0		82.3		81.5		74.4		69.7		71.3		70.1	

(1) **LO1** Micro-financing improves income, **LO2** Micro-financing increases productive assets, **LO3** Micro-financing enables housing, **LO4** Micro-financing increases self-employment, **LO5** Micro-financings enhances food consumption, **LO6** Micro-financing enhances non-food consumption, **LO7** Micro-financing improves children’s education.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Significant at 5% level of significance (p≤.05)

\* Significant at 10% level of significance (p≤.10)

**Table 7.4: Binary Logistic Regression for Respondent Characteristic Predictors and Economic Impacts (continued)**

INDEPENDENT VARIBALES <sup>(2)</sup>	DEPENDENT VARIABLES <sup>(1)</sup>											
	LO8		LO9		LO10		LO11		LO12		LO13	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
Annual household income	.000	.926	.000	.725	.000	.872	.000	.495	.000	.876	.000	.867
Age	-.013	.484	.002	.915	-.007	.742	-.008	.688	.009	.715	-.020	.318
Education	-.012	.752	.023	.563	.000	.991	.060	.150	-.068	.172	-.005	.898
Household size	.070	.386	-.010	.897	.088	.329	.009	.918	-.019	.856	-.067	.397
Agricultural land size	-.016	.663	-.034	.364	-.012	.786	-.015	.545	-.076	.237	.023	.394
Total land size	.032	.311	.041	.225	.033	.375	-.008	.578	.085	.164	-.027	.197
Membership length	.000	.983	.017	.613	-.011	.759	-.053	.106	-.012	.758	.034	.286
Total productive assets	.000	.355	.000	.285	.000	.533	.000	.386	.000	.231	.000	.625
Total non-productive asset	.000	.685	.000	.962	.000	.710	.000	.853	.000	.687	.000	.260
Gender	.350	.223	1.001	.001**	.949	.003**	.856	.007**	-.059	.873	.589	.039**
Marital status	-.254	.543	.547	.189	-.055	.906	.229	.617	.149	.772	.060	.885
Religious education	-.225	.594	.055	.900	.091	.842	-.523	.277	1.348	.003**	-.051	.904
SME ownership	.398	.208	-.071	.826	.000	.998	.325	.347	.944	.032**	-.128	.683
Occupation	.771	.026**	.226	.532	.486	.213	.835	.030**	.995	.023**	.228	.515
<b>Overall model goodness-of-fit</b>												
<b>Chi-Square</b>	19.331		24.381		17.674		32.702		26.335		17.373	
<b>(Sig)</b>	.153		.041		.222		.003		.023		.237	
<b>Cox and Snell</b>	.073		.092		.067		.121		.098		.066	
<b>Nagelkerke</b>	.099		.126		.099		.170		.159		.090	
<b>Overall percentage predicted</b>	61.0		69.7		74.8		73.6		83.5		67.3	

(1) **LO8** Micro-financing increases access to healthcare, **LO9** Micro-financing increases congregation prayers, **LO10** Micro-financing enables us to pay *zakah* and *sadaqah*, **LO11** Micro-financing enhances ability to go on pilgrimage, **LO12** Micro-financing avoids *riba*, **LO13** Micro-financing provides chance to attend Islamic lectures and study circles.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

#### ***7.2.4.1 Economic impacts of micro-financing: Binary Logistic Regression Analysis***

Referring to the results of regression of the overall model of the economic impact variables, the values of the overall models' goodness-of-fit are lower than .05. This indicates that the model is significant. The whole models (LO1-LO7) explain between 11.7%-16.5% (Cox and Snell  $R^2$ ) and 17.2%-25.2% of variance in the impact variables. The models correctly classify between 69.7%-82.3% of the cases.

Accordingly, the results show that three independent variables found to be strong predictors are gender, occupation, and age. Gender tends to contribute to the predictive ability of the models across economic impacts ( $< .05$  significance level) and all coefficients of gender have positive signs, indicating that the male respondent households are likely to benefit from micro-financing. Occupation has been found to be significant for all economic impact variables ( $< .05$  significance level). This suggests that the clients who work in organisations that pay a regular income, i.e. government office and private sector, have their households' economic wellbeing changed as a result of Islamic micro-financing.

As for other predictors, age is found to be significant in two impact variables, i.e. productive assets and housing, and the coefficients have positive signs. This indicates that, the older the respondents, the higher impact of micro-financing on their ability to acquire productive assets and housing. Total productive assets are reported to be significant for productive asset ( $< .10$  level of significance) and housing ( $< .05$  level of significance). Membership length and agricultural land size are significant for housing and self-employment respectively ( $.10$  level of significance).

In summary, gender, occupation, and age contribute significantly towards impacts of Islamic micro-financing on households' income, ability to acquire productive assets, housing, and self-employment. Moreover, membership length tends to be a strong predictor for impact on housing. The results of logistic regression fairly support the findings in Sections 7.2.2.1 and 7.2.3.1 that these factors influence the levels of economic impacts of Islamic micro-financing. This further implies that different levels of exposure, needs, and ability of clients to acquire micro-financing



are key determinants for economic impacts of micro-financing of Islamic microfinance programmes.

#### ***7.2.4.2 Non-economic impacts of micro-financing: Binary Logistic Regression Analysis***

As exhibited in Table 7.4, the results of logistic regression for non-economic variables (LO5-LO8) show that the overall goodness-of-fit of all models, except LO8, have achieved significant levels at .05 level of significance, indicating that the models are able to distinguish between respondents who reported and did not report non-economic impacts of micro-financing on their households. The whole individual models explain between 7.3%-15.4% (Cox and Snell  $R^2$ ) and 9.9%-20.8% of variance in the impact variables. The models correctly classify between 61.0% - 71.3% of the cases.

Besides, detailed observation of the models shows that two of the independent variables have made a unique statistical contribution to the model (gender and occupation). Gender is found to be significant in determining impacts of micro-financing on food consumption, non-food consumption and children's education at .05 significance level. Elsewhere, occupation is significant in influencing levels of impacts on non-food consumption, children's education, and access to healthcare at .05 level of significance. This variable is reported to be the strongest predictor in these three impact factors. The coefficients of all gender and occupation variables have positive signs.

Additionally, age is reported to be a predictor for food consumption ( $p < .10$ ) and children's education ( $p < .5$ ), with negative coefficients. This suggests that, the lower the age, the higher levels of impacts. Education is a good predictor for food consumption ( $p < .10$ ) and non-food consumption ( $p < .05$ ). The coefficient for food consumption is positive while the other is negative. This indicates that, the higher level of the respondents' education, the higher the impacts of micro-financing on households' food consumption, while the opposite is true for non-food consumption.

As for the religiosity variables (LO9-LO13), two of the overall models, namely for ability to pay *zakah* and *sadaqah* (LO10) and affordability to attend Islamic lectures and study circles (LO13),

do not achieve significant results. The models explain between 6.7%-12.1% (Cox and Snell  $R^2$ ) and 9.0%-17.0% (Nagelkerke  $R^2$ ) of the variance in impact variables. The models correctly classify 67.3%-83.5% of cases. Accordingly, gender has a positive contribution on the level of impacts ( $p < .05$ ), except on *riba* and prohibited activities (LO12), where no unique contribution is reported. Occupation is found to be significant at .05 significance level for ability to go on pilgrimage (LO11) and avoidance of *riba* and prohibited activities (LO12). The results also show that there is a significant result for 'religious education' and 'SME ownership' predictors for this impact variable. The coefficients of 'occupation', 'religious education' and 'SME ownership' predictors are positive, implying that the clients who work in organisations providing regular income, have religious education, and own a SME business have benefited more from Islamic micro-financing.

The overall findings in this section confirm the importance of gender and occupation as predictors for impacts of micro-financing on non-economic factors: non-economic and religious. The results further suggest that the relationship between gender and occupation and the impact factors are positive ones, implying that male clients and those working in regular paying jobs are more likely to improve their households' non-economic factors through Islamic micro-financing. Interestingly, when it comes to ability to avoid *riba* and prohibited activities, religious education and SME ownership become additionally significant. This result reaffirms the significance of exposure and ability of households in determining the impacts of micro-financing.

### **7.3 IMPACTS OF SAVINGS ON RESPONDENTS' HOUSEHOLDS**

Savings accounts on the basis of *wadiah* are an important Islamic microfinance product which all four IsMFIs have been offering to their clients. This section therefore examines the opinions of the respondents in relation to economic and non-economic impacts of savings accounts on the respondents' households. This section is divided into four main subsections: descriptive analysis of impacts of savings, K-W Test and U-Test analysis of the impacts, correlation analysis of the impacts, and logistic regression analysis of the impacts.

### 7.3.1 Descriptive Analysis for Economic and Non-economic Impacts of Savings

In a section of the questionnaire, the respondents were asked to state their level of agreement with statements on impacts of savings on economic and non-economic variables which include income (SA1), acquisition of productive assets (SA2), acquisition of non-productive assets (SA3), housing (SA4), healthcare (SA5), and pilgrimage (*haj*) (SA6). The first four variables are related to economic wellbeing, and the final two are concerned with non-economic aspects. Table 7.5 exhibits the results of descriptive analysis for impacts of savings on respondents' households.

**Table 7.5: Descriptive Analysis: Economic and Non-economic Impacts of Savings on Respondents' Households**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Mean Ranking
(1) Savings provide enough income (SA1).	5 (1.3%)	14 (3.5%)	81 (20.3%)	255 (63.8%)	45 (11.3%)	3.80	.728	3
(2) Savings increase ability to acquire more productive assets (SA2).	3 (0.8%)	12 (3.0%)	68 (17.0%)	271 (67.8%)	46 (11.5%)	3.86	.674	2
(3) Savings enhance ability to acquire non-productive assets (SA3).	3 (0.8%)	25 (6.3%)	85 (21.3%)	247 (61.8%)	40 (10.0%)	3.74	.751	5
(4) Savings permit maintaining, purchasing and repairing house (SA4).	6 (1.5%)	22 (5.5%)	93 (23.3%)	223 (55.8%)	56 (14.0%)	3.75	.817	4
(5) Savings enhances ability to pay for better healthcare (SA5)	3 (0.8%)	16 (4.0%)	108 (27.0%)	239 (59.8%)	34 (8.5%)	3.71	.708	6
(6) Savings accumulate enough money for <i>haj</i> (SA6)	4 (1.0%)	10 (2.5%)	80 (20.0%)	225 (56.3%)	81 (20.3%)	3.92	.767	1

#### 7.3.1.1 Economic impacts of savings: a descriptive analysis

In general the descriptive results reveal that a large number of respondents tend to agree that savings accounts have significant impacts on the household income, ability to acquire productive and non-productive assets, and housing. The impacts on productive assets (mean = 3.86) and the impacts on income (3.80) were ranked the highest two economic factors based on mean value. Small standard deviation values further demonstrate that their opinions are somewhat unambiguous. Nonetheless, the results should be treated with caution as a sizeable proportion of the respondents remain indecisive on these statements.

### ***7.3.1.2 Non-economic impacts of savings: a descriptive analysis***

The results of descriptive analysis show that savings enhance the ability of the households to access better healthcare (mean = 3.71) either from private healthcare providers or in the case of serious illness. The result further suggests that members of households often save in IsMFIs for *haj* purposes (mean = 3.92). As such, savings have a role to play in helping Muslims to fulfil their religious obligations.

### **7.3.2 Kruskal-Wallis Test and Mann-Whitney U-Test for Economic and Non-economic Impacts of Savings**

In order to probe further into the impacts of savings on the respondents' households, this section examines the differences of opinions across the respondent categories based on demographic characteristics. The K-W Test and U-Test have been employed to test statistically significant differences at .05 significance level. The mean value scores have been also investigated to establish the direction of the differences among the subgroups of each category. Table 7.6 depicts a reflection of the variables that have achieved a significant level between clients' demographic characteristics and households' impact variables. The subgroups that provide the highest mean rank score have also been provided to aid the discussions in this section. Full details of the K-W Test and the U-Test can be found in Appendix 7.3.

#### ***7.3.2.1 Economic impacts of savings: K-W Test and U-Test***

As reported in section 7.3.1.1, the majority of the respondents perceive that their households have improved economically as a result of savings. The results of the K-W Test and U-Test, however, indicate that few categorical variables have achieved significant differences and in fact none is significant in more than one economic impact variable.

Age, education, and occupation are found to be significant for the impact of savings on the ability to acquire non-productive assets. Detailed observation of the mean value score suggests that the respondents aged 25 or below recorded the highest mean value score in the age category. In fact, the older the respondents, the lower the mean scores reported for this category. In addition,

Bachelor's degree holders and government employees registered the largest scores for education and occupation categories respectively.

Furthermore, household size, agricultural land size, and total land size have reached significant levels. Household size is significant for income in which the investigation of the mean value scores reveals that the '≤ 3' subgroup recorded the highest score. As for the agricultural land size which reports a significant difference for productive assets, the '5-10' *rai* subgroup registered the highest scores. Finally, total land size has been found to be significant for housing. Accordingly, the highest mean value score is recorded for the '>10' *rai* subgroup. The overall results imply that these subgroups are more likely to have higher impacts from savings for respective impact factors.

**Table 7.6: Significant Statistical Results between Clients' Demographic Characteristics and Households' Impact Variables for Savings**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>					
	SA1	SA2	SA3	SA4	SA5	SA6
<b>AHI</b>	-----	-----	-----	-----	-----	-----
<b>AGE</b>	-----	-----	≤ 25*	-----	-----	-----
<b>EDU</b>	-----	-----	Bachelor*	-----	-----	Bach.*
<b>HME</b>	≤ 3*	-----	-----	-----	≤ 3*	>9
<b>ALA</b>	-----	5-10 <i>rai</i> *	-----	-----	5-10*	5-10
<b>TLA</b>	-----	-----	-----	>10 <i>rai</i> *	-----	-----
<b>JOI</b>	-----	-----	-----	-----	-----	-----
<b>APR</b>	-----	-----	-----	-----	40 <sup>3</sup> -100 <sup>3</sup> *	40 <sup>3</sup> -100 <sup>3</sup> *
<b>ANP</b>	-----	-----	-----	-----	-----	-----
<b>SEX</b>	-----	-----	-----	-----	-----	Male*
<b>MARI</b>	-----	-----	-----	-----	-----	-----
<b>OCC</b>	-----	-----	Government*	-----	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----
<b>SME</b>	-----	-----	-----	-----	-----	-----

(1) **SA1** Savings provide enough income, **SA2** Savings increase ability to acquire more productive assets, **SA3** Savings enhance ability to acquire non-productive assets, **SA4** Savings permit maintaining, purchasing and repairing house, **SA5** Savings enhance ability to pay for better healthcare, **SA6** Savings accumulate enough money for pilgrimage.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\* The star sign indicates a reported statistical significance at .05 significance level.

In short, the results of K-W Test and U-Test point out that there are differences in terms of impacts of savings on economic factors. In general, savings seem to serve the needs of different groups of respondents, e.g. small households to manage their income, possibly during short-term income shocks, and households of young Bachelor's degree holders probably working in government offices to purchase non-productive assets which require relatively small amounts. Households owning over 10 *rai* of land may use some of their savings to build houses. The findings again affirm that Islamic microfinance products could fulfil various needs of the Muslim clients.

#### ***7.3.2.2 Non-economic impacts of savings: K-W Test and U-Test***

This section evaluates whether there are differences in the ability to pay for better healthcare and to go on pilgrimage in households as a result of holding savings accounts in IsMFIs. The results of the tests show that there are statistically significant differences in five respondent categories for households' healthcare and ability to go on pilgrimage (*haj*). These categories include agricultural land size, total productive assets, household size, education, and gender.

The first three categories are found to be significant for both non-economic impact factors. Detailed observation of the mean ranks suggests that the households possessing agricultural land in the range of 5-10 *rai* and owning productive assets worth between THB 40,000-THB 100,000 registered the highest mean ranks in agricultural land size and total assets categories. Similarly, the ' $\leq 3$ ' and '>9' household size groups are found to have the largest scores for healthcare and pilgrimage factors respectively. The results imply that these subgroups are the most likely to improve their households' ability to access better healthcare and to go on pilgrimage from their savings at IsMFIs.

Other significant items are education and gender, both for the ability to go on pilgrimage. The mean value scores reveal that those who obtain Bachelor's degrees and are male recorded the largest scores for those subgroups in education and gender categories respectively. It can be concluded that the households of the male Bachelor's degree holders are the most likely to improve their ability to go to Makkah on an Islamic pilgrimage from their savings in IsMFIs.

In summary, the results of the K-W Test and the U-Test demonstrate that households that have a reasonable amount of agricultural land and total productive assets are able to pay for better healthcare and go on pilgrimage from savings on the basis of *wadiah* offered by IsMFIs. These amounts of agricultural land and productive assets often represent the near-poor households who may be able to fulfil their basic needs such as food and non-food consumption and healthcare, which are often provided by the government. Their higher level of needs might therefore involve better quality healthcare and performance of religious obligations such as pilgrimages. Interestingly, smaller households with these characteristics tend to put healthcare ahead of pilgrimage in terms of needs, whilst big households prefer the opposite. The male respondents with Bachelor's degrees possibly use money in savings accounts in IsMFIs to pay for pilgrimage expenses. An element of knowledge and exposure which have been discussed may play an important role in determining the impact of savings for pilgrimage.

### **7.3.3 Correlation Analysis for Impacts of Savings**

In Section 7.3.2, the differences in impacts of savings have been examined, and a number of categorical variables seem to have some relationship with the economic and non-economic impact variables. It is therefore appealing to investigate whether there is in fact an association among those variables. This section is designed to do just that by employing Spearman Rank Order Correlation analysis which will provide the direction and strength of a relationship between a categorical variable and an impact variable. Table 7.7 exhibits the significant results at 1% and 5% significance levels, and detailed correlation results are provided in Appendix 7.4.

**Table 7.7: Spearman Rank Order Correlation Results: Impacts of Savings on Households**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>					
	SA1	SA2	SA3	SA4	SA5	SA6
<b>AHI</b>	-----	-----	-----	-----	-----	-----
<b>AGE</b>	-.107*	-----	-.159**	-.099*	-----	-.131**
<b>EDU</b>	.136**	-----	.145**	-----	.115*	.147**
<b>HME</b>	-.132**	-----	-.126*	-----	-----	-.107*
<b>ALA</b>	-----	-----	-----	.164**	.131*	.111*
<b>TLA</b>	-----	-----	-----	.142*	.115*	-----
<b>JOI</b>	-----	-----	-----	-----	-----	-----
<b>APR</b>	-----	-----	-----	-----	-----	-----
<b>ANP</b>	-----	-----	-----	-----	-----	-----
<b>SEX</b>	-----	-----	-----	-----	-----	-.100*
<b>MARI</b>	-----	-----	-----	-----	-----	-----
<b>OCC</b>	.115*	-----	.151**	-----	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----
<b>SME</b>	-----	-----	-----	-----	-----	-----

(1) **SA1** Savings provide enough income, **SA2** Savings increase ability to acquire more productive assets, **SA3** Savings enhance ability to acquire non-productive assets, **SA4** Savings permit maintaining, purchasing and repairing house, **SA5** Savings enhance ability to pay for better healthcare, **SA6** Savings accumulate enough money for pilgrimage.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

### 7.3.3.1 Economic impacts of savings: Spearman Rank Order Correlation Analysis

The Spearman rank order correlation (*rho*) results to be examined for this section are between respondents' characteristic variables and savings impact variables (SA1-SA4). The results of correlation show that there are positive correlations between education and two impact variables, i.e. income (*rho* = .136,  $p < .01$ ) and non-productive assets (*rho* = .145,  $p < .01$ ). Occupation also records a positive association with income (*rho* = .115,  $p < .05$ ) and occupation (*rho* = .151,  $p < .01$ ). The absolute values of the coefficients of both education and occupation are found to be small. The overall results of correlation suggest that high levels of economic impacts relate to high levels of education and occupations that pay regular salaries, and the strength of the relationship is rather small.



Conversely, age and household size have negative correlations with many economic factors. Age has significant correlations with income ( $\rho = -.107$ ,  $p < .05$ ), non-productive assets ( $\rho = -.159$ ,  $p < .01$ ) and housing ( $\rho = -.099$ ,  $p < .05$ ). Household size has been reported to correlate with income ( $\rho = -.132$ ,  $P > .01$ ) and non-productive assets ( $\rho = -.126$ ,  $p < .05$ ) but not housing. Again, the correlations are low. The results of correlation imply that low levels of economic impacts of savings correlate with young age, and the strength of the correlations is weak.

Interestingly, agricultural land size ( $\rho = .164$ ,  $p < .01$ ) and total land size ( $\rho = .142$ ,  $p < .05$ ) are reported to have a positive association with housing. The strength of the associations is small. One possible explanation is the fact that land is a proxy of wealth in Thailand. The households that have more land should be able to generate more income from it, though the income is somewhat seasonal. They therefore save a portion of their income generated during the cultivating season for housing purposes. Nevertheless, the money from savings might not be the only source for households to undertake housing projects.

The results of correlation highlight positive contributions of education and occupation to economic impacts of savings. Higher education respondents' households who possibly work in government and private offices that pay regular salaries are able to take advantage of savings in terms of managing their income and acquiring more non-productive assets. Accordingly, young respondents' households which are small are more likely to have higher economic benefits from savings. These benefits can be in the forms of increased income, more non-productive assets, and possibly better housing. The findings in this section once more substantiate the importance of the awareness and exposure and ability factors in determining the economic impacts of an IsMFI service on respondents' households.

#### ***7.3.3.2 Non-economic impacts of savings: Spearman Rank Order Correlation Analysis***

As for the results for non-economic impacts, two items included in this analysis are access to healthcare (SA5) and ability to go on pilgrimage (SA6). The results indicate a number of

significant relationships between characteristic variables and these two impact variables, i.e. age, education, household size, agricultural land size, total land size, and gender.

Education is reported to have positive correlations with both healthcare ( $\rho = .115$ ,  $p < .05$ ) and pilgrimage ( $\rho = .147$ ,  $p < .01$ ). This is similar to agricultural land size, i.e. healthcare ( $\rho = .131$ ,  $p < .05$ ) and pilgrimage ( $\rho = .111$ ,  $p < .05$ ). Another positive correlation is found between total land size ( $\rho = .115$ ,  $p < .05$ ) and healthcare. The results suggest that higher access to healthcare and ability to perform pilgrimage correlates to higher educational levels, agricultural land size, and total land size. The observation of the absolute values of all coefficients of these correlations has been found to be small, indicating that the correlations are weak.

Three categorical variables recorded a negative relationship with ability to perform pilgrimage, i.e. age ( $\rho = -.131$ ,  $p < .01$ ), household size ( $\rho = -.107$ ,  $p < .05$ ), and gender ( $\rho = -.100$ ,  $p < .05$ ). The results imply that lower levels of these variables are associated with ability to go on pilgrimage from savings. In other words, young male respondents from smaller households are likely to use savings in IsMFIs to pay for pilgrimage expenses.

The results for correlation for non-economic impacts of savings show that education and agricultural land size are the most important factors and both tend to be positively correlated with ability to access better healthcare and ability to go on pilgrimage. In addition to that, age, household size and gender are negatively related to ability to go on pilgrimage, suggesting that younger male clients from smaller households may be the group that often spends savings on pilgrimages. The next section will further explore the levels of dependency of the impact factors on categorical variables.

#### **7.3.4 Binary Logistic Regression Analysis for Impacts of Savings**

This section further investigates the relationship between categorical variables and impact variables related to savings using binary logistic regression. A number of important values of the regression are exhibited in Table 7.8.

**Table 7.8: Binary Logistic Regression for Respondent Characteristic Predictors and Impacts of Savings**

INDEPENDENT VARIBALES <sup>(2)</sup>	DEPENDENT VARIABLES <sup>(1)</sup>											
	SA1		SA2		SA3		SA4		SA5		SA6	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
Annual household income	.000	.185	.000	.353	.000	.882	.000	.240	.000	.578	.000	.114
Age	-.008	.723	-.003	.917	-.026	.200	.004	.833	.008	.700	-.005	.812
Education	-.031	.485	-.113	.028**	-.055	.197	-.004	.912	.037	.339	.060	.171
Household size	-.116	.190	.185	.071*	-.108	.211	.032	.706	.040	.622	-.088	.353
Agricultural land size	.000	.987	.042	.164	.020	.414	-.018	.641	.019	.430	.016	.533
Total land size	-.021	.368	-.035	.054*	-.020	.199	.036	.310	-.020	.224	-.023	.176
Membership length	.002	.956	-.044	.218	-.019	.555	-.038	.250	-.039	.218	-.035	.331
Total productive assets	.000	.227	.000	.816	.000	.300	.000	.535	.000	.133	.000	.009**
Total non-productive asset	.000	.457	.000	.337	.000	.431	.000	.374	.000	.222	.000	.214
Gender	.082	.803	.450	.194	.151	.632	.545	.076*	-.176	.550	.579	.095*
Marital status	.120	.803	-.328	.532	-.415	.407	-.821	.097*	-.618	.176	-1.053	.120
Religious education	.467	.300	.348	.495	.131	.772	.305	.482	-.298	.503	.694	.127
SME ownership	-.482	.163	-.367	.326	-.359	.274	-.023	.945	.006	.985	-.602	.094*
Occupation	.866	.029**	.900	.036**	.923	.014**	.679	.063*	.372	.292	.615	.134
<b>Overall model goodness-of-fit</b>												
Chi-Square		25.074		24.729		31.408		24.999		18.009		50.850
(Sig)		.034		.037		.005		.035		.206		.000
Cox and Snell		.094		.093		.116		.094		.068		.181
Nagelkerke		.138		.144		.163		.131		.094		.266
Overall percentage predicted		72.8		79.1		70.5		68.5		67.3		78.7

(1) **SA1** Savings provide enough income, **SA2** Savings increase ability to acquire more productive assets, **SA3** Savings enhance ability to acquire non-productive assets, **SA4** Savings permit maintaining, purchasing and repairing house, **SA5** Savings enhance ability to pay for better healthcare, **SA6** Savings accumulate enough money for pilgrimage.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Significant at 5% level of significance (p≤.05)

\* Significant at 10% level of significance (p≤.10)

#### ***7.3.4.1 Economic impacts of savings: Binary Logistic Regression Analysis***

Referring to the table, the whole models of economic variables (SA1-SA4) explain between 9.3%-11.6% (Cox and Snell  $R^2$ ) and 13.1%-16.3% (Nagelkerke  $R^2$ ) of variance in the impact variables. The models correctly classify between 68.5%-79.1% of the cases.

In view of that, the results show that occupation strongly contributes to the predictive ability of the models across economic impacts of savings, i.e. income, productive assets, and non-productive assets at .05 significance level, and housing at .10 significance level. All coefficients of occupation have a positive sign, indicating that the households of clients who work in regular paying jobs are likely to benefit from savings accounts.

As for other predictors, education (<.05 level of significance), total land size (<.10 level of significance) and household size (<.10 level of significance) are found to be significant in productive assets. The coefficients of the first two variables have a negative sign whilst the one for household size has a positive sign. This indicates that, the higher the level of respondents' education and total land size, the lower the impacts of savings on ability to acquire productive assets. The prediction is the opposite for household size. There are also significance results for gender and marital status in predicting the levels of impact of savings on housing. The coefficients for gender and marital status carry a positive sign and a negative sign respectively. This suggests that households of female clients and married clients can improve housing ability as a result of savings at IsMFIs.

In short, regression analysis has identified occupation as the main predictor for economic impacts of savings, and this relationship can be found across the economic impact factors. Gender and marital status might have a role to play in predicting housing impact of savings. This is also true for education, household size and total land size in the prediction of impact of savings on productive assets of households. The results tend to refute the K-W Test and U-Test in which none of the variables are found to be significant across the economic factors, and to some extent verify the findings of correlation analysis in which occupation is found to be associated with economic impacts of savings.

#### ***7.3.4.2 Non-economic impacts of savings: Binary Logistic Regression Analysis***

The results of regression for non-economic impacts show that the logistic model for pilgrimage has been found to be significant and a few significant results were reported. The model helps to explain 18.1% (Cox and Snell  $R^2$ ) and 26.6% (Nagelkerke  $R^2$ ) of variance in this dependent variable. The model correctly classifies 78.7% of the cases. The observation of individual categorical variable shows that total productive assets (<.05 level of significance), gender (<.10 level of significance) and SME ownership (<.10 level of significance) have achieved significant results. The coefficients for the first two variables are found to be positive whilst that of the last one is negative. Based on this, it can be concluded that higher total productive assets in a male respondent's household may lead to higher impact of savings on pilgrimage. Being an SME owner, however, may result in the opposite.

### **7.4 IMPACTS OF PAWN SERVICE ON RESPONDENTS' HOUSEHOLDS**

This section assesses the impacts of another service, the pawn service, which has been offered by Islam Pattani since 2004. As such, only 102 members of this IsMFI responded to the statement in this section of questionnaire. Like other services, the analysis tools employed for pawn service include descriptive analysis, the K-W Test and U-Test, Spearman rank order correlation, and binary logistic regression.

#### **7.4.1 Descriptive Analysis for Economic and Non-economic Impacts of Pawn Service**

In a section of the questionnaire, the respondents were asked to rank their level of agreement with statements on impacts of pawn service on economic and non-economic variables, which include liquidity of business (PA1), investment (PA2), healthcare (PA3), children's education (PA4), festive seasons (PA5), food and non-food consumption (PA6), and finance in an Islamic way (PA7). The first two variables are concerned with economic factors, and the rest involve non-economic factors. Table 7.9 exhibits the results of descriptive analysis for impacts of pawn service on respondents' households.

**Table 7.9: Descriptive Analysis: Economic Impacts of Pawn Service on Households**

<b>Factor</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Mean</b>	<b>SD</b>	<b>Mean Ranking</b>
(1) Pawn helps increasing liquidity of business when needed (PA1)	0 (0.0%)	1 (1.0%)	18 (17.6%)	60 (58.8%)	23 (22.5%)	4.03	.667	2
(2) Pawn permits household to invest in on-going investment opportunities (PA2)	0 (0.0%)	3 (2.9%)	26 (25.5%)	53 (52.0%)	20 (19.6%)	3.88	.749	3
(3) Pawn enhance household ability to pay for medication of serious illness (PA3)	1 (1.0%)	7 (6.9%)	38 (37.3%)	46 (45.1%)	10 (9.8%)	3.56	.803	7
(4) Pawn makes available adequate money for children's education especially during the beginning of academic year (PA4)	0 (0.0%)	4 (3.9%)	27 (26.5%)	56 (54.9%)	15 (14.7%)	3.80	.732	4
(5) Pawn makes available enough cash for festive seasons (PA5)	3 (2.9%)	5 (4.9%)	32 (31.4%)	50 (49.0%)	12 (11.8%)	3.62	.868	6
(6) Pawn permits household to consume enough food and non-food items (PA6)	2 (2.0%)	3 (2.9%)	27 (26.5%)	61 (59.8%)	9 (8.8%)	3.71	.752	5
(7) Pawn allows household to manage household finance in Islamic way (PA7)	0 (0.0%)	0 (0.0%)	23 (22.5%)	51 (50.0%)	28 (27.5%)	4.05	.709	1

#### ***7.4.1.1 Economic impacts: a descriptive analysis***

The results of descriptive analysis tend to suggest that the pawn service offered at an IsMFI has an impact on the economic wellbeing of the clients (PA1 and PA2). It has improved the liquidity of the clients' businesses when they face liquidity problems (mean = 4.03). This might be particularly important for SME owners. Additionally, the pawn service also allows the respondents to invest in on-going investment opportunities of various forms (mean = 3.88). However, a considerable proportion of the respondents cannot express a definite opinion on these two issues and this will be further explored in the subsequent sections in this chapter.

#### ***7.4.1.2 Non-economic impacts: a descriptive analysis***

It is evidenced that a majority of the respondents feel that the pawn service offered by IsMFIs can offer alternative Islamic-compliant finance that suits the needs of Muslims on various occasions and at different stages of their life cycle. Among non-economic factors (PA3-PA7), the impact on availability of Islamic-compliant finance (mean = 4.05) and the impact on children's education (mean = 3.80) recorded the highest mean values. A considerable number of the respondents, however, tend to be uncertain about this. This might be because they have no experience of using a pawn service for that particular event.

### **7.4.2 Kruskal-Wallis Test and Mann-Whitney U-Test for Economic and Non-economic Impacts of Pawn Service**

The K-W Test and U-Test were utilised to examine the differences of opinions across the respondents' categories based on demographic characteristics at .05 significance level. The mean value scores have also been observed to establish the direction of the differences among the subgroups of each category. Table 7.10 exhibits a reflection of the variables that have achieved a significant level between clients' demographic characteristics and households' impact variables. The subgroups that provide the highest mean rank score have also been provided to aid the discussions in this section. Full details of the K-W Test and the U-Test are provided in Appendix 7.5.

**Table 7.10: Significant Statistical Results between Clients' Demographic Characteristics and Households' Impact Variables for Pawn Service**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>						
	PA1	PA2	PA3	PA4	PA5	PA6	PA7
<b>AHI</b>	-----	-----	-----	-----	-----	-----	-----
<b>AGE</b>	-----	-----	-----	≤ 25*	-----	-----	-----
<b>EDU</b>	Upper Secondary*	Bachelor*	-----	Bachelor*	-----	Lower Secondary*	-----
<b>HME</b>	3-5*	3-5*	-----	-----	-----	-----	-----
<b>ALA</b>	-----	-----	-----	-----	-----	-----	-----
<b>TLA</b>	-----	-----	>10*	-----	>10*	-----	-----
<b>JOI</b>	-----	-----	-----	-----	-----	-----	-----
<b>APR</b>	>500'*	-----	-----	-----	-----	-----	-----
<b>ANP</b>	-----	-----	-----	-----	40'-100'*	-----	40'-100'*
<b>SEX</b>	-----	-----	-----	-----	-----	-----	-----
<b>MARI</b>	-----	-----	-----	-----	-----	-----	-----
<b>OCC</b>	-----	Private Sector*	-----	Private Sector*	-----	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----	-----
<b>SME</b>	-----	-----	-----	-----	-----	-----	-----

(1) **PA1** Pawn helps increasing liquidity of business when needed, **PA2** Pawn permits household to invest in on-going investment opportunities, **PA3** Pawn enhances household ability to pay for medication for serious illness, **PA4** Pawn makes available adequate money for children's education especially during the beginning of academic year, **PA5** Pawn makes available enough cash for festive seasons, **PA6** Pawn permits household to consume enough food and non-food items, **PA7** Pawn allows household to manage household finance in Islamic way.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\* The star sign indicates the subgroup having recorded the highest mean rank.



#### ***7.4.2.1 Economic impacts of pawn service: K-W Test and U-Test***

As discussed in section 7.4.1.1, the majority of the respondents perceive that their households have improved economically from the pawn service. This section elaborates further on the result of the first statement on the pawn service to identify whether there is any difference across the subgroups of each category. Table 7.10 shows that four categories have reached a statistically significant difference for economic factors (PA1 and PA2), i.e. education, household size, productive assets, and occupation.

Education and household size are found to be significant for both economic impact factors, i.e. liquidity of business and investment. The mean value scores suggest that the households of respondents with upper secondary education and Bachelor's degrees are most likely to improve their business liquidity and investment from the pawn service, respectively. As for household size, the mean value scores indicate that the households with 3-5 members have the highest likelihood of solving the business's liquidity problem and invest in on-going investment opportunities from the pawn service.

Accordingly, the total productive assets category and occupation have achieved significant differences in business's liquidity and investment, respectively. The mean ranks reveal that the respondents with total productive assets worth over THB 500,000 often improve business liquidity from the pawn service whilst the households of those working in the private sector are more likely to put money from the pawn service into investment opportunities that may be available.

The results of the K-W Test and the U-Test reveal that clients of IsMFIs are able to solve business liquidity issues and engage in investment from the pawn service. In general, the findings tend to suggest that households from the middle level of education, medium-sized households, and those with large amounts of productive assets possibly benefit more from this service as compared to households of different characteristics.

#### ***7.4.2.2 Non-economic impacts of pawn service: K-W Test and U-Test***

In the previous section, the economic impacts of the pawn service were discussed. This section explores the impacts of the pawn service on non-economic factors (PA3-PA7), i.e. healthcare, children's education, consumption during festive seasons, food and non-food consumption, and the Islamic factor. The discussion will be based on the significant results of the K-W Test and U-Test depicted in Table 7.10. The results show that age, education, total land size, non-productive assets, and occupation indicate significant differences in at least one of non-economic impact factors.

Education, total land size and non-productive assets are significant in two impact variables. There are differences in the education category in children's education and food and non-food items impact variables. The observation of mean scores suggests that the respondents with Bachelor's degrees see an improvement in their children's education from the pawn service whilst those who have lower secondary education could improve food and non-food consumption best from the pawn service. Likewise, total land size is significant for healthcare and festive seasons. The mean scores indicate that those owning over 10 *rai* of total land are more likely to use the pawn service when they need to pay for medication for serious illness and for expenses during festive seasons. Non-productive assets are significant for festive seasons and Islamic compliance. The investigation of the mean scores reveals that the respondents' households possessing between THB 40,000-100,000 recorded the highest in both impact variables. This indicates that the households are most likely to use the pawn service during festive seasons and to perceive that the pawn service offers the chance for them to manage their household finance in an Islamic way.

Other significant categories are age and occupation, which are significant for children's education. The mean scores show that the ' $\leq 25$ ' age group and private sector subgroup registered the largest mean scores in those categories, suggesting that the households of the clients in that age group and who work in the private sector are most likely to utilise the pawn service to pay for their children's education, especially at the beginning of the academic year.

In short, the results of the survey suggest that education, total land size and non-productive assets might relate to the use of the pawn service to solve some non-economic problems within households. Even within these categories, differences can be found, *e.g.* the clients with Bachelor's degrees tend to use the pawn service for their children's education whilst those having lower secondary education probably use it for consumption. This suggests that the pawn service is often utilised to satisfy different needs for different purposes.

### **7.4.3 Correlation Analysis for Impacts of Pawn Service**

In section 7.4.2, the differences in impacts of the pawn service across subgroups in categorical factors have been examined. A number of categorical variables have been reported to have high levels of economic and non-economic impacts than the others. It is therefore interesting to explore whether there is actually a relationship among categorical variables and impact variables. Spearman rank order correlation analysis was utilised to fulfil this objective. Table 7.11 illustrates the significant results at 1% and 5% significance levels, and detailed correlation results are provided in Appendix 7.6.

**Table 7.11: Spearman Rank Order Correlation Results: Impacts of Pawn Service on Households**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>						
	PA1	PA2	PA3	PA4	PA5	PA6	PA7
<b>AHI</b>	.265**	-----	-----	-----	-----	-----	-----
<b>AGE</b>	-----	-.295**	-----	-.354**	-.235*	-----	-----
<b>EDU</b>	-----	.418**	.200*	.467**	.263**	.249*	.241*
<b>HME</b>	-.258**	-.267**	-----	-----	-----	-----	-----
<b>ALA</b>	-----	-----	-----	-----	-----	-----	-----
<b>TLA</b>	-----	-----	-----	-----	-----	-----	-----
<b>JOI</b>	-----	-----	-----	-----	-----	-----	-----
<b>APR</b>	.415**	-----	-----	-----	-----	.218*	-----
<b>ANP</b>	.308**	-----	-----	-----	-----	-----	-----
<b>SEX</b>	-----	-----	-----	-----	-----	-----	-----
<b>MARI</b>	-----	-----	-----	-----	-----	-----	-----
<b>OCC</b>	-----	.320**	-----	.372**	-----	-----	-----
<b>RED</b>	-----	-----	-----	-----	-----	-----	-----
<b>SME</b>	-----	-----	-----	-----	-----	-----	-----

(1) **PA1** Pawn helps increase liquidity of business when needed, **PA2** Pawn permits household to invest in on-going investment opportunities, **PA3** Pawn enhances household ability to pay for medication for serious illness, **PA4** Pawn makes available adequate money for children’s education especially during the beginning of academic year, **PA5** Pawn makes available enough cash for festive seasons, **PA6** Pawn permits household to consume enough food and non-food items, **PA7** Pawn allows household to manage household finance in Islamic way.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

#### ***7.4.3.1 Non-economic impacts of pawn service: Spearman Rank Order Correlation Analysis***

Unlike economic factors, a small number of significant relationships can be found for non-economic factors. The main categorical variable is education, which was reported to have positive relationships with all non-economic impact factors, i.e. healthcare ( $\rho = .200$ ,  $p < .05$ ), children's education ( $\rho = .467$ ,  $p < .01$ ), festive seasons ( $\rho = .263$ ,  $p < .01$ ), food and non-food consumption ( $\rho = .249$ ,  $p < .05$ ), and Islamic compliance ( $\rho = .241$ ,  $p < .05$ ). The strength of the relationship between education and children's education is medium. The other relationships are found to be small. The results suggest that higher education relates to higher non-economic impacts of the pawn service.

There are also positive associations between productive assets and consumption and occupation ( $\rho = .218$ ,  $p < .05$ ) and children's education ( $\rho = .372$ ,  $p < .01$ ). The strength of the first relationship is small whilst that of the second is medium. It can be concluded that higher amounts of productive assets and regularly paying jobs are associated with higher consumption and higher children's education impacts of the pawn service.

Conversely, age is reported to have negative relationships with children's education ( $\rho = -.354$ ,  $p < .01$ ) and festive seasons ( $\rho = -.235$ ,  $p < .05$ ), suggesting that younger age correlates with higher children's education and more money to spend during festive seasons. The strength of the first relationship is medium, and the second one is small.

The results of correlation generally suggest that age and education tend to be two key determining factors of non-economic impacts of the pawn service. The levels of education may change in the same direction with the levels of non-economic impacts, e.g. the higher the levels of respondents' education, the higher the non-economic impacts the respondents' households receive from the pawn service and *vice versa*. Age, however, records a reverse relationship for non-economic impacts of the pawn service.

#### **7.4.4 Binary Logistic Regression Analysis for Impacts of Pawn Service**

In the preceding section, some associations have been reported between categorical variables and impact variables. This provides the motivation to find out whether these categorical variables can actually predict the change in impact variables for the pawn service. Binary logistic regression analysis was employed to explore this issue. A summary of the results of regression is reflected in Table 7.12.

##### ***7.4.4.1 Economic impacts of pawn service: Binary Logistic Regression Analysis***

As depicted in Table 7.12, the whole models of economic impact of the pawn service explain about 37.6%-38.9% (Cox and Snell  $R^2$ ) and 51.8%-61.3% (Nagelkerke  $R^2$ ) of variance in the impact variables (PA1-PA2). The models correctly classify around 80.3%-90.1% of the cases. In view of the results, total non-productive assets strongly contribute to the predictive ability of the models across the two economic impact variables, i.e. business liquidity and investment at .05 significance level. Both coefficients show a positive sign, but the values of the coefficients are small. The results suggest that the households that own larger amounts of non-productive assets are more likely to improve business liquidity and investment undertakings from the pawn service, although the changes are expected to be small.

As for other predictors, education (<.05 level of significance) and SME ownership (<.10 level of significance) are found to be significant for business liquidity. The coefficients of these two factors are positive, suggesting that the clients with higher levels of education and who own SMEs tend to experience higher impacts from the pawn service. In other words, this group of clients often use the pawn service to increase the liquidity of their businesses when needed.

The above findings reveal the importance of non-productive assets and education in determining the levels of impacts from the pawn service at IsMFIs. The clients with more non-productive assets and education have the highest likelihood of receiving economic benefits from the pawn service by improving the liquidity of their businesses and fulfilling their investment objectives.

**Table 7.12: Binary Logistic Regression for Respondent Characteristic Predictors and Impacts of Pawn Service**

INDEPENDENT VARIBALES <sup>(2)</sup>	DEPENDENT VARIABLES <sup>(1)</sup>													
	PA1		PA2		PA3		PA4		PA5		PA6		PA7	
	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig	Coef.	Sig
Annual household income	.000	.976	.000	.733	.000	.207	.000	.398	.000	.078*	.000	.297	.000	.246
Age	-.086	.277	-.029	.592	-.011	.823	-.065	.220	-.024	.627	-.034	.502	-.008	.873
Education	.365	.034**	.123	.223	.096	.309	.138	.158	.076	.413	.019	.869	.139	.192
Household size	-.306	.324	-.271	.230	-.244	.215	.097	.678	-.370	.088*	.473	.052*	.279	.220
Agricultural land size	.008	.963	.058	.587	.041	.688	-.030	.801	-.124	.336	.252	.082*	.194	.115
Total land size	-.008	.955	-.035	.437	-.033	.466	.035	.699	.161	.147	-.141	.043**	-.083	.134
Membership length	.145	.240	-.013	.856	.060	.371	-.072	.288	.058	.375	.051	.460	.085	.247
Total productive assets	.000	.986	.000	.764	.000	.349	.000	.634	.000	.348	.000	.194	.000	.598
Total non-productive asset	.000	.025**	.000	.024**	.000	.015**	.000	.992	.000	.087*	.000	.043**	.000	.947
Gender	-.162	.882	-.161	.808	-1.028	.150	.478	.485	.539	.407	.972	.205	.050	.945
Marital status	.290	.852	-.388	.691	-.744	.477	-1.810	.178	.122	.894	.240	.817	.107	.923
Religious education	.370	.859	-.523	.665	-2.631	.094*	-1.255	.284	-1.578	.370	.842	.540	-.728	.625
SME ownership	2.434	.087*	-.501	.522	1.022	.240	.268	.730	1.402	.118	1.004	.301	.774	.380
Occupation	-.787	.647	1.220	.156	1.214	.222	1.130	.213	1.112	.274	2.585	.047**	2.215	.040**
<b>Overall model goodness-of-fit</b>														
Chi-Square	33.508		34.941		25.663		35.436		23.113		24.391		15.006	
(Sig)	.002		.001		.029		.001		.058		.041		.378	
Cox and Snell	.376		.389		.303		.393		.278		.291		.378	
Nagelkerke	.613		.518		.420		.528		.388		.429		.378	
Overall percentage predicted	90.1		80.3		76.1		77.5		77.5		83.1		81.7	

(1) **PA1** Pawn helps increase liquidity of business when needed, **PA2** Pawn permits household to invest in on-going investment opportunities, **PA3** Pawn enhances household ability to pay for medication for serious illness, **PA4** Pawn makes available adequate money for children’s education especially during the beginning of academic year, **PA5** Pawn makes available enough cash for festive seasons, **PA6** Pawn permits household to consume enough food and non-food items, **PA7** Pawn allows household to manage household finance in Islamic way.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Significant at 5% level of significance (p≤.05)

\* Significant at 10% level of significance (p≤.10)

#### ***7.4.4.2 Non-economic impacts of pawn service: Binary Logistic Regression Analysis***

In terms of non-economic impacts of the pawn service, the whole models explain around 27.8%-39.3% (Cox and Snell  $R^2$ ) and 37.8%-52.8% (Nagelkerke  $R^2$ ) of variance in the impact variables (PA3-PA7). The models correctly classify around 77.5%-83.1% of the cases. The results further show that total non-productive assets, household size, and occupation considerably determine the predictive ability of the non-economic models. Total non-productive assets are found to be significant for healthcare (<.05 level of significance), festive seasons (<.10 level of significance), and food and non-food consumption (<.05 level of significance). The sign of the coefficients are all positive, indicating that the variable contributes positively to the change in the impact variables.

Moreover, household size is significant at .10 level of significance for festive seasons and consumption. The sign of the coefficient for festive seasons is negative, suggesting that bigger household size leads to lower impact of pawn service on festive seasons. As for the coefficient of consumption, a positive sign is reported, implying that higher household size contributes to a higher level of impact of pawn service on consumption. As for occupation, significantly positive results have been found at .05 level of significance for consumption and Islamic compliance. It can be concluded that occupations that offer regular paying income contribute better to the impact factors.

Other categorical variables found to be significant are annual household income for festive seasons (<.10 level of significance), agricultural land size (<.10 level of significance), and total land size for consumption (<.05 level of significance). Detailed observation of the sign of coefficients reveals that annual household income and total agricultural land size contribute positively to the impact factors. However, total land size causes a negative change to the impact variable.

In summary, the categorical variables which contribute significantly to non-economic impacts of the pawn service include total non-productive assets, household size, and occupation. Most of these variables contribute positively to the impacts of the pawn service. In terms of individual dependent variables, festive seasons and consumption registered many significant results,



confirming the importance of pawn service in providing a financial alternative for households during festive seasons and income shocks.

## 7.5 IMPACTS OF INSURANCE SCHEMES ON HOUSEHOLDS

Insurance schemes in various forms are another product offered by IsMFIs in Thailand. Insurance schemes often aim at assisting clients to manage life cycle events such as short-term income shock, healthcare, etc. This section therefore evaluates the impact of insurance schemes on income of the respondents. Again, the analysis techniques employed will be similar to those used for other services. Due to the small number of impact factors, each of these will be discussed in one section without clearly distinguishing between economic and non-economic impacts.

### 7.5.1 Descriptive Analysis of Economic and Non-economic Impacts of Insurance Scheme on Households

In the section on insurance schemes in the questionnaire, respondents were asked to rate three statements on insurance schemes. One statement is related to economic impact and two are concerned with non-economic impacts. The results of descriptive analysis of the survey outcome are exhibited in Table 7.13.

**Table 7.13: Descriptive Analysis: Economic Impact of Insurance Scheme on Households**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD	Mean Ranking
(1) Insurance scheme helps to manage shocks that affect income more effectively (TA1).	40 (10.0%)	7 (1.8%)	110 (27.5%)	194 (48.5%)	49 (12.3%)	3.51	1.064	3
(2) Insurance scheme helps to manage money during illness of member of household (TA2).	10 (2.5%)	15 (3.8%)	127 (31.8%)	156 (39.0%)	92 (23.0%)	3.76	.932	2
(3) Insurance scheme helps to manage in the event of death of members of household (TA3).	6 (1.5%)	10 (2.5%)	132 (33.0%)	157 (39.3%)	95 (23.8%)	3.81	.877	1

The results of descriptive analysis show that insurance schemes have impacts on clients' wellbeing. They ease households' income shocks (mean = 3.51), and help in managing money if a member is ill (mean = 3.76) or dies (mean = 3.81). Again, a considerable number of the

respondents were uncertain about the impacts of insurance schemes, as over 27.0% of them rated these impact factors as ‘neutral’.

### 7.5.2 Kruskal-Wallis Test and Mann-Whitney U-Test for Economic and Non-economic Impacts of Insurance Scheme

This section further elaborates on the findings from the descriptive analysis presented in section 7.5.1 in which the results show that a majority of the respondents seem to agree that insurance schemes can help to improve their households’ wellbeing. The K-W Test and U-Test used in this section will reveal whether there are differences across subgroups within each category of the respondents. A summary of the results is reflected in Table 7.14 and more detailed results of the tests can be found in Appendix 7.7.

**Table 7.14: Significant Statistical Results between Clients’ Demographic Characteristics and Households’ Impact Variables for Insurance Scheme**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>		
	TA1	TA2	TA3
<b>AHI</b>	-----	-----	-----
<b>AGE</b>	-----	-----	-----
<b>EDU</b>	-----	-----	-----
<b>HME</b>	-----	-----	-----
<b>ALA</b>	-----	5-10*	5-10*
<b>TLA</b>	-----	-----	>10*
<b>JOI</b>	-----	-----	>10*
<b>APR</b>	-----	-----	-----
<b>ANP</b>	300’-500’*	>500’*	-----
<b>SEX</b>	-----	Male*	Male*
<b>MARI</b>	-----	-----	-----
<b>OCC</b>	-----	Government*	Cottage industry*
<b>RED</b>	-----	-----	-----
<b>SME</b>	-----	-----	-----

(1) **TA1** Insurance scheme helps to manage shocks that affect income more effectively, **TA2** Insurance scheme helps to manage money during illness of member of household, **TA3** Insurance scheme helps to manage in the event of death of members of household.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\* The star sign indicates the subgroup having recorded the highest mean rank.

The results depicted in Table 7.14 further suggest that only ‘non-productive assets’ has achieved a statistically significant difference for income shock (TA1). Detailed investigation of the results indicates that the households with ‘300,001-500,000’ worth of total non-productive assets often manage income shock using insurance schemes.

As for non-economic impacts, the results show that agricultural land size, gender and occupation recorded a statistically significant difference for both illness (TA2) and death (TA3). The mean value scores further suggest that households with 5-10 *rai* of agricultural land and male respondents registered the highest scores for both impact items. Accordingly, government employees and cottage workers recorded the largest scores for illness and death impact factors respectively. Generally, the respondents with those characteristics are more likely to see the impacts of insurance schemes.

Other significant results include total land size and membership length for death, and non-productive assets for illness. The investigation of mean rank suggests that the respondents who have been with IsMFIs for over 10 years and whose households own more than 10 *rai* of total land are more likely to agree that, in the event of the death of a household member, the households can manage from insurance schemes provided by IsMFIs. This is similar to the respondents’ households having over 500,000 THB worth of non-productive assets in the event of serious illness suffered by a household’s member.

### **7.5.3 CORRELATION ANALYSIS FOR INSURANCE SCHEME**

Table 7.15 shows the significant results of Spearman rank order correlation at 1% and 5% significance levels, and detailed correlation results are provided in Appendix 7.8.

As reported in Table 7.11, the results of Spearman rank order correlation (*rho*) demonstrate that none of the categorical variables is significant for economic factors. As for non-economic variables, agricultural land size is found to have a positive association with both non-economic variables, i.e. illness (*rho* = .144,  $p < .01$ ) and death (*rho* = .175,  $p < .01$ ). This implies that large agricultural land size is associated with high level of impact of insurance schemes in the event of serious illness and death in households. Other positive association can be found for education (*rho* = .118,  $p < .05$ ), non-productive assets (*rho* = .155,  $p < .01$ ), and occupation (*rho* = .132,

p<.01) with illness impact factor. Total land size ( $\rho = .140$ , p<.05) and membership length ( $\rho = .102$ , p<.05) are associated with death impact factor. The strength of all associations is rather weak.

**Table 7.15: Spearman Rank Order Correlation Results: Impacts of Insurance Scheme on Households**

Categorical Variables <sup>(2)</sup>	Impact Variables <sup>(1)</sup>		
	TA1	TA2	TA3
<b>AHI</b>	-----	-----	-----
<b>AGE</b>	-----	-----	-----
<b>EDU</b>	-----	.118*	-----
<b>HME</b>	-----	-----	-----
<b>ALA</b>	-----	.144**	.175**
<b>TLA</b>	-----	-----	.140*
<b>JOI</b>	-----	-----	.102*
<b>APR</b>	-----	-----	-----
<b>ANP</b>	-----	.155**	-----
<b>SEX</b>	-----	-.119*	-.156**
<b>MARI</b>	-----	-----	-----
<b>OCC</b>	-----	.132**	-----
<b>RED</b>	-----	-----	-----
<b>SME</b>	-----	-----	-----

(1) **TA1** Insurance scheme helps to manage shocks that affect income more effectively, **TA2** Insurance scheme helps to manage money during illness of member of household, **TA3** Insurance scheme helps to manage in the event of death of members of household.

(2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

In contrast, there is a negative relationship between gender and both illness ( $\rho = -.119$ , p<.10) and death ( $\rho = -.156$ , p<.01) impact factors. This suggests that higher levels of impacts from insurance schemes are linked to male respondents. The strength of the relationship is small. It can therefore be concluded that the male respondents' households may be able to take advantage of insurance schemes available at IsMFIs to satisfy their needs in the event of illness and death of a member.

#### 7.5.4 Binary Logistic Regression Analysis for Impact of Insurance Scheme

From the discussion on correlation analysis, it has been found that agricultural land size and gender may help to explain impacts of insurance schemes. This section expands the analysis to discover whether such categorical variables can influence the change in impact variables. Binary logistic regression is used to achieve this objective. The results of regression are depicted in Table 7.16.

**Table 7.16: Binary Logistic Regression for Respondent Characteristic Predictors and Impacts of Insurance Scheme**

INDEPENDENT VARIABLES	DEPENDENT VARIABLES					
	TA1		TA2		TA3	
	Coef.	Sig	Coef.	Sig	Coef.	Sig
Annual household income	.000	.973	.000	.853	.000	.527
Age	.005	.797	.007	.729	-.013	.518
Education	.025	.511	.045	.254	.040	.310
Household size	-.032	.677	-.041	.609	.029	.726
Agricultural land size	-.049	.127	-.007	.753	-.017	.637
Total land size	.039	.176	.004	.782	.031	.349
Membership length	-.017	.586	.002	.951	.039	.245
Total productive assets	.000	.289	.000	.096*	.000	.082*
Total non-productive asset	.000	.544	.000	.041**	.000	.471
Gender	.573	.046**	.638	.031**	.559	.059*
Marital status	-.306	.460	.079	.855	.312	.466
Religious education	.101	.809	-.253	.560	.406	.339
SME ownership	.422	.182	.029	.930	-.016	.961
Occupation	.074	.831	.876	.015**	.591	.098*
<b>Overall model goodness-of-fit</b>						
Chi-Square	14.339		31.484		29.795	
(Sig)	.425		.005		.008	
Cox and Snell	.055		.117		.111	
Nagelkerke	.074		.158		.151	
Overall percentage predicted	62.2		70.9		71.3	

- (1) **TA1** Insurance scheme helps to manage shocks that affect income more effectively, **TA2** Insurance scheme helps to manage money during illness of member of household, **TA3** Insurance scheme helps to manage in the event of death of members of household.
- (2) **AHI** Annual Household Income, **AGE** Age of Respondent, **EDU** Years in Education, **HME** Household Size, **ALA** Agricultural Land Size, **TLA** Total Land Size, **JOI** Membership Length, **APR** Total Productive Assets, **ANP** Total Non-Productive Assets, **SEX** Gender, **MARI** Marital Status, **OCC** Main Occupation, **RED** Religious Education, **SME** SME Ownership.

\*\* Significant at 5% level of significance ( $p \leq .05$ )

\* Significant at 10% level of significance ( $p \leq .10$ )

The results of regression indicate that the model for economic impact for insurance scheme, i.e. income shock, is not significant. As for non-economic impacts, the models explain around

11.1%-11.7% (Cox and Snell  $R^2$ ) and 15.1%-15.8% (Nagelkerke  $R^2$ ) of variance in non-economic impact variables (TA2 and TA3). The models correctly classify about 70.9%-71.3% of the cases. Accordingly, productive assets, gender and occupation strongly contributed to the change in both impacts of insurance scheme. The coefficients of all these factors are positive, indicating that larger productive assets, male gender, and regular paying jobs contribute to higher impacts of insurance scheme. In other words, the households with large productive assets, males and with government or private sector employees benefit from insurance schemes in the event of serious illness or death of a member.

## **7.6 CONCLUSION**

This chapter has provided information on the impacts of Islamic microfinancial services on the clients' households by employing various analysis tools including descriptive statistics, the K-W Test and U-Test, Spearman rank order correlation and, finally, binary logistic regression. In general, Islamic microfinancial services have been utilised by households of different characteristics in diverse events of life. In such events, households' knowledge of and exposure to Islamic microfinancial services and related procedures, their needs at those times, and their ability to acquire such services will possibly determine the likelihood of using them and the levels of impacts they might experience from using the services. The results in this chapter also seem to suggest that households may utilise two or more services, at the same time, to manage the households' financial needs.

Islamic micro-financing, for instance, is often used to satisfy various financial needs ranging from acquiring productive assets to housing. The micro-financing is perceived to have direct and indirect impacts on economic and non-economic wellbeing of respondents' households. Gender, occupation and age tend to be determinants of all impact factors. As for savings, it is perceived to have small direct impacts on the households rather providing convenience for the households in managing their income. As such, only occupation is a strong predictor of impacts of savings.

A different phenomenon is found for pawn service and insurance schemes. The amount of non-productive assets influences the impacts of the pawn service across economic and non-economic factors, perhaps indicating that this service is often used to manage short-term income or

financial needs. Household size and occupation become important when considering non-economic impact, especially during festive seasons and consumption. This further confirms the importance of the pawn service in helping the poorer households. Gender, occupation, and total productive assets are the key determinants for impacts of insurance schemes. This seems to surprisingly suggest that awareness and knowledge of the service are the keys to the impacts and the use of insurance schemes, not the needs for the service itself.

The findings in this chapter tend to confirm the findings on demand for Islamic microfinancial services presented in the previous chapters, that different Islamic microfinancial services are necessary to satisfy the needs of the poor and financially excluded segments of society, such as Muslim people in Thailand. In fact, the financial needs of this group of people are no different from mainstream society. They need micro-financing, savings, pawn services, and insurance to manage their lives more effectively, and their financial undertakings are complex. They utilise different Islamic microfinance services to respond to short-term income shock, to purchase productive and non-productive assets, to arrange for funeral of a death member of family, to expend and repair their houses, and to pay for children's higher education. Furthermore, religious factors in one way or another will have some effect on the levels of usage and impacts of financial undertakings of Muslim households. However, one simple fact that the findings in this chapter do not provide is a more detailed investigation of how these complex financial undertakings actually take place. The findings from the interviews in the next chapter will explore this interesting aspect.

## **Chapter 8**

### **SEARCHING FOR THE IMPACTS OF ISLAMIC MICROFINANCE: QUALITATIVE ANALYSIS**

#### **8.1 INTRODUCTION**

The previous two empirical chapters focused on the opinions of the Islamic microfinance clients on the demand for Islamic microfinance and the impacts of Islamic microfinancial services on their households. This chapter aims to extend the analysis by exploring the opinions of the Thai Muslim clients, regarding the pathways of these impacts and other issues underlying the operations of IsMFIs in Thailand. It partially covers the objective numbers 1, 2 and 4. In order to achieve these objectives, semi-structured interviews were conducted with the clients of the four Islamic microfinance institutions, i.e. Islam Pattani, Ibnu Affan, Ibnu Auf and As-Siddeek. As discussed in chapter 5, this research focuses on the demand-side of Islamic microfinance so opinions of suppliers or IsMFIs though important is not included in either the survey-based or the interview. This is due to mainly cost and time constraints. Another study on the supply-side may be good for further research.

Since the details of the interviews are discussed in the Research Methodology chapter, this chapter begins directly with a discussion on the analysis of the interview data based on the interview objectives, i.e. clients' relationship with IsMFIs, use of alternative conventional financial services, demand for Islamic microfinancial services, economic impacts of Islamic micro-financing, non-economic impacts of Islamic micro-financing, impacts of other Islamic microfinancial services and, finally, IsMFIs' achievements and challenges. A thematic analysis technique is employed in this section. The second section provides a detailed discussion of the results. The final section provides a conclusion to this chapter.

#### **8.2 ANALYSING INTERVIEW DATA**

This section provides the analysis of the responses from the interviewees using the thematic technique. The themes chosen include clients' relationship with IsMFIs, use of alternative financial institutions and services, demand for Islamic microfinancial services, impacts of micro-financing on households, and achievements and challenges faced by IsMFIs. Only the impacts of



micro-financing based on the *murabahah* contract will be discussed in detail because it is the main Islamic microfinance service and only a few interviewees responded to the questions on impacts of other services, i.e. savings accounts, investment accounts, pilgrimage accounts, pawn service, and insurance schemes. Nevertheless, a section is dedicated to the impacts of these services.

### 8.2.1 Clients' relationship with IsMFIs

In the preceding chapter, the results of the survey indicate that most respondents were male rather than female, as found in the microfinance literature. It is important to find out whether other members of households participate in IsMFIs so that households' financial behaviours can be identified in general. As exhibited in Table 8.1, responses from interviewees can be grouped into three categories.

**Table 8.1: Membership of Other Members in Household**

<b>Interview question 1</b>	<i>Apart from you, have any of your household members joined the IsMFI?</i>
Focused coding	Sub-theme/Remarks
1	Spouse of client also joins IsMFI.
2	Children of client also join IsMFI.
3	Other members of household join IsMFI.
Concluding theme	Islamic microfinancial services are utilised by several people in a household.

**Table 8.2: Focused Coding No. 1 for Interview Question 1**

<b>Sub-theme</b>	<i>Spouse of clients also joins IsMFIs</i>
Interviewee No.	Remarks
IN2, IN21, IN23, IN27, IN34, IN35, IN37, IN39	All family members are members of IsMFI.
IN9, IN11, IN14, IN19, IN26, IN32, IN33	Wife also joins IsMFI.
IN12, IN25	Husband also participates in IsMFI.

One of the persistent responses pertaining to other household members who participated in IsMFIs is 'spouse'. Many interviewees claimed that all household members including their spouses were members of IsMFIs. Some others stated that their wives or husbands also joined IsMFIs. The responses from the interviews are listed in Table 8.2.

**Table 8.3: Focused Coding No. 2 for Interview Question 1**

<b>Sub-theme</b>	<b><i>Children of clients also joins IsMFIs</i></b>
Interviewee No.	Remarks
IN2, IN21, IN23, IN27, IN34, IN35, IN37, IN39	All family members are members of IsMFI.
IN1, IN7, IN8	All children in household participate in IsMFI.
IN24, IN29, IN6, IN9	One or more, but not all children are members of IsMFI.

As reported in Table 8.3, children of the respondents also participated in IsMFIs. Many reported that some or all of the household members joined IsMFIs whilst a few respondents claimed that all of their children were members of IsMFIs. Some reported that some, but not all, of their children obtained services from IsMFIs.

**Table 8.4: Focused Coding No. 3 for Interview Question 1**

<b>Sub-theme</b>	<b><i>Other members of household join IsMFIs.</i></b>
Interviewee No.	Remarks
IN14, IN26, IN29	Parents and siblings also join IsMFI.
IN3, IN12, IN25	One of parents joins IsMFI.
IN20	One or more siblings also join IsMFI.

Many respondents were living in extended families and stated that, apart from their spouse and children, other members of the household also joined IsMFIs. Parents and siblings may all join IsMFIs. In some other cases, one of the parents or one or more siblings participate in IsMFIs.

### **8.2.2 Uses of Alternative Financial Institutions and Services**

In the analysis of demand for Islamic microfinance in Thailand, a substantial number of respondents claim that they still use conventional financial services even though Islamic financial institutions, i.e. IsMFIs and Islamic Bank of Thailand, are available. This section further investigates the types of services and purposes of those services. This will ascertain the financial behaviour of Muslim clients in non-Islamic financial environments.

**Table 8.5: Conventional Financial Products Used**

<b>Interview question 2</b>	<i>Are you using conventional financial services? What conventional financial services are you using?</i>
Focused coding	Sub-theme/Remarks
1	Savings account.
2	Financing.
Concluding theme	IsMFIs' clients who use conventional financial services often go for savings account and financing or loan.

Table 8.5 describes the types of conventional financial services often used by IsMFI's clients. The main financial services that a majority of the interviewees still used in terms of conventional services, after the Islamic financial services became available, are conventional savings accounts and financing or loans.

**Table 8.6: Focused Coding No. 1 for Interview Question 2**

<b>Sub-theme</b>	<i>Savings account</i>
Interviewee No.	Remarks
IN10, IN24, IN31	Used for the purpose of receiving salary as most governmental and private organisations prefer this method of payment.
IN35, IN37, IN39	Used for remittance from and transfer to children, relatives, or customers and suppliers.

**Table 8.7: Focused Coding No. 2 for Interview Question 2**

<b>Sub-theme</b>	<i>Financing</i>
Interviewee No.	Remarks
IN22, IN28	Used conventional financing or loan to purchase large or expensive assets such as a new car.
IN35	Used conventional financing or loan for business liquidity and the amount was often large.

As reported in Table 8.6 and Table 8.7, IsMFIs' clients who held a savings account with conventional banks needed it for receiving salary and payments from employers and customers respectively. Many of them also transfer money to their suppliers and to their relatives and children who lived or studied in other places, including in Malaysia. Interestingly, some purchased large and expensive assets such as new cars from conventional banks and financial institutions. Some also borrowed to improve their business liquidity.

### 8.2.3 Demand for Islamic Microfinancial Services

The results of the survey show that a majority of IsMFIs' clients utilise *wadiah* savings accounts and *murabahah* micro-financing. Only a small number of those clients use other available products such as *mudarabah* investment accounts, *mudarabah* pilgrimage accounts, and insurance schemes. The pawn service offered by Islam Pattani is popular among its clients. When asked about other products they need, the interviewees identified a variety of Islamic financial services. These services can be categorised into five groups, as depicted in Table 8.8.

**Table 8.8: Other Products and Services Needed**

Interview question 3	<i>What other products and services do you need that are currently unavailable at the IsMFI?</i>
Focused coding	Sub-theme/Remarks
1	Children's education services.
2	Pawn service.
3	Automatic teller machine (ATM).
4	Remittance and transfer.
5	Other services.
Concluding theme	IsMFIs' clients require other financial services such as child's education services, pawn service (for those IsMFIs currently not offering one), ATM, remittance and transfer, comprehensive insurance and credit card and overdraft.

**Table 8.9: Focused Coding No. 1 for Interview Question 3**

Sub-theme	<i>Children's education services.</i>
Interviewee No.	Remarks
IN12, IN13, IN23	Education fund based on <i>mudarabah</i> contract in which clients can deposit money and get it back when needed with some profits.
IN14, IN25, IN27, IN28	Education insurance based on any available <i>Shariah</i> -compliant contracts.
IN19, IN20, IN22, IN29, IN36	<i>Qard hasan</i> educational loan given without any return charges and can be repaid by instalment or lump sum.

The first main service is a service to fulfil the need for children's education, i.e. tuition fees, stationary costs, computers and computing facilities etc. This service can take the forms of educational funds, educational insurance, and benevolent educational loans. This service can be based on *mudarabah* contract, *qard hasan* and any other Islamic-compliant contracts. Educational funds based on *mudarabah* contract will provide some returns for the clients on a

regular basis and the whole amount can be recovered when needed. As for *qard hasan* or benevolent educational loan, this should be provided without any return mark-up and can be repaid either by instalments or lump sum.

**Table 8.10: Focused Coding No. 2 for Interview Question 3**

<b>Sub-theme</b>	<b><i>Pawn service</i></b>
Interviewee No.	Remarks
IN1, IN24, IN29	Paid for urgent need for children’s education, i.e. tuition fees, stationary etc.
IN13, IN24	Fulfilled urgent needs such as food and non-food consumption due to income shock.
IN7, IN22	Required for working capital for business expansion and business liquidity injection.

In order to manage their lives more effectively, a substantial number of clients of IsMFIs that are not currently providing a pawn service need this type of *Shariah*-compliant service. As highlighted in Table 8.10, a pawn service is basically needed to satisfy urgent financial requirements. One of these needs is the payment for tuition fees and other educational-related expenses of clients’ children, especially at the beginning of the academic year. Many also need pawn services to pay for food and non-food consumption when they suffer from income shocks as a result of natural disaster and loss of employment. As for SME entrepreneurs, working capital for business expansion and liquidity injection requires a fast injection of money. Pawn services can offer such a financial inflow.

**Table 8.11: Focused Coding No. 3 for Interview Question 3**

<b>Sub-theme</b>	<b><i>Automatic teller machine (ATM)</i></b>
Interviewee No.	Remarks
IN22	Used for convenience in doing business particularly for SME owners.
IN3, IN33	Utilised for effective household money management, i.e. short-term income shock, children’s education etc.
IN7	Needed for convenient withdrawal, receiving money from and transferring money to children and relatives living in other cities and abroad.

Another convenient service in demand is automatic teller machines (ATM), as reported in Table 8.11. SME owners need this service to manage their businesses more effectively when timely transfer to suppliers is needed. Households sometimes require money during non-office hours,

which they could therefore withdraw from ATMs. ATMs also offer convenience of withdrawals and transfer of money among clients' households especially for those who have children and relatives studying or working in other cities and in neighbouring countries, i.e. Malaysia and Singapore.

**Table 8.12: Focused Coding No. 4 for Interview Question 3**

<b>Sub-theme</b>	<b><i>Remittance and transfer.</i></b>
Interviewee No.	Remarks
IN21, IN7	Required remittance from customers or relatives from different locations including Malaysia and Singapore.
IN21, IN33, IN4, IN7	Needed transfer to suppliers or children and relatives in various locations including Malaysia and Singapore.

As exhibited in Table 8.12, clients required a form of remittance advice. SME owners could receive payments from their customers whilst others received money from their children and relatives who worked in Malaysia and Singapore. They could also transfer money to their children and relatives living in other cities and abroad.

**Table 8.13: Focused Coding No. 4 for Interview Question 3**

<b>Sub-theme</b>	<b><i>Other services</i></b>
Interviewee No.	Remarks
IN10, IN22	Required comprehensive insurance, i.e. cooperative insurance scheme and business insurance.
IN28	Needed credit card and overdraft for SME entrepreneurs.
IN6	Provided car service centre for members and non-members perhaps as an after-sales service for clients who obtained car financing from IsMFIs.
IN9	Increased funding for community support projects such as sports and community volunteering programmes.
IN28	Offered Islamic financing of new cars and large and more expensive assets.
IN8	Increased benevolent loan ( <i>qard hasan</i> ) for various purposes for the needy.

Clients wanted IsMFIs to offer some other services including a more comprehensive insurance scheme; this should include a cooperative insurance scheme, which most IsMFIs have been providing, and life and non-life insurance as provided by insurance companies. Car service centres for clients who received car financing from IsMFIs and non-members are also needed.

IsMFIs are also expected to increase community project funding, financing of large and more expensive assets such as new cars, and benevolent loans. These items are reported in Table 8.13.

#### 8.2.4 Economic Impacts of Islamic Micro-financing

Based on the last two micro-financing applications that they had taken out, the interviewees were asked to identify economic impacts and the pathway of economic impacts on their households. The summary of the results is exhibited in Table 8.14. The results show that Islamic micro-financing has an impact on household assets, income, self-employment and housing. These impact factors are discussed in detail in Table 8.14 – Table 8.18.

**Table 8.14: Economic Impacts of Islamic Micro-financing**

<b>Interview question 4</b>	<i>Do you think those financings have an impact on economic factors? If YES, how?</i>
Focused coding	Sub-theme/Remarks
1	Direct impact on assets.
2	Indirect impact on household income.
3	Indirect impact on self-employment.
4	Direct impact on housing.
<b>Concluding theme</b>	Financing of IsMFIs has either direct or indirect impacts on economic wellbeing of households, including the increase of assets, income, self-employment and housing.

**Table 8.15: Focused Coding No. 1 for Interview Question 4**

<b>Sub-theme</b>	<i>Direct impacts on assets.</i>
Interviewee No.	Remarks
IN1, IN2, IN3, IN5, IN6, IN7, IN9, IN14, IN19, IN27, IN28, IN30, IN31, IN32, IN33, IN34, IN35, IN36, IN37, IN39	Enabled clients to acquire more assets to be used in their business and daily life, i.e. car, motorcycle, and equipment.
IN13, IN15, IN24, IN25, IN26, IN31	Purchased non-productive assets for household use, i.e. furniture, refrigerator etc.

As highlighted in Table 8.15, clients of IsMFIs utilised Islamic micro-financing to acquire productive and non-productive assets. The productive assets include car, motorcycle, and equipment to be used for business and occupational purposes. The non-productive assets bought by IsMFIs' clients through micro-financing often included household goods such as furniture, refrigerator, and jewellery.

**Table 8.16: Focused Coding No. 2 for Interview Question 4**

<b>Sub-theme</b>	<b><i>Indirect impacts on household income.</i></b>
Interviewee No.	Remarks
IN1, IN3, IN5, IN6, IN7, IN9, IN14, IN22, IN23, IN26, IN27, IN30, IN32, IN34, IN35	Improved income as a consequence of increased economic activities from acquired productive assets.
IN13, IN20, IN21, IN24	Improved income as a consequence of increase in capital or liquidity injection.
IN19, IN33	Improved income as a result of housing expansion.

The clients' household income may increase as an outcome of Islamic micro-financing. As exhibited in Table 8.16, assets, capital or liquidity injection in clients' business and housing expansion will bring about increased economic activities within households. As a result, income of the households improves.

**Table 8.17: Focused Coding No. 3 for Interview Question 4**

<b>Sub-theme</b>	<b><i>Indirect impacts on self-employment in households.</i></b>
Interviewee No.	Remarks
IN1, IN5, IN6, IN7, IN14, IN21, IN22, IN23, IN26, IN27, IN30, IN34, IN35	Increased self-employment in households as a result of increased productive assets.
IN13, IN20, IN30	Increased self-employment opportunities in households from capital or liquidity injection.
IN9, IN19	Improved self-employment within households from expanded housing.

As listed in Table 8.17, Islamic micro-financing has indirectly improved self-employment opportunities within clients' households. According to the interviewees, self-employment in clients' households can improve in three pathways, i.e. acquired productive assets, capital or liquidity injection, and expanded housing. Many clients buy productive assets and use the assets for households' occupational activities such as rearing fish and selling sweets. SME owners use financing to buy goods considered as capital or liquidity injection. In addition, some expand their houses and use part of them as small shops selling miscellaneous items needed in the daily life of the villagers.



**Table 8.18: Focused Coding No. 4 for Interview Question 4**

<b>Sub-theme</b>	<b><i>Direct impacts on housing.</i></b>
Interviewee No.	Remarks
IN4	Purchased a new house built by IsMFIs and paid by instalments.
IN1, IN5, IN17	Purchased hardware and building materials to build a new house and paid by instalments.
IN2, IN8	Purchase of hardware and building materials to expand the existing house and paid by instalments.

Table 8.18 describes the pathway of impact on clients' housing. In one instance, the interviewees can purchase houses built by IsMFIs and repay by monthly instalments or on the basis of *murabahah* contract. In another instance, the interviewees can purchase hardware and building materials on the same contract and use those materials to build a new house or expand the existing house. The above circumstances underline the direct impacts of Islamic micro-financing on clients' housing.

In summary, the economic impacts of Islamic micro-financing by IsMFIs may be in terms of increased assets, improved income, enhanced self-employment and better housing. The impacts on assets and housing are perceived to be largely direct ones. Nevertheless, the impact on income and self-employment of household is believed to be indirect.

### **8.2.5 Non-economic Impact of Islamic Micro-financing**

When asked about non-economic impacts of Islamic micro-financing, the responses of the interviewees can be categorised into four main factors. These include the impacts on religious activities and practices of the clients and their households, the ability to support children's education, the improved food and non-food consumption, and the ability to pay for healthcare. The last three impact factors are the result of increased income within the household as a consequence of micro-financing. Table 8.19 highlights these items.

**Table 8.19: Non-economic Impacts of Islamic Micro-financing**

<b>Interview question 5</b>	<b><i>Do you think those financings have an impact on non-economic factors of household? If YES, how?</i></b>
Focused coding	Sub-theme/Remarks
1	Indirect impact on religious activities and practices of households.
2	Indirect impact on children's education.
3	Indirect impact on consumption of households.
4	Indirect impact on healthcare of households.
Concluding theme	Financing of IsMFIs can have direct or indirect impacts on households' religious activities and practices, children's education, consumption, and healthcare.

**Table 8.20: Focused Coding No. 1 for Interview Question 5**

<b>Sub-theme</b>	<b><i>Indirect impacts on religious activities and practices.</i></b>
Interviewee No.	Remarks
IN1, IN3, IN4, IN7, IN8, IN9, IN13, IN17, IN19, IN21, IN28, IN31, IN34	Attended more talks and lectures on Islamic topics which were organised by IsMFIs as part of their outreach programmes, by group members themselves, and by other organisations.
IN1, IN14, IN17, IN20, 24, IN31	Participated in social activities to strengthen brotherhood among members.
IN1, IN19, IN20, IN22, IN26, IN28, IN34	Encouraged members to perform religious duties such as paying <i>zakah</i> , attending congregation prayers etc.
IN22, IN23, IN30, IN34	Seen as a way to bring Islamic economic system into practice.

Applying for Islamic micro-financing in particular and participating in IsMFIs in general require clients to be involved in more religious activities and to bring religious teachings into practice. As exhibited in Table 8.20, the interviewees are often required to attend talks and lectures on religious duties as well as on their role in IsMFIs before they are able to apply for financing. When assigned to a group, they can voluntarily attend Islamic lectures organised by the group leaders and other organisations. Within the group, social activities are arranged to strengthen brotherhood among the group members so that they can help one another in various ways. During the group meetings, the members are encouraged to duly perform religious duties such as paying *zakah* and attending congregation prayers. Thus, IsMFIs are perceived to be a vital step in bringing an Islamic economic system to life and fulfilling the way of life of Muslims.

**Table 8.21: Focused Coding No. 2 for Interview Question 5**

<b>Sub-theme</b>	<b><i>Indirect impacts on children's education.</i></b>
Interviewee No.	Remarks
IN27	Borrowed emergency loan to pay for university tuition fees.
IN1, IN7, IN9, IN14, IN17, IN19, IN20, IN21, IN22, IN23, IN28, IN30, IN33	Purchased equipment, transport and stationary to facilitate education and learning of children in households.

Furthermore, Islamic micro-financing has an impact on the ability of households to support children's education at various levels. This is due to the fact that household income increases as a result of Islamic micro-financing. These impact factors are listed in Table 8.21. Clients can borrow emergency loans to pay for tuition fees, and this is considered to have a direct impact on children's education. Unfortunately, not many IsMFIs offer such a service and it is considered on a case-by-case basis. The clients usually buy motorbikes to use for transport to school and university, and purchase computers for their children to use at school and university. These facilities are essential for effective learning by the children today.

**Table 8.22: Focused Coding No. 3 for Interview Question 5**

<b>Sub-theme</b>	<b><i>Indirect impact on consumption in households.</i></b>
Interviewee No.	Remarks
IN13, IN14, IN21, IN26	Could provide better quality of food intake for members of households.
IN13, IN14, IN21, IN26	Could provide better quality of non-food items for members of households.

Islamic micro-financing may have an indirect impact on consumption in households. As reported in Table 8.22, the impact may be on both food and non-food consumption. The interviewees claimed that, when they obtained micro-financing from IsMFIs to buy productive assets or improve their business liquidity, their household income increased. They can therefore spend more money on high-quality food and clothes. Some of them mentioned that they could go on vacations and pilgrimage due to their increased income.

**Table 8.23: Focused Coding No. 4 for Interview Question 5**

<b>Sub-theme</b>	<b><i>Indirect impact on healthcare.</i></b>
Interviewee No.	Remarks
IN1	Paid for costs of medication for serious illness not covered under government healthcare system.
IN13, IN30	Could afford private medication for normal illness.

Islamic micro-financing can indirectly affect the ability of clients' households to receive healthcare services. Table 8.23 highlights two main impacts of micro-financing on healthcare, which is the result of increased income. Clients may pay for costs of medication for serious illnesses that are not covered by the government healthcare system. Some may want to visit private doctors or healthcare providers and are able to pay the costs from their income.

To conclude, most of the clients interviewed during the fieldwork perceived that their households had been affected indirectly after they acquired Islamic micro-financing based on *murabahah* contract. They could often attend more religious talks and congregation prayers, and be involved in social activities. Their households could also afford to pay for the children's higher educational expenses, eat better-quality food, and pay for additional healthcare for illnesses not covered by the government healthcare system.

### **8.2.6 Impacts of Other Islamic Microfinance Services**

When asked about the impacts of other Islamic microfinance services, the interviewees tend to be reluctant to discuss these in detail. They were of the opinion that those services are either for a specific purpose or several purposes depending on what they are used for. These services can be categorised into two categories, as highlighted in Table 8.24.

**Table 8.24: Impacts of Other Islamic Microfinance Services**

<b>Interview question 6</b>	<i>Do you think the services have economic impacts on your household? IF YES, how?</i> <i>Do you think the services have non-economic impacts on your household? IF YES, how?</i>
Focused coding	Sub-theme/Remarks
1	Provided one specific impact as targeted by IsMFIs.
2	Fulfilled several benefits depending on clients' use.
Concluding theme	Impacts of other Islamic microfinance services can be classified into 2 categories, i.e. one specific impact and several impacts on households depending on the purposes of use.

**Table 8.25: Focused coding No. 1 for interview question 6**

<b>Sub-theme</b>	<b><i>One specific impact.</i></b>
Interviewee No.	Remarks
IN21, IN22, IN23, IN28	Investment account which targets a wealthy group of clients to provide opportunities for them to invest for returns.
IN9, IN12, IN14	Pilgrimage account which provides opportunities for the clients to save their money for pilgrimage purposes.
IN8, IN17, IN19, IN21, IN23, IN37	Insurance scheme which serves clients who need help in medication and healthcare, death etc.

Other types of micro-financial service offered at IsMFIs have very specific purposes and can be recognized from the names of the services. As highlighted in Table 8.25, *mudarabah* investment account, for instance, serves clients who have extra money to invest in IsMFIs' and other members' projects for a return. Pilgrimage accounts target those wanting to go on pilgrimage, while insurance schemes help clients to pay for healthcare expenses and to support their family in the event of death. These services can serve specific purposes and have an impact on the lives of clients, as intended.

**Table 8.26: Focused coding No. 2 for interview question 6**

<b>Sub-theme</b>	<b><i>Several impacts.</i></b>
Interviewee No.	Remarks
IN5, IN17, IN9	Savings account can serve various purposes, i.e. buying assets, paying for medical costs, children's tuition fees, food and non-food consumption, and building house.
IN11, IN37, IN39	Pawn services can be used for buying food and non-food items, paying for children's tuition fees etc.

Table 8.26 depicts two Islamic microfinance services, i.e. savings accounts and pawn service, both of which can provide a number of benefits to or impacts on clients' households. Clients may use money withdrawn from their savings account for various purposes which may include buying food and non-food items and paying for their children's tuition fees. This implies that savings accounts have an impact on both consumption and children's education. In fact, the accounts help with household financial management. This is similar to the pawn service which offers convenience for clients to manage their lives, especially when they urgently need money for various purposes.

### 8.2.7 Achievements and Challenges Facing IsMFIs in Thailand

The interviewees perceive that IsMFIs in Thailand have achieved a number of breakthroughs in the past thirty years. As reported in Table 8.27, the main achievements include the ability of the IsMFIs to offer *Shariah*-compliant financial services, good service quality, financial strength and confidence, assistance to the poor and society, and providing a practical understanding of Islam, particularly in economic affairs. These items are discussed in more detail in the following section.

**Table 8.27: Main Achievements of IsMFIs in Thailand**

<b>Interview question 7</b>	<b><i>What do you think is the achievement of IsMFIs?</i></b>
Focused coding	Sub-theme/Remarks
1	Offer <i>Shariah</i> -compliant financial products.
2	Good service quality.
3	Financial strength and confidence.
4	Help the poor and society.
5	Practical understanding of Islam.
Concluding theme	IsMFIs' clients perceive the ability to offer <i>Shariah</i> -compliant products, to provide good service quality, to have financial strength and confidence, to help the poor and society, and portray practical understanding of Islam to people as the main achievements of the IsMFIs.

**Table 8.28: Focused Coding No. 1 for Interview Question 7**

<b>Sub-theme</b>	<b><i>Offer Shariah-compliant financial products.</i></b>
Interviewee No.	Remarks
IN2, IN11, IN14, IN23, IN26, IN31, IN36, IN37, IN38 IN7	Offer interest-free financial services to Muslim and non-Muslim clients in a non-Muslim country.
IN39	Help manage <i>zakah</i> for members who invest in <i>mudarabah</i> investment account and the dividends that clients receive at the end of the year.
IN23, IN27, IN30	Not involved in activities prohibited by <i>Shariah</i> such as gambling and support of prohibited activities.

According to the interviewees, taking the initiative to offer interest-free financial services to clients in a non-Muslim country is considered a huge achievement for IsMFIs in Thailand. It has been difficult for IsMFIs to convince the Thai authorities of the applicability of interest-free finance. The interviewees also believe that IsMFIs comply with Islamic principles in all business and non-business activities. Until recently, some IsMFIs have been helping to manage *zakah*, which is derived from investment profits and dividends, for the clients at the year end. Table 8.28 lists all these points.

**Table 8.29: Focused Coding No. 2 for Interview Question 7**

<b>Sub-theme</b>	<b><i>Good service quality.</i></b>
Interviewee No.	Remarks
IN4, IN12, IN29, IN37	Offer a variety of Islamic financial services that can satisfy different needs of clients.
IN1, IN3, IN5, IN26, IN32, IN33, IN35	Provide flexible process and procedures that take into consideration the financial status and needs of clients.

Table 8.29 exhibits the perceived good-quality services offered by IsMFIs. IsMFIs not only provide *Shariah*-compliant financial services but also offer some flexibility in the services to the clients. For instance, a client was offered *qard hasan* loan instead of financing to pay for his children's tuition fees. In most IsMFIs, a personal guarantee, for instance, can be an alternative to collateral.

**Table 8.30: Focused Coding No. 3 for Interview Question 7**

<b>Sub-theme</b>	<b><i>Financial strength and confidence.</i></b>
Interviewee No.	Remarks
IN6, IN35	Opened more branches especially in other districts far from main cities or provincial centres.
IN24, IN25, IN34	Had a strong financial performance, i.e. increase in profits, assets, and financing outstanding balance.
IN9, IN19, IN20, IN28, IN29	Increased the number of clients continuously in the past few years due to the clients' confidence in IsMFIs' operations and performance.

Table 8.30 highlights one of the main achievements of IsMFIs: financial strength and confidence. The interviewees believe that IsMFIs' ability to open more branches will expand the outreach of Islamic microfinance into untapped rural areas. Together with the strong reported financial indicators and increased number of clients in the past years, this boosts the confidence of both existing and potential clients. Many will then decide to participate in IsMFIs.

**Table 8.31: Focused Coding No. 4 for Interview Question 7**

<b>Sub-theme</b>	<b><i>Help the poor and society.</i></b>
Interviewee No.	Remarks
IN20, IN8	Helped poor people to manage their lives by providing various services to satisfy their needs and <i>zakah</i> contributions.
IN22, IN23	Encouraged entrepreneurship among members, especially in the form of small and medium-sized enterprises (SMEs).
IN23, IN22	Strengthened brotherhood and harmony among members so that they could help each other in various areas.
IN3, IN22, IN23	Supported social activities such as youth training programmes, sports camps, and educational programmes.

A considerable number of the interviewees are concerned about the socio-economic goals of these IsMFIs. As exhibited in Table 8.31, they believe that, to a certain extent, IsMFIs have accomplished a reasonable amount in this respect. Various Islamic microfinance services have enabled many poor Muslims to participate in the financial market for the first time and have helped to improve their wellbeing. Annual *zakah* contributions from IsMFIs can help the poor and needy. Many of the clients have operated well with the help of IsMFIs' finance. Moreover, group and social activities can improve brotherhood and harmony among members. Finally, IsMFIs frequently sponsor social and educational programmes with a view to improving society at large.



**Table 8.32: Focused Coding No. 5 for Interview Question 7**

<b>Sub-theme</b>	<b><i>Practical understanding of Islam.</i></b>
Interviewee No.	Remarks
IN10, IN27	Could bring Islamic principles related to economic life into practice.
IN10, IN27	Considered to be part of call to Islam ( <i>da'wah</i> ).

As reported in Table 8.32, the interviewees regard the establishment of IsMFIs as a pioneering effort to bring Islamic economic principles to life. This is a way to prove that Islam is a complete way of life which incorporates all aspects of human life. It might be one of the ways to call people to Islam.

**Table 8.33: Challenges Facing the IsMFIs**

<b>Interview question 8</b>	<b><i>What do you think are the challenges facing the IsMFI?</i></b>
Focused coding	Sub-theme/Remarks
1	Ineffective procedures.
2	Lack of effective human resource management practices.
3	High default rate.
4	Members' lack of knowledge about operations of IsMFIs.
5	Facing strong competition.
Concluding remarks	Ineffective policy and procedures, lack of human resource management, high default rate, lack of knowledge of members about IsMFIs' operations, and strong competition from Islamic banks and other financial institutions are the main challenges facing IsMFIs.

As reported in Table 8.13, the interviewees believed that IsMFIs are facing a number of challenges that they must overcome in order to provide quality services. The main challenges include ineffective policies and procedures, lack of human resource management, high default rate, clients' lack of knowledge about the operations of the IsMFIs, and strong competition in the market.

**Table 8.34: Focused Coding No. 1 for Interview Question 8**

<b>Sub-theme</b>	<b><i>Ineffective procedures.</i></b>
Interviewee No.	Remarks
IN2	Demanded high collateral requirements for micro-financing applications, turning away most poor and average clients.
IN1, IN2, IN4, IN7, IN15, IN27, IN29, IN31, IN34, IN37	Charged high return rate for micro-financing, demotivating potential clients and poor households.
IN6, IN37, IN39	Took a long time to process financing applications, causing delay in SME liquidity injection and business prospects.
IN10	Lack of clear procedures for unpopular services such as insurance schemes and investment accounts.

Table 8.34 lists items under ineffective procedures. The clients feel that IsMFIs have high collateral requirements and charge high return rates for micro-financing applicants. In many circumstances, IsMFIs take an unreasonably long time to approve micro-financing applications. According to them, this causes considerable difficulties for SME owners. They also find it hard to obtain accurate information on other services apart from micro-financing. Most clients do not understand how to join insurance schemes or make investments. Some do not even know that these services are available at all.

**Table 8.35: Focused Coding No. 2 for Interview Question 8**

<b>Sub-theme</b>	<b><i>Lack of effective human resource management.</i></b>
Interviewee No.	Remarks
IN3, IN9, IN10, IN23, IN24, IN34	Recruited under-qualified staff who lacked specialisation, experience and professionalism, causing inaccuracy in work and interruption of future business undertakings.
IN24	Lack of commitment and competence by board members, bringing about delays in decisions on financing applications and other policy-related issues.
IN27	Had inadequate number of staff, thus reducing the effectiveness of activities within client groups.

As depicted in Table 8.35, there are some human resource management issues. Some interviewees felt that a number of staff are not qualified to do the job. This causes inaccuracy in their work and results in inconvenience to the clients. For instance, a client had to travel back to an IsMFI office from another province after finding out that his savings account had been incorrectly credited. That incident cost him a transportation expense of THB500. Some have

voiced concerns over the ability of IsMFIs to undertake more complicated transactions in future due to the lack of qualified staff. Moreover, the clients feel that the board members of IsMFIs have failed to give full commitment to IsMFIs' activities because they have other full-time jobs. This causes slow approval of financing services and delays in decisions on policies and procedures which affect the efficiency and effectiveness of IsMFIs' operations.

**Table 8.36: Focused Coding No. 3 for Interview Question 8**

<b>Sub-theme</b>	<b><i>High default rate.</i></b>
Interviewee No.	Remarks
IN11, IN12, IN13, IN19, IN25, IN31	Faced high default rate due to irresponsible clients who failed to pay instalments after taking financing of assets.
IN8	Faced high default rate as a result of incompetent and irresponsible staff and board members who approved financing for their friends, relatives etc.

As for the high default rate, the interviewees are of the opinion that this is due to irresponsible clients who should be dealt with more effectively. More importantly, the default could be due to incompetent and irresponsible staff and board members who have approved micro-financing for their friends and relatives. For instance, an interviewee who has some insider information reported that most, if not all, big defaults of an IsMFI were related to this behaviour.

**Table 8.37: Focused Coding No. 4 for Interview Question 8**

<b>Sub-theme</b>	<b><i>Members' lack of knowledge about operations of IsMFIs.</i></b>
Interviewee No.	Remarks
IN32, IN33	Clients had little knowledge about policies and procedures related to individual services, thus causing delay in approval of their applications.
IN10, IN20	Clients had little knowledge and understanding about their roles and responsibilities within IsMFI.

As listed in Table 8.37, the clients also need to learn more about the operations of IsMFIs in order to play their roles more effectively. According to the interviewee, the IsMFIs' clients tend to have little knowledge about policies and procedures of IsMFIs, particularly about individual service. This results in delays to their applications. They also need to know their duties and responsibilities as members, as they can directly influence the survival of IsMFIs.

**Table 8.38: Focused Coding No. 5 for Interview Question 8**

<b>Sub-theme</b>	<b><i>Face strong competition.</i></b>
Interviewee No.	Remarks
IN22, IN35	Faced strong competition from new Islamic financial institutions such as Islamic Bank of Thailand and other Islamic cooperatives which target the same market group.
IN22, IN23	Faced strong competition from conventional financial banks and non-bank financial institutions which target Muslims in southern Thailand, especially for financing of large and expensive assets with more flexible conditions.

Table 8.38 shows issues related to strong competition faced by IsMFIs in Thailand. Unlike previous years, both the Islamic Bank of Thailand and conventional banks and finance companies are now targeting Muslim clients with more attractive offers. Many interviewees have been approached by these banks and finance companies which have offered them more attractive packages for financing of new cars and business liquidity. A better infrastructure and more branches may also attract IsMFIs' clients who need remittance and transfer services.

To conclude, IsMFIs in Thailand have achieved significant success in various aspects, i.e. providing small *Shariah*-compliant financing services, expanding their business very quickly, and assisting the poor and society. In order to sustainably provide microfinance services more effectively, the IsMFIs must be able to tackle issues related to human resources, policies and procedures, strong competition, and high default rate.

### **8.3 CONCLUSION**

From the above discussion, some key financial behaviours of IsMFIs' clients have been found. These clients are found to be very sensitive to Islamic principles, as the interest-free factor has become a predominant motivational factor for the use of these financial services. A majority of them choose not to utilise conventional banks and financial institutions at all unless it is a necessity, such as savings accounts for payment of salary and remittances and transfers. Many view participation in IsMFIs as the chance to help one another in society, while confidence in the operations of the IsMFIs in terms of financial performance and service quality may also contribute to the level of participation. However, it is fair to conclude that Islamic factors drive financial inclusiveness in Muslim society in Thailand.

In terms of demand, the clients appear to use a variety of Islamic microfinance services to serve their households' financial needs. The main services, i.e. financing and savings accounts, can be used for general household financial management, including acquisition of assets and working capital, and urgent need of money for diverse purposes. Others may be very specific, such as investment accounts, insurance schemes, and pilgrimage accounts. The pawn service is becoming very popular because of its flexibility in the process of application and approval, and it can satisfy different needs. Many believed that the IsMFIs should provide educational insurance or funds to help the clients meet the educational expenses of their children. This would be a way for the IsMFIs to fulfil their social obligations. The clients of IsMFIs in Thailand are therefore like other groups of people who need various financial products to satisfy a variety of needs, some of which are seasonal.

Responding to the experience of the impacts of financing (the main product of IsMFIs which most clients have utilised), the clients claimed that financing has direct impacts on assets and housing. It also has indirect impacts on income, self-employment, children's education, consumption, healthcare, and religious activities and practices.

Finally, the IsMFIs in Thailand have achieved significant success; without them the Muslim community in the country may not be able to participate in the financial market effectively. However, these IsMFIs must overcome issues of human resources and establish proper policies and procedures so that they can compete with the Islamic Bank of Thailand and conventional banks and financial institutions in the long run. Members of the IsMFIs must realise the vital role they play, not only as financial beneficiaries but also as the agents of change in society based on Islamic teachings.

## Chapter 9

### OUTREACH AND SUSTAINABILITY OF ISLAMIC MICROFINANCE INSTITUTIONS

#### 9.1 INTRODUCTION

MFIs aim at providing a wide range of small financial services to the poor and excluded so that they might manage their lives more effectively. The provision of these services must be available for the foreseeable future. Hence, the people will benefit from their existence and may help them to eventually escape poverty. These two critical aspects denote the outreach and sustainability of microfinance. In the light of these, it has been suggested that MFIs have reached a considerable number of clients in the past four decades, but have failed to reach the poorest segment of society who need their services most (Navajas *et al.*, 2002). This is partly because the poor do not have the required education, skill and ability to fully utilise the services provided by MFIs (Zeller and Meyer, 2002a).

Furthermore, the MFIs operating in many parts of the world tend to depend on grants and donations from governmental and non-governmental organisations. Many have stopped providing the services completely after these external subsidies cease (Rauf and Mahmood, 2009, Pollinger *et al.*, 2007). It is therefore essential for this study to investigate whether or not the IsMFIs in the form of cooperatives, operating in a non-Muslim country such as Thailand can provide financial services to a considerable number of poor and non-poor Muslims who are often driven out of conventional financial markets due to poverty and faith. Additionally, it is particularly interesting to examine whether these IsMFIs are efficient and profitable in their operations like many other conventional financial institutions. This will indicate the competitiveness of these IsMFIs in an unfriendly financial environment such as Thailand. Hence, this chapter attempts to answer the objective number 3: to examine outreach and sustainability of IsMFIs in Thailand.

In order to examine these features, financial and non-financial data are collected mainly from IsMFIs' annual reports from 1997 to 2008. The financial data, which are in the Thai Baht (THB), are estimated in USD figures and then transformed into suitable forms for final analysis. During this process, *zakah* amounts, operating costs, etc, which have been established on different bases,

are standardised. Various indicators are chosen based on popularity among practitioners and availability of data. Each of these will be presented in tables and Figures. In each table, the figures of the latest year, which is 2008, will be placed in the top row, followed by figures of the three periods calculated based on the four-year geometrical average: 1997-2000, 2001-2004 and 2005-2008 respectively. The Figures are prepared based on yearly data to illustrate trends of those indicators. It should be noted that the growth rate of all indicators is based on the four-year annual average growth of each IsMFI.

Given the above, this chapter is organised into seven sections. The next section describes outreach indicators, including number of clients, financing outstanding and its growth, and total balance of deposits. The following section explores sustainability of IsMFIs using financial spread and operational self-sufficiency. This is followed by a discussion on efficiency indicators comprising operating cost ratio, salaries as a percentage of average total assets and cost per unit of currency lent. The subsequent section discusses profitability indicators of return on assets, return on business and return on equity. Total assets, *zakah* amounts and *ar-rahn* amounts are then investigated before a concluding section is provided at the end of the chapter.

## **9.2 OUTREACH OF IsMFIS**

Outreach of a MFI can be described from various aspects and by using various indicators depending greatly on the objectives and the availability of data. These indicators should include scale, which refers to number of clients, and depth, which indicates the type of clients and the level of their poverty that an MFI can reach (Zeller *et al.*, 2003). An MFI may also take into consideration worth, cost, length, and scope of outreach (Schreiner, 2002). This study discusses the main aspects of breadth of outreach relevant to the IsMFIs for which data are available. These comprise client outreach, financing outreach and savings outreach. The number of clients represents a client outreach indicator. Ratio of volume of deposits to volume of outstanding financings and total balance of outstanding financings are two financing outreach indicators and total balance of deposits denotes savings outreach.

### 9.2.1 Number of Clients

Clients of the IsMFIs are individual members who contribute shares to the IsMFIs. In practice, a few observations need to be made on recognition of clients. Firstly, organisational clients, especially Islamic schools and Islamic non-profit organisations, may not be recognised as member clients even though they contribute to members' shares. As-Siddeek, for instance, does not initially include organisational clients in its report while others do. This means that As-Siddeek's number of clients reported in its annual reports is underestimated. Another important point is the treatment of deposit accounts as members' funds. Ibnu Auf, for example, recorded all *wadiah* and *mudarabah* amounts as members' funds during 1993-2000, implying that they were members, while other IsMFIs did not. Hence, the client figure of Ibnu Auf reported during these years may have been overestimated based on the above definition. These diverse practices are partly due to different policies and their implementations by IsMFIs. In this study, client figures are the numbers reported in annual reports.

As illustrated in Table 9.1, the number of clients of the four IsMFIs had risen significantly during the period 1997 to 2008. The number of clients of Islam Pattani grew by 9.4%, 14.5% and 12.6% during the three periods and reached 26,858 persons in 2008. Ibnu Affan recorded client increases of 10.4%, 59.3% and 55.3% during the periods and the client number stood at 38,894 persons in 2008. Ibnu Auf reported 29.3%, 14.9% and 11.1% growth rates during those periods. In 2008, its clients numbered 20,654 persons. At As-Siddeek, the number of clients was 6,137 in 2008. The number of clients was up by 17.5% in the first period and rocketed to a 57.5% increase in the following period. The growth slowed in the last period to 30.4%. The trends of the number of clients are exhibited in Figure 9.1.

**Table 9.1: Number of Clients (Persons) and Their Growth (%)**

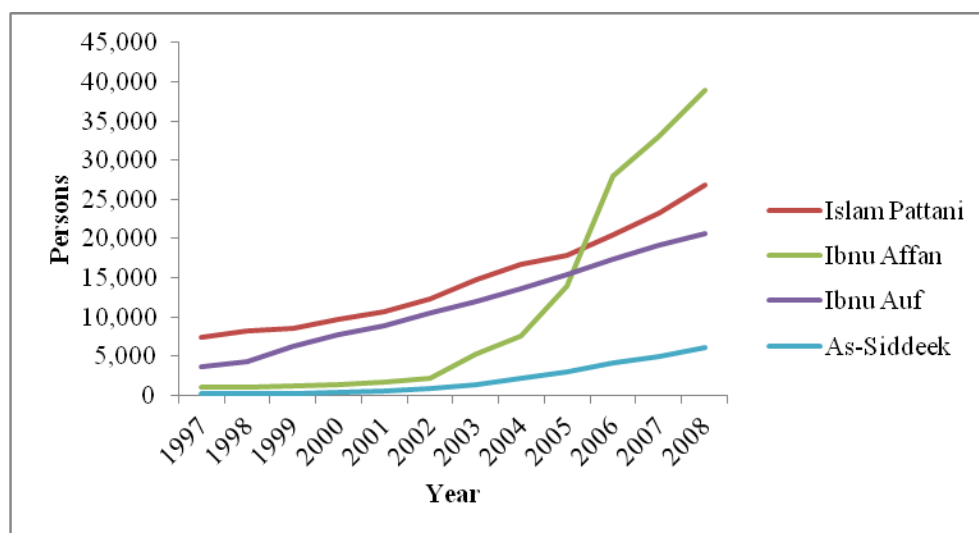
Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
<b>2008 (persons)</b>	26,858	38,894	20,654	6,137
<b>1997-2000 (%)</b>	9.4	10.4	29.3	17.5
<b>2001-2004 (%)</b>	14.5	59.3	14.9	57.5
<b>2005-2008 (%)</b>	12.6	55.3	11.1	30.4

Source: Calculated from IsMFIs' financial reports 1997-2008



The number of clients of all IsMFIs demonstrates an increasing trend. Key changes during the period are due to changes in membership policy. Islam Pattani displayed an average growth of 12.2% during this period. The client numbers grew significantly in 2006 due to a 40.4% increase in the *ar-rahn* service which requires people who need the service to first become members of the IsMFI (ISCP, 2006). Ibnu Affan's average growth in client numbers was 44.5%. The highest growth was 138.9%, recorded in 2003, which was the year this IsMFI opened up its membership to a larger public, not specifically Muslim groups who were initially targeted (IAFSC, 2003). At Ibnu Auf, a decreasing growth rate with an average of 18.4% was reported. The highest growth rate of 42.5% was demonstrated in 1999 when the IsMFI aggressively expanded its operations (IAC, 1999). As-Siddeek reported an average increase of 35.1% during the periods and exhibited the highest growth in 2003 at 76.3%, the year when the IsMFI changed its membership policy, targeting a wider public (ASDC, 2003).

**Figure 9.1: Trend of Clients**



### 9.2.2 Financing Outstanding and Its Growth

A micro-financing service is an integral part of IsMFIs and it indicates the outreach ability of these institutions. IsMFIs offer various types of financings broadly categorised into ordinary financings and emergency financings. Ordinary financings could be for various purposes including purchasing of consumer goods, purchasing of agricultural land, building houses and buying productive assets. These financings are usually based on *murabahah* contract. Emergency

financings consist of financings for natural disaster and educational purposes. These financings are based on *qard hasan*. Islam Pattani, unlike other IsMFIs, offers emergency financings through its *ar-rahn* service. All these financings are reported together as financing outstanding in this study.

Financing outstanding of the four IsMFIs has constantly expanded from 1997 to 2008. As shown in Table 9.2, Ibnu Affan reported the highest financing outstanding among them, recording over USD15 million in 2008 alone. In the same year, Ibnu Auf registered around USD14 million of outstanding financing while Islam Pattani and As-Siddeek disclosed about USD6.5 million and USD5 million respectively. At Ibnu Affan, the financing outstanding consistently grew at an increasing rate during the three periods, displaying a rate of 27.4% in the first period. The growth was up to 29.1% in the second period before finishing the next period significantly higher at 50.2%. Islam Pattani and As-Siddeek, however, grew at a diminishing rate during these three periods while Ibnu Auf's growth was fluctuating.

**Table 9.2: Financing Outstanding (USD '000) and Its Growth (%)**

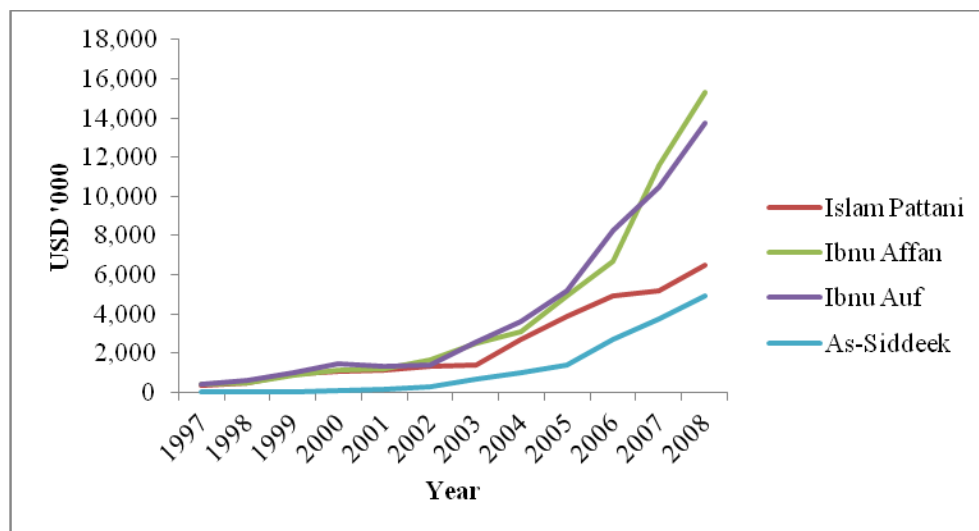
Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008 (USD '000)	6,466	15,336	13,745	4,908
1997-2000 (%)	35.8	27.4	34.2	172.5
2001-2004 (%)	30.7	29.1	29.9	88.3
2005-2008 (%)	25.2	50.2	40.2	49.0

Source: Calculated from IsMFIs' financial reports 1997-2008

In addition, the growth of outstanding financing had been steady before it began to increase continuously after 2004. As illustrated in Figure 9.2, Islam Pattani had registered an increasing trend of financing outstanding from 1997 to 2003. However, the growth started to shrink thereafter. Ibnu Affan reported an increasing trend of financing outstanding during the first half of the study period. In 2003, the IsMFI registered a 138.9% growth followed by a 44.5% growth in 2004. The growth picked up again, however, in the next two years before continuing to decline after that. Ibnu Auf reported a fluctuating growth trend during this period. The growth had been between 10%-20%. As-Siddeek saw a big increase during 1997-2003 but it slumped continuously thereafter. The decline of financing outstanding of these IsMFIs in 2004 was partly

due to the recommendation of the Cooperative Accounting Auditing Department which noted a high rate of unpaid financings in these IsMFIs (ASDC, 2003).

**Figure 9.2: Trends of Financing Outstanding**



### 9.2.3 Total Balance of Deposits

Deposit accounts are an important part of IsMFIs' services in Thailand. The four IsMFIs offer a variety of deposit accounts based on *shariah* principles, namely *wadiah* and *mudarabah*. Islam Pattani currently offers *wadiah* deposit accounts and *mudarabah* accounts for clients who want to invest in its investment projects initiated by the IsMFI or by other clients. Ibnu Affan provides *wadiah* accounts and *mudarabah* accounts. *Mudarabah* accounts are in two forms: investment accounts and *haj* accounts. Ibnu Auf offers the same savings services as Ibnu Affan. However, the IsMFI began receiving its first type of deposits, *wadiah*, only in 2006. Previously, all deposits were considered as members' funds although the deposits could be withdrawn at any time. At As-Siddeek, savings have been tailored into different accounts to suit clients' needs. These include *wadiah* accounts for safekeeping, *mudarabah* accounts for investment, *haj* accounts for pilgrimage purposes, youth accounts for marriage, and *mudarabah selamat* for long-term investment. The latter three accounts are based on *mudarabah* contract. In order to calculate total savings or deposits amount, amounts of all deposits reported in the balance sheets of the IsMFIs are summed to derive total savings or deposits.

As illustrated in Table 9.3, Ibnu Auf reported the highest deposits among the IsMFIs, registering around USD10 million in 2008, followed by Ibnu Affan which received over USD8 million deposits that year. In the same year, Islam Pattani and As-Siddeek showed deposits of around USD6 million and USD4 million respectively. All IsMFIs reported a continued positive growth of deposits during 1997-2008. Islam Pattani and Ibnu Affan had deposits growth of just over 20% during the period. As-Siddeek suggested a big growth at a decreasing rate, showing a huge growth of 1,320.2% during the first few years of its establishment and declining continuously to 88.8% during 2001-2004 and 52.7% during 2005-2008.

**Table 9.3: Total Deposit (USD '000) and Its Growth (%)**

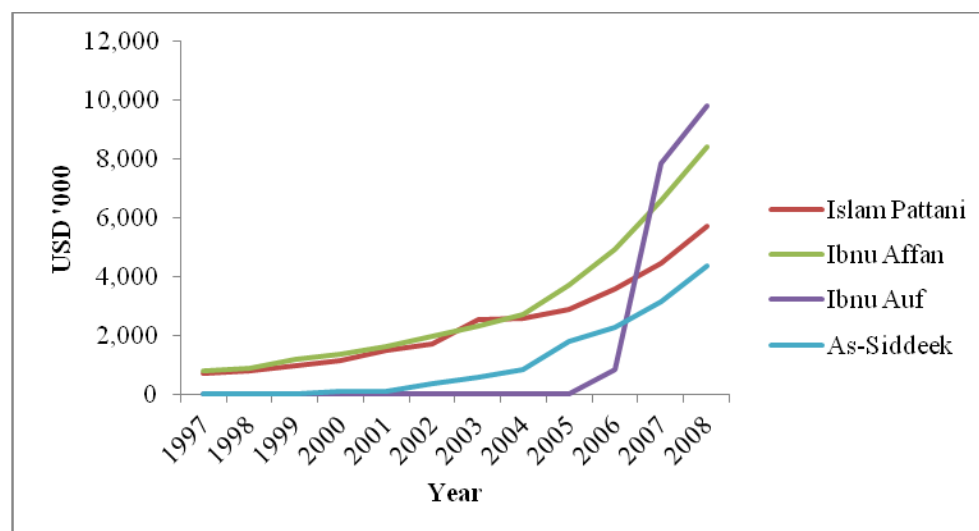
Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008 (USD '000)	5,706	8,445	9,797	4,371
1997-2000 (%)	17.3	18.9	na	1,320.2
2001-2004 (%)	23.7	18.8	na	88.8
2005-2008 (%)	22.0	32.8	425.7	52.7

Source: Calculated from IsMFIs' financial reports 1997-2008

A positive growth in total deposits of all IsMFIs is clearly demonstrated in Figure 9.3. Islam Pattani and As-Siddeek showed a consistent growth during 1997-2008. Ibnu Affan's trend suggested a faster rate of deposit growth after 2004. Ibnu Auf's deposits grew at a high rate after it changed its policy to record some of its *wadiah* and *mudarabah* accounts as deposits, not members' funds, in 2001 (IAC, 2001).

In view of the above, it is clear that IsMFIs can provide financial access to the Muslim poor and non-poor who have been excluded from the Thai conventional financial system. The IsMFIs offer alternative financial services including financings, deposits and micro-insurance which are needed for managing their daily lives. The trends of various outreach indicators have been positive ones during the period of study. However, this study cannot evaluate the depth of outreach or the extent to which they reach the poor segment of the Muslim community due to unavailability of data. It will now be interesting to ascertain whether these IsMFIs, which have provided financial services to a considerable number of Muslims, can achieve another main objective of a MFI: sustainability.

**Figure 9.3: Trend of Deposits**



### **9.3 SUSTAINABILITY OF IsMFIs**

Sustainability is a key issue in microfinance, especially when an MFI relies on grants from governmental and non-governmental agencies. A sustainable MFI suggests that it can cover its costs and operate for the foreseeable future (Zeller and Meyer, 2002a). Techniques employed to assess sustainability of a MFI comprise financial spread, operational self-sufficiency, financial self-sufficiency and subsidy dependence index (Ledgerwood, 1999, Yaron, 1992). Financial spread and operational self-sufficiency are suitable for IsMFIs in the form of cooperatives as they depend heavily on sources of funds from members in terms of members' funds and savings.

#### **9.3.1 Financial Spread**

Financial spread is the difference between the revenue earned on the outstanding portfolio and the average costs of funds. It is calculated by dividing operating revenue after the deduction of financing costs by average portfolio outstanding. If return on investment is included in the operating revenue, average performing assets can replace average portfolio outstanding (Ledgerwood, 1999). Financial spread gives the revenue available to cover operating costs, financing loss provision and the cost of capital (Jansson, 2003). In this study, average performing assets and operating costs are used as IsMFIs' financial reports do not specify costs on debts.

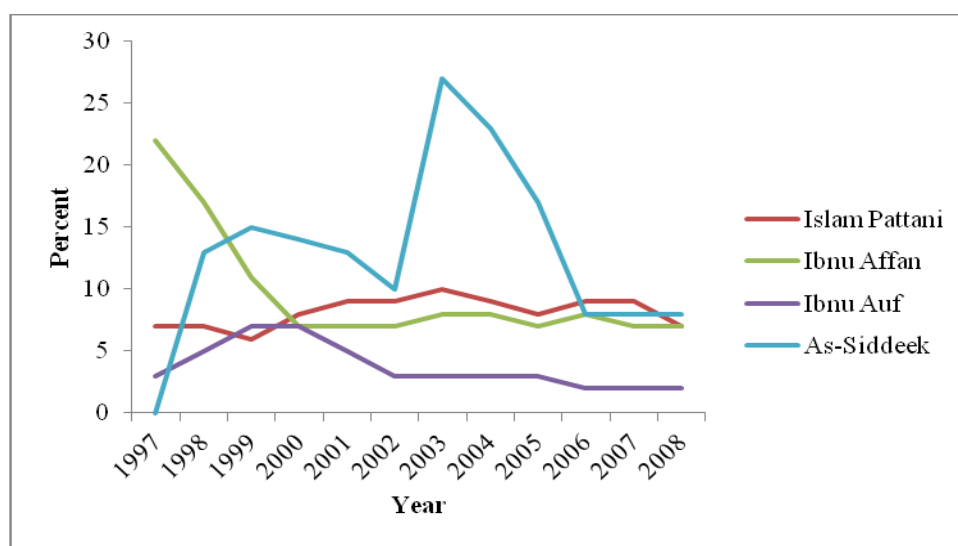
**Table 9.4: Financial Spread (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008	7.3	7.3	1.8	7.7
1997-2000	7.1	14.1	5.2	13.9
2001-2004	9.1	7.5	3.5	18.2
2005-2008	8.3	7.5	2.1	10.2

Source: Calculated from IsMFIs' financial reports 1997-2008

As illustrated in Table 9.4, financial spread of IsMFIs shows a fluctuating trend during 1997-2008, possibly indicating a diverse efficiency position of the IsMFIs. The IsMFIs reported a spread of below 20% throughout the period. Islam Pattani exhibited an average financial spread of 8.2%. The spread rose from 7.1% during 1997-2000 to 9.1% during 2001-2004, followed by a considerable drop to 8.3% in the following period. The IsMFI reported a spread of 7.3% in 2008. Ibnu Affan performed slightly better in this respect, registering an average spread of 9.1% in the same period and reaching a lowly 7.3% in 2008. The IsMFI went from 14.1% during 1997-2000 to 7.5%, a reduction of around 32%. However, the spread remained unchanged at 7.5% during the last two periods. As-Siddeek recorded an average of 14.5% of financial spread. The figure dropped sharply in the last few years, however, reaching a modest 7.7% in 2008. Ibnu Auf recorded the smallest financial spread among the IsMFIs, reporting a figure of 5.2% during the first period and falling in the subsequent periods to 1.8% in 2008.

**Figure 9.4: Financial Spread**



In view of the financial spread, this IsMFI tends to be more efficient in generating income from assets as compared to the other IsMFIs in this study. This trend is partly explained by the increase in revenue at a higher rate as compared to the increased assets. Figure 9.4 shows the trend of financial spread of IsMFIs during 1997-2008. It should be noted that a sharp increase of financial spread for As-Siddeek in 2003 is perhaps due to an aggressive membership policy and a strong return from its property business during the period (ASDC, 2003). The membership of the IsMFI, which was initially confined to those who have the same Islamic ideology, was opened to the general public without any restriction. The change brought about an increase in financing and revenues from its operations.

### 9.3.2 Operational Self-Sufficiency

Another important sustainability indicator is operational self-sufficiency. It indicates whether or not a MFI is earning enough revenue to cover operating costs, hence suggesting that it may continue to offer financial services to its clients for the longest possible period of time (Harper, 1998). In this study, operational self-sufficiency is derived by dividing operating income by operating cost, including provision for financing loss and financing cost, which were available in some IsMFIs in the last few years. Some IsMFIs reported *zakah* which is not related to operations as part of operating costs; the amount of *zakah* is therefore deducted from the reported operating costs to obtain the final operating cost figures for the calculation of this indicator. A higher operational self-sufficiency is preferable and indicates the ability of an MFI to continue its operations without any assistance, which is common for MFIs.

Table 9.5 indicates that all IsMFIs had generally achieved operational self-sufficiency during 1997-2008, ranging from 115.0% to 257.9%. Islam Pattani, which registered an average 194.2%, recorded 190.0% in 2008. During the three periods of four-year averages, it grew from 146.1% to 215.3% and 221.1% in the subsequent periods. Ibnu Affan exhibited a decreasing operational self-sufficiency with an average of 175.0%, reaching 130.9% in 2008, the lowest among the IsMFIs that year. The sufficiency figure began with 195.0% during the first period, followed by a decline of 16.5% to 167.4%. It went down further to 162.7% in the last period. Ibnu Auf reported a low, but somewhat increasing, trend of sufficiency indicator with an average of 117.8%. The IsMFI registered 98.0% of self-sufficiency in the first period, followed by 99.5%

the period after. The IsMFI then exhibited 155.8% during 2005-2008, and reported 134.5% of operational self-sufficiency in 2008. As-Siddeek, although recording the highest average self-sufficiency of 200.8%, disclosed a somewhat fluctuating trend of self-sufficiency during these periods. It reported a modest 143.6% of self-sufficiency in the first period, followed by a 39.4% increase to 257.9% in the second period. During 2005-2008, it declined by 22.1% to 200.8%. As at 2008, 149.4% of self-sufficiency was reported.

**Table 9.5: Operational Self-Sufficiency (%)**

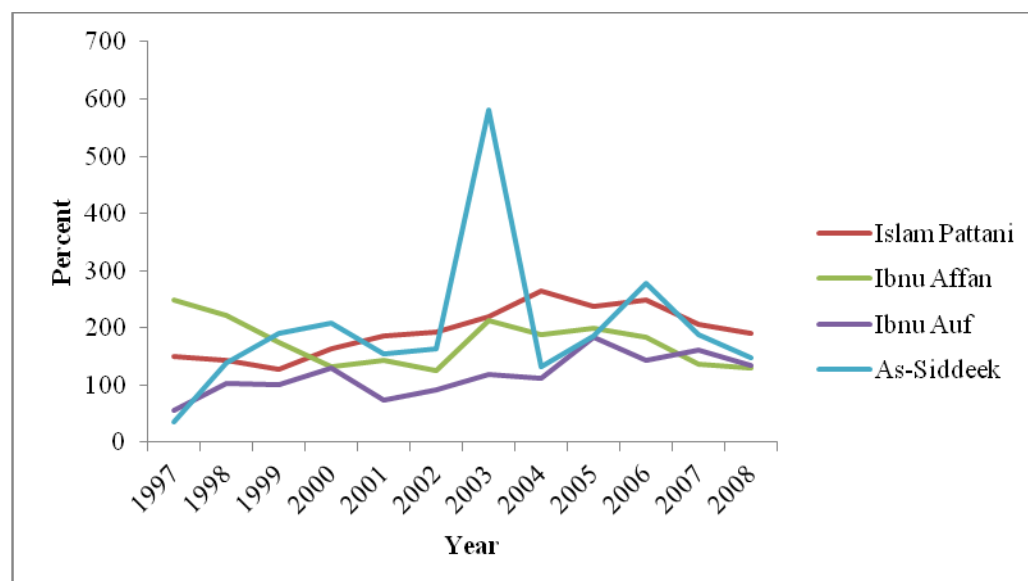
<b>Year</b>	<b>Islam Pattani</b>	<b>Ibnu Affan</b>	<b>Ibnu Auf</b>	<b>As-Siddeek</b>
<b>2008</b>	190.0	130.9	134.5	149.4
<b>1997-2000</b>	146.1	195.0	98.0	143.6
<b>2001-2004</b>	215.3	167.4	99.5	257.9
<b>2005-2008</b>	221.1	162.7	155.8	200.8

Source: Calculated from IsMFIs' financial reports 1997-2008

As shown in Figure 9.5, the operational self-sufficiency of all IsMFIs demonstrates that they could cover costs with revenues from their operations. The IsMFIs consistently report operational self-sufficiency of over 100%. This trend is in part explained by the fact that, until recently, most IsMFIs have been providing financial services based on *murabahah* contracts so that profit can be fairly ensured. Moreover, staff-related costs are considered low because, unlike most mainstream MFIs, the IsMFIs employ individual lending technology; thus, the number of staff required is small. During 1997, As-Siddeek earned revenues to cover only 35.6% of its costs. This is perhaps due to the fact that the IsMFI was new, being established that year by people who had little experience of managing a financial institution. Default financings were therefore huge in that period (ASDC, 1997). It should be noted that As-Siddeek demonstrated 581.6% operational self-sufficiency in 2003, reflecting the aggressive involvement of this IsMFI in the property business that yielded a very high return during the year, as discussed in the previous section (ASDC, 2003).



**Figure 9.5: Operational Self-Sufficiency**



## 9.4 EFFICIENCY INDICATORS

As pointed out in the previous section, the IsMFIs are operationally self-sufficient; it would therefore be interesting to see whether these IsMFIs are efficient and profitable in their operations. The following two sections will investigate these two aspects. Efficiency ratios measure the cost of providing services to generate revenue (Gibson, 2011). Efficiency ratios chosen for this study include operating cost, salaries as a percentage of average portfolio outstanding, and cost per unit of currency lent.

### 9.4.1 Operating Cost Ratio

Operating cost ratio is derived by dividing operating costs by average portfolio outstanding, if an MFI provides mainly financings to its clients. However, average total assets are more appropriate for MFIs that offer some other services apart from financings. A more efficient MIF tends to have a smaller operating cost ratio (Ledgerwood, 1999). The IsMFIs provide financings, deposits, investment and insurance; average total assets are used in the calculation of the operating cost ratio. Successful mainstream MFIs tend to have operating cost ratios of between 5 and 16 per cent of their average total assets (Christen *et al.*, 1995).

Table 9.6 illustrates the operating cost ratios of the IsMFIs. The IsMFIs have operating cost ratios in the range of successful MFIs. Ibnu Auf was the most efficient IsMFI, exhibiting the ratios of 5.3%, 3.8%, and 1.3% during the periods. It registered 1.3% of operating cost ratio in 2008. Islam Pattani reported 4.9%, 4.3% and 3.8% operating cost ratios during the three periods. The figure stood at 3.9% in 2008. Ibnu Affan recorded 6.9% of operating cost ratio in the first period, which decreased by 37.7% to 4.3% in the second period. The ratio on average shrank further to 3.8% in the third period. As-Siddeek registered 7.9% of operating ratio in the first period and then increased to 9.1% in the period after. The ratio dropped by 41.8% to 5.3% in the last period. The IsMFIs reported an impressive 5.1% of operating cost ratio in 2008.

**Table 9.6: Operating Cost Ratio (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008	3.9	5.6	1.3	5.1
1997-2000	4.9	6.9	5.3	7.9
2001-2004	4.3	4.3	3.8	9.1
2005-2008	3.8	3.8	1.3	5.3

Source: Calculated from IsMFIs' financial reports 1997-2008

**Figure 9.6: Trends of Operating Cost Ratio**

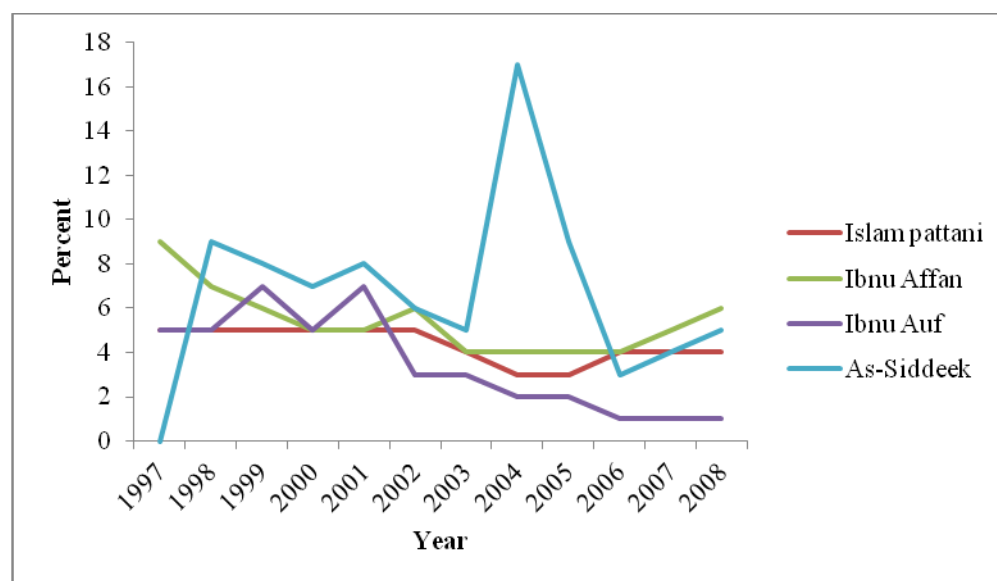


Figure 9.6 shows the trends of the operating cost ratios, which tend to decline over time. This implies that the IsMFIs are expanding and developing better efficiencies in their operations. Islam Pattani, Ibnu Affan, Ibnu Auf, and As-Siddeek have average operating cost ratios of 4.3%, 5.4%, 3.5% and 6.8% respectively. Another point worth emphasising is the fluctuation of As-Siddeek's ratio during 2001-2004. This reflects its aggressive investment in the sale of property and land, which incurs high costs with remarkable expected returns in 2003 (ASDC, 2003).

#### **9.4.2 Salaries as a Percentage of Average Total Assets**

In view of the discussion on operating cost ratio, it is worth inquiring further into some of the biggest components of costs in the IsMFIs. One of these components is salaries and wages paid to staff of the IsMFIs. Salaries as a percentage of average portfolio outstanding are often used to analyse revenues left over after salaries and wages are paid. As mentioned earlier in the previous section, the IsMFIs provide a variety of services; average total assets are used in the calculation of this ratio. Salaries and wages used in the calculation include salaries, wages and staff benefits. Low salaries as a percentage of average total assets ratio tends to suggest high efficiency in microfinance operations.

Table 9.7 exhibits that the IsMFIs have a low level of salaries as a percentage of average total assets, suggesting that they have been operating efficiently. Islam Pattani reported an average of 1.6% in the first period. The ratio then stood at 1.3% in both the last two periods and 2008. Ibnu Affan recorded a 2.2% ratio in the first period, followed by a decline to 1.5% in the second period. However, it grew slightly to 1.6% in the final period. The figure stood at 1.5% in 2008. Ibnu Auf demonstrated a consistent decrease in the ratio, exhibiting 3.4% during the first period. It then decreased by 61.8% to 1.3% in the following period. It declined again to 0.5% in the last period and 2008. As-Siddeek reported the figure of 4.3% during 1997-2000 and then 2.6% in the subsequent period. The ratio decreased further to 1.4% in the last period and dropped to 1.3% in 2008.

Moreover, as clearly shown in Figure 9.7, the ratios of all IsMFIs have persistently decreased during 1997-2008. This indicates that the IsMFIs have increased efficiency in their operations over time. Islamic Pattani has an average ratio of 1.4% while Ibnu Affan and Ibnu Auf record an average of 1.8%. As-Siddeek reports an average 2.6% of this ratio. Ibnu Auf and As-Siddeek on

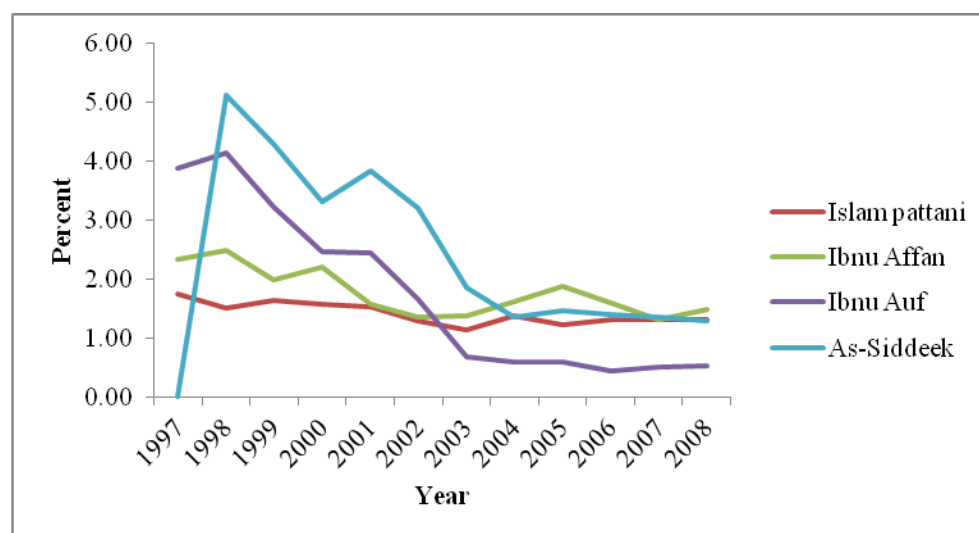
average appear to record higher salaries as a percentage of average total assets ratios as compared to other two IsMFIs. These two IsMFIs' ratios declined sharply during 1998-2003. However, the ratios showed a slow reduction thereafter. The other two IsMFIs' ratios tend to show a decline at a decreasing rate and at some points they remain constant. The trends suggest that these IsMFIs operate efficiently, especially when they have operated for a longer time and have had more experience. It should be noted that salaries as a percentage of average total assets of the IsMFIs are much lower than the ratios of other successful MFIs, which have ratios of between 4% and 16% (Christen *et al.*, 1995). This might be because the IsMFIs employ individual lending technology and do not often have staff attending group meetings. Only recently did an IsMFI hold a pilot group meeting, and it is still at an initial stage. Thus, the number of employees is small, leading to small salaries and benefits paid.

**Table 9.7: Salaries as Percentage of Average Total Assets (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008	1.3	1.5	0.5	1.3
1997-2000	1.6	2.2	3.4	4.3
2001-2004	1.3	1.5	1.3	2.6
2005-2008	1.3	1.6	0.5	1.4

Source: Calculated from IsMFIs' financial reports 1997-2008

**Figure 9.7: Trends of Salaries to Average Total Assets Ratio**



### 9.4.3 Cost per Unit of Currency Lent

Another efficiency ratio often calculated in a MFI is cost per unit of currency lent. This ratio is derived by dividing operating costs by total financing amount disbursed in the period and it is often compared over time. It indicates the impact of the turnover of the financing portfolio on operating costs. The lower the ratio, the higher the efficiency (Ledgerwood, 1999). In this study, Islam Pattani, Ibnu Affan and As-Siddeek include the *zakah* figure in operating costs; it will therefore be deducted from the operating costs reported in their financial statements. Ibnu Auf, however, does not report the *zakah* amount as an operating cost item but, rather, as a deducted item after profit, so the operating costs figure recorded in the income statement is suitable for this analysis.

The IsMFIs report small costs per unit of currency lent during 1997-2008. Islam Pattani recorded 10.9% of the ratio in the first period and then increased to 11.2% in the following period. It reached 19.9% in 2008, basically due to reduced financing activities. Ibnu Affan's ratio of the first two periods cannot be calculated because no records of financing disbursed during those periods are available. During 2005-2008, it exhibited 6.6% of this ratio and stood at 9.1% in 2008. Ibnu Auf reported 8.2%, 7.1% and 3.3% during the three periods and registered 3.4% of this ratio in 2008. As-Siddeek's cost per unit of currency lent was reasonably low and has been declining during the study years. In the first period, this IsMFI registered 19.5% of the ratio and it then sharply reduced by 31.3% in the following period. The ratio decreased further to 10.4% in the last period and stood at 8.7% in 2008.

**Table 9.8: Cost per Unit of Currency Lent (%)**

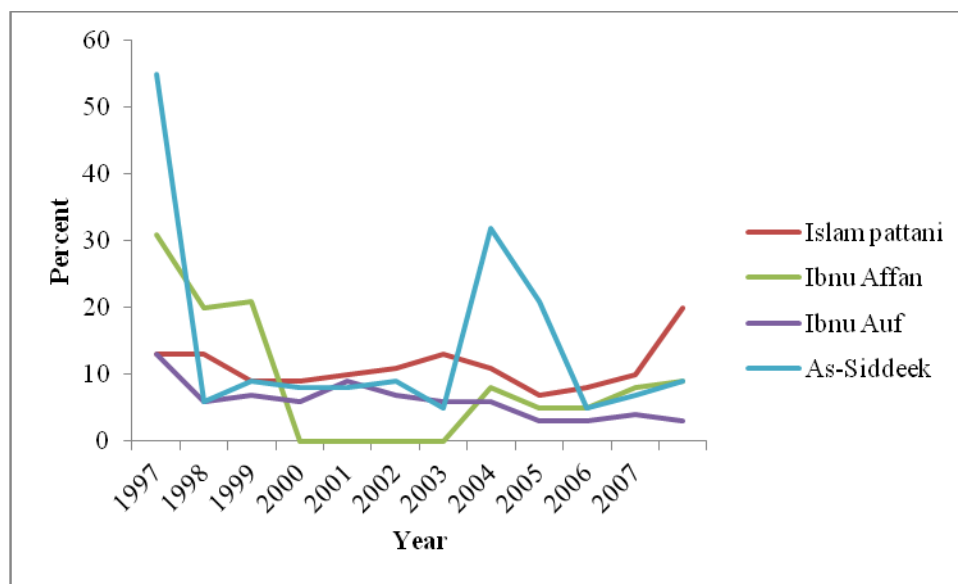
<b>Year</b>	<b>Islam Pattani</b>	<b>Ibnu Affan</b>	<b>Ibnu Auf</b>	<b>As-Siddeek</b>
<b>2008</b>	19.9	9.1	3.4	8.7
<b>1997-2000</b>	10.9	na	8.2	19.5
<b>2001-2004</b>	11.2	na	7.1	13.4
<b>2005-2008</b>	11.3	6.6	3.3	10.4

Source: Calculated from IsMFIs' financial reports 1997-2008

Figure 9.8 illustrates the trends of cost per unit of currency lent by the IsMFIs, and they tend to be consistently low. Islam Pattani reports an average ratio of 11.1% while Ibnu Affan, Ibnu Auf

and As-Siddeek register 13.3%, 6.2% and 14.6% of the ratio respectively. The high ratio of As-Siddeek in 1997 was due to its inexperience in managing lending activities during the early years of its operations. The high ratio in 2004 was the result of aggressive investment in property and land, as discussed earlier.

**Figure 9.8: Cost per Unit of Currency Lent**



The discussion on efficiency ratios suggests that the IsMFIs have been operating efficiently over time and the trends have been stable in the last few years of their operations. The IsMFIs tend to incur low costs in the lending business and indicate higher costs if they are involved more in other types of businesses such as buying and selling of land, which require high investment amounts. At As-Siddeek, this trend can be observed in some years when it was actively involved in land and house business, which involves big costs. Nevertheless, these IsMFIs have generally achieved the efficiency levels of successful MFIs and should be able to provide financial access to the poor and non-poor Muslims who are excluded from the country's financial system. The next section discusses another component of a successful MFI, profitability.

## 9.5 PROFITABILITY INDICATORS

As pointed out in the preceding discussion, performance of the IsMFIs has been impressive. It is therefore important to assess whether the IsMFIs that have fine records of outreach, sustainability and efficiency will be profitable. This section therefore describes the profitability

indicators of these IsMFIs. Profitability ratios measure a business's net income in relation to the structure of its balance sheet and are used to examine how well assets and equity are utilised to generate profit so that the future profit can be forecasted (Samuels *et al.*, 1995). The indicators discussed here are return on assets ratio, return on business ratio and return on equity ratio. In the case of IsMFIs in Thailand, these ratios help members, executive board members and managers to determine whether they are earning an adequate return on their funds invested in the IsMFIs. Thailand cooperative averages of return on assets and return on equity are available and therefore provided for comparison.

### **9.5.1 Return on Asset Ratio**

Return on assets (ROA) compares income with total assets. The ratio not only measures the management's ability to employ total assets to generate profits but also indicates income accruing to all fund providers irrespective of source of fund (White *et al.*, 2003). In this study, average total assets are used in calculating return to assets ratio, because the IsMFIs are being measured on their total financial performance, including the decisions to invest in other organisations or subsidiaries, and to purchase land and buildings. Profit before *zakah* is used in calculations to ensure that earnings are from operating activities. Hence, *zakah* amount is added back into the profit reported in the income statement if the amount is included in operating costs or expenses. According to Christen *et al.* (1995) successful MFIs had adjusted return on assets ratios ranging from 7.4% to -18.5% in 1993.

As illustrated in Table 9.9, all IsMFIs tend to have positive return on assets ratios, although these figures are not adjusted for inflation. The ratios are somewhat similar to the Thailand average. Islam Pattani reported ROA at 2.3% in the first period, followed by a 108.7% increase to 4.8% in the period after. However, the ROA reduced to 4.3% in the final period, reaching 3.4% in 2008. Ibnu Affan's ROA ranged from 1.9% to 2.1% during these periods, indicating a stable return on assets. Ibnu Auf registered a relatively high ROA, reporting 5.6% in the first period. This was followed by a reduction to 5.0% and 3.9% in the two subsequent periods. The 2008 figure stood at 4.0%. As-Siddeek recorded 6.0% of ROA in the first period. The ratio then increased by 51.7% to 9.1% during 2001-2004. However, it declined to 4.7% in the last period, indicating a decrease of 48.4%. In 2008, the ROA of this IsMFI stood at 2.1%.

**Table 9.9: Return on Asset Ratio (%)**

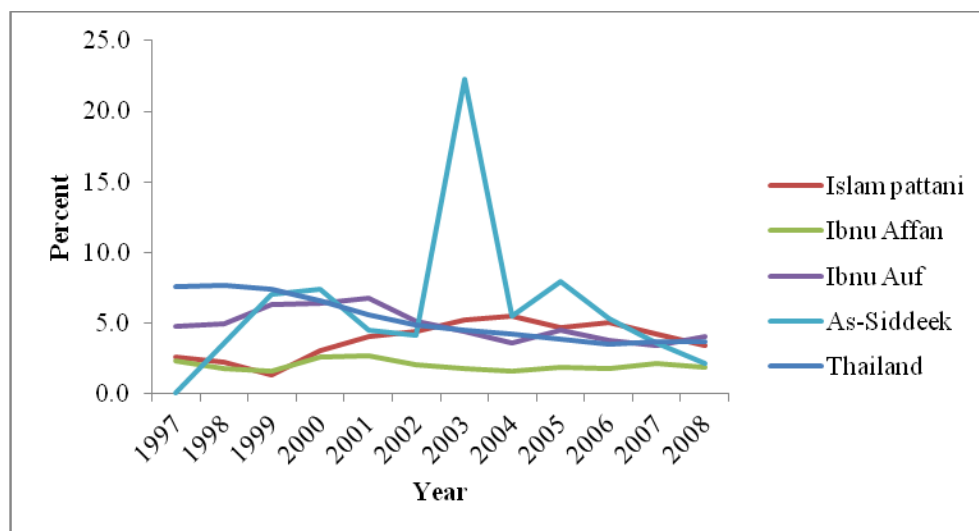
Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek	Thailand
2008	3.4	1.9	4.0	2.1	3.7
1997-2000	2.3	2.1	5.6	6.0	7.3
2001-2004	4.8	2.1	5.0	9.1	4.8
2005-2008	4.3	1.9	3.9	4.7	3.7

Source: Calculated from IsMFIs' financial reports 1997-2008

Financial condition of cooperative institutions by CAD in various years

Figure 9.9 illustrates the ROA of the IsMFIs during the years 1997-2008. With some exceptions, the ROA of the IsMFIs tends to be lower than the country average in the first few years before outperforming it thereafter. Islam Pattani and As-Siddeek are the two IsMFIs that recorded better a ROA in the later period. Ibnu Auf, however, exhibited very similar levels of ROA as compared to the country average while Ibnu Affan consistently reported lower ones. A few points need to be discussed further here. The huge increase in ROA of As-Siddeek in 2003 was due to increased income from aggressive investment in the property business, as described earlier. Secondly, the ROA of the IsMFIs over time shows that these IsMFIs can compete with conventional financial institutions of the same type in the long run.

**Figure 9.9: Trends of return on assets**





### 9.5.2 Return on Business

Many MFIs mobilise deposits as a substantial part of their business activities, and return on business (ROB) ratio is a good profitability indicator. This is because operational and financial costs may be added into other costs. Return on business is provided by dividing income by average business base which is derived from summing the assets and liabilities and dividing by two. It is a good estimator of profitability if a MFI acts as a true financial intermediary and uses deposits to provide loans (Ledgerwood, 1999). The IsMFIs provide a variety of services like banks, so return on business is a fair profitability estimator. In this study, net income before *zakah* is used for the calculation of return on business for the reason stated in the preceding section.

Return on business of the IsMFIs appears to be varied: some have a fluctuating return on business, while others display a stable one during the period. The ratios tend to be higher than ROA of the same period, indicating that deposit mobilisation activities do not negatively affect operational and financing costs. This is so because the IsMFIs do not provide interest on savings accounts on the basis of *wadiah* contract. Only savings accounts on the basis of *mudarabah* are entitled to a predetermined ratio of profits from IsMFIs' business. Islam Pattani exhibited a low return on business in the first period, recording 2.8%, followed by an increase of over 100% to 5.7% in the later period. However, the ratio dropped slightly to 5.1% in the final period and reached 3.9% in 2008. Ibnu Affan recorded a very stable low return on business of between 2.0% and 2.1% over the years. Ibnu Auf demonstrated a high return on business during the first period and then declined thereafter. It reported 8.3%, 7.5% and 5.1% during the three periods and reached 4.3% in 2008. This figure was still high compared to Islam Pattani and Ibnu Affan. As-Siddeek had a negative return on business of -6.4% in the first period, followed by a sharp increase of 231.3% in the succeeding period. This was because net income increased 12 times as compared to a 1.1 times increase of total assets and liabilities. However, the ratio dropped sharply to 4.9% in the last period and stood at 2.2% in 2008.

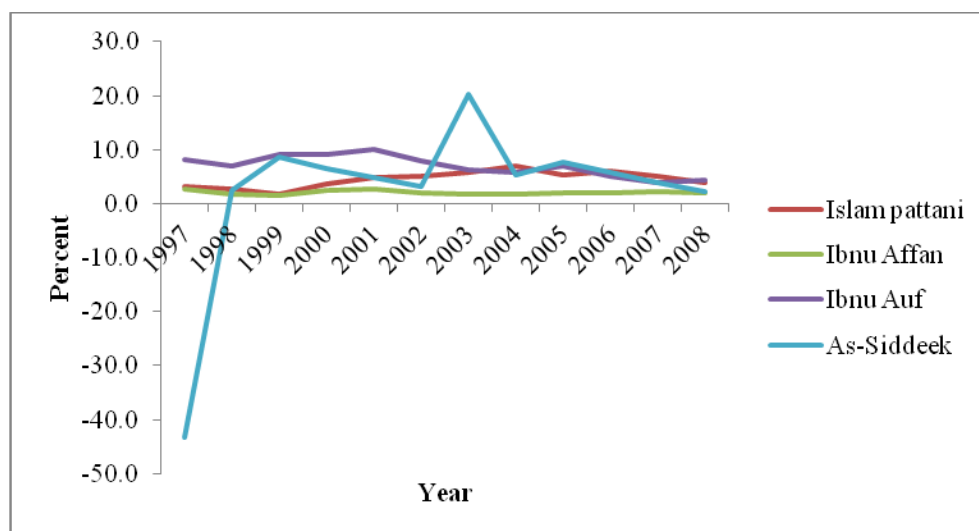
**Table 9.10: Return on Business (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008	3.9	2.0	4.3	2.2
1997-2000	2.8	2.1	8.3	-6.4
2001-2004	5.7	2.0	7.5	8.4
2005-2008	5.1	2.0	5.1	4.9

Source: Calculated from IsMFIs' financial reports 1997-2008

As exhibited in Figure 9.10, the trends of return on business of the IsMFIs from 1997 to 2008 tend to be stable over the years. With the exception of As-Siddeek, the ratios ranged from 1.0% to 10.0% and were similar to ROA during the same period. This suggests the advantage of *wadiah* savings accounts offered by the IsMFIs which do not incur substantial additional operating and financing costs. As-Siddeek had a negative 43.3% in 1997, the first year of its establishment, because it relied heavily on borrowed funds in the form of *wadiah* deposits to finance its business. However, the ratio increased to 2.5% in 1998 and 8.6% in 1999. It then declined continuously during 2000-2002 before a big jump to 20.2% in 2003 due to a high income, as discussed in earlier sections. The IsMFI reported a decreasing return on business from that year until 2008.

**Figure 9.10: Trends of Return on Business**



### 9.5.3 Return on Equity

Another main profitability indicator is return on equity ratio. The ratio provides the stakeholders of the IsMFIs with the rate of return they make from the invested funds. This is a very important indicator of the IsMFIs in the form of cooperatives in which members' funds usually constitute the biggest portion of the source of funds. This ratio is to a great extent affected by the capital structure of MFIs. Lower return on equity ratio is often the case for MFIs, whose assets are funded by equity. According to Christen *et al.* (1995) the most successful MFIs had inflation-adjusted return on equity ratios ranging from 32.7% to -18.7%. In this study, income before *zakah* is used in the computation of this ratio without any inflationary adjustment. Average total equity is the denominator.

As illustrated in Table 9.11, the ROE of the IsMFIs appears to be high. Islam Pattani recorded ROE of 4.4%, 10.4% and 9.6% during the three periods and the ratio stood at 7.6% in 2008. Ibnu Affan registered 16.0% ROE in the first period and thereafter dropped sharply to 13.3% and 5.9% during the subsequent periods. The ROE was 5.1% in 2008. Ibnu Auf, however, exhibited a slightly different scenario, increasing in the later period and reaching 11.8% in 2008. The IsMFI initially indicated a return on equity ratio of 6.9% during 1997-2000, and it then declined slightly to 5.9%. The ratio then grew after that period. As-Siddeek reported a fluctuating return on equity during the period. The IsMFI registered a ratio of 15.9% in the first period, followed by a growth of 52.2% to 24.2% during 2001-2004. However, it declined by 46.7% in the next period and reached 5.2% in 2008.

**Table 9.11: Return on Equity (%)**

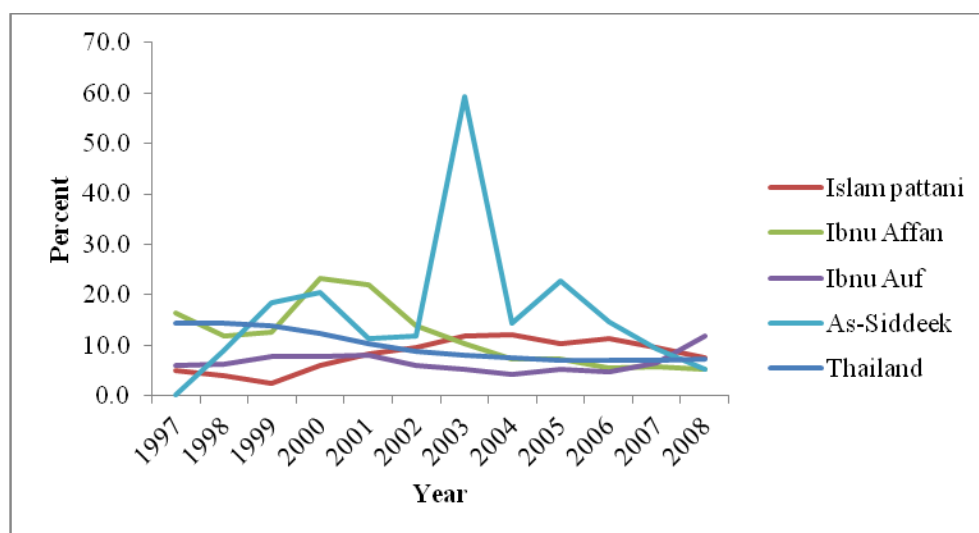
Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek	Thailand
2008	7.6	5.1	11.8	5.2	7.2
1997-2000	4.4	16.0	6.9	15.9	13.7
2001-2004	10.4	13.3	5.9	24.2	8.6
2005-2008	9.6	5.9	7.1	12.9	7.0

Source: Calculated from IsMFIs' financial reports 1997-2008  
Financial condition of cooperative institutions by CAD in various years

Figure 9.11 exhibits the trends of return on equity ratios of the IsMFIs. With some exceptions, the ratios tend to fluctuate during the first few years and decline thereafter. The ratios are often

higher than that of the country average. This may be explained in part by the efforts of the IsMFIs to acquire more equity in terms of members' funds in the later years. The IsMFI could then have more funds to invest and to provide financial services to the clients and remain liquid. Moreover, these IsMFIs currently retain a substantial part of earnings for educational and welfare purposes. This can be seen especially with As-Siddeek and Ibnu Auf which have financed educational projects for Muslims in their localities. As pointed out in the discussion on ROA, As-Siddeek reported a high income in 2003 due to a change of recognition of the method of income, causing its ratios, which use income as a nominator, to be large. Thus, the return on equity ratio of this IsMFI was 59.4% in 2003. Interestingly, Ibnu Auf's ROE is always lower than that of the country average. This might be a result of the policy of recording all deposits as members' fund; this causes its equity to be big, causing the ROE to be small. However, the trend changed in 2008.

**Figure 9.11: Trends of Return on Equity**



The profitability indicators discussed above show that the IsMFIs are efficiently managed and profitable according to the MFI standards and the industry in the country as a whole. With some notable exceptions, these IsMFIs tend to outperform the industry in the later years. It is fair to conclude that the IsMFIs in the form of Islamic cooperatives can operate profitably and competitively in Thailand's financial industry. Nevertheless, there are some other indicators, especially the social ones, that are essential for Islamic financial institutions. These indicators are examined in the following section.

## 9.6 OTHER INDICATORS

There are other indicators worth examining, including total assets, *zakah* contribution, and *ar-rahn* outstanding balance. Total assets figure is the basis for other calculations and comparison of other indicators such as return on assets, return on business and return on equity. *Zakah* is a social indicator of Islamic financial institutions while *ar-rahn* is a kind of emergency financing that is viewed rather like an insurance service and is another social indicator. Unlike financings and other services which need considerable time, this service can be easily attained and the approval is timely.

### 9.6.1 Total Assets

Total assets of the IsMFIs, as exhibited in Table 9.12, have shown a continuously rising trend. Islam Pattani recorded growth of 15.8%, 22.7% and 21.1% during the three periods and reached USD10.5 million in 2008. Ibnu Affan reported USD15.9 million in 2008 and grew by 20.2%, 21.1% and 43.8% during the same periods. Ibnu Auf displayed the highest total assets among the IsMFIs, recording USD20.1 million in 2008. This IsMFI, however, had a decreasing growth rate during these periods. As-Siddeek reported a 204.2% increase during 1997-2000 and thereafter declined to 97.6% and 41.6% in the last two periods respectively. The total assets reported in 2008 were approximately USD7.7 million. One important point worth noting here is that the total assets of As-Siddeek grew sharply during 1997-2000 because it had only just started operating and Muslim people were at that time familiar with Islamic microfinance as some other pioneering Islamic microfinance institutions had been successful in their operations. More importantly, As-Siddeek was the first IsMFI operating in Hat Yai, Songkhla Province, the commercial city of Southern Thailand. Many Muslims in this area are well-off as compared to Muslims in other provinces and many prefer to use As-Siddeek's services.

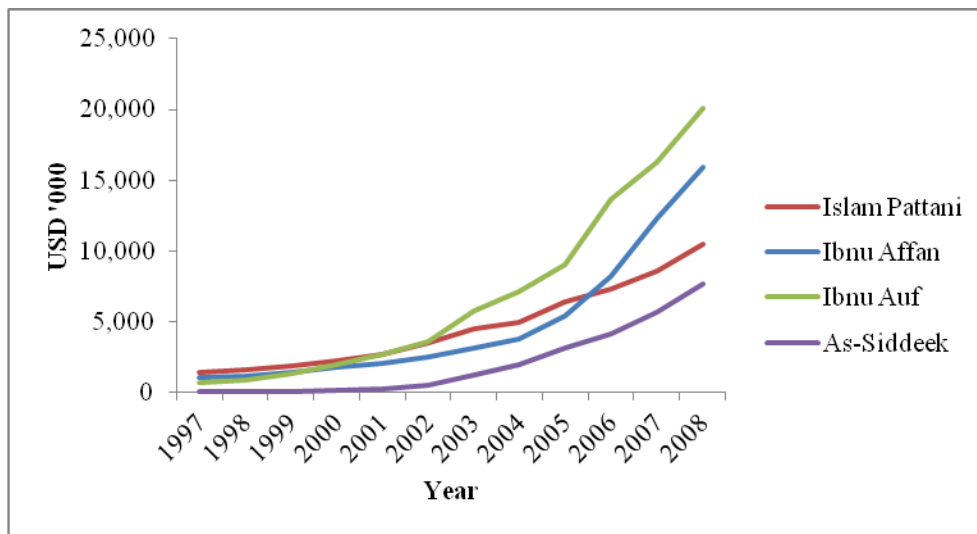
**Table 9.12: Total Asset (USD '000) and Its Growth (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008 (USD '000)	10,516	15,960	20,135	7,671
1997-2000 (%)	15.8	20.2	44.6	204.2
2001-2004 (%)	22.7	21.1	39.3	97.6
2005-2008 (%)	21.1	43.8	30.3	41.6

Source: Calculated from IsMFIs' financial reports 1997-2008

Figure 9.12 further demonstrates the trends of total assets of the IsMFIs, indicating continuous positive growth rates. As-Siddeek exhibited a 106.3% average growth rate, the highest average among the IsMFIs. However, the rates have been stable during the last few years. This is followed by Ibnu Auf which records an average growth of 37.5% and Ibnu Affan which reported 29.1% average growth. Islam Pattani reported 20.2% of average growth of total assets. The graph also shows that Ibnu Affan and Ibnu Auf tended to acquire more assets during 2003-2008. These trends are partially explained by the efforts made by these two IsMFIs to engage in long-term investment in the form of investment in other financial institutions, business projects with members or clients, and the establishment of subsidiary businesses.

**Figure 9.12: Trends of Total Assets**



### 9.6.2 Zakah

*Zakah* contribution refers to alms-giving for welfare purposes. At the IsMFIs, *zakah* has been calculated by two different methods. At Islam Pattani, Ibnu Affan and As-Siddeek, the annual *zakah* amount is computed as 2.5% of working assets and is part of the operating costs. Ibnu Auf calculates *zakah* as 2.5% of net profit when allocating profit. The methods of measurement and recognition of *zakah* have caused the *zakah* amounts of the IsMFIs to fluctuate during the years. In 2008, *zakah* amounts of Islam Pattani and Ibnu Affan were USD20, 917.9 and USD20, 539.8

respectively. As-Siddeek reported an amount of USD30, 918.7, the highest among the IsMFIs. Ibnu Auf displayed the lowest *zakah* contribution in 2008, at just slightly below USD16, 000.

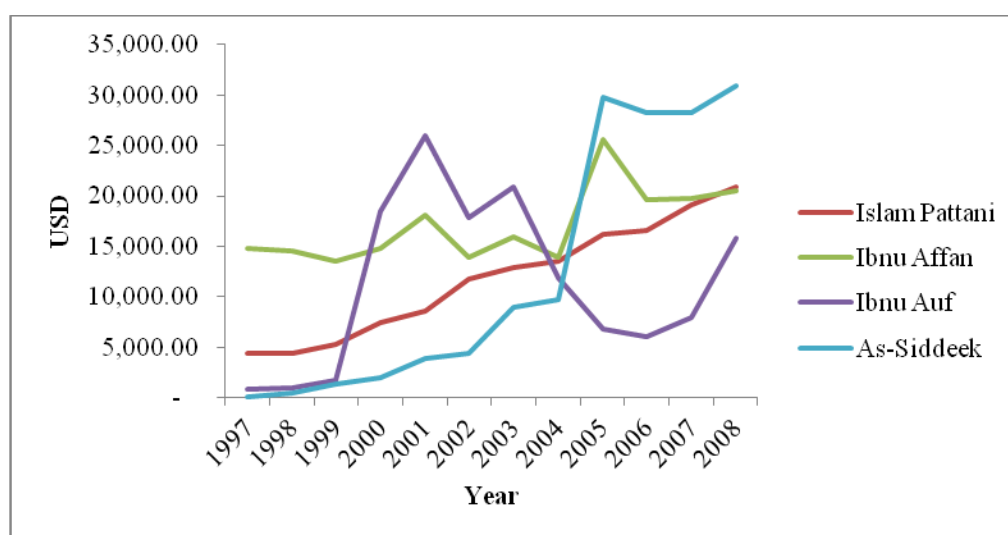
**Table 9.13: Zakah Contributions (USD) and Their Growth (%)**

Year	Islam Pattani	Ibnu Affan	Ibnu Auf	As-Siddeek
2008 (USD)	20,917.9	20,539.8	15,867.8	30,918.7
1997-2000 (%)	20.3	0.3	366.3	121.4
2001-2004 (%)	17.0	0.2	-4.1	56.8
2005-2008 (%)	11.6	16.4	19.3	53.0

Source: Calculated from IsMFIs' financial reports 1997-2008

Figure 9.13 illustrates clear fluctuating trends of *zakah* contributions among the IsMFIs. Two observations may be made regarding this phenomenon. The first aspect is that *zakah* levels of Islam Pattani, Ibnu Affan and As-Siddeek demonstrate an increasing trend over the years. This is perhaps due to the method of *zakah* calculation which is directly affected by working assets, which have increased during this period, including huge growth at Ibnu Affan and As-Siddeek in 2005. The fluctuating trend at Ibnu Auf is also influenced by the *zakah* calculation method on the one hand and variable net profit on the other. When *zakah* is based on net profit and profits at Ibnu Auf have been inconsistent, this causes *zakah* amount to be uneven, as clearly exhibited in the Figure.

**Figure 9.13: Trends of Zakah Contribution**



### 9.6.3 Pawn (*Ar-rahn*) Outstanding Balance

*Ar-rahn* is a kind of financing-cum-insurance service offered by Islam Pattani and has been very popular among women entrepreneurs and very poor Muslims due to its flexibility; it is also easy to understand and to engage in. Current year amounts would be a fair indication of another social contribution of the IsMFIs because of the short-term nature of *ar-rahn* offered. However, only the amounts of three periods are reported in the financial statements of Islam Pattani. The amount grew from USD142, 595 in 2006 to USD198, 768 in the following year. It rose further to USD264, 896 in 2008. The average growth rate of these three years was 36.3%. In terms of outstanding balance, which can be found in financial statements, it demonstrates an increasing trend over the years. The IsMFI recorded only USD1, 127 in the first year of its offering and reached an impressive USD107, 513 in 2008. On average, the growth was 76.4% over the years. In view of this, it may be concluded that *ar-rahn* is another popular product of IsMFIs that may contribute towards the socio-economic wellbeing of Muslims in Thailand.

**Table 9.14: *Ar-rahn* Outstanding Balance (USD) and Its Growth (%)**

Year	Current year	Balance	Growth (%)
1999	na	1,127	na
2000	na	3,733	231.2
2001	na	9,627	157.9
2002	na	17,314	79.9
2003	na	19,438	12.3
2004	na	28,708	47.7
2005	na	38,434	33.9
2006	142,595	53,943	40.4
2007	198,768	67,846	25.8
2008	264,896	107,513	58.5

Source: Calculated from IsMFIs' financial reports 1999-2008

## 9.7 CONCLUSION

Many conventional microfinance programmes raise some concerns in regard to outreach and sustainability, which often inspires a search for a microfinance structure and technology that may strengthen these two key areas. The discussion in this chapter shows that IsMFIs in the form of cooperatives appear to offer a reliable alternative. The results exhibit that these IsMFIs have



been capable of providing small financial services to poor and non-poor Muslims and non-Muslims who are often excluded from Thailand's financial system. The services are fairly tailored to suit the needs of these people including not only financing but also deposits, investments and welfare-based services such as *ar-rahn* and *zakah*. Sustainability indicators suggest that these IsMFIs have been operated in a sustainable manner; as such, they should be able to provide microfinance services to their clients into the foreseeable future.

Furthermore, it has been illustrated that the IsMFIs can not only sustain themselves but can also be efficient and profitable like other established conventional financial institutions. Efficiency indicators highlight the ability of the management of the IsMFIs to manage their operations in such a way that all costs can be covered by revenues from their operations and they can be competitive financial organisations, at least in Muslim majority provinces in Thailand, if not beyond. Profitability levels of the IsMFIs are often superior to the international microfinance standards, perhaps making this type of MFI an interesting innovation. Additionally, the IsMFIs provide *zakah* and *ar-rahn*, which can be regarded as social indicators. These will also contribute to the betterment of the lives of their clients, especially the poorest of the poor. The above institutional outreach and sustainability analysis of the IsMFIs appears encouraging; however, the main contribution of an MFI is improvement of people's standard of living and welfare and how, in their view, this impacts on their economic life and beyond.

## **Chapter 10**

### **DISCUSSING AND CONTEXTUALISING THE FINDINGS**

#### **10.1 INTRODUCTION**

This chapter aims at critically reflecting the findings in this study. Each section attempts to address how one of the objectives introduced in Chapter 1 is accomplished. The first section (Section 10.2) describes the scope and overview of Islamic microfinance in Thailand and the four IsMFIs chosen for this study. The key findings on demand for Islamic microfinance in Thailand (Section 10.3) are then discussed. This is followed by a discussion of the findings on impacts of various Islamic microfinancial services on the lives of clients' households (Section 10.4). The next section highlights the findings on outreach and sustainability of these IsMFIs (Section 10.5) followed by the findings on the achievements and challenges facing the IsMFIs (Section 10.6). A conclusion (Section 10.7) is provided in the final section. It should again be noted that this study is largely a demand-side study in which clients' opinions and perceptions are assessed. The findings based on the opinions and perceptions are crucial to academics, practitioners and experts leading the way in seeking improvements to the microfinance industry at a time when the industry is moving towards a market-oriented approach.

#### **10.2 AN OVERVIEW OF ISLAMIC MICROFINANCE PROGRAMMES IN THAILAND**

The discussion in this section aims at accomplishing the first objective of this study: to describe an overview of Islamic microfinance programmes in Thailand. In particular, it attempts to answer the following research questions (RQs):

**RQ1:** What is the current status of IsMFIs in Thailand?

**RQ2:** What *Shariah*-compliant products are provided by the IsMFIs?

The first part of this section highlights key findings on the history and scope of Islamic microfinance in the form of Islamic cooperatives, the problems faced at this stage, and the Islamic microfinance client-base in Thailand. The second part deals with the main issues related to *Shariah*-compliant products that IsMFIs offer.

### **10.2.1 Status of IsMFIs in Thailand**

There are two major findings in this research relating to the status of IsMFIs in Thailand. The first finding is that the establishment of IsMFIs was the result of a strategic effort by civil society, i.e. influential Muslim leaders, predominant Muslim intellectuals and well-known Muslim politicians. It is part of the efforts to transform the economic life of Muslims to be closer to Islam. This supports the view in Warde (2000), Henry and Wilson (2004), and Siddiqi (n.d.) who revealed that civil society has played an important role in the establishment of Islamic banks in Muslim countries. However, it should be noted that, unlike the establishment of Islamic banks in Muslim countries where respected Muslim businessmen were directly involved in the initiative, business people did not play an integral part in this process in Thailand. A possible explanation for this is that the main concern of the founders at that time was to create small-scale financial institutions in which Muslims can avoid interest and help each other in the Muslim community. This was appropriate for the limited financial needs and expertise that the Muslim community had at that time.

Before the first IsMFI in the form of an Islamic cooperative was created in 1987, the Cooperative Promotion Department and the Cooperative Auditing Department were concerned about the feasibility of an interest-free financial institution. This issue was also prevalent in other Muslim societies, as mentioned in Warde (2000), Henry and Wilson (2004), and Siddiqi (n.d.). The government regulatory bodies, however, approved the application to establish Islamic cooperatives as part of the government's policy to accommodate the needs of Muslims in the country. It is reported that at least 50 cooperatives were operating under Islamic principles in the country in 2009. All cooperatives operate under the provisions of the Cooperative Act B.E. 2542 and the Cooperative Act (No.2) B.E. 2553. Since then, many Islamic cooperatives have been created, primarily in the south.

Another major finding (Chapter 6, Table 6.3) is the fact that the clients of IsMFIs in Thailand are mainly the near-poor and rich households who are sensitive to Islamic teachings and principles. They are not the poorest segment of the population, as found in Johnson and Rogaly (1997). It should be noted that this finding is consistent with the finding by Zeller and Sharma (2002a). The majority of the clients in many countries were males who have attained relatively high

educational levels. The IsMFIs' customers live in wooden houses with large households. They have enough income to cope with their basic needs, i.e. food and non-food consumption, but may find it hard to manage income shocks and fulfil large financial needs such as acquisition of productive assets and building a house. These people own some land, as well as productive and non-productive assets. These are the characteristics of average households in Thailand as reported in Chapter 4. They are actually among the low-income group in Thailand, a country that has fulfilled the World Bank's Millennium Goals since 2002.

### **10.2.2 Shariah-Compliant Services Offered at IsMFIs**

The detailed discussions in Chapter 4 in general and Section 4.10 in particular reveal that IsMFIs in Thailand have been operating in compliance with *Shariah*. On the liability side, IsMFIs obtain funds mainly through savings and participation modes. On the asset side, sale-based mode, participation mode, and benevolent loan are the principal components. These financial modes based on an Islamic contract are recommended by scholars in Islamic finance (see Lewis and Algaoud, 2001, Wilson 2007, Obaidullah and Khan, 2008, and Ahmad, 2009, among other studies). The main Islamic microfinance services offered in these IsMFIs are *murabahah* micro-financing, *wadiah* savings accounts, *mudarabah* investment accounts, pilgrimage accounts, pawn service (*ar-rahn*), and insurance schemes (*takaful*). A majority of the clients uses micro-financing and savings accounts. Micro-financing is popular because it offers flexibility for lower and average income households, who form the majority of the population in the south, to acquire assets that they find it very hard to purchase from their incomes. A savings account, on the other hand, is a flexible money management tool for a household.

## **10.3 FACTORS AFFECTING DEMAND FOR ISLAMIC MICROFINANCIAL SERVICES**

This section deals with the second objective of this study: to identify factors affecting demand for Islamic microfinance services. Particularly, it seeks to answer the following question related to this objective:

**RQ3:** What are the income and non-income factors affecting the demand for various IsMF products and services?

The findings demonstrate demographic and household characteristics of the clients demanding Islamic microfinance services and the determinants of demand for the services. The findings also portray key behaviours of the clients relating to demand for Islamic microfinance. It should be noted that a limited amount of research has addressed demand for microfinance and, if available, the research is related to microcredit programmes in general, and not specifically to individual microfinance services, as attempted in this research. Thus, comparative analysis can be made largely for Islamic micro-financing against micro-loans, but not other services, i.e. savings accounts, pilgrimage accounts, investment accounts, pawn service, and insurance schemes.

### **10.3.1 Demand for Islamic *Murabahah* Micro-financing**

As exhibited in Chapter 6, Table 6.5, the findings in this study show that a majority (67.8%) of IsMFIs' clients has used Islamic micro-financing. Table 6.23 further reveals that clients' exposure to IsMFIs' operations and the existence of needs driven by diverse life cycle events determine the demand for Islamic micro-financing. Exposure to IsMFIs can be found among clients of different gender and membership length. This finding shows that male clients are more likely to use Islamic micro-financing as compared to their female counterparts. This finding is inconsistent with the findings established in microfinance studies in which females represent a majority of the customers (see Hashemir *et al.*, 1996, Mustafa *et al.*, 1996, Zaman, 1996, Johnson and Rogaly, 1997, Amin *et al.*, 1998, and Ahmed, 2002 who studied IsMFIs in Bangladesh, among other studies). However, the finding can be justified by the findings from the research conducted by Imady and Seibel (2003) and Ahmed (2008a) who investigated IsMFIs in Syria and Sudan respectively. A possible reason for this is that, in Thai Muslim society, the male is considered to be head of the household who handles all the financing undertakings of the household. Furthermore, there may not be any active initiative from IsMFIs to target women, as in the case of Grameen Bank and other microfinancial service providers. The utilisation of financing may benefit all members of a household. As for membership length, the clients with longer membership length are more likely to use Islamic micro-financing. This confirms the finding in Zaman (1996). This might be due to the fact that they have more information about products and services offered and are familiar with policies and procedures applied by the

IsMFIs. This results in increased experience and confidence in dealing with IsMFIs in general and micro-financing in particular.

Additionally, the finding shows that financial needs in various life cycle events impel the clients to use Islamic micro-financing. Clients from large households or who are involved in SMEs have the highest likelihood of applying for this service. The finding on the influence of household size is in line with the findings in Evans *et al.* (1999) and Bokosi (2004). In a similar manner, Ahmed (2008a) found that a majority of the clients of IsMFIs in Sudan have a household size of 5 or larger. A possible reason for these phenomena is that this group of clients is in need of diverse microfinance services to manage their households. They may require transport for private and business uses, see investment opportunities, and need to build houses for their households. They therefore require micro-financing to fulfil those needs. The finding on SME ownership supports the view that clients of microcredit are involved in micro-enterprises (see Otero, 1991; Seibel and Parhusip, 2003; Agar and Oliva, 2006; Guangwen, 2008; and Kritikos *et al.*, 2009, among other studies). They frequently need financing for capital and liquidity injection. They therefore require more financing as compared to those do not own SMEs.

### **10.3.2 Demand for *Wadiah* Savings Accounts**

In respect of demand for savings accounts, the findings in this study reveal that a majority (74.5%) of IsMFIs' customers utilise this service and express a demand for this service (Chapter 6, Table 6.6). The findings tend to support the views in Nguyen *et al.* (2002), Rutherford (2000), Matin *et al.* (2002), and Harper (2003), who argue that savings are essential for effective household financial management by microfinance clients. Moreover, Table 6.24, in the same chapter, shows that the level of familiarity and exposure and the need of the clients influence the demand for savings accounts. Hence, clients who are familiar with the business and procedure of the IsMFIs, such as males of long-standing membership, are more likely to use savings accounts. This is similar to SME owners.

### **10.3.3 Demand for *Mudarabah* Investment Accounts**

The findings in this study show that a small number (18.8%) of clients have made deposits in investment accounts (Chapter 6, Table 6.7). This is reasonable as this account requires a

comparatively large amount of money, i.e. at least THB50,000 or approximately USD1,560. Many near-poor Thai Muslims cannot afford to deposit that amount of money for the required period of at least 3 months. Affordability and exposure are the main determinants of the use of investment accounts (Table 6.25, Chapter 6). As total land is a key proxy of wealth, it should be noted that clients who own larger amounts of land are more likely to make deposits in investment accounts. They have the ability to save the required amount of money and keep it on deposit for a certain period of time. As for membership length, which is a component of exposure, clients who have been with IsMFIs for a longer period of time are more likely to use investment accounts.

#### **10.3.4 Demand for Pilgrimage (*Haj*) Accounts**

The results of descriptive analysis depicted in Chapter 6, Table 6.8, indicate that only 4.3% of the respondents have utilised pilgrimage accounts. A possible explanation for this reality is that this account is targeted at a specific customer group, i.e. those who plan to go on pilgrimage in the near future. This group of customers is very small. The findings (Table 6.26 in the same chapter) in this study strongly suggest that the demand for pilgrimage accounts is associated with the need of and the ability to acquire this service. Clients who are married and of greater age tend to have higher demand for pilgrimage accounts and *vice versa*. This is expected as older people have great desire to go on pilgrimage at least once in a lifetime and their incomes may be relatively high and stable. This is similar to the clients from large households and who are involved in SMEs. They have stable and regular incomes from their businesses or receive contributions from their children.

#### **10.3.5 Demand for Pawn Service (*Ar-rahn*)**

As discussed in Chapter 6, Islam Pattani is the only IsMFI offering a pawn service. 56.9% of its clients surveyed have used this service, (Chapter 6, Table 6.9). Table 6.27, in the same chapter, shows that the need for timely financial services is the key influencing factor in the demand for pawning. However, the level of exposure may also play a role. Clients who have lower education levels, especially lower secondary certificate, or who are involved in SMEs, are more likely to apply for pawning. This might be due to the fact that clients with lower education can more

easily understand the procedures and regulations involved in pawning as compared to other services. SME owners may need to urgently inject liquidity into their business regularly. The pawn service offers the fastest way to do that. Moreover, there is a positive relationship between membership length and the use of pawn service. Long-standing customers may have received relevant information about the pawn service from annual general meetings, staff, and other IsMFI members. Hence, they can apply for this service when the need arises.

### **10.3.6 Demand for Insurance Schemes (*Takaful*)**

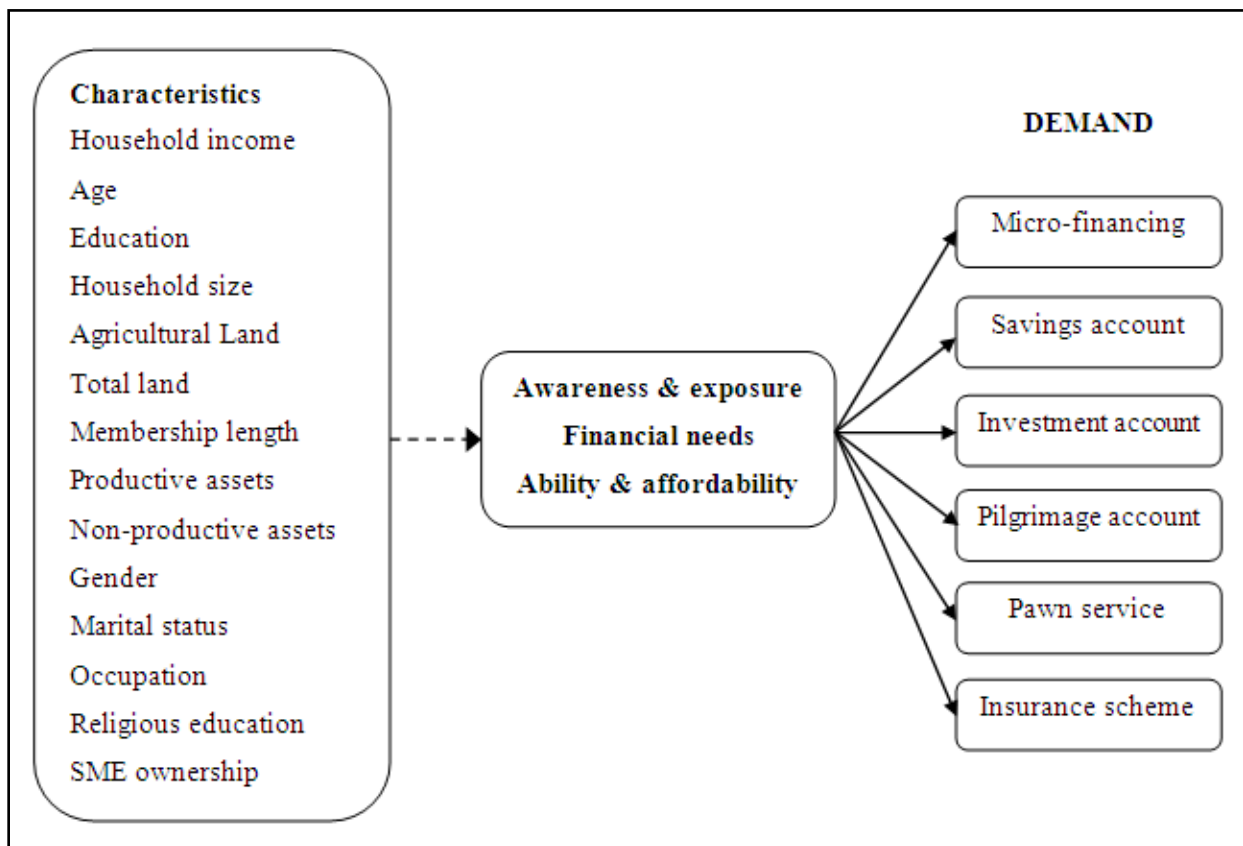
The findings in this study show that about one third of the respondents have used insurance schemes to cover funeral expenses and purchase medication not provided by the government healthcare system (Chapter 6, Table 6.10). Furthermore, the results in Chapter 6, Table 6.28, reveal that the need to cover those costs strongly influences the demand for this service. Factors such as annual household income, age, and agricultural land size contribute to the need for this service. The need of the service by older and married clients can arise not only from themselves but also from other members in their households, such as children and parents of those living in extended families. Interestingly, the demand for this service increases up to certain levels of annual household income and agricultural land size (indicating average income group) and declines significantly after that. This convincingly suggests that lower-income groups benefit from insurance schemes provided by IsMFIs. The obvious reason for this might be their limited incomes. They therefore apply for insurance schemes to fulfil their healthcare and medication needs. This also applies to clients who have longer membership length. They access relevant information about all services, thus resulting in more exposure; they may then choose to apply for insurance schemes when necessary.

To conclude, the findings in this research highlight key financial behaviours of Islamic microfinance clients. The first finding is that Islamic microfinance clients are no different from mainstream clients in that they need a variety of financial services and are driven by diverse needs. Savings accounts and pawn service can serve diverse needs on a timely basis, whilst Islamic micro-financing serves a variety of large and more expensive financial needs. The findings imply that effective Islamic microfinance must fulfil the needs of the poor and excluded when they need them and for the purpose they need. The findings support the findings of Wright



(2005) and Cohen (2002). Another key finding is that the demand for Islamic microfinance products depends on the needs, ability and exposure of the clients. Generally, household size, age, marital status, SME ownership, and annual household income determine the types of Islamic microfinance services required, whilst agricultural land size and main occupation indicate the ability and eligibility of clients to acquire those services. Membership length, education and gender, which indicate the ability to access information about IsMFIs and related matters, define the exposure of the clients. Figure 10.1 depicts factors influencing demand for Islamic microfinancial services in Thailand.

**Figure 10.1: Factors Affecting Demand for Islamic Microfinancial Services in Thailand**



### 10.3.7 Patronage Factors of Islamic Microfinance

The findings (Chapter 6, Table 6.16) reveal one of the key perceptions about Islamic microfinance clients, which is the fact that they want an Islamic financial institution per se, but

the institution must also be stable and sustainable so that it can continuously offer Islamic microfinance services to the clients. Absence of interest and social responsibilities were ranked highest among the patronage factors. These two factors are perceived to relate to Islamic teachings and principles and are viewed as the main objectives of the establishment of IsMFIs in Thailand. The findings confirm the view of Chapra (1992b), Dhumale and Sapcanin (1999), El Hawary and Grais (2005), Segrado (2005), Iqbal and Mirakhor (2007), and Dusuki (2008a), among others, that Islamic finance must be interest-free and fulfil the socio-economic goals of Islam. It should be noted that the above findings correspond to those of Ahmed (2008b) as he found that the clients of the Rural Development Scheme of Islami Bank Bangladesh became members of the programme simply because it is Islamic and interest-free.

Moreover, the findings indicate that the confidence of the IsMFIs' clients in the operations, performance and quality of services provided by the IsMFIs motivate them to participate in Islamic microfinance programmes. These factors are found to be very strong among clients who recently joined the IsMFIs as they prefer stabilised and established Islamic financial institutions.

### **10.3.8 Relationship with IsMFIs and Conventional Financial Institutions**

Another key financial behaviour of Islamic microfinance clients relates to the use of conventional banks and financial institutions by the IsMFIs' clients. The findings show that *Shariah*-compliant services can play an important role in financial inclusion among Muslims who are religiously sensitive. Over half (53.8%) of the clients who have used mainstream financial services would completely shift to Islamic financial services, if available (Chapter 6, Table 6.13). Qualitative analysis further reveals that this group of clients use conventional financing or loans and savings accounts (Chapter 8, Tables 8.5-8.7). Conventional financing or loans are utilised for the purposes of purchasing large assets such as new cars, which are not provided by most IsMFIs, and the injection of capital or liquidity into their businesses. As for conventional savings accounts, IsMFIs' clients use them in order to receive their salaries from their employers, as well as for remittances and transfers. It is normal practice for governmental and non-governmental organisations to credit the salaries of their employees into bank accounts. For those working in these organisations, having a savings account is a necessity. Some of the clients also need savings accounts to transfer money to their children who are studying in other

cities, and to receive money from their children and relatives who work in Malaysia and Singapore.

### **10.3.9 IsMFIs' Clients and SMEs**

A large number of microfinance studies focus on microcredit for micro-entrepreneurs. In this study, Table 6.14 in Chapter 6 shows that 31.5% of IsMFIs' clients are involved in micro-enterprises. These findings contradict the findings of the studies conducted by Seibel and Parhusip (2003), Agar and Oliva (2006), and Kritikos *et al.* (2009), among others, who found that a majority of IsMFIs' clients engage in microenterprise. However, it is reasonable, as Rutherford (2000), Matin *et al.* (2002), Harper (2003) and Seibel and Parhusip (2003) have argued, for microfinance clients to have a variety of financial needs, not just credit for micro-enterprises. Of those owning SMEs, many engage in petty trade and have been doing so for less than six years. The findings further show that a majority of the clients do not receive any training to build their SME skills such as accounting, marketing etc. It should be noted that this finding does not support those of Bennett (1998), Ledgerwood (1999) and McKernan (2002), as they found that successful microfinance institutions provide skills training for their clients in order for them to manage their SMEs more effectively and improve the welfare of their households.

### **10.3.10 Rank of Islamic Microfinancial Services**

The findings in this study show that clients of IsMFIs utilise a variety of Islamic promotional and protective microfinancial services to suit their needs. They do not only apply for micro-financing for their micro-enterprises. This finding confirms the views of Churchill (2002), Helms (2006), Johnston and Morduch (2007) and Rutherford (2003). As shown in Chapter 6, Table 6.17, in responding to short-term income shocks due to loss of employment, death of head of household or natural disasters, the clients of IsMFIs in Thailand firstly withdraw money from their savings accounts. Some may apply for welfare schemes and emergency loans (*qard hasan*). When it comes to the purchasing of productive assets and housing (Chapter 6, Tables 6.18 and 6.21), a majority chooses micro-financing as the first option. A smaller number may withdraw money from savings accounts or apply for the pawn service. They use money in their savings accounts, pawn service and micro-financing respectively to buy non-productive assets. In the event of the

death of a member of the household, shown in Chapter 6, Table 6.20, money from insurance schemes, savings accounts or pawn service is used for funeral expenses. Finally, children's education expenditure is met by savings, pawn service or emergency loan (Chapter 6, Table 6.22).

Another key finding in this study is related to clients' behaviour. The results in Tables 6.17-6.22 in Chapter 6 reveal that IsMFIs' clients exploit a number of microfinancial services to satisfy financial needs arising from a specific life event. For example, when a household needs to pay tuition fees for their children, they might first use money in a savings account. If it is not enough, pawning and/or emergency or *qard hasan* loan could be used. In the event of productive assets acquisition and housing needs, Islamic micro-financing will be the first alternative whilst savings and pawning might also contribute to arrive at the needed amount. The clients do this often because the money available for them from a service is not adequate to fulfil their needs. It was also clear in the interviews that many households may apply for micro-financing for housing using both the husband's and the wife's membership.

In conclusion, IsMFIs' clients are no different from other groups of people; they need a variety of financial services to manage their lives more effectively. They need micro-financing to acquire productive assets and to build houses, and savings and pawn services for urgent financial needs such as income shocks. Additionally, they seem to use a number of microfinance services to satisfy financial needs particularly those needs that require a reasonably large amount of money, such as housing and children's education. These services, however, must be permitted by *Shariah*. In light of the above, it may be reasonable to conclude that needs, affordability and eligibility tend to influence the behaviours of IsMFIs' clients in Thailand.

#### **10.4 IMPACTS OF ISLAMIC MICROFINANCIAL SERVICES**

This section addresses the third objective of this study: to evaluate the impacts of Islamic financial services on client households. Specially, the findings in this study attempt to answer the following research questions:

**RQ4:** How do different IsMF products and services affect the economic wellbeing of the poor and financially excluded?

**RQ5:** How do different IsMFI products and services affect the non-economic variables of the poor and financially excluded?

The discussion addresses each Islamic financial service in turn. The main services included in the discussion in this section are micro-financing, savings accounts, investment accounts, pilgrimage accounts, pawn service, and insurance schemes. The results of economic and non-economic impacts of Islamic micro-financing are depicted in Chapter 7, Tables 7.1-7.5. Again, main comparisons will be made between Islamic micro-financing and conventional micro-loans as the relevant information and literature are available. Literature on impacts of other services on clients' households is scarce, but will be highlighted when appropriate.

#### **10.4.1 Impacts of Micro-financing on the Poor and Financially Excluded**

##### ***10.4.1.1 Economic impacts of micro-financing***

The findings in the descriptive analysis establish that Islamic micro-financing improves income, the ability to acquire productive assets, the ability to build, buy or expand housing, and self-employment opportunities in clients' households. Thus, these findings in general tend to support microfinance advocates who perceive that microfinance is an effective approach to the alleviation of poverty (refer to Chapter 7, Sections 7.2.1.1, 7.2.2.1, 7.2.3.1 and 7.2.4.1 for detailed discussion on economic impacts of Islamic micro-financing).

##### ***Impacts of micro-financing on income of households***

The findings showing that Islamic micro-financing can improve households' income are in line with the findings of previous research on microfinance (see Mosley and Hulme, 1998, Copestake *et al.*, 2001, Mosley 2001, Chowdhury *et al.*, 2003, Afrane, 2003, Nghiem *et al.* (2007), Kondo *et al.*, 2008, Mahjabeen, 2008, and Waheed, 2009, among other studies). As for the impact of Islamic micro-financing on income, Osman (1999) and Rahman and Ahmad (2010) found that IsMFIs in Sudan and Bangladesh respectively improve the incomes of clients. The findings contradict Braverman and Guasch (1986), Hulme and Mosley (1996), Chavan and Ramakumar (2002), and Ullah and Routray (2007).

Interestingly, the level of impact seems to depend on the initial income level and exposure of household. The households with lower incomes are able to improve their incomes to a certain level, whilst those earning regular salaries in governmental and private organisations can also increase their incomes from Islamic micro-financing. The findings on household income tend to support the findings of Shaw (2004), Haque and Yamao (2008) and Nader (2008). Male clients, those who have higher education and those with longer membership length may gain detailed information about micro-financing programmes at IsMFIs. Hence, they may identify the economic activities that will qualify for financial support from the programme and implement it successfully. The findings on gender difference contradict the findings in Copestake *et al* (2001), who found that female heads of households can improve income from micro-loans. The significance of education confirms the finding of Swain and Floro (2007), but contradicts the findings of Khandker *et al.* (1998) and Nader (2008). The finding on the significance of membership length is in line with the finding of Chowdhury (2008) who found that the poverty of borrowing households decreases with the increase of microcredit programme membership. The ability of both the lower-income group and the non-poor to improve their household incomes from Islamic micro-financing and the level of improvement seem to rely on the household's readiness to take up the micro-financing and its exposure to this service.

Furthermore, the findings reveal that the impacts of Islamic micro-financing are indirect (Chapter 8, Table 8.16). The clients of IsMFIs use Islamic micro-financing to acquire productive assets, obtain business capital or liquidity injections, and expand their houses, using part of them as shops. Hence, they are able to increase their economic activities within the household, resulting in an increase in the household's income. The impacts are therefore 'immediate outcomes' as termed by Khalily (2004). These findings tend to support the findings of Hulme and Mosley (1996).

### ***Impacts of micro-financing on assets of households***

In general, the findings in this study suggest that Islamic micro-financing can improve productive assets-holding of households. These findings are in line with the findings of Pitt and Khandker (1998), Mosley (2001), Ahmed (2002), Sharma and Bucheniender (2002), Chowdhury *et al.* (2003), Coleman (2006), Nader (2008) and Adjei *et al.* (2009), but are inconsistent with the

findings of Ullah and Routray (2007) and Kondo *et al.* (2008) who concluded that there is no evidence of increased assets in households of microfinance clients.

According to the clients, the level of improvement is dependent on the initial amount of productive assets and the exposure to Islamic micro-financing products offered by IsMFIs. The clients with higher productive assets-holding may be able to accurately identify productive assets that may benefit them and apply for Islamic micro-financing to acquire the assets. Males and those working in governmental and private organisations may be able to gain information and experience from their direct involvement with IsMFIs and people around them; they are in a better position to be successful when applying for micro-financing. Male household heads are more likely to have increased asset-holding as compared to female heads of households. This finding corresponds to the finding of Gobezie and Garber (2007) but contradicts the findings of Pitt and Khandher (1998) and Pitt *et al.* (2003) who found that women's participation in microfinance has a significant impact on the assets-holding of a household, whilst men's participation does not provide such an impact. In a similar manner, Swain and Flora (2007) demonstrate that gender difference may not contribute to the varied impact of microfinance on assets-holding and diversity.

The results from the interviews (Chapter 8, Table 8.15) suggest that Islamic micro-financing directly provides productive and non-productive assets for households. The clients acquire assets to use for their business and agricultural and non-agricultural work, i.e. motorcycles, vehicles, tools and equipment, and computers. These assets provide either necessary factors or convenient components for them to work more efficiently and effectively. Furthermore, the clients purchase non-productive assets such as furniture, refrigerators, etc.

### ***Impacts of micro-financing on the housing of households***

The findings in this study suggest that Islamic micro-financing can improve the housing of households. The findings support the findings in Ahmad and Ahmad (2008) who found that IsMFIs in Australia enhance the ability of the clients to acquire houses for their households. In a similar manner, Rahman and Ahmad (2010) and Berhane and Gardebroek (2011) found that microfinance programmes provide the opportunity for clients to expand their houses and to

undertake more house repairs and maintenance. The level of impact on housing may depend on the level of exposure, affordability and need factors.

Being male, membership length, and occupation provide exposure to the rules and regulations of the product. Male clients are expected to perceive a higher impact as compared to their female counterparts. This finding challenges the general finding on the impact of microfinance programmes that female clients often benefit more from these programmes (see Hashemi *et al.*, 1996; Mustafa *et al.*, 1996; Johnson and Rogaly, 1997; and Amin *et al.*, 1998, among other studies).

Age, marital status, and occupation indicate the needs and ability of the clients to acquire and expand their houses. As for age group, this research finds that the older age group (46-55 years old) are more likely to see higher housing impacts on their households. Married clients are more likely to repair or build their houses using Islamic micro-financing. The finding tends to support the view that microfinance targets clients with families and they can improve their lives significantly, including through housing improvement and construction (see Ahmad and Ahmad, 2008; Rahman and Ahmad, 2010; and Berhane and Gardebroek, 2011, among other studies).

The results from the interviews (Chapter 8, Table 8.18) further indicate that Islamic micro-financing directly impacts the housing ability of households. The client can request the IsMFI to build a house and she or he can later purchase it by instalments. Alternatively, the clients can buy hardware for housing construction purposes and pay by instalments. Many clients also buy hardware from IsMFIs for housing improvement and expansion. As such, Islamic micro-financing contributes directly to housing ability of clients' households.

### ***Impacts of micro-financing on self-employment of households***

The findings in this study show that Islamic micro-financing enhances self-employment opportunities in clients' households. The findings support the findings of Pitt and Khandker (1998), Chowdhury *et al.* (2003), Rahman (2010), and Rahman and Ahmad (2010) who found that microfinance programmes, including Islamic ones, can enhance labour supply and production opportunities in households. Nevertheless, the findings are inconsistent with the view of Hulme and Mosley (1996) who stated that it is unusual for microfinance programmes to



produce employment of any kind. The level of impact tends to depend on exposure resulting from gender roles in society, membership length, occupation, and land-holding. Unlike other factors, the result on land-holding suggests that those who have no land are more likely to have self-employment opportunities. A possible reason for this is that those who have no land may be actively involved in small businesses and they can identify self-employment opportunities available to them.

Interestingly, the findings from the interviews (Chapter 8, Table 8.17) reveal that the improved self-employment opportunities in the clients' households are an indirect consequence of Islamic micro-financing. The households can enhance the opportunities from the productive assets bought through IsMFIs, liquidity injections into their small businesses, or expansion of housing. Many clients have bought vehicles from IsMFIs and use those vehicles as mobile food stalls, whilst others use them in their goat-rearing businesses. Many clients have bought equipment for fish-rearing. Some acquire Islamic micro-financing for liquidity injections so that they might continue to produce their goods at home. A few have applied for Islamic micro-financing to expand their houses and use the expanded parts as small stalls. These activities clearly show that Islamic micro-financing indirectly improves self-employment opportunities within households.

To conclude, the findings in this study prove that Islamic micro-financing based on *murabahah* contract contributes significantly to the improvement of income, productive assets, housing ability, and self-employment opportunities in households. The level of impacts is influenced by the level of exposure to Islamic micro-financing and IsMFIs in general, the existence of financial needs, and their readiness and ability to pay for them. Interestingly, the initial level of household income and productive assets may determine the level of impact the clients experience from Islamic micro-financing. Moreover, clients who own small amounts of land can potentially improve their self-employment opportunities within the household from Islamic micro-financing.

#### **10.4.1.2      *Non-economic impacts of micro-financing***

The results of descriptive analysis indicate that Islamic micro-financing offered by IsMFIs in Thailand can increase food and non-food consumption, enhance children's education, improve household access to healthcare, and upgrade Islamic activities and practices of Muslim clients.

Generally, these findings support popular findings in microfinance literature in different countries around the world. Detailed discussion of non-economic impacts of Islamic micro-financing is available in Chapter 7, Sections 7.2.1.2, 7.2.2.2, 7.2.3.2 and 7.2.4.2.

### ***Impacts of micro-financing on food consumption in households***

The study found that Islamic micro-financing has an impact on the food consumption of households. The findings, hence, are in parallel with the research conducted by Pitt and Khandker (1998), Menon (2006), Nghiem *et al.* (2007), Kondo *et al.* (2008), Mahjabeen (2008), Waheed (2009), and Berhane and Gardebroek (2011). A similar phenomenon was found by Osman (1999), Rahman (2010), and Rahman and Ahmad (2010). Nevertheless, Morduch (1998) and Ullah and Routray (2007) found that participation in microfinance programmes does not result in improved food consumption in households.

In addition, the findings reveal that the level of impact may be affected by the level of their exposure to the operations of IsMFIs, and household financial needs at certain points of the life cycle. The findings largely contradict the findings in Berhane and Gardebroek (2011). Clients who are male, have higher education, or work in governmental offices may obtain relevant information about the operations of the IsMFIs in general and the procedures of Islamic micro-financing in particular; they may then identify and appropriately apply for the service. Those active young households may in the early stages of their careers and need Islamic micro-financing to enhance the consumption in their households. The interviews (Chapter 8, Table 8.22) rightly indicate that the clients perceived that the impact refers to a better quality of food items consumed by the members of households and this is a result of the improved income from economic activities. The clients, for example, acquire productive assets through micro-financing and use them for economic activities. This increases the incomes of households. The households may spend this income on better-quality food. As such, the impact of Islamic micro-financing on food consumption is an indirect one.

### ***Impacts of micro-financing on non-food consumption in households***

The results of the study show that Islamic micro-financing has a significant impact on households' non-food consumption and expenditure. The findings are in line with the findings in

Pitt and Khandker (1998), Kondo *et al.* (2008), Mahjabeen (2008), and Berhane and Gardebroek (2011), but contradict the findings in Ullah and Routray (2007) who found that microfinance cannot improve non-food expenditure of households.

Furthermore, the findings reveal that the groups of clients who are more likely to increase non-food consumption include the lower age group, the higher education group and those working in governmental offices. Some of the findings are inconsistent with the findings of Berhane and Gardebroek (2011) who discovered that age and education level do not significantly influence the level of impact on non-food consumption. Again the findings highlight the importance of clients' exposure to IsMFIs and their needs that enhance the impacts of Islamic micro-financing. The interviews (Chapter 8, Table 8.22) suggest that the impact of Islamic micro-financing on household non-food consumption is an indirect one. It is a result of improved income in households, as discussed earlier in the previous section.

#### ***Impacts of micro-financing on children's education in households***

Generally, the findings in this study show that Islamic micro-financing can enhance the educational opportunities of children in households; this confirms the finding in Pitt and Khandker (1998) who found that clients of microfinance programmes in Bangladesh enhance their children's education. Similar findings were established by Wydick (1999), Gobezie and Garber (2007) Nader (2008), Haque and Yamao (2008) and Adjei *et al.* (2009). The findings are inconsistent with the findings of Kondo *et al.* (2008), Morduch (1998), and Coleman (2006) who found that participation in microfinance programmes may not affect children's educational attainment. Similarly, Maldonado and Gonzalez-Vega (2008) discovered that the participation may not increase demand for education due to the need for labour.

The findings again highlight the importance of exposure, financial needs in a specific life cycle, and initial wealth, which may all influence the level of impact. Exposure factors are found to have a positive relationship with impact, including males, higher education, and working in government office. The young age-group represent the clients who really need micro-financing while the clients who have a reasonable land-holding show level of wealth. The influence of education confirms the finding in Maldonado and Gonzalez-Vega (2008) and Adjei (2009).

However, Adjei found that age does not affect the level of impact of microfinance on children's education. The findings in the interviews (Chapter 8, Table 8.21) reveal that the impact can be either a direct or an indirect one. Some clients borrow to pay for university fees for their children. As basic education is compulsory and free in Thailand, most clients perceive that Islamic micro-financing indirectly improves the levels of education of their children. They purchase necessary educational equipment such as computers and cameras for their children through Islamic micro-financing. Some buy motorcycles for their children to use as transport to schools and universities.

### ***Impacts of micro-financing on access to healthcare in households***

Access to healthcare is another important impact factor of microfinance programmes. The findings in this study show that Islamic micro-financing can improve access to healthcare by households. The findings tend to support those of Afrane (2003), Pitt *et al.* (2003), Gobezie and Garber (2007), Epstein and Crane (2007), Adjei (2008), Mohindra and Haddad (2005) who found that microfinance can be an essential complement to health promotion and prevention programmes. Similarly, Basher (2007) maintains that participation in a microcredit programme reduces fertility rate in clients' households. It is important to note that the findings contradict those of Coleman (2006), Hiatt and Woodworth (2006), and Nader (2008).

In addition, the interviews (Chapter 8, Table 8.23) suggest that, for the clients of IsMFIs in Thailand, where basic healthcare can be accessed for free, Islamic micro-financing may increase household income which consequently enables them to pay for private healthcare treatment, even for ordinary illnesses. Many of them also use their increased income to pay for medication for more serious illnesses and other medical-related expenses, such as special rooms, which are not covered under the government healthcare system. This might explain the finding in the survey that clients who have a considerable amount of productive assets and land holdings are more likely to perceive a higher impact. These findings contradict the findings in Gobezie and Garber (2007) and Adjei (2008) who did not find that these factors significantly contribute to the impact of microfinance on healthcare access and conditions of households.

### ***Impacts of micro-financing on Islamic religiosity***

The final non-economic impact of Islamic micro-financing examined was on Islamic religiosity. In general, the clients feel that Islamic micro-financing can improve Islamic activities and practices in households. These findings confirm the findings in Rahman (2010) who found that Islamic micro-financing can improve the clients' religious knowledge, whilst Rahman and Ahmad (2010) claim that clients of the Islamic microfinance programmes of the Islami Bank of Bangladesh improved their religious observations such as prayer and fasting. In this study, the findings reveal that Islamic micro-financing customers can regularly perform congregation prayers, pay *zakah* and *sadaqah*, avoid interest, pay for pilgrimages and improve Islamic knowledge. Some of the findings are not in line with the findings in Afrane (2003) who found that participation in microfinance hardly improves church attendance and prayer and devotion, but does improve charitable giving.

Besides, the findings show that differences of impact on these factors can be found among people with different incomes and assets. The clients with reasonable amounts of income and assets-holding are more likely to pay *zakah* and *sadaqah* and go on pilgrimage as a result of Islamic micro-financing. Male and lower age groups may attend prayer and Islamic study circles more often. People who have religious education and own SMEs are often keen to avoid interest by using Islamic micro-financing.

To sum up, the findings in this study generally confirm the previous studies that found that microfinance programmes can improve households' wellbeing in terms of food and non-food consumption, children's education, access to healthcare, and religious activities and practices. Furthermore, the findings reveal that the level of impact on non-economic factors seems to be associated with three important factors, i.e. the needs to fulfil, the initial level of wealth, and the exposure to IsMFIs' rules and regulations, procedures, and detailed features of the service. The clients in the lower income group seem to have consumption and healthcare needs to fulfil. The clients with higher education may also need micro-financing to improve their consumption, but they may need it for a better quality of consumption and private medication. In addition, male clients who may work in governmental or non-governmental organisations that offer regular salaries, and who obtain higher education may have access to relevant information and they are

able to commit themselves to instalment payments for Islamic micro-financing. It is interesting to note that young clients' households tend to perceive high non-economic impacts from Islamic micro-financing.

## **10.4.2 Impacts of Savings Account on the Poor and Financially Excluded**

### **10.4.2.1 *Economic impacts of savings accounts***

Until recently, microfinance studies have focused on micro-financing or micro-loans. Most studies are therefore related to various aspects of this service. Later, Nguyen *et al.* (2002), Harper (2003), Seibel and Parhusip (2003) and Wright (2005) argued that other services including savings are important to help the poor and financially excluded manage their lives effectively. Hence, it is difficult to find studies on the impact of savings on participants' households. The findings in this study show that savings accounts can improve the economic wellbeing of Islamic microfinance clients. Detailed economic impacts of savings accounts can be found in Chapter 7, Sections 7.3.1.1, 7.3.2.1, 7.3.3.1, and 7.3.4.1.

#### ***Impacts of savings accounts on household income***

The findings in this study reveal that savings accounts can enhance the incomes of households. The need of savings to manage households seems to influence the level of impact. The young clients' households with small household size are more likely to benefit more from savings accounts in terms of improved income. This group of clients are in the early stages of their career and have just formed their households. They might not have an adequate amount of income to deal with the increasing variety of financial needs. Moreover, the impact of savings accounts on household income seems to be indirect, i.e. the clients acquire assets using money from their savings accounts and utilise the assets in income-generating activities. As a consequence, they can improve the income level of their households. Moreover, savings can be used in the event of income shocks or income smoothing, as highlighted in Rutherford (2003) and Matin *et al.* (2002). This point is discussed in Section 10.2.5.2.

### ***Impacts of savings account on productive asset-holding in households***

Generally, the findings in this study reveal that *wadiah* savings accounts have an impact on productive asset-holding of households. The results suggest that the impact of savings accounts on productive asset-holding tends to be direct, meaning that the clients use the money in their savings accounts to purchase productive assets for their households. However, the findings discussed in Section 6.9.2 of Chapter six demonstrate that savings are often used as a second-best option to acquire productive assets. The clients might first apply for Islamic micro-financing which may provide an inadequate amount for the purchase. They might then add some money from their savings account to reach the required amount. More practically, the clients contribute some part of the cost of the assets from their savings account and apply for micro-financing for the extra amount that cannot be met by the savings. Many clients purchase used cars via this type of arrangement.

### ***Impacts of savings account on non-productive assets in households***

The findings in this study generally show that savings accounts enable clients' households to acquire non-productive assets. This confirms the finding on ranking of service for non-productive assets in Chapter 6 which indicates that a majority of the clients prefers first to use money from their savings accounts to purchase non-productive assets such as furniture, refrigerators etc. A possible explanation is that this type of asset does not cost a large amount of money. Most clients therefore can save regularly and buy those assets with the money they have been saving. In addition, the need for non-productive assets at a specific time of the life cycle and affordability are the main factors affecting the level of impact. Young clients' households with higher education and permanent jobs, for instance, appear to use savings to buy non-productive assets such as refrigerators, furniture, and televisions.

### ***Impacts of savings accounts on housing conditions of households***

The last economic impact factor is housing. The findings show that savings accounts can have an impact on the housing conditions of households. Unsurprisingly, the richer clients are more likely to spend some money from savings to buy or expand houses. The findings imply that the clients who can afford to save enough for housing should be reasonably wealthy. Nevertheless,

the ranking order of service for housing highlighted in Chapter 6 tends to indicate that savings are not the first option for housing acquisition. Average-income clients tend to go for micro-financing, and savings is ranked second. These results show that either there are a considerable number of clients who are rich or the clients contribute some money from savings accounts and acquire the rest through Islamic micro-financing to build or expand their houses.

To sum up, the findings confirm that savings accounts can be an effective tool to improve the economic wellbeing of clients' households. This Islamic microfinance service can fulfil a variety of needs in diverse life events. Hence, the impacts of savings can be different depending on the conditions of the households. The younger household heads are more likely to acquire non-productive assets, whilst those wealthier clients who can be identified by their land-holding have the highest likelihood of purchasing productive assets and housing from savings. This highlights one important fact about the financial behaviours of IsMFIs' clients: they do not want to be in debt. They prefer to purchase what they need from their savings. Additionally, they can choose the right service to satisfy their needs. Nevertheless, the findings again point out that the impacts of savings accounts on clients' households depend to a large extent on the need, events, and the ability of the clients to use the services to fulfil their needs.

#### ***10.4.2.2 Non-economic impacts of savings accounts***

The general findings on non-economic impacts of savings accounts suggest that savings enable the clients' households to access the type of healthcare they require and to accumulate enough money to go on pilgrimage to Makkah. A detailed discussion on non-economic impacts of savings accounts is available in Chapter 7, Sections 8.3.1.2, 8.3.2.2, 8.3.3.2, and 8.3.4.2.

#### ***Impacts of savings account on healthcare of households***

The findings in this study reveal that the impact of savings accounts on healthcare or medication in households depends on the conditions of households. The richer households are more likely to use savings for medical expenses. Arguably, this should be for seeking private medication for minor illnesses such as flu rather than for more serious illnesses that require large amounts of money.



### ***Impacts of savings account on pilgrimage***

The findings in this study show that IsMFIs' clients spend money from savings accounts for pilgrimages. Those who are relatively wealthy, judging from their productive assets and agricultural land holdings, are more likely to save for pilgrimage. Those who own SMEs may be another group of clients who save for this purpose. These clients are perceived to earn regular incomes from their agricultural products, such as rubber, and small enterprises, and can save a considerable amount of money on a regular basis. Additionally, they perhaps want to spend their money on religious pilgrimages to be pure from any form of unwanted elements. It is a traditional approach to accumulate money for pilgrimages. Again, these findings demonstrate the importance of the need and ability of IsMFIs' clients to benefit from savings accounts offered by IsMFIs in Thailand.

In summary, the findings on non-economic impacts of savings accounts bring to light the significance of the needs for healthcare and pilgrimages to Makkah and the ability of the clients' households to save for these purposes. As mentioned earlier, wealthier households may save for pilgrimage, which requires a large amount of money, because they want to go on pilgrimage, and they can afford to set aside a relatively large amount of money from their income for this purpose. They are more likely to fulfil this objective as compared to the lower-income households.

### **10.4.3 Impacts of Pawn Service on the Poor and Financially Excluded**

#### ***10.4.3.1 Economic impacts of pawn service***

A pawn service has been offered at Islam Pattani for a number of years. The response of its clients to this service has been overwhelming. The findings show that the pawn service has been used to improve economic and non-economic wellbeing of clients' households. The main economic impacts of the pawn service include improving liquidity of clients' businesses and providing the chance for the clients to undertake investment opportunities available. Impacts of the pawn service have been discussed in length in Chapter 7, Sections 7.4.1.1, 7.4.2.1, 7.4.3.1 and 7.4.4.1.

### ***Impacts of pawn service on business liquidity of households***

The findings in this study show that the pawn service can be used to improve the clients' business liquidity. Interestingly, the clients with upper secondary certificate, medium household size, or large amount of productive assets are more likely to benefit from the pawn service. These findings are expected as most IsMFI clients who are involved in small businesses such as the trading of furniture and household appliances have such characteristics. With a low level of education, they want fast money to seal the business opportunities available, but do not want to be involved in a lengthy approval process. The pawn service provides just that. They do, however, need vehicles to transport their goods to their customers in the villages. This may be the reason for their large assets-holding.

### ***Impacts of pawn service on investment opportunities of households***

The findings in this study reveal that the pawn service provides opportunities for clients' households to invest in business opportunities available to them. The findings show that young professional clients who hold Bachelor's degrees, have medium household size, or work in the private sector are more likely to benefit from this circumstance. Moreover, the level of impact may also relate to the age of the clients, i.e. younger clients tend to benefit more from the pawn service. A possible reason for this phenomenon is that young professional clients are enthusiastic about part-time work such as direct marketing and agricultural projects, i.e. fish-rearing, goat-farming etc. These projects do not require large amounts of investment, but they provide a regular extra income for their households.

In a nutshell, the pawn service allows the clients who own small businesses to inject liquidity into their businesses and further undertake investment opportunities available to them. The clients who are in need of this are those who are already involved in small businesses and young active professionals who need extra income. Hence, their needs underline the level of impact from the pawn service they may receive.

### ***10.4.3.2 Non-economic impacts of pawn service***

The pawn service can be an effective tool for clients' households to enhance their non-economic wellbeing, i.e. paying for medication for serious illness, children's education expenditure, and consumption, and allowing the clients to manage their households' finance in an Islamic way. The findings on the ranking of IsMFIs' services emphasise the importance of this service which forms the top three choices for purchase of productive and non-productive assets, death of a member, house improvement, and children's education. Please refer to Chapter 7, Sections 7.4.1.2, 7.4.2.2, 7.4.3.2, and 7.4.4.2, for a detailed discussion on non-economic impacts of the pawn service.

#### ***Impacts of pawn service on medication for serious illness***

The findings in this study reveal that the pawn service can improve the ability of the households to pay for expensive medication for serious illness. The impact can be both direct and indirect, i.e. the clients use money to pay for medical expenses or inject liquidity into their SME, which consequently improves income used to pay for medical expenses. As basic healthcare is provided for free under the Thai government healthcare system, expensive medication and private medication are matters of concern. Furthermore, the findings indicate that the clients' households that hold a large amount of land are more likely to be able to afford this type of medication expense. A possible explanation for this is that this group of clients can be considered wealthy clients who can therefore afford to provide a pledge amount in the form of gold or jewellery for a large amount of money.

#### ***Impacts of pawn service on children's education in households***

The findings confirm that the pawn service can help to improve the education of children in the clients' households. The clients may directly pay the children's education fees or other related expenses from the pawn amount obtained. Alternatively, they may enhance their income-generating activities from the pawn amount and pay for educational expenses from the income they get from those activities. Additionally, the findings show that the impact of the pawn service on children's education relates to the needs and means of the clients' households. Clients who are young or have higher education tend to benefit more from the pawn service. This is also

true for clients who work in private organisations. This might be due to the fact that this group of clients have the highest likelihood of facing short-term income shock. They have enough income to manage their daily lives but need help when it comes to education expenses which require a considerable amount of money.

### ***Impacts of pawn service on households' spending on festive seasons***

During festive seasons, especially Eid days, Muslims need extra money to pay for new clothes, food etc. Many clients apply for pawn services just before this period. The findings in this study prove that the pawn service can have an impact on the spending of Muslims during festive seasons. The findings further suggest that both lower- and higher-income groups may benefit from this service, implying lower non-productive assets and large land-holding. Arguably, the lower-income group may need pawn services for basic festive expenses, whilst the higher-income group may indulge in luxurious expenses. The younger clients with higher education can benefit more from the pawn service. A possible reason may be the needs of young professionals during the festive season, as highlighted in the previous section.

### ***Impacts of pawn service on consumption of households***

Another impact of the pawn service tested in this study is the impact on consumption of households. The findings reveal that the pawn service has a significant impact on the consumption ability of households. The impact can be either direct or indirect. Interestingly, the pawn service is the only service in which the clients are permitted to use the proceeds for consumption. It should be noted that lower-income households, which usually have large household size, are more likely to benefit from this Islamic microfinancial service.

### ***Impacts of pawn service on Islamic religiosity of households***

The final non-economic impact factor tested for the pawn service is religiosity. Clients of IsMFIs in Thailand agree that the pawn service is a key service that permits them to manage their financial needs in accordance with Islamic principles. This is true because the service is very flexible so that the clients can use it to satisfy various financial needs. In addition, the findings reveal that this service is an essential part of lower-income clients' financial choices.

In conclusion, the findings point out that the pawn service has significant impacts on clients' households. The clients apply for this service if they need fast money for medication for serious illness, children's education expenses, festive seasons, and consumption. It is an effective Islamic-compliant approach to urgent money needs for different events. The results additionally highlight the importance of levels of financial needs as a determinant for the impact of this service. The young professional lower-income group, for instance, may need fast money to pay the school fees of their children. The pawn service offers the most effective way to do so. Affordability or ability to obtain it might play a significant role if larger financial needs are targeted. This means that the clients must have enough pledge items to apply for it. This could occur in the event of medication being needed for serious illness which requires a large amount of money.

#### **10.4.4 Impacts of Insurance Schemes on the Poor and Financially Excluded**

##### ***10.4.4.1 Economic impacts of insurance schemes on households***

IsMFIs may offer financial assistance under insurance schemes to their members. This, however, will be considered on a case-by-case basis. One case where assistance might be offered is in the event of a short-term income shock. The findings in this study show that insurance schemes can be an effective tool to assist a member to fulfil their financial needs for a short period. The findings further indicate that the impact of this service is linked to gender, implying that male clients are exposed to information on availability and procedures of this service, and they may then benefit from it. Detailed analysis of this can be found in Chapter 7, Sections 7.5.1-8.5.4.

##### ***10.4.4.2 Non-economic impacts of insurance schemes on households***

Insurance schemes are often utilised in the events of illness and death of members of clients' households. All IsMFIs in Thailand offers this service to varying degrees. Islam Pattani, for instance, offers both small insurance schemes and life insurance schemes in collaboration with an Islamic insurance company in Malaysia. Other IsMFIs provide modest financial assistance with small initial contributions. The findings in this study confirm that insurance schemes can fulfil their objectives, i.e. providing assistance in the event of illness and death.

### ***Impact of insurance schemes on the ability to pay for healthcare expenses***

The findings show that insurance schemes have an impact on households in the event of illness of a member. The client's household may apply for this scheme to pay for some of the medical expenses. The results further suggest that the level of exposure and affordability primarily influence the impact. Clients who are male and working in government offices are more likely to benefit from the service. As a pledge in the form of gold is required, the clients who perceive high impact have relatively high non-productive assets, potentially gold.

### ***Impact of insurance schemes on households in the event of death of a member***

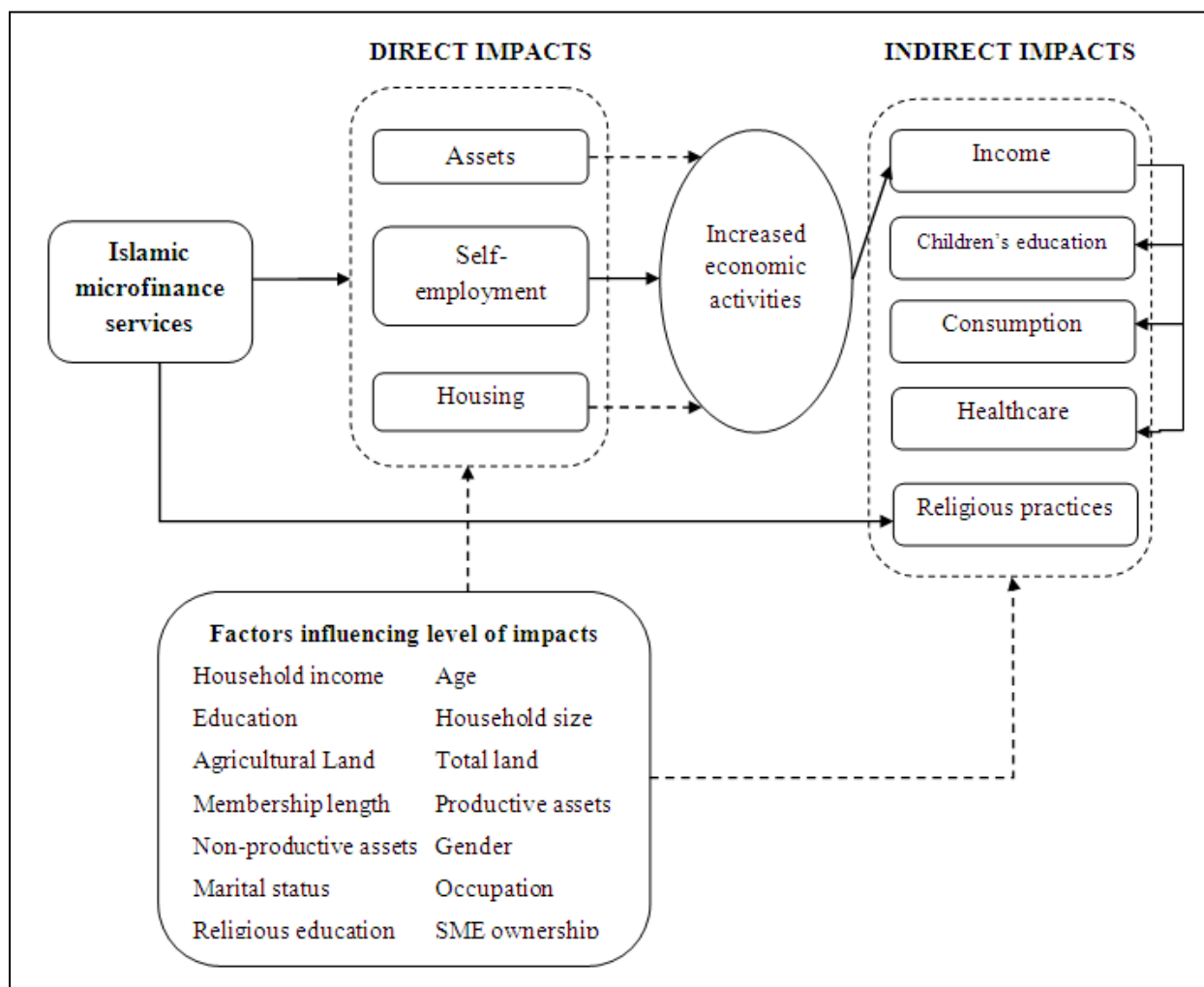
The results in this study show that insurance schemes can help households to manage financial needs in the event of the death of a member, such as funeral expenses. The findings additionally indicate that the level of impact tends to significantly relate to the level of exposure and assets-holding. Interestingly, the perceived level of impact seems to positively relate to land-holding, a proxy for wealth. A possible reason for this is that these clients may not be sensitive to insurance contributions and will see the importance of this scheme.

In a nutshell, Islamic insurance schemes offered by the IsMFIs in Thailand can help the clients' households to effectively manage their financial needs in the event of illness and death of a member. The impact level is, however, very much dependent on their ability to obtain information and exposure to policies and procedures of the IsMFIs relating to this service.

From the discussion on impacts of Islamic microfinancial services above, it is fair to conclude that Islamic microfinance enhances the welfare of clients' households. The level of impact is influenced by their level of awareness and exposure to the IsMFIs, and the services, affordability and emerging financial needs can also determine the level of impacts. Moreover, the impacts can be either direct or indirect. Impacts on accumulation of productive and non-productive assets and housing seem to be direct ones. The improvement of these factors consequently enhances economic activities of households and self-employment and increases income level of households. The income can then be used to pay for medication, children's educational expenses, and consumption. These are the indirect impacts of Islamic microfinance services. Moreover, some Islamic microfinance services may offer a specific impact on clients' households.

Insurance schemes, for instance, are designed specifically to assist the clients' households in the event of serious illness and deaths of members of the households. Furthermore, involvement in IsMFIs in themselves, rather than in a specific service, improves religious knowledge and practices of the clients, whilst pilgrimage accounts help the clients to accumulate money for *haj*, a religious obligation. Overall impact analysis is depicted in the following figure.

**Figure 10.2: Impacts of Islamic Microfinancial Services on Thai Households**



## 10.5 OUTREACH AND SUSTAINABILITY OF ISLAMIC MICROFINANCE IN THAILAND

In order for microfinance programmes to benefit the poor and financially excluded households, their programmes must reach these groups and must be able to operate for the foreseeable future.

This section therefore attempts to accomplish the fourth objective of this research: to examine outreach and sustainability of IsMFIs in Thailand. Specifically, it aims to answer the following research questions:

**RQ6:** How successful IsMFIs are in reaching the poor and financially excluded?

**RQ7:** What is the extent of the sustainability, efficiency and profitability of the IsMFIs?

### **10.5.1 Outreach of Islamic Microfinance in Thailand**

The findings in this study reveal that Islamic microfinance programmes in Thailand can provide Islamic microfinancial services to a large number of Muslim clients (Chapter 9, Table 9.1). The findings support the findings in Fox (1995), Rhyne (1998), UNDP (1999), Paxton and Cuevas (2002) and Zeller *et al.* (2002), but are inconsistent with the findings of Navajas *et al.* (2002) and Schreiner (2002), who found that microfinance cannot reach the target group of clients. Although this study has not been conducted for all IsMFIs available in the country, the results of outreach indicators have been encouraging and indicate progressive trends (Chapter 9, Tables 9.2 and 9.3). These findings are in line with the findings in the studies on outreach of Islamic microfinance programmes in Al-ZamZami and Grace (2001) and Al-Asaad (2008).

The findings show that breadth of outreach depends on the targeting strategies of the IsMFIs. This confirms the findings in Paxton and Cuevas (2002), Navajas *et al.* (2002) and Zeller *et al.* (2003). The number of clients and micro-financing outstanding reached 93,000 people and USD40 million respectively. The average growth of the two indicators was 28.0% and 51.0% during 1997-2008, respectively. In addition, the total balance of deposits strengthens that fact. The total balance of deposits increased significantly during the period, recording an average growth of over 230.0%. At the beginning, the IsMFIs targeted only a small group of people with a similar religious ideology, so the number of clients was small. Since the target group has been broadened to a larger public, the number has increased significantly in the past few years.

In terms of depth of outreach, it can be argued from the discussion on demand in Chapter 6 that Islamic microfinance programmes can reach the lower-income and financially excluded groups, but not the extreme poor. This finding is based on the respondents profiles which is proved to



representative of the people in the Four Provinces in southern Thailand. The finding seems to support the findings in Zeller and Meyer (2002b), Navajas *et al.* (2002) and Harper (2003). The finding shows that about 59.0% of the respondents who demand Islamic microfinancial services are classified as average, near-poor and poor. This indicates a considerable depth of outreach, taking into account the fact that the average-income group has just enough income to live on. Muslim people living in the four southern border provinces are among the poorest, with the lowest educational attainment and the highest rate of unemployment in the country. Hence, Islamic microfinance programmes can prevent many average-income households from falling into the poverty trap. The findings support those of Wright and Dondo (2001) and Al Asaad (2008), but are inconsistent with the findings of Ahmed (2008a) and Seibel (2008) who found that Islamic microfinance hardly reaches the core poor.

In short, the findings on outreach of IsMFIs confirm the established literature on microfinance that microfinance programmes can provide financial access to the unserved households and improve financial inclusiveness for this group, the Muslims who are driven away from the mainstream financial market mainly due to religious sensitivity. This can be proved by the number of clients, growth of financing, and growth of deposits in these IsMFIs.

### **10.5.2 Sustainability of Islamic Microfinance in Thailand**

In terms of sustainability of Islamic microfinance programmes, the findings in this study reveal that IsMFIs in Thailand can cover the costs and can additionally make profits (Chapter 9, Tables 9.4, 9.9, 9.10, and 9.11). The findings confirm the findings in Fox (1995), de Crombrughe *et al.* (2008) and Seibel and Parhusip (2003). This finding confirms the findings on sustainability of IsMFIs in Al-ZamZami and Grace (2001), Ahmed (2002), Al Asaad (2008) and Obaidullah and Mohamed-Saleem (2008). However, it contradicts the findings in Pollinger *et al.* (2007) and Rauf and Mahmood (2009) who found that microfinance institutions cannot survive without raising additional funds from grants and donations.

As shown in Chapter 9, sustainability, efficiency and profitability indicators of the IsMFIs, i.e. financial spread and operational self-sufficiency, clearly indicate that the IsMFIs have achieved sustainability and operational self-sufficiency. There are a number of possible explanations for

this phenomenon: firstly all IsMFIs take the form of cooperatives which acquire funding from their members' shares. They do not receive any grants and donations from any private and governmental organisations. As such, the IsMFIs must ensure that they can cover the costs and this has been reflected in their policies and operations. Another reason could be the fact that these IsMFIs have been adopting individual lending. The microfinance institutions that use individual lending were found by Seibel and Parhusip (2003) to be more sustainable as compared to those who offer group lending.

In a nutshell, the findings in this research suggest that IsMFIs in the form of Islamic cooperatives in Thailand have been operating in a sustainable and efficient manner. Hence, they are able to provide Islamic microfinance services to the clients for the foreseeable future. Additionally, the IsMFIs can make profits and pay dividends to the members.

## **10.6 ACHIEVEMENTS AND CHALLENGES**

This section attempts to answer the fifth objective of this study: to highlight the prospects and challenges facing the IsMFIs. The research question which this section answers read:

**RQ8:** What are the prospects and challenges facing Islamic microfinance in a non-Muslim country, Thailand?

The findings show that clients maintain that IsMFIs in Thailand have been successful in various aspects (Chapter 8, Table 8.27-8.32). However, there are challenges facing these IsMFIs today. The clients feel that the ability to offer *Shariah*-compliant financial services in an unfriendly financial environment is a big achievement by the IsMFIs. What's more, they can help manage *zakah* for the members who might not be comfortable managing it by themselves. The financial services provided by the IsMFIs are considered to be of high quality, satisfying the clients' needs and permitting some flexibility. Moreover, the IsMFIs have a strong financial performance and have opened many new branches in local areas. The bottom line is that the IsMFIs can help the lower-income group and strengthen brotherhood among people in society. The establishment of IsMFIs is in fact the way to bring Islamic teaching related to the economy into life and it is the way to call people to the Islamic religion.

Nevertheless, there are some issues that the IsMFIs must address in order to improve their services (Chapter 8, Tables 8.33-8.38). According to the respondents, these include certain policies and procedures which need to be changed. Return rate charges are very high as compared to mainstream cooperatives and financial institutions whilst the procedures to approve a micro-financing application take an unnecessarily long time. Additionally, procedures for unpopular services are not clear and are not effectively disseminated to the clients. Human resource management within these IsMFIs might need to be reshuffled. Currently, recruitment is based on other criteria but not merit. A majority of the staff, especially the initial recruits, are relatives of the founders and do not have the necessary qualifications. As a result, the staff members are incompetent and require intensive training. A high default rate and lack of knowledge of the clients on operations are other emerging issues. Finally, competition from the Islamic Bank of Thailand and other mainstream financial institutions which are now beginning to interest Muslim clients is a matter of concern. The IsMFIs must be able to deal with these issues so that they can be competitive and provide quality Islamic microfinancial services to Muslims in Thailand in a sustainable manner.

## **10.7 CONCLUSION**

This study reveals that Islamic microfinance programmes can be an effective financial tool for financial inclusiveness for the Muslim community and improve the welfare of lower-income households. The main findings on demand suggest that the clients of IsMFIs need not only micro-financing but also other services such as savings, investment, pawn services, and insurance to manage their lives effectively. They tend to use a combination of services to fulfil a financial need if they require a large amount of money. Apart from religious factors, demand for Islamic microfinance services is primarily dependent on the level of the clients' exposure to policies and procedures of IsMFIs and specific guidelines for specific services on offer, their various needs emerging for life cycle events, and the affordability and accessibility of the service.

As for the impacts of Islamic microfinance, the findings reveal that Islamic microfinance has both direct and indirect impacts on the welfare of clients' households. Some services such as insurance schemes and pilgrimage accounts offer specific impacts, whilst others including micro-

financing and savings provide various impacts based on their use. Involvement in Islamic microfinance in itself enhances the clients' ability to perform religious activities such as attending religious lectures and paying *zakah*. Nevertheless, this study suggests that the level of impacts of Islamic microfinance in general is influenced by the level of the clients' awareness and exposure, ability to afford the services and emerging financial needs which allow the clients to choose the right service for the right financial needs driven by diverse life cycle events.

Finally, the findings confirm that IsMFIs in Thailand have accomplished a number of achievements. The ability to offer Islamic financial services to largely financially excluded Muslims is considered to be a very great achievement. Outreach, sustainability, and financial strength are exceptional. The IsMFIs provide financial services to a large number of clients, integrating them with the country's financial system. They have achieved operational self-sufficiency and consistently make profits. The establishment of these IsMFIs show the people, Muslims and non-Muslims alike, that Islam can provide a workable example economically. However, a number of challenges remain. The clients perceive that the IsMFIs need to implement effective operational and human resource procedures so that they can operate efficiently and effectively. The client members should be trained in related aspects. They may play the role in the effective operations of the IsMFIs. The default rate can be reduced. The improved policies and procedures and client base will prepare the IsMFIs to face a strong competition from both Islamic banks and other financial institutions.

## Chapter 11

### CONCLUSION AND RECOMMENDATIONS

#### 11.1 INTRODUCTION

This research was carried out with the aim of assessing the performance and scope of Islamic microfinance programmes in Thailand. In order to realise this aim, the perceptions and opinions of the IsMFIs' customers were gathered by a questionnaire-based survey and semi-structured interviews. In addition, secondary data were also obtained from the IsMFIs' annual reports. The results of the analyses were then compared with the existing literature on mainstream and Islamic microfinance. This chapter sums up the main conclusions derived from the research findings and highlights some key practical and policy recommendations for the Islamic microfinance industry and beyond. The chapter also presents the research limitations and recommendations for future research in relation to this study.

#### 11.2 REFLECTING ON THE FINDINGS OF THE RESEARCH

Microfinance has been regarded by many as an effective approach to enable the poor and financially excluded to participate in the financial market, particularly in less-developed countries. Many studies have established that, should microfinance programmes reach a considerable number of clients and be sustained for the foreseeable future, they may have an enormous impact on the welfare of their clients' households in terms of increased income, asset accumulation, and consumption. This may lead to poverty alleviation, the ultimate aim of all development agendas. Nonetheless, many other studies have suggested that microfinance projects may fail to improve the lives of the poor and financially excluded. Other country-specific environmental factors such as infrastructure and transport system can affect the level of impacts of microfinance programmes.

It has been argued theoretically that microfinance and Islamic finance share development goals; thus, Islamic microfinance can contribute to accomplishing development goals in poor Muslim countries across the globe. However, Islamic microfinance programmes must adopt *Shariah*-compliant financial modes and instruments to replace interest-based financial tools. The limited empirical evidence, largely in Muslim countries, has shown that outreach, institutional

sustainability, and welfare impacts of the programmes were encouraging. Islamic sources of funds including *zakah*, *sadaqah*, and *awqaf* should be tapped so that Islamic microfinance programmes might achieve higher sustainability levels.

This study contributes to empirical evidence based on a triangulation method in which IsMFIs' clients from one of the poorest regions of Thailand were sampled. The first part of the empirical analysis shows that IsMFIs' customers need a variety of Islamic microfinance services which can fulfil their financial needs derived from their life cycle events. Hence, the Muslim poor and financially excluded are similar to the customers of mainstream financial institutions in terms of diversity of financial needs. The need for relatively larger amounts of financing and fast money for household financial management makes micro-financing and savings accounts the most popular services. A pawn service has been increasingly applicable for fulfilling short-term financial needs. Additionally, demand for Islamic financial services is largely related to the customers' awareness and exposure to the services in particular and the IsMFIs in general, and the existence of financial needs in their households, whilst the Islamic-compliant feature of the services is regarded as essential. A combination of services may be utilised to fulfil a specific financial need that requires a large amount of money, such as housing.

Furthermore, the findings reveal that Islamic microfinance services have improved the welfare of the customers' households in various ways. Islamic micro-financing, savings accounts, and pawn service fulfil a variety of financial needs, i.e. purchase of productive and non-productive assets and payments for healthcare bills and children's education expenses. Pilgrimage accounts and insurance schemes serve specific purposes, i.e. pilgrimage and assistance in the event of illness and death. The level of impacts tends to correlate to the awareness and exposure (or access to information) of the customers to features of services and IsMFIs' policy and procedures in which they may identify the suitable services to satisfy their financial needs. The financial needs and the ability to acquire the needed microfinancial services at a particular time and initial level of their financial conditions also play a significant role in determining the impact level. The results suggest that, like the mainstream financial market, access to information is critical for Islamic microfinance customers. The findings also indicate that the IsMFIs can reach significant segments of the low income Muslims, and be self-sustainable and profitable.

### **11.3 RESEARCH IMPLICATIONS**

As mentioned in Chapter 1, this research is motivated by the gap between the anticipated theoretical benefits of Islamic microfinance in particular and Islamic finance in general in particular in fulfilling the development goals of Islam and the practical perceptions and behaviours of the Islamic microfinance customers. Hence, the findings in this research offer positive implications and recommendations for various stakeholders of Islamic microfinance, and contribute towards academic research in expanding the boundary of the research area. The study may also provide significant contributions to Islamic microfinance providers and regulators for enhancing existing practices and regulations. This section describes the implications of this study in the following areas:

#### **11.3.1 Knowledge Generation and Development**

This research mainly expands to the process of knowledge generation and development in two important aspects. Firstly, it adds value to the existing scarce literature in the area of Islamic microfinance in particular and the socio-economic goals of Islamic finance in general. To the best of the researcher's knowledge, it is one of the few empirical research studies so far to be conducted on the demand for and the performance of Islamic microfinance and the first of its kind carried out on Islamic microfinance institutions in Thailand. This study is important for ascertaining the customer behaviours related to demand for and perceptions of welfare impacts of Islamic microfinance programmes which can contribute towards a market-led Islamic microfinance delivery and the impacts of Islamic microfinance programmes. Secondly, this study applies a triangulation method in the impact study which differs from the main body of literature on microfinance in which either quasi-experimental or qualitative methods were employed. It offers a balanced approach in which the qualitative side gives a deeper insight into the complicated conditions of demand and welfare impact of microfinance programmes.

#### **11.3.2 Islamic Microfinance Providers**

This study highlights three key aspects that require close attention from Islamic microfinance providers. Firstly, the findings in this study reveal that Islamic microfinance customers are no different from the customers of mainstream financial institutions. They need a variety of

financial services to fulfil financial needs driven by life cycle events at an affordable price. The Islamic microfinance providers should be able to identify the required products and deliver them to the customers at the right time. The services that offer flexibility and require a shorter time to approve, such as pawning, should form a main part of the service menus. These will effectively respond to the needs of the lower-income group who often face short-term income shocks and urgent financial needs.

Secondly, awareness of and exposure to the services and policy of IsMFIs and affordability are essential for increased demand and impacts of Islamic microfinance services. The providers of Islamic micro-finance should improve communicational and promotional channels so that detailed information on the services and policy of IsMFIs can reach the potential target groups. As a result of that they may identify the right services to satisfy their financial needs, leading to a higher impact level. Sponsoring sport programmes, giving talks and lectures, and other social activities can be alternative communication channels for the IsMFIs to reach their target audience and achieve the successful delivery of microfinance programmes.

Finally, religious factors such as *Shariah*-compliance and Islamic brotherhood, which strengthens the desire of people to help one another in Muslim society, are the foundations of Islamic microfinance programmes. These factors should be strictly upheld and improved practically through social involvement and interaction of the IsMFIs. These institutions must be able to clearly show this in their visions, missions and operational agendas. *Zakah*, *sadaqah* and *awqaf* should be explored to help the poorest of the poor in society. Moreover, the IsMFIs are now stable; the IsMFIs should improve the quality of services and financial performance as these factors are viewed as significant to ensure the outreach and sustainability of the IsMFIs. This cannot be done without the implementation of effective operational strategy and human resource procedures. Initially, the association of Islamic cooperatives, which has been recently formed, should be the centre for cooperation and assistance in operational and human resource development among these IsMFIs.



### **11.3.3 Islamic Microfinance Customers**

The theoretical perspective always envisages customers enjoying benefits and improving their wellbeing by participating in microfinance programmes. The empirical evidence in this research reveals that they may be able to do so if they can gain access to adequate information about the services and policy of the IsMFIs, can afford the services, and are able to identify suitable financial needs for each Islamic microfinancial service. The implementation of products and services and underlying policies should be made easily available to the customers. This will improve awareness about the services and related IsMFI policies which may in part bring about higher demand and impacts. Moreover, once equipped with the necessary knowledge and information on the services and policies, the customers may be in a better position to negotiate with the IsMFIs during annual general meetings about the policies of IsMFIs including concern about the high return rate charged by the IsMFIs, as highlighted by the customers during the interview sessions.

### **11.3.4 Financial Regulators and Policy-makers**

The findings in this research highlight two main aspects that should be addressed by financial regulators and policy-makers, i.e. the Cooperative Promotion Department and the Cooperative Auditing Department. The IsMFIs have been classified into diverse types of cooperative which makes standardisation and comparison difficult if not impossible. Best practices in operations are therefore specific to individual IsMFI. Matters related to *Shariah* and religious principles are hard to agree upon and implement across the IsMFIs. The pawn service, for instance, which is relevant to current conditions of the Muslim community, is not rolled out in most IsMFIs due to *Shariah* concerns. A specific type of cooperative, possibly an Islamic cooperative, should be legalised in addition to the eight types of cooperative available in the country. The theoretical and operational aspects of Islamic microfinance can be standardised for the benefits of the customers and providers alike.

Another aspect relates to the availability of Islamic finance experts within the government agencies responsible for regulating Islamic microfinance operations. At the moment there is a wide gap in the theoretical and practical understanding between the officials and the Islamic

microfinance providers, which makes it difficult for the industry progress further. This is particularly true when the IsMFIs want to address socio-economic goals of Islam more effectively by offering specific products which are not allowed under the cooperative law. The pawn service, for instance, has been offered under emergency loans. This issue needs to be taken seriously, especially when the government is currently using Islamic microfinance as part of policy measures to solve the Southern unrest and to improve the wellbeing of people in the region.

#### **11.4 LIMITATIONS OF THE RESEARCH**

Even though this research is considered a successful attempt at making meaningful inquiries into the behaviours and perceptions of customers on the demand for and performance of Islamic microfinance programmes, there are some limitations and challenges to be overcome before more rigorous results can be obtained. The first limitation relates to sampling in that the most appropriate samples cannot be targeted through non-probability sampling. The respondents, who are randomly selected, include customers who have not used a particular Islamic microfinance service referred to in the questionnaire. They may not be in a good position to provide meaningful information about that service. The researcher has attempted to reduce the impact of this by identifying, in the interview, the interviewees who have utilised the service.

As a result of non-probability sampling, data obtained from a questionnaire-based survey may not be appropriate for parametric techniques. These techniques are arguably more robust compared to the non-parametric techniques employed in this research. In this research, a complete list of customers of IsMFIs cannot be obtained due to some restrictions resulting from IsMFIs' data protection policy. Hence, probability sampling cannot be undertaken.

Another limitation concerns the size of the sample. Due to time and costs involved, the customers of only four IsMFIs are included in this study. The number is relatively small compared to other market-led or marketing research. The results and findings of this study would have been more rigorous had a country-wide survey been conducted so that a bigger number of samples from over 40 other IsMFIs could have been obtained. The study would then have

provided a more accurate representation of Islamic microfinance programmes throughout the country.

Furthermore, the researcher faced logistical barriers during the data collection process, especially during the interview sessions. A majority of the respondents and interviewees are local Malay speakers, a language which the researcher has not mastered adequately. During the survey process, research assistants who are fluent in both Thai and the local Malay language were recruited to assist in collecting data. A local Malay speaker was available to transcribe interview records which were conducted in the Malay language. These initiatives reduced the linguistic barriers faced during the data collection process and improved the validity and reliability of the data.

There is a limitation in regard to the use the questionnaire, which is the timing of the data collection. Data collected at a single moment in time may not provide the research with great accuracy. The opinions and perceptions of the customers of IsMFIs collected within a fairly short period of time may not present the true picture. A longitudinal design would have been a good research design to reduce this problem. However, this was difficult to achieve given the limited time and funds. The Southern unrest, which has rocked the region since 2004, made frequent travel in the region undesirable.

Finally, this study is a case study of Thailand in which IsMFIs are in the form of cooperative. The regulatory and industry conditions may differ from those of other countries. Hence, the results of this study cannot be generalised for other countries where different models of microfinance programmes operate.

## **11.5 SUGGESTIONS FOR FUTURE RESEARCH**

A number of suggestions and recommendations can be made either to enhance this research or to provide a basis for future research in the area of Islamic microfinance.

- (i) Future studies should expand the scope of the sample to include customers of other IsMFIs in Thailand. This will enhance the representation of the Islamic microfinance industry in Thailand and improve the rigorousness of the research.

- (ii) In order to improve the sampling design, researchers may need to conduct their studies in cooperation with Islamic microfinance providers so that a complete list of customers is accessible. Parametric techniques of analysis can be confidently employed, leading to more robust results and meaningful findings.
- (iii) This research is an exploratory research which incorporates all the services of IsMFIs, focusing on demand side. It should be noted that conducting separate studies for each Islamic microfinancial service would be a good way of investigating in more depth the attitudes, behaviours and perceptions of the IsMFIs clients. In addition, studies should be undertaken to understand supply side of IsMFIs. This would result in an accurate understanding of the subject matter and increasing efficiency and effectiveness of Islamic microfinance programmes.
- (iv) *Shariah*-related topics would be an interesting area for further research as there seems to be some contradicting opinions in relation to pawning practices. This service is regarded as providing flexible finance that effectively impacts on the lives of the clients in Thailand. Clear indications from *Shariah* scholars and practitioners would help to improve the demand, impacts and outreach of Islamic microfinance programmes.
- (v) Future studies could also be conducted on issues related to human resources and marketing of IsMFIs. These would help to identify the most effective ways of dealing with human capital and the process of services and would propose more effective and efficient processes to improve the quality of staff and services within the IsMFIs.

## **11.6 EPILOGUE**

This research aims at assessing demand for and performance of Islamic microfinance programmes in Thailand. The efforts put into this research in planning, executing, and delivering the research outcomes ensure that this research has achieved meaningful and rigorous results which fulfil the aim and objectives outlined in Chapter 1. It is hoped that the findings of this humble effort will benefit the stakeholders of Islamic microfinance programmes in Thailand in particular and Islamic finance in general. It is also hoped that, as a result of this study, the practices of IsMFIs in Thailand can be improved, thus leading to greater impacts on the lives of Muslim households in the country.

# **APPENDICES**

# **Appendix 5.1**

## **Customers' Survey**



## **Durham Islamic Finance Programme**

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**School of Government and International Affairs**

Dear Respondent,

The purpose of this research study is to assess demand and impacts of Islamic microfinance in Thailand which is a part of a research leading to Ph.D. at the School of Government and International Affairs, Durham University, United Kingdom.

Islamic microfinance is a new phenomenon in which a limited number of research has been conducted to explore its various aspects. The findings of this study shall highlight applicability of Islamic microfinance and its potentials to provide effective financial services to the poor and excluded in Muslim communities. Additionally, this study may offer some guidelines to policy makers, regulatory agencies and people involved in Islamic microfinance to improve the industry.

I would like to ask you to complete this questionnaire and return it to cooperative branch. Your responses will be strictly kept confidential and will only be used to assist the completion of the research aim of this study.

Please kindly fill in the appropriate boxes and check the most appropriate options among the given choices.

Thank you very much in advance for your support by responding to this survey. If you have any questions, concerns or complaints regarding this survey, you may forward them through e-mail to me at: [tawat.noipom@dur.ac.uk](mailto:tawat.noipom@dur.ac.uk).

Best regards,

Tawat Noipom

***Instructions: This questionnaire should be completed by head of your household, through the respondent should feel free to consult with other family members.***



**SECTION ONE: PERSONAL INFORMATION OF HOUSEHOLD HEAD**

1. Gender (check  $\surd$  **only one**):

Male

Female

2. Age: \_\_\_\_\_ years

3. Marital status (check  $\surd$  **only one**):

Single

Married

Divorced/Separated

Other (please specify) \_\_\_\_\_

4. Please circle the **highest** year of school completed:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19+

(Primary) (Secondary) (Teachers") (Master)

5. Have you received religious education?

Yes

No

6. Main occupation (check  $\surd$  **only one**):

Agriculture/farming

Small enterprise

Cottage industry

Government service

Private employee

Other (please specify) \_\_\_\_\_

7. Monthly income: \_\_\_\_\_ Baht

**SECTION TWO: HOUSEHOLD INFORMATION**

8. Number of people living in household: \_\_\_\_\_ persons

9. Number of household members in income generating activities: \_\_\_\_\_ persons

10. Additional income they earn: \_\_\_\_\_ Baht

11. Household agricultural land size: \_\_\_\_\_ rai

12. Household total land size: \_\_\_\_\_ rai

13. Kind of house (check  $\surd$  **only one**):

Cement or brick

Wood and cement or brick

Mainly permanent materials

Non-permanent materials

Reused materials

Unknown

14. Total productive assets: \_\_\_\_\_ Baht

15. Total non-productive assets: \_\_\_\_\_ Baht

**SECTION THREE: ENTERPRISE INFORMATION**

16. Own small and medium size business (check  $\surd$  *only one*):

- Yes  No

**If YES, please go to Q 17; if NO, please go to SECTION FOUR on page 3**

17. Number of years engaged in this business: \_\_\_\_\_ years

18. Type of business engaged in (check  $\surd$  *only one*):

- |   |  |
|---|--|
| <input type="checkbox"/> Petty trade                  | <input type="checkbox"/> Transportation      |
| <input type="checkbox"/> Cottage industry             | <input type="checkbox"/> Agriculture/fishery |
| <input type="checkbox"/> Other (please specify) _____ |  |

19. Skill training received from or through IsMFI (check  $\surd$  *only one*):

- Yes  No

**SECTION FOUR: ABOUT IsMFI**

20. Name of IsMFI you join (check  $\surd$  *only one*):

- Pattani Islamic Savings Cooperative Ltd.  
 Ibn Affan Savings Cooperative Ltd.  
 Ibn Auf Cooperative Ltd.  
 As-Siddeek Savings Cooperative Ltd.

21. Number of years join IsMFI: \_\_\_\_\_ years

22. Services and number of times used services (check  $\surd$  *all that apply*):

Use	Time	Service
<input type="checkbox"/>	_____	Loans
<input type="checkbox"/>	_____	Savings account
<input type="checkbox"/>	_____	Insurance/welfare scheme
<input type="checkbox"/>	_____	Pawn services
<input type="checkbox"/>	_____	Investment account
<input type="checkbox"/>	_____	Pilgrimage account
<input type="checkbox"/>	_____	Other, please specify _____

23. Use of loans (check  $\surd$  *all that apply*):

- Business/microenterprise  
 Non-enterprise productive assets such as farm machinery, motorcycle and land  
 Non-productive assets such as buying and repairing house and household appliances  
 Consumption of food and non-food items  
 Other, please specify \_\_\_\_\_

24. Receive loans from informal sources such as friends and relatives (check  $\surd$  *only one*):

Yes  No  
 25. Will you conventional financial services when no Islamic financial services are available (check  $\surd$  *only one*):

Yes  No

26. Will you conventional financial services when Islamic financial services are available (check  $\surd$  *only one*):

Yes  No

<b>SECTION FIVE: SELECTION CRITERIA FOR ISLAMIC MICROFINANCE</b>					
<b>WHAT ARE THE FACTORS AFFECTING SELECTION OF ISLAMIC MICROFINANCE SERVICES? How important is each of the following to your decision to use Islamic microfinance services?</b>					
	NOT AT ALL IMPORTANT	SLIGHTLY IMPORTANT	IMPORTANT	VERY IMPORTANT	OF UPMOST IMPORTANT
27. Provision of good return.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Quality of services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Confidence in IsMFI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Close distance from household locality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Avoidance of interest ( <i>riba</i> ) and other prohibitive activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Social responsibility.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>SECTION SIX: LOAN AND ECONOMIC IMPACTS</b>					
<b>WHAT ARE THE IMPACTS OF ISLAMIC MICROFINANCE LOANS ON INCOME, ASSETS AND EMPLOYMENT OF YOUR HOUSEHOLD? What is your level of agreement or disagreement with the following?</b>					
LOANS	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
33. Increase income.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Purchase or rent productive assets such as land, vehicles and tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Build, buy and repair a house for household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Increase opportunity for self-employment labour in household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION SEVEN: LOAN AND NON-ECONOMIC IMPACTS**

**WHAT ARE THE IMPACTS OF OTHER ISLAMIC MICROFINANCIAL SERVICES ON ECONOMIC AND NON-ECONOMIC FACTORS OF YOUR HOUSEHOLD?** What is your level of agreement or disagreement with the following statement?

<b>LOANS</b>	<b>STRONGLY DISAGREE</b>	<b>DISAGREE</b>	<b>NEUTRAL</b>	<b>AGREE</b>	<b>STRONGLY AGREE</b>
37. Increase amount of food consumption in household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Enable household to provide enough non-food items such as clothing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Allow household to allocate more money for children education, especially, college education.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Increase household access to healthcare.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Attend more congregation prayers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Enable you to pay <i>zakat</i> and more charitable contribution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Enhance your ability to go for pilgrimage to Makhah ( <i>haj</i> ).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Avoid interest ( <i>riba</i> ) and prohibited activities in business and daily life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Have more time to participate in Islamic lectures and Islamic study circle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION EIGHT: SAVINGS, INSURANCE, PAWN AND IMPACTS**

**WHAT ARE THE IMPACTS OF OTHER ISLAMIC MICROFINANCIAL SERVICES ON ECONOMIC AND NON-ECONOMIC FACTORS OF YOUR HOUSEHOLD?** What is your level of agreement or disagreement with the following statement?

<b>SAVINGS</b>	<b>STRONGLY DISAGREE</b>	<b>DISAGREE</b>	<b>NEUTRAL</b>	<b>AGREE</b>	<b>STRONGLY AGREE</b>
46. Provide enough income for consumption.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Increase ability to acquire more productive assets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Enhance ability to acquire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

more non-productive assets.					
49. Increase ability to pay for better healthcare.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Purchase new house, repair and rent better house.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Accumulated enough money for pilgrimage to Mecca ( <i>haj</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>PAWN SERVICES</b>	<b>STRONGLY DISAGREE</b>	<b>DISAGREE</b>	<b>NEUTRAL</b>	<b>AGREE</b>	<b>STRONGLY AGREE</b>
52. Help increasing liquidity of business when needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Enhance household ability to pay for medication of serious illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Do not make available adequate money for children's education especially during the beginning of academic year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Make available enough cash for festive seasons.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. Permit household to consume enough food and non-food items.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. Permit household to invest in on-going investment opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. Allow household to manage household finance in Islamic way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>INSURANCE AND WELFARE SCHEME</b>	<b>STRONGLY DISAGREE</b>	<b>DISAGREE</b>	<b>NEUTRAL</b>	<b>AGREE</b>	<b>STRONGLY AGREE</b>
59. Manage shocks that affect income more effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. Manage money during illness of member of household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. Help to manage in the event of death of member of household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION NINE: ORDER OF SERVICE USE**

**Please indicate your order of service use under particular event by writing number 1, 2, 3 and 4 in appropriate boxes.**

<b>EVENT</b>	<b>LOAN</b>	<b>SAVINGS</b>	<b>PAWN</b>	<b>INSURANCE</b>
<b>62.</b> Short-term income shocks for food and non-food consumption.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>63.</b> Acquiring productive assets such as farm equipment and cultivated land.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>64.</b> Buying non-productive assets such as household appliances and furniture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>65.</b> Illness or death of household head or other members of household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>66.</b> Building or buying new house or repairing existing house.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>67.</b> Paying for education fees and related expenses for children.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **Appendix 5.2**

### **Customers' Interview**

## **LIST OF INTERVIEW QUESTIONS**

### **1. QUESTIONS ON PARTICIPATION IN IsMFI**

- 1.1. How long have you joined the IsMFI?
- 1.2. Apart from you, is there any of your household members joining the IsMFI?
- 1.3. Why do you participate in the IsMFI?

### **2. QUESTIONS ON USE OF CONVENTIONAL FINANCIAL PRODUCTS AND SERVICE**

- 2.1. Are you using conventional financial products and services?
- 2.2. IF YES, what are those products and services?
- 2.3. What are those products and services for?

### **3. QUESTIONS ON DEMAND OF ISLAMIC MICROFINANCE SERVICES**

- 3.1. What are the products and services you use?
- 3.2. What are other products and services you need but currently unavailable at the IsMFI?
- 3.3. Why do you need those products and services?

### **4. QUESTIONS ON MICRO-FINANCING AND ECONOMIC IMPACTS**

- 4.1. How many times have you taken any micro-financings from the IsMFI?
- 4.2. Could you provide me details of your last 2 micro-financings? How much are the micro-financings? What are the purposes of those micro-financings?
- 4.3. Do you think those micro-financings have economic impacts on your household i.e. income, amount of assets, housing, and self-employment?
- 4.4. IF YES, how?



## **5. QUESTIONS ON MICRO-FINANCING AND NON-ECONOMIC IMPACTS**

- 5.1. Do you think those micro-financings have non-economic impacts on household i.e. religious activities, children's education, consumption, and healthcare?
- 5.2. IF YES, how?

## **6. QUESTION ON OTHER SERVICES AND IMPACTS**

- 6.1. Do you think the service have economic impacts on your household i.e. income, amount of assets, housing, and self-employment?
- 6.2. IF YES, how?
- 6.3. Do you think the service have non-economic impacts on your household i.e. religious activities, children's education, consumption, and healthcare?
- 6.4. IF YES, how?

## **7. QUESTIONS ACHIEVEMENTS AND EXPECTATION**

- 7.1. What do you think is achievement of IsMFI?
- 7.2. What other expectation of IsMFI do you have?
- 7.3. Do you think IsMFI can be an effective financial institution for Muslims? Why?

## **8. QUESTIONS ON CHALLENGES**

- 8.1. In your opinion, what are the challenges facing IsMFI?
- 8.2. What could be done to solve those challenges?
- 8.3. Do you have other observations and remarks about IsMFI?

## Appendix 6.1

### Purposes of Micro-Financing

#### Working Capital

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	79	19.8	19.8	19.8
No	321	80.3	80.3	100.0
Total	400	100.0	100.0	

#### Productive Assets

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	134	33.5	33.5	33.5
No	266	66.5	66.5	100.0
Total	400	100.0	100.0	

#### Non-Productive Assets

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	126	31.5	31.5	31.5
No	274	68.5	68.5	100.0
Total	400	100.0	100.0	

#### Consumption

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	40	10.0	10.0	10.0
No	360	90.0	90.0	100.0
Total	400	100.0	100.0	

#### Other Purposes

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	6	1.5	1.5	1.5
No	394	98.5	98.5	100.0
Total	400	100.0	100.0	

## Appendix 6.2

### Cross-tabulation: Use of Conventional Service through Islamic One Available

			Use or Not use		Total
			Yes	No	
<b>Main occupation</b>	Agriculture	Count	37	56	93
		% within Main occupation	39.8%	60.2%	100.0%
	Small enterprise	Count	29	33	62
		% within Main occupation	46.8%	53.2%	100.0%
	Cottage industry	Count	3	4	7
		% within Main occupation	42.9%	57.1%	100.0%
	Government services	Count	10	17	27
		% within Main occupation	37.0%	63.0%	100.0%
	Private sector employee	Count	63	119	182
		% within Main occupation	34.6%	65.4%	100.0%
	Other	Count	7	22	29
		% within Main occupation	24.1%	75.9%	100.0%
	<b>Total</b>	Count	149	251	400
		% within Main occupation	37.3%	62.8%	100.0%

Chi-Square: 5.509    df: 5    Sig: .730    Cramer's V: .084

**Appendix 6.3**  
**K-W Test and U-Test:**  
**Demand for Microfinancial Services**

## Demand for Micro-Financing

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.																																																																																																																																										
<b>Number of Micro-Financing taken</b>	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 2.142$	4	.710																																																																																																																																										
	Poor ( $\leq 40,000$ baht)	3	132.33																																																																																																																																													
	Near poor (40,001-100,000)	28	189.09																																																																																																																																													
	Average (100,001-300,000)	187	185.94																																																																																																																																													
	Near rich(300,001-500,000)	91	172.13																																																																																																																																													
	Rich ( $> 500,000$ baht)	61	205.07																																																																																																																																													
Total N	370				<b>Gender</b>		<b>U-Test</b>	$Z = -3.726$		.000	Male	234	217.92	Female	166	175.94	Total N	400			<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 9.991$	4	.000	$\leq 25$	48	132.65	26-35	150	192.80	36-45	117	210.79	46-55	58	232.33	$> 55$	27	250.94	Total N	400				<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 13.835$	2	.001	Single	74	157.16	Married	318	210.38	Other	8	208.63	Total N	400				<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 6.894$	4	.142	$\leq$ Primary certificate	88	205.99	Lower secondary certificate	21	181.38	Upper secondary certificate	77	218.14	Bachelor degree	196	189.58	$>$ Bachelor degree	18	239.44	Total N	400				<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 10.138$	3	.017	$\leq 3$	2	273.50	3-5	167	182.12	6-9	211	210.22	$> 9$	20	244.08	Total N	400				<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 4.178$	3	.243	$\leq 2$ rai	89	150.09	2.01-5.00 rai	89	161.76	5.01-10.00 rai	80	175.55	$> 10.00$ rai	70	173.68	Total N	328				<b>Total land size</b>		<b>K-W Test</b>			
	<b>Gender</b>		<b>U-Test</b>		$Z = -3.726$		.000																																																																																																																																									
	Male	234	217.92																																																																																																																																													
	Female	166	175.94																																																																																																																																													
	Total N	400																																																																																																																																														
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 9.991$	4	.000																																																																																																																																										
	$\leq 25$	48	132.65																																																																																																																																													
	26-35	150	192.80																																																																																																																																													
	36-45	117	210.79																																																																																																																																													
	46-55	58	232.33																																																																																																																																													
	$> 55$	27	250.94																																																																																																																																													
Total N	400				<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 13.835$	2	.001	Single	74	157.16	Married	318	210.38	Other	8	208.63	Total N	400				<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 6.894$	4	.142	$\leq$ Primary certificate	88	205.99	Lower secondary certificate	21	181.38	Upper secondary certificate	77	218.14	Bachelor degree	196	189.58	$>$ Bachelor degree	18	239.44	Total N	400				<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 10.138$	3	.017	$\leq 3$	2	273.50	3-5	167	182.12	6-9	211	210.22	$> 9$	20	244.08	Total N	400				<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 4.178$	3	.243	$\leq 2$ rai	89	150.09	2.01-5.00 rai	89	161.76	5.01-10.00 rai	80	175.55	$> 10.00$ rai	70	173.68	Total N	328				<b>Total land size</b>		<b>K-W Test</b>																																													
	<b>Marital status</b>		<b>K-W Test</b>		$X^2 = 13.835$	2	.001																																																																																																																																									
	Single	74	157.16																																																																																																																																													
	Married	318	210.38																																																																																																																																													
	Other	8	208.63																																																																																																																																													
Total N	400				<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 6.894$	4	.142	$\leq$ Primary certificate	88	205.99	Lower secondary certificate	21	181.38	Upper secondary certificate	77	218.14	Bachelor degree	196	189.58	$>$ Bachelor degree		18	239.44	Total N				400				<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 10.138$	3	.017	$\leq 3$	2	273.50	3-5	167	182.12	6-9	211	210.22	$> 9$	20	244.08	Total N	400				<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 4.178$	3	.243	$\leq 2$ rai	89	150.09	2.01-5.00 rai	89	161.76	5.01-10.00 rai	80	175.55	$> 10.00$ rai	70	173.68	Total N	328				<b>Total land size</b>		<b>K-W Test</b>																																																													
	<b>Highest Education</b>		<b>K-W Test</b>		$X^2 = 6.894$	4	.142																																																																																																																																									
	$\leq$ Primary certificate	88	205.99																																																																																																																																													
	Lower secondary certificate	21	181.38																																																																																																																																													
	Upper secondary certificate	77	218.14																																																																																																																																													
	Bachelor degree	196	189.58																																																																																																																																													
	$>$ Bachelor degree	18	239.44																																																																																																																																													
Total N	400				<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 10.138$	3	.017	$\leq 3$	2	273.50	3-5	167	182.12	6-9	211	210.22	$> 9$	20	244.08	Total N	400				<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 4.178$	3	.243	$\leq 2$ rai	89	150.09	2.01-5.00 rai	89	161.76	5.01-10.00 rai	80	175.55	$> 10.00$ rai	70	173.68	Total N	328				<b>Total land size</b>		<b>K-W Test</b>																																																																																											
	<b>Members in household</b>		<b>K-W Test</b>		$X^2 = 10.138$	3	.017																																																																																																																																									
	$\leq 3$	2	273.50																																																																																																																																													
	3-5	167	182.12																																																																																																																																													
	6-9	211	210.22																																																																																																																																													
	$> 9$	20	244.08																																																																																																																																													
Total N	400				<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 4.178$	3	.243	$\leq 2$ rai	89	150.09	2.01-5.00 rai	89	161.76	5.01-10.00 rai	80	175.55	$> 10.00$ rai	70	173.68	Total N	328				<b>Total land size</b>		<b>K-W Test</b>																																																																																																																		
	<b>Agricultural land size</b>		<b>K-W Test</b>		$X^2 = 4.178$	3	.243																																																																																																																																									
	$\leq 2$ rai	89	150.09																																																																																																																																													
	2.01-5.00 rai	89	161.76																																																																																																																																													
	5.01-10.00 rai	80	175.55																																																																																																																																													
	$> 10.00$ rai	70	173.68																																																																																																																																													
Total N	328				<b>Total land size</b>		<b>K-W Test</b>																																																																																																																																									
	<b>Total land size</b>		<b>K-W Test</b>																																																																																																																																													

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	162.24 143.26 171.60 173.12	$X^2 = 5.515$	3	.138
	<b>Occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 202.14 218.12 180.14 181.33 202.39 168.45	$X^2 = 5.091$	5	.405
	<b>Length with IsMFI</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 151.80 212.64 235.46 274.56	$X^2 = 58.228$	3	.000
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 200.19 202.55	$Z = -.144$		.885
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 223.90 189.74	$Z = -2.858$		.004
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 189.74 198.27 231.91	$X^2 = 10.266$	2	.006

### Demand for Savings Account

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
Number of times using savings account	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 4.328$	4	.363
	Poor ( $\leq 40,000$ baht)	3	132.33			
	Near poor (40,001-100,000)	28	189.09			
	Average (100,001-300,000)	187	185.94			
	Near rich(300,001-500,000)	91	172.13			
	Rich ( $> 500,000$ baht)	61	205.07			
	Total N	370				
	<b>Gender</b>		<b>U-Test</b>	$Z = -2.380$		.017
	Male	234	211.97			
	Female	166	184.33			
	Total N	400				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 1.756$	4	.781
	$\leq 25$	48	204.94			
	26-35	150	198.97			
	36-45	117	193.56			
	46-55	58	216.87			
	$> 55$	27	196.00			
	Total N	400				
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 5.014$	2	.082
	Single	74	203.15			
	Married	318	202.14			
	Other	8	110.81			
	Total N	400				
	<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 5.727$	4	.220
	$\leq$ Primary certificate	88	209.97			
	Lower secondary certificate	21	148.05			
	Upper secondary certificate	77	192.06			
	Bachelor degree	196	204.77			
	$>$ Bachelor degree	18	205.03			
Total N	400					
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 6.140$	3	.105
	$\leq 3$	2	349.50			
	3-5	167	193.26			
	6-9	211	201.32			
	$> 9$	20	237.38			
	Total N	400				
	<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 1.581$	3	.664
	$\leq 2$ rai	89	154.96			
	2.01-5.00 rai	89	167.21			
	5.01-10.00 rai	80	164.57			
	$> 10.00$ rai	70	173.10			
	Total N	328				
	<b>Total land size</b>		<b>K-W Test</b>			

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	155.53 170.27 153.62 172.89	$X^2 = 2.855$	3	.415
	<b>Occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 196.80 191.80 181.79 212.31 203.10 208.16	$X^2 = 1.154$	5	.949
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 164.56 220.98 216.99 237.22	$X^2 = 25.347$	3	.000
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 198.80 211.66	$Z = -.762$		.446
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 179.22 210.28	$Z = -2.521$		.012
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 210.28 135.88 192.77	$X^2 = 11.995$	2	.002



### Demand for Investment Account

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Number of times using investment account</b>	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 3.865$	4	.425
	Poor ( $\leq 40,000$ baht)	3	208.50			
	Near poor (40,001-100,000)	28	169.93			
	Average (100,001-300,000)	187	181.53			
	Near rich(300,001-500,000)	91	190.21			
	Rich ( $> 500,000$ baht)	61	196.67			
Total N	370					
	<b>Gender</b>		<b>U-Test</b>	$Z = -1.470$		.142
	Male	234	205.36			
	Female	166	193.65			
	Total N	400				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 3.344$	4	.502
	$\leq 25$	48	183.00			
	26-35	150	202.91			
	36-45	117	200.74			
	46-55	58	202.03			
	$> 55$	27	213.93			
Total N	400					
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 4.057$	2	.132
	Single	74	186.86			
	Married	318	202.81			
	Other	8	235.00			
Total N	400					
	<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 5.914$	4	.206
	$\leq$ Primary certificate	88	189.18			
	Lower secondary certificate	21	181.29			
	Upper secondary certificate	77	194.46			
	Bachelor degree	196	208.22			
	$>$ Bachelor degree	18	219.97			
Total N	400					
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 2.931$	3	.402
	$\leq 3$	2	259.00			
	3-5	167	194.93			
	6-9	211	202.89			
	$> 9$	20	216.00			
	Total N	400				
	<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 5.398$	3	.145
	$\leq 2$ rai	89	159.53			
	2.01-5.00 rai	89	158.67			
	5.01-10.00 rai	80	163.07			
	$> 10.00$ rai	70	179.87			
	Total N	328				
	<b>Total land size</b>		<b>K-W Test</b>			

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	165.90 157.44 153.00 176.79	$X^2 = 8.162$	3	.043
	<b>Main occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 191.90 198.12 163.00 208.39 207.73 189.48	$X^2 = 5.165$	5	.396
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 190.86 195.14 222.29 213.30	$X^2 = 9.747$	3	.021
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 200.35 201.48	$Z = .010$		.922
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 199.83 200.81	$Z = -.116$		.908
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 200.81 188.60 203.34	$X^2 = .820$	2	.664

### Demand for Pilgrimage Account

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Number of times using pilgrimage account</b>	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 3.899$	4	.420
	Poor ( $\leq 40,000$ baht)	3	178.50			
	Near poor (40,001-100,000)	28	178.50			
	Average (100,001-300,000)	187	183.43			
	Near rich(300,001-500,000)	91	188.64			
	Rich ( $> 500,000$ baht)	61	190.71			
	Total N	370				
	<b>Gender</b>		<b>U-Test</b>	$Z = -1.540$		.124
	Male	234	203.12			
	Female	166	196.81			
	Total N	400				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 36.414$	4	.000
	$\leq 25$	48	192.00			
	26-35	150	194.72			
	36-45	117	202.23			
	46-55	58	198.88			
	$> 55$	27	243.72			
	Total N	400				
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 3.023$	2	.221
	Single	74	194.70			
	Married	318	201.44			
	Other	8	216.94			
	Total N	400				
	<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 14.813$	4	.005
	$\leq$ Primary certificate	88	207.87			
	Lower secondary certificate	21	201.50			
	Upper secondary certificate	77	202.36			
	Bachelor degree	196	194.08			
	$>$ Bachelor degree	18	225.25			
	Total N	400				
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 22.612$	3	.000
	$\leq 3$	2	192.00			
	3-5	167	197.97			
	6-9	211	198.62			
	$> 9$	20	242.30			
		Total N	400			
	<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = .374$	3	.945
	$\leq 2$ rai	89	165.42			
	2.01-5.00 rai	89	165.35			
	5.01-10.00 rai	80	164.13			
	$> 10.00$ rai	70	162.67			
		Total N	328			
	<b>Total land size</b>		<b>K-W Test</b>			

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	161.27 169.44 163.57 163.54	$X^2 = 2.401$	3	.493
	<b>Main occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 200.58 214.52 192.00 199.39 195.34 205.76	$X^2 = 11.269$	5	.046
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 199.82 196.64 205.78 205.30	$X^2 = 3.104$	3	.376
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 200.65 199.53	$Z = -.188$		.851
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 206.25 197.86	$Z = -1.930$		.054
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 197.86 198.65 208.63	$X^2 = 5.120$	2	.077

### Demand for Pawn Service

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Number of times using pawn service</b>	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 3.218$	4	.522
	Poor ( $\leq 40,000$ baht)	3	146.50			
	Near poor (40,001-100,000)	28	187.34			
	Average (100,001-300,000)	187	191.17			
	Near rich(300,001-500,000)	91	181.54			
	Rich ( $> 500,000$ baht)	61	175.09			
Total N	370					
	<b>Gender</b>		<b>U-Test</b>	$Z = -.433$		.665
	Male	234	198.99			
	Female	166	202.63			
	Total N	400				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 13.812$	4	.008
	$\leq 25$	48	176.50			
	26-35	150	195.88			
	36-45	117	207.69			
	46-55	58	228.27			
	$> 55$	27	178.02			
Total N	400					
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 5.399$	2	.067
	Single	74	185.80			
	Married	318	205.00			
	Other	8	157.50			
Total N	400					
	<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = 13.329$	4	.010
	$\leq$ Primary certificate	88	208.24			
	Lower secondary certificate	21	233.26			
	Upper secondary certificate	77	214.92			
	Bachelor degree	196	191.80			
	$>$ Bachelor degree	18	157.50			
Total N	400					
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 7.745$	3	.052
	$\leq 3$	2	157.50			
	3-5	167	190.53			
	6-9	211	210.93			
	$> 9$	20	177.98			
Total N	400					
	<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 7.646$	3	.054
	$\leq 2$ rai	89	166.06			
	2.01-5.00 rai	89	178.00			
	5.01-10.00 rai	80	148.41			
	$> 10.00$ rai	70	163.74			
Total N	328					
	<b>Total land size</b>		<b>K-W Test</b>			

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	152.56 176.90 169.23 158.47	$X^2 = 5.028$	3	.170
	<b>Main occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 191.67 215.10 215.07 200.65 199.68 199.10	$X^2 = 3.209$	5	.668
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 181.62 191.80 222.27 254.30	$X^2 = 33.225$	3	.000
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 202.86 185.05	$Z = -1.454$		.146
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 220.08 191.50	$Z = -3.198$		.001
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 191.50 212.52 222.44	$X^2 = 10.551$	2	.005

### Demand for Insurance Scheme

Variable	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
Number of times using insurance scheme	<b>Household annual income</b>		<b>K-W Test</b>	$X^2 = 15.914$	4	.003
	Poor ( $\leq 40,000$ baht)	3	191.00			
	Near poor (40,001-100,000)	28	192.84			
	Average (100,001-300,000)	187	201.12			
	Near rich(300,001-500,000)	91	166.22			
	Rich ( $> 500,000$ baht)	61	162.75			
	Total N	370				
	<b>Gender</b>		<b>U-Test</b>	$Z = -.948$		.343
	Male	234	204.11			
	Female	166	195.41			
	Total N	400				
	<b>Age groups</b>		<b>K-W Test</b>	$X^2 = 23.967$	4	.000
	$\leq 25$	48	164.48			
	26-35	150	204.64			
	36-45	117	184.80			
	46-55	58	237.19			
	$> 55$	27	230.74			
	Total N	400				
	<b>Marital status</b>		<b>K-W Test</b>	$X^2 = 16.626$	2	.000
	Single	74	166.73			
	Married	318	209.75			
	Other	8	145.00			
	Total N	400				
	<b>Highest Education</b>		<b>K-W Test</b>	$X^2 = .991$	4	.911
	$\leq$ Primary certificate	88	204.59			
	Lower secondary certificate	21	207.33			
	Upper secondary certificate	77	205.40			
	Bachelor degree	196	196.68			
	$>$ Bachelor degree	18	193.17			
	Total N	400				
	<b>Members in household</b>		<b>K-W Test</b>	$X^2 = 2.247$	3	.523
	$\leq 3$	2	238.50			
	3-5	167	195.09			
	6-9	211	205.86			
	$> 9$	20	185.38			
	Total N	400				
	<b>Agricultural land size</b>		<b>K-W Test</b>	$X^2 = 2.420$	3	.490
	$\leq 2$ rai	89	167.61			
	2.01-5.00 rai	89	161.38			
	5.01-10.00 rai	80	172.68			
	$> 10.00$ rai	70	155.17			
	Total N	328				
	<b>Total land size</b>		<b>K-W Test</b>			

	≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total N	50 72 88 118 328	172.19 156.71 173.31 159.43	$X^2 = 3.160$	3	.368
	<b>Main occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total N	93 62 7 27 182 29 400	<b>K-W Test</b> 212.47 203.26 234.71 188.76 198.60 170.79	$X^2 = 6.340$	5	.274
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total N	153 129 73 45 400	<b>K-W Test</b> 187.20 191.16 221.40 238.60	$X^2 = 16.535$	3	.001
	<b>Religious education</b> Having religious education Not having Total N	347 53 400	<b>U-Test</b> 202.86 185.03	$Z = -1.336$		.182
	<b>Own SME</b> Own Not own Total N	126 274 400	<b>U-Test</b> 215.48 193.61	$Z = -2.244$		.025
	<b>Length engaged in SME</b> 0 1-2 ≥ 3 Total N	274 30 96 400	<b>K-W Test</b> 193.61 185.77 224.77	$X^2 = 9.277$	2	.010



**Appendix 7.1**

**K-W Test and U-Test:**

**Impacts of Islamic Micro-financing**

### Micro-financing increases income

Statement	Subgroup	N	Mean Rank	Z, $\chi^2$	df	Asymp. Sig.
<b>Micro-financing increases income.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	232.50	15.236	4	.004
	Near poor (40,001-100,000)	28	173.50			
	Average (100,001-300,000)	187	169.74			
	Near rich(300,001-500,000)	91	215.76			
	Rich ( $> 500,000$ )	61	191.86			
Total	370					
	<b>Gender</b>					
	Male	234	221.76	-4.821		.000
	Female	166	170.54			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	188.73	2.458	4	.652
	26-35	150	205.71			
	36-45	117	197.09			
	46-55	58	193.73			
	$> 55$	27	221.76			
	Total	400				
	<b>Marital status</b>					
	Single	74	182.53	5.125	2	.077
	Married	318	206.02			
	Other	8	147.38			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	179.38	6.994	4	.136
	Lower secondary certificate	21	186.40			
	Upper secondary certificate	77	203.25			
	Bachelor degree	196	207.04			
	$>$ Bachelor degree	18	237.22			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	168.50	2.972	3	.396
	3-5	167	197.16			
	6-9	211	199.86			
	$>9$	20	238.30			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	158.52	4.217	3	.239
	2.01-5.00 rai	89	155.00			
	5.01-10.00 rai	80	167.19			
	$> 10.00$ rai	70	181.11			

	Total	328				
	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	174.14	3.641	3	.303
	2.01-5.00 <i>rai</i>	72	163.83			
	5.01-10.00 <i>rai</i>	88	150.63			
	> 10.00 <i>rai</i>	118	171.17			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	198.69	12.048	5	.034
	Small enterprise	62	184.79			
	Cottage industry	7	164.29			
	Government services	27	260.76			
	Private sector employee	182	202.01			
	Other	29	183.07			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	190.36	2.840	3	.417
	3-5 years	129	202.54			
	6-10 years	73	213.42			
	>10 years	45	208.18			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	203.07	-1.255		.209
	Not having	53	183.69			
	Total	400				
	<b>SME ownership</b>					
	Own	126	203.75	-.422		.673
	Not own	274	199.00			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	153.03	2.067	4	.723
	40,001-100,000	53	148.94			
	100,001-300,000	58	165.55			
	300,001-500,000	37	168.69			
	> 500,000	76	157.17			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	156.24	2.521	4	.641
	40,001-100,000	42	145.88			
	100,001-300,000	62	142.82			
	300,001-500,000	61	141.59			
	> 500,000	100	157.76			
	Total	298				

**Micro-financing enables you to purchase or rent productive assets**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>\chi^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Micro-financing enables you to purchase or rent productive assets.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	176.50	2.572	4	.632
	Near poor (40,001-100,000)	28	184.11			
	Average (100,001-300,000)	187	178.49			
	Near rich(300,001-500,000)	91	196.89			
	Rich ( $> 500,000$ )	61	191.09			
Total	370					
	<b>Gender</b>					
	Male	234	218.84	-4.243		.000
	Female	166	174.65			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	180.66	3.777	4	.437
	26-35	150	196.09			
	36-45	117	207.23			
	46-55	58	215.25			
	$> 55$	27	199.44			
	Total	400				
	<b>Marital status</b>					
	Single	74	179.15	4.019	2	.134
	Married	318	205.61			
	Other	8	194.75			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	199.40	1.620	4	.805
	Lower secondary certificate	21	195.21			
	Upper secondary certificate	77	193.90			
	Bachelor degree	196	201.71			
	$>$ Bachelor degree	18	227.08			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	116.75	3.408	3	.333
	3-5	167	200.40			
	6-9	211	198.31			
	$>9$	20	232.78			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	158.20	6.006	3	.111
	2.01-5.00 rai	89	150.66			
	5.01-10.00 rai	80	178.63			
	$> 10.00$ rai	70	173.96			

	Total	328				
	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	164.10	1.051	3	.789
	2.01-5.00 <i>rai</i>	72	163.67			
	5.01-10.00 <i>rai</i>	88	157.94			
	> 10.00 <i>rai</i>	118	170.06			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	186.88	4.602	5	.466
	Small enterprise	62	208.11			
	Cottage industry	7	173.86			
	Government services	27	229.06			
	Private sector employee	182	200.95			
	Other	29	204.95			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	196.74	1.748	3	.626
	3-5 years	129	201.17			
	6-10 years	73	196.03			
	>10 years	45	218.59			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	200.25	-.126		.899
	Not having	53	202.16			
	Total	400				
	<b>SME ownership</b>					
	Own	126	203.70	-.423		.672
	Not own	274	199.03			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	145.38	6.218	4	.183
	40,001-100,000	53	149.81			
	100,001-300,000	58	154.92			
	300,001-500,000	37	169.45			
	> 500,000	76	173.36			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	155.68	1.960	4	.743
	40,001-100,000	42	141.39			
	100,001-300,000	62	144.35			
	300,001-500,000	61	145.36			
	> 500,000	100	156.58			
	Total	298				

**Micro-financing enables you to build, buy, and repair a house for household**

Statement	Subgroup	N	Mean Rank	Z, X <sup>2</sup>	df	Asymp. Sig.
<b>Micro-financing enables you to build, buy, and repair a house for household.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	189.50	1.429	4	.839
	Near poor (40,001-100,000)	28	193.32			
	Average (100,001-300,000)	187	186.83			
	Near rich(300,001-500,000)	91	188.81			
	Rich ( $> 500,000$ )	61	172.70			
Total	370					
	<b>Gender</b>					
	Male	234	214.88	-3.285		.001
	Female	166	180.22			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	163.07	10.998	4	.027
	26-35	150	211.73			
	36-45	117	192.79			
	46-55	58	221.09			
	$> 55$	27	193.81			
	Total	400				
	<b>Marital status</b>					
	Single	74	175.85	5.403	2	.067
	Married	318	206.60			
	Other	8	186.19			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	195.51	1.937	4	.747
	Lower secondary certificate	21	186.33			
	Upper secondary certificate	77	199.34			
	Bachelor degree	196	202.16			
	$>$ Bachelor degree	18	228.28			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	205.00	1.518	3	.678
	3-5	167	199.87			
	6-9	211	198.33			
	$>9$	20	228.18			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	165.80	.191	3	.979
	2.01-5.00 rai	89	161.74			
	5.01-10.00 rai	80	163.76			
	$> 10.00$ rai	70	167.20			

	Total	328				
	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	179.75	2.558	3	.465
	2.01-5.00 <i>rai</i>	72	166.68			
	5.01-10.00 <i>rai</i>	88	156.00			
	> 10.00 <i>rai</i>	118	163.05			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	199.19	9.319	5	.097
	Small enterprise	62	169.24			
	Cottage industry	7	183.50			
	Government services	27	233.65			
	Private sector employee	182	205.97			
	Other	29	210.47			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	192.42	1.725	3	.631
	3-5 years	129	202.46			
	6-10 years	73	208.76			
	>10 years	45	208.93			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	200.50	-.002		.998
	Not having	53	200.47			
	Total	400				
	<b>SME ownership</b>					
	Own	126	187.52	-1.693		.091
	Not own	274	206.47			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	149.24	2.583	4	.630
	40,001-100,000	53	157.90			
	100,001-300,000	58	152.64			
	300,001-500,000	37	163.58			
	> 500,000	76	167.75			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	147.64	3.873	4	.423
	40,001-100,000	42	165.18			
	100,001-300,000	62	137.94			
	300,001-500,000	61	143.97			
	> 500,000	100	154.07			
	Total	298				

**Micro-financing increases opportunity for self-employment labour in household**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Micro-financing increases opportunity for self-employment labour in household.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	205.00	6.428	4	.169
	Near poor (40,001-100,000)	28	202.86			
	Average (100,001-300,000)	187	185.22			
	Near rich(300,001-500,000)	91	196.71			
	Rich ( $> 500,000$ )	61	160.70			
Total	370					
	<b>Gender</b>					
	Male	234	215.03	-3.338		.001
	Female	166	180.02			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	165.31	7.958	4	.093
	26-35	150	212.19			
	36-45	117	196.92			
	46-55	58	208.03			
	$> 55$	27	197.43			
	Total	400				
	<b>Marital status</b>					
	Single	74	183.59	3.858	2	.145
	Married	318	205.42			
	Other	8	161.25			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	183.32	4.532	4	.339
	Lower secondary certificate	21	211.81			
	Upper secondary certificate	77	207.51			
	Bachelor degree	196	201.53			
	$>$ Bachelor degree	18	230.08			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	225.50	1.734	3	.629
	3-5	167	195.05			
	6-9	211	202.29			
	$>9$	20	224.63			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	173.59	4.150	3	.246
	2.01-5.00 rai	89	153.63			
	5.01-10.00 rai	80	173.79			
	$> 10.00$ rai	70	156.14			
	Total	328				



	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	189.27	7.982	3	.046
	2.01-5.00 <i>rai</i>	72	166.99			
	5.01-10.00 <i>rai</i>	88	147.35			
	> 10.00 <i>rai</i>	118	165.28			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	185.43	3.217	5	.667
	Small enterprise	62	199.54			
	Cottage industry	7	196.14			
	Government services	27	196.07			
	Private sector employee	182	207.74			
	Other	29	210.62			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	181.45	13.879	3	.003
	3-5 years	129	198.22			
	6-10 years	73	222.70			
	>10 years	45	235.79			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.00	-.742		.458
	Not having	53	190.69			
	Total	400				
	<b>SME ownership</b>					
	Own	126	205.61	-.670		.503
	Not own	274	198.15			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	145.49	3.339	4	.503
	40,001-100,000	53	165.56			
	100,001-300,000	58	163.93			
	300,001-500,000	37	166.26			
	> 500,000	76	156.93			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	159.17	8.838	4	.065
	40,001-100,000	42	176.63			
	100,001-300,000	62	146.54			
	300,001-500,000	61	133.04			
	> 500,000	100	146.79			
	Total	298				

### Micro-financing increases amount of food consumption in household

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Micro-financing increases amount of food consumption in household.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	180.00	2.574	4	.631
	Near poor (40,001-100,000)	28	191.54			
	Average (100,001-300,000)	187	177.57			
	Near rich(300,001-500,000)	91	193.70			
	Rich ( $> 500,000$ )	61	195.09			
	Total	370				
	<b>Gender</b>					
	Male	234	210.82	-2.328		.020
	Female	166	185.95			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	227.66	33.139	4	.000
	26-35	150	231.18			
	36-45	117	173.28			
	46-55	58	158.83			
	$> 55$	27	189.28			
	Total	400				
	<b>Marital status</b>					
	Single	74	228.78	6.549	2	.038
	Married	318	194.06			
	Other	8	195.00			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	148.19	37.046	4	.000
	Lower secondary certificate	21	160.90			
	Upper secondary certificate	77	203.53			
	Bachelor degree	196	222.76			
	$>$ Bachelor degree	18	247.14			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	153.00	9.199	3	.027
	3-5	167	214.82			
	6-9	211	186.49			
	$>9$	20	233.53			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	171.47	7.820	3	.050
	2.01-5.00 rai	89	151.49			
	5.01-10.00 rai	80	182.98			
	$> 10.00$ rai	70	151.05			
	Total	328				

	<b>Total land size</b>					
	≤ 2 rai	50	174.20	1.092	3	.779
	2.01-5.00 rai	72	166.35			
	5.01-10.00 rai	88	164.61			
	> 10.00 rai	118	159.18			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	158.09	24.892	5	.000
	Small enterprise	62	190.07			
	Cottage industry	7	183.21			
	Government services	27	220.59			
	Private sector employee	182	222.48			
	Other	29	206.33			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	204.88	1.496	3	.683
	3-5 years	129	194.27			
	6-10 years	73	208.30			
	>10 years	45	190.83			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.15	-.803		.422
	Not having	53	189.68			
	Total	400				
	<b>SME ownership</b>					
	Own	126	192.56	-1.022		.307
	Not own	274	204.15			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	157.35	9.419	4	.051
	40,001-100,000	53	178.08			
	100,001-300,000	58	136.55			
	300,001-500,000	37	141.04			
	> 500,000	76	167.33			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	133.95	4.264	4	.371
	40,001-100,000	42	168.36			
	100,001-300,000	62	143.11			
	300,001-500,000	61	147.05			
	> 500,000	100	152.17			
	Total	298				

**Micro-financing enables household to provide enough non-food items such as clothing**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Micro-financing enable household to provide enough non-food items such as clothing.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	244.50	23.423	4	.000
	Near poor (40,001-100,000)	28	161.80			
	Average (100,001-300,000)	187	183.70			
	Near rich(300,001-500,000)	91	194.30			
	Rich ( $> 500,000$ )	61	185.86			
Total	370					
	<b>Gender</b>					
	Male	234	208.00	-1.710		.087
	Female	166	189.92			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	224.70	23.423	4	.000
	26-35	150	224.44			
	36-45	117	182.45			
	46-55	58	158.90			
	$> 55$	27	192.06			
	Total	400				
	<b>Marital status</b>					
	Single	74	222.18	3.931	2	.140
	Married	318	195.54			
	Other	8	197.19			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	149.91	49.008	4	.000
	Lower secondary certificate	21	132.33			
	Upper secondary certificate	77	191.46			
	Bachelor degree	196	230.56			
	$>$ Bachelor degree	18	238.67			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	263.50	8.777	3	.032
	3-5	167	215.98			
	6-9	211	186.23			
	$>9$	20	215.48			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	159.29	1.537	3	.674
	2.01-5.00 rai	89	159.62			
	5.01-10.00 rai	80	173.54			
	$> 10.00$ rai	70	167.00			
	Total	328				

	Total	328				
	<b>Total land size</b>					
	≤ 2 rai	50	160.78	1.564	3	.668
	2.01-5.00 rai	72	170.32			
	5.01-10.00 rai	88	156.01			
	> 10.00 rai	118	168.86			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	151.06	39.775	5	.000
	Small enterprise	62	184.10			
	Cottage industry	7	187.71			
	Government services	27	243.98			
	Private sector employee	182	227.38			
	Other	29	188.03			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	210.68	3.850	3	.278
	3-5 years	129	189.29			
	6-10 years	73	206.66			
	>10 years	45	188.03			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	201.41	-.446		.655
	Not having	53	194.55			
	Total	400				
	<b>SME ownership</b>					
	Own	126	176.38	-3.138		.002
	Not own	274	211.59			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	157.34	8.131	4	.087
	40,001-100,000	53	184.41			
	100,001-300,000	58	141.56			
	300,001-500,000	37	153.97			
	> 500,000	76	152.81			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	141.17	10.720	4	.030
	40,001-100,000	42	181.08			
	100,001-300,000	62	137.69			
	300,001-500,000	61	136.69			
	> 500,000	100	154.12			
	Total	298				

**Micro-financing allows household to allocate more money for children's education, especially, college education**

Statement	Subgroup	N	Mean Rank	Z, X <sup>2</sup>	df	Asymp. Sig.
Micro-financing allows household to allocate more money for children's education, especially, college education.	<b>Annual household income (in baht)</b>					
	Poor (≤ 40,000)	3	67.00	6.965	4	.138
	Near poor (40,001-100,000)	28	192.95			
	Average (100,001-300,000)	187	185.44			
	Near rich(300,001-500,000)	91	177.08			
	Rich (> 500,000)	61	200.65			
	Total	370				
	<b>Gender</b>					
	Male	234	207.89	-1.695		.090
	Female	166	190.08			
	Total	400				
	<b>Age groups</b>					
	≤ 25	48	205.74	7.404	4	.116
	26-35	150	214.42			
	36-45	117	197.79			
	46-55	58	176.80			
	> 55	27	176.48			
	Total	400				
	<b>Marital status</b>					
	Single	74	196.90	.784	2	.676
	Married	318	202.06			
	Other	8	171.63			
	Total	400				
	<b>Education</b>					
	≤ Primary certificate	88	174.52	10.775	4	.029
	Lower secondary certificate	21	166.71			
	Upper secondary certificate	77	207.92			
	Bachelor degree	196	212.26			
	> Bachelor degree	18	207.11			
	Total	400				
	<b>Household size</b>					
	≤ 3	2	235.50	1.201	3	.753
	3-5	167	197.86			
	6-9	211	200.22			
	>9	20	222.00			
	Total	400				
	<b>Agricultural land size</b>					
	≤ 2 rai	89	161.19	5.101	3	.165
	2.01-5.00 rai	89	150.32			
	5.01-10.00 rai	80	178.36			

	> 10.00 rai Total	70 328	170.89			
	<b>Total land size</b> ≤ 2 rai 2.01-5.00 rai 5.01-10.00 rai > 10.00 rai Total	50 72 88 118 328	171.33 156.69 144.61 181.20	10.235	3	.017
	<b>Occupation</b> Agriculture Small enterprise Cottage industry Government services Private sector employee Other Total	93 62 7 27 182 29 400	182.16 187.98 208.93 219.98 211.16 198.98	6.764	5	.239
	<b>Membership length</b> ≤ 2 years 3-5 years 6-10 years >10 years Total	153 129 73 45 400	204.68 199.78 205.38 180.43	2.108	3	.550
	<b>Religious education</b> Having religious education Not having Total	347 53 400	203.47 181.03	-1.470		.142
	<b>SME ownership</b> Own Not own Total	126 274 400	192.31 204.26	-1.072		.284
	<b>Productive assets (in baht)</b> ≤ 40,000 40,001-100,000 100,001-300,000 300,001-500,000 > 500,000 Total	90 53 58 37 76 314	159.23 172.11 148.46 152.65 154.53	2.685	4	.612
	<b>Non-productive assets (in baht)</b> ≤ 40,000 40,001-100,000 100,001-300,000 300,001-500,000 > 500,000 Total	33 42 62 61 100 298	144.68 156.04 129.84 142.94 164.54	8.711	4	.069

### Micro-financing increases household access to healthcare

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Micro-financing increases household access to healthcare.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	166.33	1.700	4	.791
	Near poor (40,001-100,000)	28	183.16			
	Average (100,001-300,000)	187	181.00			
	Near rich(300,001-500,000)	91	186.90			
	Rich ( $> 500,000$ )	61	199.23			
Total	370					
	<b>Gender</b>					
	Male	234	203.43	-.650		.515
	Female	166	196.37			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	214.64	2.161	4	.706
	26-35	150	204.96			
	36-45	117	190.44			
	46-55	58	198.60			
	$> 55$	27	198.30			
	Total	400				
	<b>Marital status</b>					
	Single	74	197.30	1.836	2	.399
	Married	318	199.98			
	Other	8	250.75			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	179.06	5.609	4	.230
	Lower secondary certificate	21	221.33			
	Upper secondary certificate	77	211.31			
	Bachelor degree	196	202.08			
	$>$ Bachelor degree	18	217.53			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	259.50	.611	3	.894
	3-5	167	200.21			
	6-9	211	200.16			
	$>9$	20	200.60			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	160.17	8.436	3	.038
	2.01-5.00 rai	89	146.39			
	5.01-10.00 rai	80	184.54			
	$> 10.00$ rai	70	170.13			
	Total	328				



	<b>Total land size</b>					
	≤ 2 rai	50	165.66	4.249	3	.236
	2.01-5.00 rai	72	156.53			
	5.01-10.00 rai	88	153.77			
	> 10.00 rai	118	176.88			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	173.21	9.909	5	.078
	Small enterprise	62	208.82			
	Cottage industry	7	244.50			
	Government services	27	226.91			
	Private sector employee	182	203.77			
	Other	29	214.47			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	200.19	.693	3	.875
	3-5 years	129	205.84			
	6-10 years	73	193.08			
	>10 years	45	198.29			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	199.30	-.573		.567
	Not having	53	208.35			
	Total	400				
	<b>SME ownership</b>					
	Own	126	207.49	-.885		.376
	Not own	274	197.29			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	154.41	15.804	4	.003
	40,001-100,000	53	193.45			
	100,001-300,000	58	130.78			
	300,001-500,000	37	162.73			
	> 500,000	76	153.94			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	149.44	15.768	4	.003
	40,001-100,000	42	179.32			
	100,001-300,000	62	121.32			
	300,001-500,000	61	140.84			
	> 500,000	100	159.75			
	Total	298				

**Micro-financing allows you to attend more congregation prayers**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Micro-financing allows you to attend more congregation prayers.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	164.17	.926	4	.921
	Near poor (40,001-100,000)	28	180.14			
	Average (100,001-300,000)	187	190.17			
	Near rich(300,001-500,000)	91	181.91			
	Rich ( $> 500,000$ )	61	180.06			
	Total	370				
<b>Gender</b>						
Male	234	213.18	-2.797		.005	
Female	166	182.62				
Total	400					
	<b>Age groups</b>	48	178.09	5.458	4	.243
	$\leq 25$	150	211.70			
	26-35	117	201.03			
	36-45	58	183.56			
	46-55	27	212.24			
	$> 55$	400				
	Total	48	178.09			
	<b>Marital status</b>					
	Single	74	178.56	4.668	2	.097
	Married	318	206.38			
	Other	8	169.81			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	181.99	3.791	4	.435
	Lower secondary certificate	21	215.52			
	Upper secondary certificate	77	199.55			
	Bachelor degree	196	207.10			
	$>$ Bachelor degree	18	205.61			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	238.00	1.039	3	.792
	3-5	167	195.91			
	6-9	211	204.72			
	$>9$	20	190.58			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	164.25	2.516	3	.472
	2.01-5.00 rai	89	154.30			
	5.01-10.00 rai	80	175.93			
	$> 10.00$ rai	70	164.74			
	Total	328				

	<b>Total land size</b>					
	≤ 2 rai	50	164.59	5.016	3	.171
	2.01-5.00 rai	72	164.51			
	5.01-10.00 rai	88	148.48			
	> 10.00 rai	118	176.40			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	199.09	1.434	5	.921
	Small enterprise	62	191.47			
	Cottage industry	7	209.43			
	Government services	27	205.41			
	Private sector employee	182	200.24			
	Other	29	219.22			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	185.54	6.406	3	.093
	3-5 years	129	205.49			
	6-10 years	73	222.96			
	>10 years	45	200.64			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.66	-1.028		.304
	Not having	53	186.34			
	Total	400				
	<b>SME ownership</b>					
	Own	126	201.10	-.075		.940
	Not own	274	200.23			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	145.07	5.723	4	.221
	40,001-100,000	53	170.81			
	100,001-300,000	58	157.79			
	300,001-500,000	37	143.55			
	> 500,000	76	169.51			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	164.77	11.659	4	.020
	40,001-100,000	42	165.21			
	100,001-300,000	62	123.40			
	300,001-500,000	61	140.12			
	> 500,000	100	159.77			
	Total	298				

**Micro-financing enables you to pay *zakah* and more charitable contribution**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Micro-financing enables you to pay <i>zakah</i> and more charitable contribution.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	54.00	9.537	4	.049
	Near poor (40,001-100,000)	28	176.52			
	Average (100,001-300,000)	187	179.91			
	Near rich(300,001-500,000)	91	203.76			
	Rich ( $> 500,000$ )	61	185.98			
Total	370					
<b>Gender</b>	Male	234	208.82	-1.882		.060
	Female	166	188.78			
	Total	400				
<b>Age groups</b>	$\leq 25$	48	196.76	1.836	4	.766
	26-35	150	207.62			
	36-45	117	201.48			
	46-55	58	188.68			
	$> 55$	27	188.74			
	Total	400				
<b>Marital status</b>	Single	74	199.79	.080	2	.961
	Married	318	200.92			
	Other	8	190.56			
	Total	400				
<b>Education</b>	$\leq$ Primary certificate	88	180.26	5.710	4	.222
	Lower secondary certificate	21	204.69			
	Upper secondary certificate	77	201.40			
	Bachelor degree	196	210.55			
	$>$ Bachelor degree	18	181.31			
	Total	400				
<b>Household size</b>	$\leq 3$	2	209.50	.318	3	.957
	3-5	167	197.51			
	6-9	211	201.99			
	$>9$	20	208.83			
	Total	400				
<b>Agricultural land size</b>	$\leq 2$ rai	89	160.59	1.814	3	.612
	2.01-5.00 rai	89	156.94			
	5.01-10.00 rai	80	172.48			
	$> 10.00$ rai	70	169.96			
	Total	328				

	<b>Total land size</b>					
	≤ 2 rai	50	144.58	5.829	3	.120
	2.01-5.00 rai	72	176.31			
	5.01-10.00 rai	88	155.73			
	> 10.00 rai	118	172.28			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	186.61	4.066	5	.540
	Small enterprise	62	194.72			
	Cottage industry	7	187.71			
	Government services	27	226.04			
	Private sector employee	182	206.25			
	Other	29	200.62			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	197.89	.338	3	.953
	3-5 years	129	202.29			
	6-10 years	73	205.18			
	>10 years	45	196.66			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.63	-1.041		.298
	Not having	53	186.53			
	Total	400				
	<b>SME ownership</b>					
	Own	126	205.24	-.612		.540
	Not own	274	198.32			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	145.17	14.761	4	.005
	40,001-100,000	53	182.65			
	100,001-300,000	58	154.15			
	300,001-500,000	37	125.97			
	> 500,000	76	172.47			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	147.70	16.960	4	.002
	40,001-100,000	42	174.87			
	100,001-300,000	62	139.76			
	300,001-500,000	61	120.03			
	> 500,000	100	163.46			
	Total	298				

**Micro-financing enhances your ability to go for pilgrimage to Makkhah (*haj*)**

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Micro-financing enhances your ability to go for pilgrimage to Makkhah (<i>haj</i>).</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	157.00	2.216	4	.696
	Near poor (40,001-100,000)	28	161.25			
	Average (100,001-300,000)	187	186.84			
	Near rich(300,001-500,000)	91	189.51			
	Rich ( $> 500,000$ )	61	187.94			
Total	370					
	<b>Gender</b>					
	Male	234	205.01	-1.019		.308
	Female	166	194.14			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	204.41	11.264	4	.024
	26-35	150	215.56			
	36-45	117	201.91			
	46-55	58	162.67			
	$> 55$	27	185.00			
	Total	400				
	<b>Marital status</b>					
	Single	74	201.64	.013	2	.993
	Married	318	200.20			
	Other	8	202.06			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	166.61	14.317	4	.006
	Lower secondary certificate	21	183.36			
	Upper secondary certificate	77	202.29			
	Bachelor degree	196	216.56			
	$>$ Bachelor degree	18	203.61			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	225.50	2.581	3	.461
	3-5	167	196.39			
	6-9	211	200.20			
	$>9$	20	235.45			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	182.07	15.380	3	.002
	2.01-5.00 rai	89	139.42			
	5.01-10.00 rai	80	182.13			
	$> 10.00$ rai	70	153.90			
	Total	328				

	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	179.57	7.820	3	.050
	2.01-5.00 <i>rai</i>	72	172.22			
	5.01-10.00 <i>rai</i>	88	143.02			
	> 10.00 <i>rai</i>	118	169.42			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	161.62	19.460	5	.002
	Small enterprise	62	204.61			
	Cottage industry	7	218.86			
	Government services	27	228.43			
	Private sector employee	182	216.22			
	Other	29	187.33			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	200.62	3.072	3	.381
	3-5 years	129	209.80			
	6-10 years	73	197.49			
	>10 years	45	178.32			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	201.10	-.290		.772
	Not having	53	196.59			
	Total	400				
	<b>SME ownership</b>					
	Own	126	205.08	-.591		.554
	Not own	274	198.39			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	147.39	11.778	4	.019
	40,001-100,000	53	190.67			
	100,001-300,000	58	146.11			
	300,001-500,000	37	145.41			
	> 500,000	76	160.92			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	162.32	15.205	4	.004
	40,001-100,000	42	180.31			
	100,001-300,000	62	127.90			
	300,001-500,000	61	133.19			
	> 500,000	100	155.67			
	Total	298				

**Micro-financing enables you to avoid interest (*Riba*) and prohibitive activities in business and daily life**

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
Micro-financing enables you to avoid interest ( <i>Riba</i> ) and prohibitive activities in business and daily life.	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	110.17	2.287	4	.683
	Near poor (40,001-100,000)	28	173.11			
	Average (100,001-300,000)	187	187.48			
	Near rich(300,001-500,000)	91	187.68			
	Rich ( $> 500,000$ )	61	185.57			
	Total	370				
<b>Gender</b>						
Male	234	198.39	-.467		.640	
Female	166	203.48				
Total	400					
	<b>Age groups</b>					
	$\leq 25$	48	205.75	.709	4	.950
	26-35	150	201.67			
	36-45	117	194.84			
	46-55	58	206.77			
	$> 55$	27	195.74			
	Total	400				
<b>Marital status</b>						
Single	74	185.70	3.049	2	.218	
Married	318	204.94				
Other	8	160.75				
Total	400					
	<b>Education</b>					
	$\leq$ Primary certificate	88	202.80	7.856	4	.097
	Lower secondary certificate	21	210.76			
	Upper secondary certificate	77	182.51			
	Bachelor degree	196	210.03			
	$>$ Bachelor degree	18	150.44			
	Total	400				
<b>Household size</b>						
$\leq 3$	2	171.00	.362	3	.948	
3-5	167	198.30				
6-9	211	201.76				
$>9$	20	208.50				
Total	400					
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	169.98	5.829	3	.120
	2.01-5.00 rai	89	153.30			
	5.01-10.00 rai	80	154.68			
Total	258					



	> 10.00 <i>rai</i>	70	183.00			
	Total	328				
	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	151.62	7.167	3	.067
	2.01-5.00 <i>rai</i>	72	177.33			
	5.01-10.00 <i>rai</i>	88	147.95			
	> 10.00 <i>rai</i>	118	174.47			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	194.46	1.431	5	.921
	Small enterprise	62	203.14			
	Cottage industry	7	182.14			
	Government services	27	185.69			
	Private sector employee	182	204.41			
	Other	29	207.90			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	196.08	.491	3	.921
	3-5 years	129	201.63			
	6-10 years	73	205.81			
	>10 years	45	203.67			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	208.77	-3.945		.000
	Not having	53	146.33			
	Total	400				
	<b>SME ownership</b>					
	Own	126	223.92	-2.959		.003
	Not own	274	189.73			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	146.33	16.021	4	.003
	40,001-100,000	53	161.44			
	100,001-300,000	58	130.13			
	300,001-500,000	37	190.50			
	> 500,000	76	172.80			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	120.89	7.767	4	.101
	40,001-100,000	42	168.61			
	100,001-300,000	62	142.71			
	300,001-500,000	61	148.01			
	> 500,000	100	156.04			
	Total	298				

**Micro-financing enables you to have more time to participate in Islamic lectures and Islamic study circle**

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
Micro-financing enables you to have more time to participate in Islamic lectures and Islamic study circle.	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	62.33	6.146	4	.189
	Near poor (40,001-100,000)	28	193.88			
	Average (100,001-300,000)	187	188.37			
	Near rich(300,001-500,000)	91	176.07			
	Rich ( $> 500,000$ )	61	192.99			
	Total	370				
<b>Gender</b>						
Male	234	208.97	-1.879		.060	
Female	166	188.56				
Total	400					
	<b>Age groups</b>					
	$\leq 25$	48	194.52	12.231	4	.016
	26-35	150	199.71			
	36-45	117	224.00			
	46-55	58	179.91			
	$> 55$	27	157.89			
	Total	400				
	<b>Marital status</b>					
	Single	74	196.08	.158	2	.924
	Married	318	201.56			
	Other	8	199.31			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	185.50	4.670	4	.323
	Lower secondary certificate	21	177.10			
	Upper secondary certificate	77	212.48			
	Bachelor degree	196	202.87			
	$>$ Bachelor degree	18	224.08			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	139.25	.772	3	.856
	3-5	167	201.55			
	6-9	211	200.95			
	$>9$	20	193.08			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	154.16	7.276	3	.064
	2.01-5.00 rai	89	156.10			
	5.01-10.00 rai	80	186.81			

	> 10.00 rai	70	162.83			
	Total	328				
	<b>Total land size</b>					
	≤ 2 rai	50	149.76	2.699	3	.440
	2.01-5.00 rai	72	162.33			
	5.01-10.00 rai	88	162.78			
	> 10.00 rai	118	173.35			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	200.20	5.595	5	.348
	Small enterprise	62	199.49			
	Cottage industry	7	167.29			
	Government services	27	236.15			
	Private sector employee	182	193.58			
	Other	29	221.86			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	190.58	2.461	3	.482
	3-5 years	129	209.99			
	6-10 years	73	200.95			
	>10 years	45	206.27			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	201.98	-.708		.479
	Not having	53	190.81			
	Total	400				
	<b>SME ownership</b>					
	Own	126	199.20	-.165		.869
	Not own	274	201.10			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	138.59	14.519	4	.006
	40,001-100,000	53	182.40			
	100,001-300,000	58	170.66			
	300,001-500,000	37	132.31			
	> 500,000	76	164.75			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	177.33	16.778	4	.002
	40,001-100,000	42	162.96			
	100,001-300,000	62	132.73			
	300,001-500,000	61	123.03			
	> 500,000	100	161.20			
	Total	298				

## Appendix 7.2

### Spearman's rho correlation: Impacts of micro-financing

	AHI	AGE	EDU	HME	ALA	TLA	JOI	APR	ANP	SEX	MARI	OCC	RED	SME
<b>LO1</b>	.160**	.018	.110*	.066	.066	.005	.109*	.035	.044	-.241**	.057	.000	-.063	-.021
<b>LO2</b>	.073	.082	.026	.041	.098	.031	.074	.140*	.038	-.212**	.091	.040	.006	-.021
<b>LO3</b>	-.027	.071	.054	.037	.017	-.060	.077	.108	.004	-.164**	.101*	.062	.000	.085
<b>LO4</b>	-.043	.053	.065	.068	-.064	-.113*	.193**	.066	-.086	-.167**	.058	.085	-.037	-.034
<b>LO5</b>	.103*	-.245**	.285**	-.035	-.032	-.053	-.022	.007	.003	-.117*	-.123*	.218**	-.040	.051
<b>LO6</b>	.099	-.229**	.330**	-.086	.068	.036	-.038	-.044	-.014	-.086	-.095	.239**	-.022	.157**
<b>LO7</b>	.038	-.136**	.144**	.049	.072	.059	-.019	-.038	.099	-.085	.004	.101*	-.074	.054
<b>LO8</b>	.057	-.071	.044	.042	.099	.085	.022	-.059	.018	-.033	.032	.095	.029	-.044
<b>LO9</b>	.012	.023	.057	.024	.048	.051	.113*	.093	.008	-.140**	.080	.033	-.051	-.004
<b>LO10</b>	.094	-.040	.071	.066	.061	.058	.038	.087	.011	-.094	.000	.065	-.052	-.031
<b>LO11</b>	.031	-.139**	.151**	.010	-.063	-.042	-.022	.022	-.036	-.051	-.004	.147**	-.015	-.030
<b>LO12</b>	.017	-.015	.001	.034	.037	.049	.029	.130*	.059	.023	.047	.040	-.197**	-.148**
<b>LO13</b>	-.013	-.027	.062	-.035	.088	.052	.079	.083	-.016	-.094	.018	.002	-.035	.008

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Note: Relevant coefficients are reported in this table.

**Appendix 7.3:**  
**K-W Test and U-Test: Impacts of Savings  
Account**

### Savings provide enough income for consumption

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Savings provide enough income for consumption.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	210.50	2.495	4	.646
	Near poor (40,001-100,000)	28	207.73			
	Average (100,001-300,000)	187	180.59			
	Near rich(300,001-500,000)	91	188.67			
	Rich ( $> 500,000$ )	61	184.39			
Total	370					
<b>Gender</b>	Male	234	203.87	-.809		.419
	Female	166	195.75			
	Total	400				
<b>Age groups</b>	$\leq 25$	48	205.76	3.945	4	.414
	26-35	150	211.42			
	36-45	117	189.80			
	46-55	58	195.52			
	$> 55$	27	187.57			
	Total	400				
<b>Marital status</b>	Single	74	210.69	1.889	2	.389
	Married	318	199.02			
	Other	8	165.00			
	Total	400				
<b>Education</b>	$\leq$ Primary certificate	88	189.42	6.288	4	.179
	Lower secondary certificate	21	183.17			
	Upper secondary certificate	77	186.30			
	Bachelor degree	196	212.57			
	$>$ Bachelor degree	18	204.17			
	Total	400				
<b>Household size</b>	$\leq 3$	2	228.00	9.868	3	.020
	3-5	167	215.72			
	6-9	211	185.93			
	$>9$	20	224.40			
	Total	400				
	<b>Agricultural land size</b>	$\leq 2$ rai	89			
2.01-5.00 rai		89	159.84			
5.01-10.00 rai		80	176.16			
$> 10.00$ rai		70	150.40			
Total		328				

	<b>Total land size</b>					
	≤ 2 rai	50	166.60	2.427	3	.489
	2.01-5.00 rai	72	170.62			
	5.01-10.00 rai	88	170.60			
	> 10.00 rai	118	155.33			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	182.55	9.764	5	.082
	Small enterprise	62	192.62			
	Cottage industry	7	161.14			
	Government services	27	231.56			
	Private sector employee	182	204.96			
	Other	29	227.48			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	198.70	.133	3	.988
	3-5 years	129	201.98			
	6-10 years	73	199.66			
	>10 years	45	203.74			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	200.70	-.104		.917
	Not having	53	199.19			
	Total	400				
	<b>SME ownership</b>					
	Own	126	186.42	-1.932		.053
	Not own	274	206.98			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	162.91	6.234	4	.182
	40,001-100,000	53	171.24			
	100,001-300,000	58	156.33			
	300,001-500,000	37	163.22			
	> 500,000	76	139.63			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	160.12	4.228	4	.376
	40,001-100,000	42	166.24			
	100,001-300,000	62	149.79			
	300,001-500,000	61	144.77			
	> 500,000	100	141.67			
	Total	298				

**Savings increase ability to acquire more productive assets**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Savings increase ability to acquire more productive assets.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	250.50	3.443	4	.487
	Near poor (40,001-100,000)	28	191.68			
	Average (100,001-300,000)	187	186.34			
	Near rich(300,001-500,000)	91	188.87			
	Rich ( $> 500,000$ )	61	171.85			
Total	370					
<b>Gender</b>	Male	234	201.72	-.303		.762
	Female	166	198.78			
	Total	400				
<b>Age groups</b>	$\leq 25$	48	184.03	4.733	4	.316
	26-35	150	198.87			
	36-45	117	207.09			
	46-55	58	215.03			
	$> 55$	27	179.04			
	Total	400				
<b>Marital status</b>	Single	74	201.28	3.930	2	.140
	Married	318	201.98			
	Other	8	134.25			
	Total	400				
<b>Education</b>	$\leq$ Primary certificate	88	213.96	4.898	4	.298
	Lower secondary certificate	21	206.93			
	Upper secondary certificate	77	186.05			
	Bachelor degree	196	201.77			
	$>$ Bachelor degree	18	175.25			
	Total	400				
<b>Household size</b>	$\leq 3$	2	219.00	.711	3	.871
	3-5	167	203.50			
	6-9	211	197.05			
	$>9$	20	209.98			
	Total	400				
	<b>Agricultural land size</b>	$\leq 2$ rai	89			
2.01-5.00 rai		89	145.42			
5.01-10.00 rai		80	179.62			
$> 10.00$ rai		70	161.46			
Total		328				



	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	166.10	1.732	3	.630
	2.01-5.00 <i>rai</i>	72	170.87			
	5.01-10.00 <i>rai</i>	88	155.54			
	> 10.00 <i>rai</i>	118	166.62			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	191.46	6.578	5	.254
	Small enterprise	62	227.27			
	Cottage industry	7	193.21			
	Government services	27	210.02			
	Private sector employee	182	195.27			
	Other	29	197.93			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	201.95	.914	3	.822
	3-5 years	129	196.32			
	6-10 years	73	198.12			
	>10 years	45	211.41			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	201.96	-.783		.434
	Not having	53	190.93			
	Total	400				
	<b>SME ownership</b>					
	Own	126	205.85	-.759		.448
	Not own	274	198.04			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	148.66	4.174	4	.383
	40,001-100,000	53	163.62			
	100,001-300,000	58	168.21			
	300,001-500,000	37	144.22			
	> 500,000	76	162.00			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	146.82	5.974	4	.201
	40,001-100,000	42	171.14			
	100,001-300,000	62	139.19			
	300,001-500,000	61	141.89			
	> 500,000	100	152.33			
	Total	298				

**Savings enhance ability to acquire more non-productive assets**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Savings enhance ability to acquire more non-productive assets.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	219.00	1.620	4	.805
	Near poor (40,001-100,000)	28	181.63			
	Average (100,001-300,000)	187	186.09			
	Near rich(300,001-500,000)	91	191.51			
	Rich ( $> 500,000$ )	61	174.85			
Total	370					
	<b>Gender</b>			-.069		.945
	Male	234	200.21			
	Female	166	200.91			
	Total	400				
	<b>Age groups</b>			10.567	4	.032
	$\leq 25$	48	217.85			
	26-35	150	216.28			
	36-45	117	187.31			
	46-55	58	184.33			
	$> 55$	27	173.89			
Total	400					
	<b>Marital status</b>			4.180	2	.124
	Single	74	221.37			
	Married	318	195.32			
	Other	8	213.44			
Total	400					
	<b>Education</b>			13.909	4	.008
	$\leq$ Primary certificate	88	183.68			
	Lower secondary certificate	21	214.29			
	Upper secondary certificate	77	173.59			
	Bachelor degree	196	217.31			
	$>$ Bachelor degree	18	198.69			
Total	400					
	<b>Household size</b>			7.597	3	.055
	$\leq 3$	2	237.00			
	3-5	167	216.26			
	6-9	211	188.26			
	$>9$	20	194.38			
Total	400					
	<b>Agricultural land size</b>			2.153	3	.541
	$\leq 2$ rai	89	164.96			
	2.01-5.00 rai	89	166.79			
	5.01-10.00 rai	80	171.94			
	$> 10.00$ rai	70	152.50			
Total	328					

	<b>Total land size</b>					
	≤ 2 rai	50	166.90	3.380	3	.337
	2.01-5.00 rai	72	176.72			
	5.01-10.00 rai	88	152.59			
	> 10.00 rai	118	164.91			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	176.77	16.140	5	.006
	Small enterprise	62	195.74			
	Cottage industry	7	123.21			
	Government services	27	228.35			
	Private sector employee	182	207.36			
	Other	29	236.47			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	204.70	4.913	3	.178
	3-5 years	129	203.63			
	6-10 years	73	177.87			
	>10 years	45	213.96			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.33	-.934		.350
	Not having	53	188.50			
	Total	400				
	<b>SME ownership</b>					
	Own	126	186.94	-1.832		.067
	Not own	274	206.74			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	152.41	5.857	4	.210
	40,001-100,000	53	179.68			
	100,001-300,000	58	159.97			
	300,001-500,000	37	156.14			
	> 500,000	76	146.84			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	166.82	7.782	4	.100
	40,001-100,000	42	172.64			
	100,001-300,000	62	139.73			
	300,001-500,000	61	141.16			
	> 500,000	100	145.22			
	Total	298				

**Savings increase ability to pay for better healthcare**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Savings increase ability to pay for better healthcare.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	176.50	1.243	4	.871
	Near poor (40,001-100,000)	28	193.11			
	Average (100,001-300,000)	187	180.33			
	Near rich(300,001-500,000)	91	190.38			
	Rich ( $> 500,000$ )	61	191.02			
Total	370					
<b>Gender</b>	Male	234	195.66	-1.134		.257
	Female	166	207.32			
	Total	400				
<b>Age groups</b>	$\leq 25$	48	213.71	8.591	4	.072
	26-35	150	210.45			
	36-45	117	179.14			
	46-55	58	212.19			
	$> 55$	27	189.17			
	Total	400				
<b>Marital status</b>	Single	74	217.24	2.489	2	.288
	Married	318	196.64			
	Other	8	199.00			
	Total	400				
<b>Education</b>	$\leq$ Primary certificate	88	179.56	8.538	4	.074
	Lower secondary certificate	21	169.69			
	Upper secondary certificate	77	211.32			
	Bachelor degree	196	206.50			
	$>$ Bachelor degree	18	227.22			
	Total	400				
<b>Household size</b>	$\leq 3$	2	247.00	8.184	3	.042
	3-5	167	212.77			
	6-9	211	187.46			
	$>9$	20	230.93			
	Total	400				
	<b>Agricultural land size</b>	$\leq 2$ rai	89			
2.01-5.00 rai		89	159.90			
5.01-10.00 rai		80	188.88			
$> 10.00$ rai		70	164.94			
Total		328				

	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	156.68	4.834	3	.184
	2.01-5.00 <i>rai</i>	72	150.49			
	5.01-10.00 <i>rai</i>	88	164.76			
	> 10.00 <i>rai</i>	118	176.17			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	188.41	3.298	5	.654
	Small enterprise	62	196.25			
	Cottage industry	7	216.93			
	Government services	27	208.91			
	Private sector employee	182	208.22			
	Other	29	188.14			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	204.67	2.509	3	.474
	3-5 years	129	205.42			
	6-10 years	73	184.03			
	>10 years	45	198.94			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	201.71	-.612		.541
	Not having	53	192.58			
	Total	400				
	<b>SME ownership</b>					
	Own	126	204.43	-.527		.598
	Not own	274	198.69			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	163.54	10.777	4	.029
	40,001-100,000	53	182.97			
	100,001-300,000	58	155.72			
	300,001-500,000	37	134.88			
	> 500,000	76	144.95			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	130.62	6.225	4	.183
	40,001-100,000	42	165.94			
	100,001-300,000	62	137.31			
	300,001-500,000	61	151.58			
	> 500,000	100	155.11			
	Total	298				

**Savings enable to purchase new house, repair and rent better house**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Savings enable to purchase new house, repair and rent better house.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	255.50	3.395	4	.494
	Near poor (40,001-100,000)	28	191.55			
	Average (100,001-300,000)	187	190.26			
	Near rich(300,001-500,000)	91	175.45			
	Rich ( $> 500,000$ )	61	179.70			
Total	370					
<b>Gender</b>	Male	234	206.01	-1.257		.209
	Female	166	192.73			
	Total	400				
<b>Age groups</b>	$\leq 25$	48	216.06	7.229	4	.124
	26-35	150	213.01			
	36-45	117	183.03			
	46-55	58	198.12			
	$> 55$	27	184.13			
	Total	400				
<b>Marital status</b>	Single	74	215.26	2.238	2	.327
	Married	318	197.74			
	Other	8	173.75			
	Total	400				
<b>Education</b>	$\leq$ Primary certificate	88	186.97	8.666	4	.070
	Lower secondary certificate	21	211.69			
	Upper secondary certificate	77	200.65			
	Bachelor degree	196	210.43			
	$>$ Bachelor degree	18	144.78			
	Total	400				
<b>Household size</b>	$\leq 3$	2	154.00	6.403	3	.094
	3-5	167	214.60			
	6-9	211	188.71			
	$>9$	20	211.78			
	Total	400				
<b>Agricultural land size</b>	$\leq 2$ rai	89	151.62	7.537	3	.057
	2.01-5.00 rai	89	153.93			
	5.01-10.00 rai	80	175.61			
	$> 10.00$ rai	70	181.62			
	Total	328				

	<b>Total land size</b>					
	≤ 2 rai	50	147.94	9.959	3	.019
	2.01-5.00 rai	72	164.34			
	5.01-10.00 rai	88	149.53			
	> 10.00 rai	118	182.78			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	188.60	2.917	5	.713
	Small enterprise	62	197.42			
	Cottage industry	7	187.36			
	Government services	27	213.61			
	Private sector employee	182	207.70			
	Other	29	191.03			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	210.11	2.765	3	.429
	3-5 years	129	191.85			
	6-10 years	73	192.32			
	>10 years	45	205.88			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	200.43	-.033		.973
	Not having	53	200.94			
	Total	400				
	<b>SME ownership</b>					
	Own	126	197.56	-.382		.702
	Not own	274	201.85			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	161.54	7.433	4	.115
	40,001-100,000	53	179.44			
	100,001-300,000	58	138.52			
	300,001-500,000	37	150.92			
	> 500,000	76	155.10			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	137.92	8.795	4	.066
	40,001-100,000	42	170.89			
	100,001-300,000	62	129.04			
	300,001-500,000	61	152.52			
	> 500,000	100	155.18			
	Total	298				

Savings enable you to accumulate enough money for pilgrimage to Makkhah (*haj*)

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
Savings enable you to accumulate enough money for pilgrimage to Makkhah ( <i>haj</i> ).	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	236.50	4.479	4	.345
	Near poor (40,001-100,000)	28	172.96			
	Average (100,001-300,000)	187	177.90			
	Near rich(300,001-500,000)	91	194.54			
	Rich ( $> 500,000$ )	61	198.55			
Total	370					
	<b>Gender</b>			-1.995		.046
	Male	234	209.22			
	Female	166	188.21			
	Total	400				
	<b>Age groups</b>			8.799	4	.066
	$\leq 25$	48	225.28			
	26-35	150	212.20			
	36-45	117	188.38			
	46-55	58	181.63			
	$> 55$	27	184.52			
	<b>Marital status</b>			2.688	2	.261
	Single	74	218.18			
	Married	318	196.70			
	Other	8	188.06			
	<b>Education</b>			12.459	4	.014
	$\leq$ Primary certificate	88	173.81			
	Lower secondary certificate	21	161.33			
	Upper secondary certificate	77	205.29			
	Bachelor degree	196	214.19			
	$>$ Bachelor degree	18	207.11			
	<b>Household size</b>			9.368	3	.025
	$\leq 3$	2	207.00			
	3-5	167	215.93			
	6-9	211	185.66			
	$>9$	20	227.50			
	Total	400				
	<b>Agricultural land size</b>			11.755	3	.008
	$\leq 2$ rai	89	153.75			
	2.01-5.00 rai	89	147.02			
	5.01-10.00 rai	80	187.30			
	$> 10.00$ rai	70	174.34			
	Total	328				



	<b>Total land size</b>					
	≤ 2 rai	50	157.52	6.584	3	.086
	2.01-5.00 rai	72	158.38			
	5.01-10.00 rai	88	152.21			
	> 10.00 rai	118	180.36			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	183.09	8.144	5	.148
	Small enterprise	62	191.92			
	Cottage industry	7	192.36			
	Government services	27	235.35			
	Private sector employee	182	209.77			
	Other	29	186.05			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	206.93	.977	3	.807
	3-5 years	129	195.86			
	6-10 years	73	198.14			
	>10 years	45	195.77			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	203.29	-1.376		.169
	Not having	53	182.24			
	Total	400				
	<b>SME ownership</b>					
	Own	126	194.11	-.835		.404
	Not own	274	203.44			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	159.90	10.945	4	.027
	40,001-100,000	53	187.44			
	100,001-300,000	58	149.72			
	300,001-500,000	37	134.61			
	> 500,000	76	150.86			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	141.71	7.870	4	.096
	40,001-100,000	42	169.52			
	100,001-300,000	62	129.11			
	300,001-500,000	61	150.86			
	> 500,000	100	155.47			
	Total	298				

## Appendix 7.4

### Spearman's rho correlation: Impacts of savings account

	AHI	AGE	EDU	HME	ALA	TLA	JOI	APR	ANP	SEX	MARI	OCC	RED	SME	SA1	SA2	SA3	SA4	SA5	SA6	
<b>AHI</b>	1.000																				
<b>AGE</b>	.079	1.000																			
<b>EDU</b>	.152**	-.482**	1.000																		
<b>HME</b>	.142**	.214**	-.135**	1.000																	
<b>ALA</b>	.369**	-.001	.022	-.025	1.000																
<b>TLA</b>	.393**	-.035	.044	.022	.911**	1.000															
<b>JOI</b>	.110*	.335**	.010	.082	.080	.023	1.000														
<b>APR</b>	.204**	.084	-.047	.068	.190**	.195**	.070	1.000													
<b>ANP</b>	.312**	.024	.019	.144*	.442**	.519**	.041	.333**	1.000												
<b>SEX</b>	-.045	-.126*	-.017	-.019	-.018	.032	-.134**	-.088	-.016	1.000											
<b>MARI</b>	-.029	.502**	-.259**	.062	-.079	-.089	.168**	.032	-.108	.009	1.000										
<b>OCC</b>	-.019	-.478**	.563**	-.118*	-.092	-.084	-.036	-.116*	-.027	.036	-.241**	1.000									
<b>RED</b>	.028	.105*	-.097	-.037	.000	.009	-.037	.030	-.043	.135**	.064	-.049	1.000								
<b>SME</b>	-.060	-.223**	.211**	.025	-.002	-.030	-.139**	-.099	-.126*	-.041	-.129**	.279**	.059	1.000							
<b>SA1</b>	-.010	-.107*	.136**	-.132**	-.028	-.083	-.001	-.093	-.088	-.040	-.061	.115*	-.005	.097	1.000						
<b>SA2</b>	-.066	.042	-.026	.013	.019	-.023	-.007	.055	-.024	-.015	-.032	-.022	-.039	-.038	.438**	1.000					
<b>SA3</b>	-.010	-.159**	.145**	-.126*	-.023	-.040	-.038	-.024	-.103	.003	-.088	.151**	-.047	.092	.461**	.651**	1.000				
<b>SA4</b>	.045	-.091	.115*	-.039	.131*	.115*	-.059	-.098	.059	.057	-.075	.052	-.031	-.026	.406**	.390**	.448**	1.000			
<b>SA5</b>	-.072	-.099*	.036	-.074	.164**	.142*	-.047	-.046	.028	-.063	-.074	.052	.002	.019	.339**	.487**	.449**	.395**	1.000		
<b>SA6</b>	.092	-.131**	.147**	-.107*	.111*	.096	-.026	-.077	.043	-.100*	-.081	.072	-.069	.042	.326**	.348**	.344**	.436**	.571**	1.000	

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

**Appendix 7.5:**  
**K-W Test and U-Test:**  
**Impacts of Pawn Service**

**Paw service helps increasing liquidity of business when needed**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Paw service helps increasing liquidity of business when needed.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	44.00	8.171	4	.086
	Near poor (40,001-100,000)	9	40.00			
	Average (100,001-300,000)	53	42.58			
	Near rich(300,001-500,000)	21	55.19			
	Rich ( $> 500,000$ )	9	61.28			
Total	93					
	<b>Gender</b>					
	Male	54	54.62	-1.279		.201
	Female	48	47.99			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	49.83	2.374	4	.667
	26-35	36	49.85			
	36-45	28	57.45			
	46-55	17	49.68			
	$> 55$	6	43.00			
	Total	102				
	<b>Marital status</b>					
	Single	21	48.00	1.630	2	.443
	Married	78	53.02			
	Other	3	36.50			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	40.50	9.807	3	.020
	Lower secondary certificate	4	50.13			
	Upper secondary certificate	17	64.29			
	Bachelor degree	51	53.81			
	Total	102				
	<b>Household size</b>					
	3-5	43	57.35	7.302	2	.026
	6-9	54	49.19			
	$>9$	5	26.10			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	40.50	1.663	3	.645
	2.01-5.00 rai	29	41.29			
	5.01-10.00 rai	20	47.48			
	$> 10.00$ rai	15	46.87			
	Total	86				

	<b>Total land size</b>					
	≤ 2 <i>rai</i>	11	35.50	3.737	3	.291
	2.01-5.00 <i>rai</i>	20	42.40			
	5.01-10.00 <i>rai</i>	26	41.21			
	> 10.00 <i>rai</i>	29	49.34			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	40.06	9.364	5	.095
	Small enterprise	15	63.67			
	Cottage industry	1	49.50			
	Government services	5	49.50			
	Private sector employee	49	54.84			
	Other	7	44.64			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	50.09	2.007	3	.571
	3-5 years	28	48.13			
	6-10 years	19	58.63			
	>10 years	17	52.24			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	51.62	-.155		.877
	Not having	8	50.13			
	Total	102				
	<b>SME ownership</b>					
	Own	34	56.91	-1.479		.139
	Not own	68	48.79			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	33.17	19.183	4	.001
	40,001-100,000	14	41.93			
	100,001-300,000	17	36.12			
	300,001-500,000	16	55.00			
	> 500,000	16	59.44			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	28.20	7.418	4	.115
	40,001-100,000	11	41.45			
	100,001-300,000	22	38.30			
	300,001-500,000	20	41.38			
	> 500,000	27	51.41			
	Total	85				

**Pawn service enhances household ability to pay for medication of serious illness**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service enhances household ability to pay for medication of serious illness.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	26.00	2.511	4	.643
	Near poor (40,001-100,000)	9	36.61			
	Average (100,001-300,000)	53	48.25			
	Near rich(300,001-500,000)	21	49.00			
	Rich ( $> 500,000$ )	9	47.72			
Total	93					
	<b>Gender</b>					
	Male	54	49.61	-.739		.460
	Female	48	53.63			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	64.83	8.252	4	.083
	26-35	36	55.50			
	36-45	28	47.64			
	46-55	17	42.47			
	$> 55$	6	37.75			
	Total	102				
	<b>Marital status</b>					
	Single	21	60.17	2.815	2	.245
	Married	78	49.01			
	Other	3	55.50			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	38.83	16.004	3	.001
	Lower secondary certificate	4	32.38			
	Upper secondary certificate	17	47.41			
	Bachelor degree	51	61.81			
	Total	102				
	<b>Household size</b>					
	3-5	43	59.47	6.312	2	.043
	6-9	54	45.82			
	$>9$	5	44.30			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	37.98	3.411	3	.333
	2.01-5.00 rai	29	42.69			
	5.01-10.00 rai	20	51.10			
	$> 10.00$ rai	15	43.03			
	Total	86				

	<b>Total land size</b>					
	≤ 2 rai	11	32.32	6.690	3	.082
	2.01-5.00 rai	20	44.33			
	5.01-10.00 rai	26	39.02			
	> 10.00 rai	29	51.19			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	40.88	20.665	5	.001
	Small enterprise	15	36.07			
	Cottage industry	1	5.00			
	Government services	5	52.70			
	Private sector employee	49	63.21			
	Other	7	46.29			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	53.84	2.136	3	.545
	3-5 years	28	51.09			
	6-10 years	19	43.84			
	>10 years	17	55.50			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	51.01	-.619		.536
	Not having	8	57.25			
	Total	102				
	<b>SME ownership</b>					
	Own	34	45.19	-1.646		.100
	Not own	68	54.65			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	37.31	7.648	4	.105
	40,001-100,000	14	56.57			
	100,001-300,000	17	39.82			
	300,001-500,000	16	50.00			
	> 500,000	16	41.47			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	53.70	7.096	4	.131
	40,001-100,000	11	47.05			
	100,001-300,000	22	34.50			
	300,001-500,000	20	38.90			
	> 500,000	27	49.33			
	Total	85				

**Pawn service makes available adequate money for children's education**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service makes available adequate money for children's education.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	55.00	.613	4	.962
	Near poor (40,001-100,000)	9	45.89			
	Average (100,001-300,000)	53	47.21			
	Near rich(300,001-500,000)	21	44.69			
	Rich ( $> 500,000$ )	9	51.39			
Total	93					
	<b>Gender</b>					
	Male	54	48.70	-1.123		.261
	Female	48	54.65			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	63.83	4.865	4	.301
	26-35	36	50.33			
	36-45	28	49.14			
	46-55	17	51.47			
	$> 55$	6	38.75			
	Total	102				
	<b>Marital status</b>					
	Single	21	56.67	1.080	2	.583
	Married	78	50.33			
	Other	3	45.67			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	44.15	3.778	3	.287
	Lower secondary certificate	4	47.63			
	Upper secondary certificate	17	52.09			
	Bachelor degree	51	55.93			
	Total	102				
	<b>Household size</b>					
	3-5	43	55.27	1.746	2	.418
	6-9	54	49.30			
	$>9$	5	42.90			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	38.59	4.437	3	.218
	2.01-5.00 rai	29	40.12			
	5.01-10.00 rai	20	51.70			
	$> 10.00$ rai	15	46.30			
	Total	86				



	<b>Total land size</b>					
	≤ 2 rai	11	40.77	13.106	3	.004
	2.01-5.00 rai	20	40.80			
	5.01-10.00 rai	26	33.54			
	> 10.00 rai	29	55.33			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	50.00	5.161	5	.396
	Small enterprise	15	40.43			
	Cottage industry	1	59.50			
	Government services	5	51.20			
	Private sector employee	49	56.63			
	Other	7	43.71			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	51.84	1.807	3	.613
	3-5 years	28	54.57			
	6-10 years	19	44.45			
	>10 years	17	53.56			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	50.51	-1.291		.197
	Not having	8	63.19			
	Total	102				
	<b>SME ownership</b>					
	Own	34	48.29	-.858		.391
	Not own	68	53.10			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	38.63	5.400	4	.249
	40,001-100,000	14	52.79			
	100,001-300,000	17	40.15			
	300,001-500,000	16	50.88			
	> 500,000	16	41.59			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	42.40	2.289	4	.683
	40,001-100,000	11	42.59			
	100,001-300,000	22	38.98			
	300,001-500,000	20	40.88			
	> 500,000	27	48.13			
	Total	85				

**Pawn service makes available enough cash for festive seasons**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service makes available enough cash for festive seasons.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	60.00	3.230	4	.520
	Near poor (40,001-100,000)	9	52.00			
	Average (100,001-300,000)	53	44.62			
	Near rich(300,001-500,000)	21	45.19			
	Rich ( $> 500,000$ )	9	58.78			
Total	93					
	<b>Gender</b>					
	Male	54	49.44	-.811		.417
	Female	48	53.82			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	64.17	15.240	4	.004
	26-35	36	59.83			
	36-45	28	46.50			
	46-55	17	33.79			
	$> 55$	6	43.33			
	Total	102				
	<b>Marital status</b>					
	Single	21	60.64	3.002	2	.223
	Married	78	49.03			
	Other	3	51.83			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	32.37	23.001	3	.000
	Lower secondary certificate	4	45.00			
	Upper secondary certificate	17	54.91			
	Bachelor degree	51	62.13			
	Total	102				
	<b>Household size</b>					
	3-5	43	55.19	1.818	2	.403
	6-9	54	49.55			
	$>9$	5	40.90			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	41.55	3.157	3	.368
	2.01-5.00 rai	29	38.97			
	5.01-10.00 rai	20	50.35			
	$> 10.00$ rai	15	46.00			
	Total	86				

	<b>Total land size</b>					
	≤ 2 <i>rai</i>	11	41.55	5.505	3	.138
	2.01-5.00 <i>rai</i>	20	43.03			
	5.01-10.00 <i>rai</i>	26	36.37			
	> 10.00 <i>rai</i>	29	50.97			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	37.22	22.152	5	.000
	Small enterprise	15	39.27			
	Cottage industry	1	2.00			
	Government services	5	57.30			
	Private sector employee	49	63.03			
	Other	7	50.93			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	54.96	1.135	3	.769
	3-5 years	28	50.59			
	6-10 years	19	47.39			
	>10 years	17	49.85			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	51.42	-.101		.919
	Not having	8	52.44			
	Total	102				
	<b>SME ownership</b>					
	Own	34	47.38	-1.078		.281
	Not own	68	53.56			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	39.58	8.483	4	.075
	40,001-100,000	14	58.32			
	100,001-300,000	17	38.50			
	300,001-500,000	16	49.09			
	> 500,000	16	38.84			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	51.60	6.203	4	.185
	40,001-100,000	11	47.36			
	100,001-300,000	22	33.84			
	300,001-500,000	20	41.25			
	> 500,000	27	48.39			
	Total	85				

**Pawn service permits household to consume enough food and non-food items**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service permits household to consume enough food and non-food items.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	57.00	.746	4	.945
	Near poor (40,001-100,000)	9	51.78			
	Average (100,001-300,000)	53	46.79			
	Near rich(300,001-500,000)	21	44.71			
	Rich ( $> 500,000$ )	9	47.67			
Total	93					
	<b>Gender</b>					
	Male	54	53.20	-.704		.481
	Female	48	49.58			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	64.73	7.347	4	.119
	26-35	36	53.69			
	36-45	28	46.52			
	46-55	17	42.44			
	$> 55$	6	54.17			
	Total	102				
	<b>Marital status</b>					
	Single	21	55.86	2.042	2	.360
	Married	78	51.01			
	Other	3	33.67			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	42.17	6.167	3	.104
	Lower secondary certificate	4	49.75			
	Upper secondary certificate	17	52.06			
	Bachelor degree	51	56.94			
	Total	102				
	<b>Household size</b>					
	3-5	43	54.09	.889	2	.641
	6-9	54	50.00			
	$>9$	5	45.40			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	37.45	5.164	3	.160
	2.01-5.00 rai	29	41.91			
	5.01-10.00 rai	20	52.38			
	$> 10.00$ rai	15	43.60			
	Total	86				

	<b>Total land size</b>					
	≤ 2 rai	11	36.68	8.378	3	.039
	2.01-5.00 rai	20	42.88			
	5.01-10.00 rai	26	36.88			
	> 10.00 rai	29	52.45			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	44.70	10.453	5	.063
	Small enterprise	15	48.07			
	Cottage industry	1	1.50			
	Government services	5	63.00			
	Private sector employee	49	57.41			
	Other	7	40.71			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	52.79	1.288	3	.732
	3-5 years	28	47.79			
	6-10 years	19	50.16			
	>10 years	17	56.24			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	52.11	-.817		.414
	Not having	8	44.31			
	Total	102				
	<b>SME ownership</b>					
	Own	34	53.04	-.426		.670
	Not own	68	50.73			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	37.58	4.718	4	.317
	40,001-100,000	14	52.79			
	100,001-300,000	17	41.76			
	300,001-500,000	16	45.66			
	> 500,000	16	46.66			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	37.30	9.648	4	.047
	40,001-100,000	11	54.64			
	100,001-300,000	22	37.16			
	300,001-500,000	20	35.78			
	> 500,000	27	49.43			
	Total	85				

**Pawn service permits household to invest in on-going investment opportunities**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service permits household to invest in on-going investment opportunities.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	13.50	1.904	4	.753
	Near poor (40,001-100,000)	9	47.22			
	Average (100,001-300,000)	53	47.18			
	Near rich(300,001-500,000)	21	47.95			
	Rich ( $> 500,000$ )	9	47.22			
Total	93					
	<b>Gender</b>					
	Male	54	54.60	-1.228		.219
	Female	48	48.01			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	55.40	3.830	4	.430
	26-35	36	53.22			
	36-45	28	54.63			
	46-55	17	44.65			
	$> 55$	6	36.25			
	Total	102				
	<b>Marital status</b>					
	Single	21	51.67	2.023	2	.364
	Married	78	52.29			
	Other	3	29.67			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	40.73	11.343	3	.010
	Lower secondary certificate	4	83.38			
	Upper secondary certificate	17	51.44			
	Bachelor degree	51	55.35			
	Total	102				
	<b>Household size</b>					
	3-5	43	53.30	1.075	2	.584
	6-9	54	51.11			
	$>9$	5	40.20			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	40.86	.883	3	.830
	2.01-5.00 rai	29	42.97			
	5.01-10.00 rai	20	47.40			
	$> 10.00$ rai	15	43.20			
	Total	86				

	<b>Total land size</b>					
	≤ 2 rai	11	37.55	5.649	3	.130
	2.01-5.00 rai	20	48.75			
	5.01-10.00 rai	26	36.38			
	> 10.00 rai	29	48.52			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	44.00	5.340	5	.376
	Small enterprise	15	46.53			
	Cottage industry	1	56.00			
	Government services	5	48.10			
	Private sector employee	49	57.74			
	Other	7	47.00			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	51.13	1.216	3	.749
	3-5 years	28	48.89			
	6-10 years	19	50.45			
	>10 years	17	57.79			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	52.02	-.667		.505
	Not having	8	45.38			
	Total	102				
	<b>SME ownership</b>					
	Own	34	49.97	-.404		.686
	Not own	68	52.26			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	38.19	7.473	4	.113
	40,001-100,000	14	48.82			
	100,001-300,000	17	36.41			
	300,001-500,000	16	45.88			
	> 500,000	16	54.69			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	51.50	5.287	4	.259
	40,001-100,000	11	51.27			
	100,001-300,000	22	36.45			
	300,001-500,000	20	38.85			
	> 500,000	27	46.46			
	Total	85				

**Pawn service allows household to manage household finance in Islamic way**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Pawn service allows household to manage household finance in Islamic way.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	1	44.50	.989	4	.911
	Near poor (40,001-100,000)	9	45.06			
	Average (100,001-300,000)	53	45.79			
	Near rich(300,001-500,000)	21	51.71			
	Rich ( $> 500,000$ )	9	45.33			
	Total	93				
	<b>Gender</b>					
	Male	54	51.80	-.117		.907
	Female	48	51.17			
	Total	102				
	<b>Age groups</b>					
	$\leq 25$	15	49.67	2.435	4	.656
	26-35	36	54.90			
	36-45	28	46.89			
	46-55	17	49.74			
	$> 55$	6	62.17			
	Total	102				
	<b>Marital status</b>					
	Single	21	51.48	.930	2	.628
	Married	78	52.08			
	Other	3	36.67			
	Total	102				
	<b>Education</b>					
	$\leq$ Primary certificate	30	42.02	6.297	3	.098
	Lower secondary certificate	4	59.50			
	Upper secondary certificate	17	49.44			
	Bachelor degree	51	57.14			
	Total	102				
	<b>Household size</b>					
	3-5	43	51.48	3.322	2	.190
	6-9	54	49.56			
	$>9$	5	72.70			
	Total	102				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	22	37.11	3.771	3	.287
	2.01-5.00 rai	29	47.29			
	5.01-10.00 rai	20	48.08			
	$> 10.00$ rai	15	39.43			
	Total	86				



	<b>Total land size</b>					
	≤ 2 rai	11	29.73	6.610	3	.085
	2.01-5.00 rai	20	49.63			
	5.01-10.00 rai	26	40.48			
	> 10.00 rai	29	47.21			
	Total	86				
	<b>Occupation</b>					
	Agriculture	25	44.96	6.882	5	.230
	Small enterprise	15	44.73			
	Cottage industry	1	88.50			
	Government services	5	57.40			
	Private sector employee	49	53.39			
	Other	7	66.64			
	Total	102				
	<b>Membership length</b>					
	≤ 2 years	38	45.63	3.234	3	.357
	3-5 years	28	53.77			
	6-10 years	19	53.55			
	>10 years	17	58.59			
	Total	102				
	<b>Religious education</b>					
	Having religious education	94	51.27	-.298		.766
	Not having	8	54.25			
	Total	102				
	<b>SME ownership</b>					
	Own	34	51.91	-.108		.914
	Not own	68	51.29			
	Total	102				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	24	43.96	3.850	4	.427
	40,001-100,000	14	53.32			
	100,001-300,000	17	37.47			
	300,001-500,000	16	41.59			
	> 500,000	16	45.25			
	Total	87				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	5	53.40	10.559	4	.032
	40,001-100,000	11	54.45			
	100,001-300,000	22	42.82			
	300,001-500,000	20	30.40			
	> 500,000	27	45.89			
	Total	85				

### Appendix 7.6:

#### Spearman's rho correlation: Impacts of pawn service

	AHI	AGE	EDU	HME	ALA	TLA	JOI	APR	ANP	SEX	MARI	OCC	RED	SME
<b>PA1</b>	.265*	-.043	.191	-.258**	.096	.126	.101	.415**	.308**	-.127	.032	.119	-.015	-.147
<b>PA2</b>	.110	-.295**	.418**	-.267**	.154	.201	-.032	.085	.108	.074	-.141	.320**	.062	.164
<b>PA3</b>	.023	-.152	.200*	-.158	.201	.204	-.030	.055	.119	.112	-.103	.091	.128	.085
<b>PA4</b>	.080	-.354**	.467**	-.117	.100	.138	-.092	.020	.083	.081	-.157	.372**	.010	.107
<b>PA5</b>	-.062	-.235*	.263**	-.171	.164	.191	.013	.126	.086	-.070	-.117	.134	-.081	-.042
<b>PA6</b>	.053	-.140	.249*	-.120	.071	.036	.057	.218*	.037	-.122	-.047	.174	-.066	.040
<b>PA7</b>	.171	-.035	.241*	.006	.075	.041	.173	-.041	-.124	-.012	-.030	.190	.030	-.011

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Note: Relevant coefficients are reported in this table.

## **Appendix 7.7:**

### **K-W Test and U-Test: Insurance scheme**

**Insurance scheme enables you to manage shocks that affect income more effectively**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, X<sup>2</sup></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Insurance scheme enables you to manage shocks that affect income more effectively.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	272.00	2.499	4	.645
	Near poor (40,001-100,000)	28	182.82			
	Average (100,001-300,000)	187	187.05			
	Near rich(300,001-500,000)	91	181.48			
	Rich ( $> 500,000$ )	61	183.72			
Total	370					
	<b>Gender</b>					
	Male	234	208.23	- 1.710		.087
	Female	166	189.60			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	215.46	4.910	4	.297
	26-35	150	202.51			
	36-45	117	183.53			
	46-55	58	210.04			
	$> 55$	27	215.76			
	Total	400				
	<b>Marital status</b>					
	Single	74	195.04	1.033	2	.597
	Married	318	202.58			
	Other	8	168.25			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	189.45	2.509	4	.643
	Lower secondary certificate	21	198.90			
	Upper secondary certificate	77	211.44			
	Bachelor degree	196	203.20			
	$>$ Bachelor degree	18	180.14			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	254.50	5.053	3	.168
	3-5	167	206.62			
	6-9	211	191.52			
	$>9$	20	238.68			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	160.95	5.767	3	.124
	2.01-5.00 rai	89	148.46			
	5.01-10.00 rai	80	177.02			
	$> 10.00$ rai	70	175.10			

	Total	328				
	<b>Total land size</b>					
	≤ 2 <i>rai</i>	50	151.53	7.132	3	.068
	2.01-5.00 <i>rai</i>	72	161.10			
	5.01-10.00 <i>rai</i>	88	152.34			
	> 10.00 <i>rai</i>	118	181.14			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	188.67	7.877	5	.163
	Small enterprise	62	210.46			
	Cottage industry	7	267.50			
	Government services	27	226.76			
	Private sector employee	182	201.02			
	Other	29	173.26			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	201.65	1.873	3	.599
	3-5 years	129	198.11			
	6-10 years	73	191.27			
	>10 years	45	218.41			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	198.61	-.900		.368
	Not having	53	212.86			
	Total	400				
	<b>SME ownership</b>					
	Own	126	211.96	-		.148
	Not own	274	195.23	1.448		
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	155.38	8.808	4	.066
	40,001-100,000	53	178.41			
	100,001-300,000	58	132.89			
	300,001-500,000	37	158.19			
	> 500,000	76	163.88			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	111.71	9.866	4	.043
	40,001-100,000	42	156.29			
	100,001-300,000	62	143.31			
	300,001-500,000	61	159.04			
	> 500,000	100	157.14			
	Total	298				

**Insurance scheme enables you to manage money during illness of member of household**

<b>Statement</b>	<b>Subgroup</b>	<b>N</b>	<b>Mean Rank</b>	<b>Z, <math>X^2</math></b>	<b>df</b>	<b>Asymp. Sig.</b>
<b>Insurance scheme enables you to manage money during illness of member of household.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	212.00	1.044	4	.903
	Near poor (40,001-100,000)	28	196.52			
	Average (100,001-300,000)	187	183.10			
	Near rich(300,001-500,000)	91	190.16			
	Rich ( $> 500,000$ )	61	179.53			
Total	370					
	<b>Gender</b>					
	Male	234	211.46	-2.378		.017
	Female	166	185.05			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	208.43	6.828	4	.145
	26-35	150	212.95			
	36-45	117	188.02			
	46-55	58	204.04			
	$> 55$	27	163.69			
	Total	400				
	<b>Marital status</b>					
	Single	74	200.15	.802	2	.670
	Married	318	201.44			
	Other	8	166.38			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	174.27	8.874	4	.064
	Lower secondary certificate	21	173.24			
	Upper secondary certificate	77	213.66			
	Bachelor degree	196	208.75			
	$>$ Bachelor degree	18	214.42			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	230.50	1.705	3	.636
	3-5	167	201.16			
	6-9	211	197.01			
	$>9$	20	228.78			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	148.02	15.772	3	.001
	2.01-5.00 rai	89	151.47			
	5.01-10.00 rai	80	197.69			
	$> 10.00$ rai	70	164.09			
	Total	328				

	<b>Total land size</b>					
	≤ 2 rai	50	150.49	6.358	3	.095
	2.01-5.00 rai	72	155.03			
	5.01-10.00 rai	88	158.25			
	> 10.00 rai	118	180.88			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	179.96	27.962	5	.000
	Small enterprise	62	158.56			
	Cottage industry	7	185.00			
	Government services	27	260.06			
	Private sector employee	182	220.69			
	Other	29	177.64			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	200.23	2.500	3	.475
	3-5 years	129	190.36			
	6-10 years	73	209.36			
	>10 years	45	216.11			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	198.07	-1.134		.257
	Not having	53	216.39			
	Total	400				
	<b>SME ownership</b>					
	Own	126	184.73	-1.954		.051
	Not own	274	207.75			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	148.04	7.098	4	.131
	40,001-100,000	53	182.65			
	100,001-300,000	58	147.19			
	300,001-500,000	37	149.66			
	> 500,000	76	162.84			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	120.15	12.155	4	.016
	40,001-100,000	42	157.52			
	100,001-300,000	62	129.10			
	300,001-500,000	61	157.36			
	> 500,000	100	163.67			
	Total	298				

**Insurance scheme helps you to manage in the event of death of member of household**

Statement	Subgroup	N	Mean Rank	Z, $X^2$	df	Asymp. Sig.
<b>Insurance scheme helps you to manage in the event of death of member of household.</b>	<b>Annual household income (in baht)</b>					
	Poor ( $\leq 40,000$ )	3	118.50	3.176	4	.529
	Near poor (40,001-100,000)	28	191.89			
	Average (100,001-300,000)	187	191.68			
	Near rich(300,001-500,000)	91	181.14			
	Rich ( $> 500,000$ )	61	173.42			
Total	370					
	<b>Gender</b>					
	Male	234	214.79	-3.112		.002
	Female	166	180.35			
	Total	400				
	<b>Age groups</b>					
	$\leq 25$	48	192.54	3.358	4	.500
	26-35	150	207.02			
	36-45	117	188.53			
	46-55	58	215.77			
	$> 55$	27	197.48			
	Total	400				
	<b>Marital status</b>					
	Single	74	184.87	2.354	2	.308
	Married	318	204.72			
	Other	8	177.38			
	Total	400				
	<b>Education</b>					
	$\leq$ Primary certificate	88	186.06	4.258	4	.372
	Lower secondary certificate	21	220.83			
	Upper secondary certificate	77	207.00			
	Bachelor degree	196	205.02			
	$>$ Bachelor degree	18	170.33			
	Total	400				
	<b>Household size</b>					
	$\leq 3$	2	227.00	.700	3	.873
	3-5	167	203.29			
	6-9	211	196.90			
	$>9$	20	212.53			
	Total	400				
	<b>Agricultural land size</b>					
	$\leq 2$ rai	89	152.28	11.086	3	.011
	2.01-5.00 rai	89	147.97			
	5.01-10.00 rai	80	188.14			
	$> 10.00$ rai	70	174.04			
	Total	328				



	<b>Total land size</b>					
	≤ 2 rai	50	141.49	10.461	3	.015
	2.01-5.00 rai	72	158.63			
	5.01-10.00 rai	88	155.46			
	> 10.00 rai	118	184.58			
	Total	328				
	<b>Occupation</b>					
	Agriculture	93	194.05	15.446	5	.009
	Small enterprise	62	165.61			
	Cottage industry	7	299.00			
	Government services	27	233.57			
	Private sector employee	182	206.65			
	Other	29	202.60			
	Total	400				
	<b>Membership length</b>					
	≤ 2 years	153	195.51	9.980	3	.019
	3-5 years	129	186.51			
	6-10 years	73	208.97			
	>10 years	45	243.82			
	Total	400				
	<b>Religious education</b>					
	Having religious education	347	202.46	-.920		.358
	Not having	53	187.66			
	Total	400				
	<b>SME ownership</b>					
	Own	126	194.56	-.738		.460
	Not own	274	203.23			
	Total	400				
	<b>Productive assets (in baht)</b>					
	≤ 40,000	90	164.30	5.494	4	.240
	40,001-100,000	53	171.54			
	100,001-300,000	58	137.40			
	300,001-500,000	37	149.45			
	> 500,000	76	158.92			
	Total	314				
	<b>Non-productive assets (in baht)</b>					
	≤ 40,000	33	133.29	3.792	4	.435
	40,001-100,000	42	161.62			
	100,001-300,000	62	140.65			
	300,001-500,000	61	147.11			
	> 500,000	100	156.71			
	Total	298				

### Appendix 7.8:

#### Spearman's rho Correlation: Impacts of Insurance Scheme

	AHI	AGE	EDU	HME	ALA	TLA	JOI	APR	ANP	SEX	MARI	OCC	RED	SME	TA1	TA2	TA3
<b>AHI</b>	1.000																
<b>AGE</b>	.079	1.000															
<b>EDU</b>	.152**	-.482**	1.000														
<b>HME</b>	.142**	.214**	-.135**	1.000													
<b>ALA</b>	.369**	-.001	.022	-.025	1.000												
<b>TLA</b>	.393**	-.035	.044	.022	.911**	1.000											
<b>JOI</b>	.110*	.335**	.010	.082	.080	.023	1.000										
<b>APR</b>	.204**	.084	-.047	.068	.190**	.195**	.070	1.000									
<b>ANP</b>	.312**	.024	.019	.144*	.442**	.519**	.041	.333**	1.000								
<b>SEX</b>	-.045	-.126*	-.017	-.019	-.018	.032	-.134**	-.088	-.016	1.000							
<b>MARI</b>	-.029	.502**	-.259**	.062	-.079	-.089	.168**	.032	-.108	.009	1.000						
<b>OCC</b>	-.019	-.478**	.563**	-.118*	-.092	-.084	-.036	-.116*	-.027	.036	-.241**	1.000					
<b>RED</b>	.028	.105*	-.097	-.037	.000	.009	-.037	.030	-.043	.135**	.064	-.049	1.000				
<b>SME</b>	-.060	-.223**	.211**	.025	-.002	-.030	-.139**	-.099	-.126*	-.041	-.129**	.279**	.059	1.000			
<b>TA1</b>	-.025	-.023	.006	-.014	.106	.101	.004	-.010	.113	-.086	.011	-.012	.045	-.072	1.000		
<b>TA2</b>	-.006	-.096	.118*	-.036	.144**	.086	.046	.025	.155**	-.119*	-.011	.132**	.057	.098	.601**	1.000	
<b>TA3</b>	-.012	.009	.030	-.008	.175**	.140*	.102*	-.057	.068	-.156**	.056	.065	-.046	.037	.583**	.608**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

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