

FINANCIAL LITERACY COMPETENCIES OF FARM HOUSEHOLDS IN BANG KLAM DISTRICT, SONGKHLA: METHODOLOGICAL ISSUES

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Abstract

The main objective of this article was to critically review the literature relating to financial literacy, financial management and its links towards farmers' performance. The study was based on an initial observation of methodological issues with the goal of assessing how prior studies measured financial literacy. The study further examined the impact of financial management as a mediating variable on the relationship between financial literacy and farmers' performance. The research attempts to paradigm a conceptual framework that will improve farmers' well-being through the integration of financial literacy and financial management for a prospective investigation. The awareness of the methodology adopted by several studies and the items used to measure financial literacy and farm performance will be considered to develop a comprehensive questionnaire for this study. In-depth interviews will also be facilitated. The sample for this study will be farm households from the target locale which will be purposely selected considering that the majority of the residences are farmers with lands as their major assets with limited capital to purchase the commodity and low levels of educational attainments. Data from the surveys will be analyzed and interpreted quantitatively and qualitatively. Results will be spread through the writing of academic papers to be presented at international conferences and submitted to high-quality academic journals.

Keywords: Financial literacy (FL), farm households, financial competencies, Financial Management (FM), farm performance, Bang Klam District

Introduction

Financial Literacy (FL) is rapidly being recognized as a core skill in an increasingly complex financial environment (Aggarwal, Gupta, & Singh, 2014). In recent years, there has been a rapid increase of interest in studying individual FL ever since the world face financial crisis. This implies the risk people around the world are facing today. The

governments around the world are putting all efforts to improve FL amongst their citizens. Policymakers in both developed and developing countries are increasingly recognizing the importance of FL and of investing resources in financial education programs (Xu & Zia, 2012).

FL has become essential for farmers to manage their business efficiently and to access productive credit. In developing countries, most smallholder farmers are operating below their potential capacity. Asian Development Bank (ADB) (2009) in the Philippines reported that poverty rate remains high because they earn a small income from their farm. In Malaysia, a study reveals that the lower income group including farmers shows a lower level of FL. Many who were financially illiterate have found themselves in various financial problems such as being delinquent on loan repayments and bankruptcy (Lim, Osman, Karamah, Azlan, & Jamal, 2012). The reasons behind are because they lack financial access, farm inputs, agricultural knowledge, and adequate training. To help these farmers, many banks and alliances are nowadays willing to support and finance local farmers worldwide. They also assist them with further services and provide necessary technical training to help them achieve success. FL is, therefore, a crucial element for farmers to pave the way for a substantial increase in productivity, income and profitability, and improved livelihoods (Boekhold, 2016).

Thailand in particular, production of reliable and quality agricultural products is mainly by smallholders, farmer groups or by contract farmers supplying corporate enterprises (Ellis, Panyakul, Vildoza, & Kasterine, 2006). However, not all goods producers, specifically the farm households, get the maximum benefits out of their products. The fact is that majority of the farmers are just into working hard and bringing in crops. They only have the skills and traditional methods on how to take care of their fields, lands, and crops. Another reason given is because of various constraints that the farmers are experiencing. Somboonsuke and Shivakoti (2001) in their review of the problems that smallholders of rubber farms in Songkhla province faced, reveals that some of the constraints include low production quality, low selling price and high costs, deficient investment capital, input factor deficiency, family labor shortage, poor local government assistance, and other critical factors. Another problem arising recently is the possible risk of continued indebtedness of Thai farmers (“Farmers get more assistance”, 2016). Today, farmers have access to financial services (loan privileges), farming inputs, agricultural training and fair crop markets provided by government organizations and other several institutions to optimize their productivity and increase their earnings. Also, the Thai government is trying to help them by restructuring the collection of loans and reducing interests (“Farmers get more assistance”, 2016).

Following these survival efforts, the question that comes to attention is whether or not Thai farmers have adequate knowledge and skills to effectively manage their production and financial resources to improve farming business. Hence, it is vital to enhance their FL to advance their livelihoods. Without a proper knowledge on how to plan, account, and control day-to-day finances and other possible constraints in the future, the success of reaching and keeping the goal will be at stake and hence not be stable. There is a need for these farm households to understand the significant benefits of financial education by putting them into practice, and to search for other strategies that can significantly increase incomes and transform lives in rural communities.

In this study, the term ‘farmers’, also called peasants, is used to describe the farm households which simultaneously engaged in both production and consumption. Ellis (1992) defines farmers as follows:

Peasants are households which derive their livelihoods mainly from agriculture, utilize mainly family labor in farm production, and are characterized by partial engagement in input and output markets which are often imperfect or incomplete (p. 13).

Objectives

This conceptual paper aimed to critically review the theoretical and empirical literature relating to FL, financial management, and farmers’ performance. The review also attempted to observe methodological issues that arise in measuring FL and develop a conceptual framework for maximizing farmers’ performance.

Understanding the Concept of Financial Literacy

There are different perceptions on what FL entails. Researchers and many organizations have defined FL in a variety of ways. The term FL has been frequently used as a synonym for financial education or financial knowledge like in the study of Huston (2010). But, it goes beyond financial education. As defined by the Organization of Economic Co-operation and Development (OECD, 2016), FL is a combination of competencies such as awareness, knowledge, skills, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being. For Cohen (2010), it incorporates knowledge, skills, and attitude. Similarly, Boekhold (2016) describes FL as “having the knowledge, skills and confidence to manage one’s finances well, taking into account one’s economic and social circumstances, where: “knowledge” means having an understanding of personal financial issues; “skills” means being able to apply that knowledge to manage one’s personal finances; and “confidence” means feeling sufficiently self-assured to make decisions relating to one’s personal finances (p.

4.” According to Xu and Zia (2012), FL encompasses a number of different concepts such as financial awareness and knowledge, financial skills and financial capability. Huston (2010) conceptualizes FL as having two dimensions- understanding and use. An individual who is financially literate knows not only the information but also applies it appropriately. A stock knowledge acquired through education and/or experience can help an individual to have the ability and confidence to effectively apply the knowledge. Remund (2010) explains FL as “a measure of the degree to which one understand key financial concepts (knowledge) and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions (p. 284)”. In line with the farming industry, it should be defined not being just a general life skill but rather advanced business skills (Boekhold, 2016). This study adopts the above definition, where FL is defined as a combination of competencies such as financial behavior, financial knowledge, and financial attitude.

Financial Literacy Competencies

Financial knowledge is an important component of FL for individuals, to help them compare financial products and services and make appropriate, well-informed financial decisions (OECD, 2016). This competency is a particular kind of human capital that is acquired throughout the life cycle, by learning subjects that affect the ability to effectively manage revenues, expenses, and savings (Delavande, Rohwedder, & Willis, 2008). A basic knowledge of financial concepts and the ability to apply numeracy skills in a financial context ensures that consumers can act autonomously to manage their financial matters and react to news and events that may have implications for their financial well-being. According to Taft, Zare, Seyyed, and Abdoreza (2013), “the financial knowledge helps reducing social and psychological pressures and to increase the welfare of the family in the personal life (p. 64).” Hilgert and Hogarth (2003) assert that lack of knowledge about principles of Financial Management and financial matters could explain why some families do not follow recommended financial practices. Generally, financial knowledge comprises of understanding topics such as inflation, interest rates, the value of money over time, risk, return, diversification, the stock market, credit, and government securities (Potrich, Vieira, & Kirch, 2015).

Consumers’ actions and behavior are what ultimately shape their financial situation and well-being, in both the short and longer-term (OECD, 2016). Atkinson and Messy (2012) agree that the way in which a person behaves will have a significant impact on their financial well-being. Cohen (2010) cited that financial behaviors are influenced by the context in which people live—both inside and outside the household. Those who

are unable to correctly calculate interest rates out of a stream of payments (implying low FL) would predict unsound financial practice, end up borrowing more, having reduced financial profit low savings, and less wealth accumulation (Stango & Zinman, 2009). Paying bills on time or putting off bill payment, thinking or not before making a purchase, planning future expenditures, and making ends meet are some of the examples of financial behaviors which may impact positively or negatively on an individual's financial situation and well-being (Atkinson & Messy, 2012; OECD, 2016). A financially literate person should develop and exhibit positive behavior competency.

Financial attitudes refer to one's beliefs and values related to various personal finance concepts, such as whether one believes it is important to save money (Chowa, Despard, & Osei-Akoto, 2012), and they are, therefore, a key factor in the personal decision-making process (Ajzen, 1991; Atkinson & Messy, 2012). The OECD/INFE definition of FL recognizes that even if an individual has sufficient knowledge and ability to act in a particular way, their attitude will influence their decision of whether or not to act (OECD, 2016). Based on OECD competency framework, to develop one's FL, an individual should be motivated to create and consider the overall budget and prioritize savings over some forms of discretionary spending, be confident to make decisions about income and expenditure and set personal priorities in terms of important and optional expenditure. An individual should value long-term financial planning as a way of maintaining or increasing financial well-being and consider the consequences of accessing credit before making a decision and resolve issues related to credit before debt becomes a burden (OECD, 2016, pp. 12-22).

Measuring Financial Literacy

The assessment of farm households FL level is necessary to study most of their financial behaviors. A farmer's knowledge about basic financial principles and the ability to apply these concepts in taking a real financial decision generally affects the choice between different options on the market to satisfy a financial need or the awareness about long-term financial consequences of today's financial behaviors (Nicolini, 2016). Hence, it is essential to carefully measure the farmers' FL competencies by considering different dimensions such as the selection of the areas of knowledge to take into account in that process and the level of detail in these areas that depend by the need of knowledge related with the financial need of individuals (Nicolini, 2016).

Up to the present, there is no standardized FL measure. Several empirical studies used different measures to identify the FL level of the subjects being studied. Lusardi and Mitchell (2011) suggest four principles of FL measures. It should be simple, relevant, brief, and the level of knowledge questions could be differentiated. Based on these

principles, Lusardi and Mitchell (2011) were able to develop simple three questions to measure FL. The first two questions assess whether respondents display fundamental economic concepts and competence knowledge with basic financial numeracy (e.g., interest compounding and inflation). The third question evaluates respondents' knowledge of risk diversification, a crucial element of an informed investment decision.

On the other hand, the OECD suggested that FL level should be measured based on the three constructs: financial attitude, financial behavior, and financial knowledge (OECD, 2016). The concept applied by Lusardi and Mitchell (2011) in measuring FL seems to be simple and concise. However, taking into account the definition of FL as comprises of different competencies; knowledge and awareness, skills and behavior, and attitude (OECD, 2016; Cohen, 2010; Xu & Zia, 2012; Boekhold, 2016), Lusardi and Mitchell (2011) focus only on one dimension (knowledge). It is therefore relevant to cover all competencies to accurately measure an individual's FL. Considering the core competency framework designed by OECD (2016), FL should be measured according to three specific constructs. Table 1 summarizes the topics and examples recommended and prepared by the OECD which was also used by the Bank of Thailand (BOT) in 2013 survey to assess the level of FL of Thai people.

Table 1
FL Survey Content

Financial Literacy		
Financial Knowledge	Financial Behavior	Financial Attitude
<ul style="list-style-type: none"> - Division - Time value of money - Interest paid on the loan - Calculation of principal plus interest, and compound interest 	<ul style="list-style-type: none"> - Considered purchase - Timely bill payment - Keeping watch on financial affairs - Long-term financial goal setting - Household budget responsibility - Active saving - Making an informed decision and comparing information before purchase - Not borrowing to make ends meet 	<ul style="list-style-type: none"> - I find it more satisfying to spend money than to save it for the long-term

Potrich et al. (2015) adapted the survey designed and prepared by the OECD/INFE (2013) and proposed a set of questions related to the three competencies. Their study will be considered during the designing of the instrument to be used in this study. The researchers do not find any conflicts between Potrich et al. (2015) and OECD/INFE (2013). Hence, the results of this study will still be comparable with those of other countries.

Farm Performance

The ultimate goal of farm households is to be able to meet the daily essential needs of the family. However, if there's a way to help them squeeze out a few more cents from the labor they put into their profession and increase their performance, then it can't be a bad thing. To understand the influence of behavioral background or the way of life and decision making of farm households to farmers' performance, different microeconomic theories and approaches to peasant economy were reviewed. Some of the theories comprise 'profit-maximizing peasant' by Schultz (1964), 'utility maximization' by Chayanov (1966), and the 'risk-averse peasant'. These theories may have relevance in explaining how farm households' performance is affected by different circumstances within the peasant economy.

In 1964, Schultz claimed that farm households in developing countries are 'efficient but poor' (Ellis, 1992). Schultz' hypothesis came up in contrast to the prior notion by development economists that farmers were poor since they were backward and inefficient. This had led to a formulation of a theory called '*profit-maximizing peasant*'. Farmers just do the best they can under the challenging circumstances life has set them in as long as their land is productive (Duflo, 2003). This neo-classical theory implies that the profit of the farmers will only increase or be positively affected if there is a change in either input or output. Empirical studies concluded that farm households are only allocatively efficient but not technically efficient (GLOPP, 2007). Submerged in that state of below the average resources, farm households somehow tried to maximize profit. Despite the criticisms received because of ignoring the risk and quality and the consumption aspect in peasant household decision processes (Mendola, 2007), it shows that they are persistent to maximize their profit to meet the family needs.

Utility maximization theories, on the other hand, postulate that farm households maximize utility through the consumption of all available commodities including their own resources. This Chayanovian model focuses particularly on the utilization of family labor in farm production. It incorporates both the production and consumption goals of households. "A proportion of produce is sold to meet their cash requirements and financial obligations, and a part is consumed by them. In the absence of a labor market or any other missing market, the decision-making process between production and consumption may not be separable especially when the farmers are the one who decides about how much of his available time to be spent to production. This decision making has generally produced negative results" (Mendola, 2007, pp. 50, 54).

Because farmers are not excused with a broad range of high risks and constraints (Somboonsuke & Shivakoti, 2001), it seems wise for them to comply with the principle of 'safety first'. The theory of the '*risk-averse peasant*' assumes that farm households,

while not efficient in terms of profit maximization, however, make decisions and take actions that are rational in economic terms (Ellis, 1992). The major concern associated with this theory is to secure the survival of the household to avoid or reduce risks. It infers that as farmers are aware of various kinds of risks, they will tend to prefer a safe or conservative strategy with a low return than a risky strategy with potential higher returns. Only those who are well-off farm households may take the risks as they have more resources (Duflo, 2003). Thus, it results in unwillingness or slowness to adopt innovations (Ellis, 1992). Mendola (2007) concludes that farm households' behavior is influenced by various natural, market, and social uncertainties. Incorporating all these factors, along with asset-poor initial conditions, these may all contribute to making farmers inefficient and persistently poor. With the above conclusion, it can be further concluded that farmers' behavior likewise influences farm performance and profitability.

Moreover, the majority of the farm households earn only minimal or no formal education. It is one of the many factors that influence a farmer's performance. Those who are financially illiterate pass through repeated cycles of losses instead of becoming productive (Stango & Zinman, 2009; Alessie, Van Rooij, & Lusardi & Mitchell, 2011). Financial illiteracy also reduces the chances of effectively assessing financial risks or opportunities. Hence, it is necessary to educate them and increase their financial awareness.

Financial Management

Unstable income and growing debts are some of the precise problems faced by the farmers affecting their family's financial situation aside from the above-mentioned uncertainties. As a result, a farmer is compelled to borrow money for basic family living expenses. More often than not, their farm profit is not sufficient to repay these debts. This is where managing finances skill is essential to solve these underlying problems.

Theories have indicated the importance of financial knowledge and application in managing different forms of organizations to increase revenue and maximize profit and production (Langemeier, 2004). Financial Management is a process of planning, organizing, directing and controlling the farm's financial activities. It refers to the efficient and effective management of an individual or a firm's finances. Literature reporting relationship precisely between FL and financial knowledge and practices of financial management is abundantly available. Generally, ample reviews focused on savings, borrowing, and investments (Lusardi & Mitchell, 2011; Alessie et al., 2011). As suggested by Hilgert and Hogarth (2003), financial management can be categorized into different activities such as cash-flow management, credit management, saving, and investment.

Going back to the conventional theory of profit maximization, the main objective of any firms is to maximize its profits where profits are the difference between the revenue and costs. To gauge farm profitability and financial performance, farm managers should follow appropriate key performance indicators/measures. These measures include financial ratios used in Financial Management such as liquidity, solvency, profitability, financial efficiency, repayment capacity ratios (Langemeier, 2004). Education and training programs can help equip households with knowledge and skills that cause better approaches to improving individuals' financial efficiency and productivity (Cohen, 2010). Creation of financial education programs designed specifically to enhance FL has been viewed as a solution to mitigating financial problems that individuals and families face (Huston, 2010). To remain on track, farmers should be financially literate to be able to do more and get ahead and definitely plan ahead for a rainy or dry day. Thus, farmers should possess the appropriate level of financial management knowledge, skills, behavior, and attitude necessary to manage their finances and improve their productivity, increase profitability, and fulfill their long-term goals. The importance of farm financial management will only be intensified if targeted individuals have the basic FL. However, FL tools and materials should be suitably chosen according to farm households' needs and circumstances since they will never need or use most of products and services available (Boekhold, 2016).

Conceptual Framework and Hypotheses Development

Literature has also considered the impact of education, financial experiences, gender, financial socialization, and other demographic factors on FL of every individual regardless of cultures and nationalities. Numerous studies were also done to assess the FL of farmers in both developed and developing countries. However, there is a minimal effort contributed in exploring the links between FL and Financial Management in improving explicitly farm performance and profitability. Several studies have confirmed the positive association between FL and performance and have reported that poor financial decisions hurt productivity in the workplace. Lusardi and Mitchell (2011) also found that FL had a significant effect on household income. A study by Alessie et al. (2011) found that the less financially literate households may be more likely, unknowingly commit financial mistakes, less likely to engage in recommended financial practices and be able to cope with sudden economic shocks. Brennan points out that in work life, higher FL has higher efficiency and productivity in the result and will help employees to better understand benefits offered by the organization and improve their satisfaction (as cited in Taft et al., 2013). Furthermore, Taft et al. (2013) found that those with higher FL are more successful in their business and personal lives. The relationship

between knowledge of and skills on managing finances and financial returns is also found to be significantly correlated (Lawbaumrung, 2013; Mwambia, 2014).

Grounded in the above literature and empirical studies, this paper recommends a conceptual framework. The initial concept of this study is derived from the framework designed and developed by OECD (2016) emphasizing on the financial knowledge, attitude, and behavior, as well as their mutual relationships on measuring FL. In expanding the scope of FL OECD model, the researchers attempt to link financial management as a mediating variable on the relationship between FL and farmers' performance. The proposed conceptual framework for this study as shown in Figure 1 is designed as a way to respond to the research problem on how to help farm households optimize their farming performance and well-being, connecting FL, Financial Management, and Farmers' Performance.

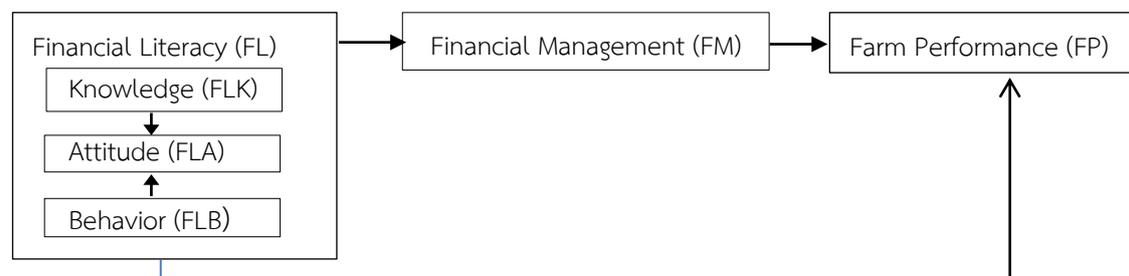


Figure 1. The relationship between Financial Literacy and Farmers' Performance by mediating effect of Financial Management—A conceptual framework. (Source: Prepared by the author)

The independent variable is the FL, while the dependent variable is the farmers' performance, and financial management is considered as mediating variable. The following are the hypotheses for this study:

- H1: FL has a significant relationship with FM.
- H2: FM mediates the positive relationship between FL and FP.
- H3: FL positively influences FP.

Methods

The methodology employed in this paper incorporates the review of existing literature relating to FL, Financial Management, and its relations to Farmers' Performance. To see whether the conceptualized model is an effective approach to help farm holders improve the quality of their lives, the next phase of this study is to implement it for investigation. The research scope, population and sample, necessary instruments, and appropriate data analysis will be considered.

The scope of this study will be Songkhla Province. As of 2015, the Office of Agricultural Economics of Thailand reported that the agricultural area of Songkhla Province covers 4,486 km² which is 61% of the total land area. Approximately 13%

(31,626 million baht) of Songkhla Province Gross Provincial Product (GPP) comes from agricultural activity. Statistics show that more than 50% of the population is engaged in farm activities. The participants of this study will be taken from Bang Klam District, one of the districts of Songkhla Province with a total population of 30,930 in 2016 (Songkhla Provincial Statistical Office, 2017). It is a home to around 2% (147.80 km²) of the province's arable land.

The study has purposely chosen this district as the sample based on the factors considered. The sample is appropriate for the study as the majority of the residences are farmers with lands as their major assets with limited capital to purchase the commodity and low levels of educational attainments. This study will involve two phases with the second phase building on the previous one. Hence, purposive sampling is useful in this instance. The data will be collected using non-probability sampling method from the residents of the two sub-districts of Bang Klam; Ban Klam and Ban Han, to represent farmers within the study area. Studies will be done through primary and secondary data.

Focus group discussions among farmers will also be conducted. A semi-structured questionnaire in the respondents' language will be used to solicit information on independent and dependent variables required for the analysis. Content and construct validity of the instruments will be checked with respect to the consistency of the items with the purpose of the questionnaires and the appropriateness of the content areas, using an Index of Item-Objective Congruence (IOC) test validating form. Internal consistency (reliability) will be tested using Cronbach's Alpha (α) in SPSS Statistics. The study will employ the appropriate statistical analysis tool in the attempt to examine the mediating role of financial management practices on the relation between FL and farm performance.

Conclusions and Discussion

Farm households are open for ways on how to improve their well-being and maximize their profit and utilities. However, different risks, uncertainties, and limited resources hinder them from reaching their short-term and long-term goals. Instead, when uncertainties arise, they prefer to choose safe alternatives to avoid risks and forgo profit-maximizing. This type of behavior is indeed reasonable, yet, there are ways on how to manage risks and still aim for profit maximization. This is where FL and Financial Management come into play. Farmers need to be flexible to innovative ideas and not just being primitive oriented. The awareness on the importance of FL through the integration of proper management of finance can be a tool to help them minimize financial mistakes, reduce their often impoverished state, have enough startup and working capitals to reduce the seeking for financial loans and optimize their farming

performance and profitability. Training on Financial Management would be the greatest good that can be offered to them to relief worries. The recommended conceptualized model would be useful to farmers to plan ahead by exploring the impacts of FL on their well-being and the society's well-being as well. To academicians and researchers, this study will definitely broaden the existing knowledge on the effect of FL on financial performance and social economic lives, irrespective of their sources of incomes and present opportunities for further research. The study will further help the educators in identifying the appropriate platform to develop farmer's technical skills and competencies on FL. For instance, providing a series of workshops in bookkeeping, cash management or savings for farmers with an appropriate set of materials can be a useful tool. It is the duty of educational institutions & agricultural departments to teach farmers what they need in financial awareness. This study will also help contribute to policy formulation and implementation by providing empirical evidence on the role of financial management practices in improving the performance of farmers. The awareness of the methodology adopted by several studies and the items used to measure FL may be considered to develop a comprehensive questionnaire for this study.

This paper recommends the government and other institutions to persistently promote/raise awareness on the importance of financial education to all farmers' community. The leader of the target community/village has to be contacted to have a proper organization and good collaboration for the implementation of this study. This could also be an avenue to collaborate with NGOs and other practitioners to offer free community programs or workshops designed to help improve small farmers' well-being and build a stronger economic system. FL programs should be tailored particularly according to farmers' needs and conditions, not just based on all available financial products and services.

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