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FACTORS INFLUENCING PERFORMANCE OF FARMERS AT THONGWA TOWNSHIP

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FACTORS INFLUENCING PERFORMANCE OF FARMERS AT THONGWA TOWNSHIP

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ABSTRACT

This study aims to identify factors influencing performance of farmers at Thongwa Township in Yangon. To meet the objective of the study, quantitative research method has been used. The analysis is conducted based on a sample of 56 farmers among the total population of 92 farmers in Pyinmakan Village, Thongwa Township who accessed credit. Both primary and secondary data were used in this study. For primary data, the questionnaires were distributed to the respondents by using a simple random sampling method. The result of the study showed that farm size has the most statistically significant effect on farmer performance, followed by cost of credit facility as the second most influential factor, and access to services as the third. Collateral availability and knowledge and awareness was not statistically significant in the regression model. According to the findings, this study suggest that policy interventions aimed at reducing credit costs and supporting farm expansion, along with enhancing service access, could substantially improve agricultural productivity in Thongwa Township.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Myanmar relies on agriculture for GDP and jobs. The sector accounts for approximately 30% of Myanmar's GDP, while industry contributes around 25% and services make up the remaining 45% (Thein, 2004). Additionally, a large proportion of industrial and trade activities are directly or indirectly linked to the agricultural and natural resource (ANR) sector. Recognizing its importance, the Myanmar government has outlined a long-term vision for agriculture, aiming to establish an inclusive, competitive, food-secure, climate-resilient, and sustainable agricultural system by 2030. This vision aims to improve farmers' and rural communities' socioeconomic situations and boost national economic growth (MOALI, 2018-2023).

Agriculture is a major employer, especially in rural regions, and crucial to Myanmar's economic and social growth. Agriculture has always driven economic growth due to the country's tremendous natural resources. Myanmar has 67.6 million hectares of land, 12.8 million of which are agricultural. (Euro Cham Myanmar, 2018). Paddy rice is the dominant crop, accounting for nearly 60% of the net sown area and contributing approximately 80% to the total agricultural output in terms of value (World Bank, 2016).

However, despite its potential, Myanmar's agricultural growth is hindered by various challenges, including limited access to modern technology, financial constraints, market accessibility issues, and concerns over land tenure security. Access to credit is a crucial driver of economic growth and financial inclusion, particularly in the agricultural and small business sectors. Credit allows individuals and enterprises to invest in productive activities, improve their income, and enhance overall economic resilience (World Bank, 2020). However, access to credit remains a challenge for many, particularly in developing countries, due to various factors such as the cost of credit facilities, collateral requirements, financial literacy, farm size and access to services. These barriers often limit the ability of smallholder farmers and micro-enterprises to secure the necessary financial resources to expand their operations and improve productivity.

Myanmar's agricultural growth is closely tied to its ability to compete in an evolving global market. Increasing productivity and efficiency in the sector can enhance the country's participation in international trade, further stimulating agricultural development. The government has shown a strong commitment to agricultural

development by formulating the Agriculture Development Strategy (ADS), which focuses on improving financial accessibility, trade facilitation, logistics, and market information dissemination (MOALI, 2018-2023). Myanmar is endowed with abundant natural resources, a favorable land-to-labor ratio, and a growing domestic market, all of which present vast opportunities for agricultural expansion (Euro Cham Myanmar, 2018).

In Thongwa Township, many farmers rely on informal credit sources or government-backed agricultural loans. However, there is limited empirical research on how these credit mechanisms impact overall performance of farmer. Understanding the relationship between influencing factors and performance of farmers can provide insights into policy improvements, financial interventions, and strategies for enhancing agricultural productivity.

1.1 Rationale of the Study

Agriculture is crucial to the economic success of many countries, especially developing ones where a large section of the population relies on farming. Credit helps farmers invest in improved inputs, technology, and infrastructure, improving agricultural production and performance (Feder et al., 1990; Khandker & Faruqee, 2003). Smallholder farmers in rural regions like Thongwa Township in Myanmar struggle to get financing, even though agriculture accounts for a large portion of GDP and jobs.

Its importance in Myanmar's agricultural sector—primarily paddy, pulses, and beans—led to its selection. The location is perfect for analyzing farmers' financial performance and loan access. The study examined farmers' obstacles and possibilities to make practical suggestions to improve financial inclusion and preserve Myanmar's agricultural sector.

The effectiveness of credit access in improving performance of farmer depends on several key factors, including the cost of credit, collateral availability, financial knowledge, and farm size (Khandker & Faruqee, 2003; Swinnen & Gow, 1999). These factors determine how well farmers can utilize credit for investment in agricultural inputs, technology, and improved production methods. The cost of credit is a significant determinant of financial accessibility for farmers. Credit costs include interest rates, processing fees, insurance premiums, and other borrowing-related expenses (Feder et al., 1990). High interest rates discourage smallholder farmers, who typically operate on thin profit margins, from seeking formal credit (Khandker & Faruqee, 2003). In developing

countries like Myanmar, financial institutions impose elevated interest rates due to the perceived risk of lending to borrowers with low creditworthiness or limited financial history (Meyer, 2011). Furthermore, fixed repayment schedules do not always align with the seasonal income cycles of farmers, making it difficult for them to repay loans during non-harvest periods (Binswanger & Rosenzweig, 1986). In Thongwa Township, many farmers rely on informal lenders who offer flexible repayment terms but charge extremely high interest rates. Reducing these financial barriers is crucial for increasing credit accessibility and enabling farmers to invest in productivity-enhancing technologies.

Collateral requirements present another major challenge for smallholder farmers seeking credit. Many financial institutions require borrowers to provide tangible assets, such as land, livestock, or machinery, as loan security (Besley, 1995). However, a large proportion of farmers in rural Myanmar lack formal land ownership documentation, making it difficult for them to meet collateral requirements (Nghiem et al., 2021). Land tenure insecurity is a persistent issue, further limiting access to formal financial institutions (Deininger & Jin, 2006). Some microfinance institutions have introduced alternative solutions, such as group lending models and credit guarantee schemes, which use social collateral to provide loans to farmers without physical assets (Giné & Karlan, 2014). While these approaches have been successful in extending credit to smallholders, they are often insufficient for large-scale agricultural investments.

A lack of financial literacy and awareness about available credit options further limits access to formal financial services (Cole et al., 2011). Many rural farmers have limited knowledge of loan application procedures, repayment terms, and the advantages of formal credit over informal borrowing (Xu & Zia, 2012). This lack of awareness leads to underutilization of affordable credit sources and increases reliance on informal lenders, who often impose higher interest rates and unfavorable conditions (Miller, 2012). Farmers who are unaware of government-backed loans or microfinance programs may miss out on opportunities to access low-cost financing for their agricultural activities. Additionally, a lack of understanding of key financial concepts—such as interest rates and repayment schedules—often results in loan defaults. Improving financial literacy through training programs, workshops, and digital financial tools has shown promise in helping farmers make informed borrowing decisions and use credit effectively (Bruhn & Zia, 2013).

Farm size also plays an important role in determining access to credit. Larger farms tend to have better credit access because they generate higher output, benefit from

economies of scale, and own more valuable assets (Carter, 1989). These factors make them more attractive to lenders, who prefer borrowers with stable income streams and strong repayment capacity (Feder et al., 1990). In contrast, smallholder farmers—those cultivating less than two hectares of land—struggle to access formal credit due to their low profitability and lack of collateral (Zeller et al., 1997). Studies indicate that large-scale farmers are more likely to secure formal loans because they are integrated into commercial value chains and cooperative systems, which improve their creditworthiness (Conning & Udry, 2007). In Myanmar's Thongwa Township, this disparity highlights the need for targeted financial interventions to support smallholder farmers in overcoming credit access barriers.

In addition to financial and knowledge-related barriers, the limited physical accessibility of financial institutions poses a significant challenge for farmers seeking to obtain credit, particularly in rural areas where banking infrastructure is often underdeveloped (Munyegera & Matsumoto, 2016). In remote and rural areas like Thongwa Township, the scarcity of formal financial institutions, such as banks and microfinance branches, forces farmers to travel long distances, incurring transportation costs and losing valuable time that could be spent on agricultural activities. Even when institutions are present, limited operating hours, bureaucratic procedures, and a lack of outreach programs further restrict access, particularly for farmers with limited mobility or those engaged in demanding farm work. This geographical and operational exclusion often leaves farmers with no viable alternative but to rely on informal, often exploitative, moneylenders, despite the higher costs (Center for Strategic and International Studies, 2022).

Improving the reach of financial services through mobile banking, agent networks, and community-based financial initiatives is therefore crucial for enhancing financial inclusion and ensuring that credit is not just available but also truly accessible to all farmers. For instance, agent banking models have been effective in bridging the financial inclusion gap in developing countries by decentralizing access to essential financial services, empowering underserved communities, and fostering trust in formal financial systems (Developing Telecoms, 2025). Similarly, community-based organizations have played a significant role in advancing digital financial inclusion by engaging with regulators and providing financial literacy training in local languages, thereby connecting rural populations to essential financial services (Candid, 2025).

Addressing these challenges requires policies that lower credit costs, introduce flexible repayment structures, promote financial literacy, and develop alternative collateral

mechanisms. These interventions can enhance credit access and improve the financial performance of smallholder farmers, contributing to sustainable agricultural development in regions like Thongwa Township. This study aimed to provide valuable insights into how financial inclusion and credit access could be improved for farmers in Myanmar, thereby enhancing agricultural outcomes. By focusing on Thongwa Township, the study offered a localized perspective on the unique challenges and opportunities farmers faced regarding credit access. The findings informed policy decisions and financial institutions' strategies to better support farmers, contributing to sustainable agricultural development and rural economic growth. The study filled gaps in existing literature on agricultural finance in Myanmar and provided evidence-based recommendations to improve financial access, supporting the country's long-term agricultural and economic goals.

1.2 Objectives of the Study

The main objectives of this study are

1. To identify factors influencing performance of farmers at Thongwa Township.
2. To analyze the factors influencing on performance of farmers at Thongwa Township.

1.3 Scope and Method of the Study

This study focuses on factors influencing performance of farmers in Thongwa Township. For data analysis, quantitative research method was used. Both primary and secondary data were collected. The primary data were gathered by meeting with farmers using structured questionnaires, which included questions on demographic factors, credit access, and performance of farmer. In 2024, data from the Department of Agriculture and the Department of Land Administration and Statistics reported that 92 farmers in Pyinmakan Village, Thongwa Township, obtained credit to enhance their financial performance. Using a simple random sampling method, a sample of 56 farmers representing 60% of the target population was selected for the study. The data collection period is conducted March 2025. The Department of Agriculture, the Department of Land Administration and Statistics, the Myanmar Agriculture Development Bank, the General Administration Department of Thongwa Township, reports, online resources, and prior thesis papers served as key sources for secondary data and information.

1.4 Organization of the Study

This research has five chapters. Chapter One introduces the study's motivation, objectives, scope, technique, and organization. Chapter Two covers financial performance, determinants, theoretical foundation, prior investigations, and conceptual framework. Chapter Three describes Thongwa Township and credit access. Chapter Four analyzes contributing variables and Thongwa Township farmers' financial performance. Chapter Five concludes with observations, comments, recommendations, and research requirements.

CHAPTER II

THEORETICAL BACKGROUND

This chapter focuses on the financial performance, factors influencing of farmers financial performance, related theories of the study, previous studies and conceptual framework of the study.

2.1 Financial Performance

The financial performance of farmers was a multidimensional concept that reflected how effectively they utilized available resources to generate income, sustain profitability, and ensure long-term economic viability (Boone et al., 2011). Among the various indicators, productivity and profitability were considered the most critical dimensions for assessing financial performance in the agricultural sector. Productivity referred to the efficiency of converting inputs such as land, labor, capital, and technology into agricultural output. According to Ali and Byerlee (2002), increasing agricultural productivity was essential for enhancing farmers' income and ensuring food security, particularly in developing economies. Greater productivity enabled farmers to produce more with the same or fewer inputs, thereby reducing unit production costs and improving competitiveness. Similarly, profitability assessed the net financial gains from farming operations after accounting for input costs, labor, and other operational expenses. It served as a key determinant of farmers' ability to invest in future production cycles and adopt risk management strategies (Boone et al., 2011).

Productivity and profitability were deeply interlinked, as higher productivity typically contributed to higher profits, especially when input costs were effectively managed. As noted by Ellis (1993), the use of modern agricultural techniques and access to credit, extension services, and quality inputs significantly enhanced both productivity and financial performance. Moreover, Alene and Hassan (2006) emphasized that the adoption of yield-enhancing technologies—such as improved seeds, fertilizers, and irrigation—led to both increased farm output and improved income levels for smallholder farmers. Conversely, farmers with low productivity often faced challenges in meeting market demands and repaying loans, which undermined their profitability and long-term sustainability (OECD, 2011). The ability to maintain financial performance also depended on market access, infrastructure, and the level of financial literacy among farmers. As noted by Zeller and Sharma (2000), well-informed farmers were more likely to make cost-

effective investment decisions and utilize credit efficiently, which contributed to improved profitability.

Financial performance in farming was not solely a function of market prices or external support but was largely driven by a farmer's ability to produce efficiently and manage costs effectively. Enhancing productivity and profitability through targeted interventions—such as capacity-building, access to affordable credit, and market integration—remained critical for improving the economic resilience of farming households and promoting sustainable rural development.

2.2 Factors Influencing Performance of farmers

There are many factors that can affect performance of farmers. This study describes cost of credit facility, collateral availability, knowledge and awareness, farm size and access to services.

2.2.1 Cost of Credit Facility

Access to credit was essential for farmers to invest in agricultural activities, such as purchasing seeds, fertilizers, machinery, and other farm inputs. However, the cost of credit facilities was a significant determinant of farmers' financial performance. According to Kumar (2013), the interest rate on loans was one of the most critical factors influencing the accessibility of credit for farmers. High interest rates increased the cost of borrowing, making it difficult for farmers to repay their loans, which often led to financial distress and reduced profitability. In contrast, affordable interest rates encouraged farmers to invest in their farms, resulting in higher productivity and improved financial performance.

Friedberg (2015) also emphasized that the repayment tenure and flexibility of credit facilities affected farmers' financial outcomes. Longer repayment periods and flexible terms reduced the financial burden on farmers, enabling more effective cash flow management. Additionally, Sepehri and Moshiri (2004) observed that many farmers, especially smallholders, depended on informal sources of credit that imposed excessively high interest rates. Access to formal credit institutions, such as banks and microfinance institutions, provided farmers with more affordable and stable credit options, thereby enhancing their financial performance. Kalani (2009) further noted that hidden charges—such as processing fees, insurance, and collateral requirements—often increased the overall

cost of credit. Awareness of these concealed costs was necessary for farmers to make informed and efficient borrowing decisions.

2.2.2 Collateral Availability

Collateral was typically required by financial institutions as security for loans. The availability of collateral was one of the key factors influencing farmers' access to credit and, consequently, their financial performance. Harrison (1994) noted that farmers who owned land were more likely to use it as collateral to obtain loans. However, in many developing countries, land ownership was often fragmented or poorly documented, which prevented farmers from using their land as security. This limitation hindered their access to credit and reduced their ability to invest in agricultural improvements.

Frangos et al. (2012) argued that in the absence of land, farmers could use alternative assets—such as livestock, machinery, or crops—as collateral. Nevertheless, the value of these assets was often insufficient to meet the required loan amounts, further restricting farmers' borrowing capacity.

Dietrich (2016) highlighted that some financial institutions and government programs provided collateral-free loans specifically designed for smallholder farmers. These loans expanded credit access, particularly for those lacking traditional forms of collateral. However, such loans typically carried higher interest rates or stricter repayment conditions. Black et al. (2003) cautioned that farmers who pledged property as collateral risked losing those assets if they failed to repay their loans. This risk created long-term financial vulnerability and often discouraged farmers from seeking credit, even when it was necessary for farm operations.

2.2.3 Knowledge and Awareness

Farmers' awareness and knowledge of financial management, agricultural practices, and available resources were key determinants of their financial performance. Agarwal and Singhal (2013) emphasized that financial literacy was essential for farmers to make sound financial decisions. Farmers with a strong understanding of financial concepts—such as interest rates, loan repayment terms, and budgeting—were better equipped to manage debt, avoid over-borrowing, and plan investments effectively.

Jain (2014) observed that a significant portion of farmers lacked awareness of the various credit facilities available to them, including government-subsidized loans,

microfinance, and cooperative credit. This lack of awareness often prevented farmers from accessing affordable financing options, negatively affecting their financial performance.

Oladepo and Abimbola (2014) highlighted the role of training and agricultural extension services in educating farmers on modern techniques, such as crop rotation, pest management, and soil conservation. The adoption of these practices contributed to increased productivity and profitability, thereby enhancing financial outcomes.

Philip and Hazlett (1997) further noted that knowledge of risk management strategies—such as crop insurance, income diversification, and savings—enabled farmers to mitigate the effects of adverse events like droughts, floods, and market price fluctuations. This awareness supported greater financial resilience and long-term sustainability in agricultural operations.

2.2.4 Farm Size

Farm size was another critical factor influencing farmers' financial performance. It affected the ability to achieve economies of scale, access essential resources, and invest in advanced agricultural technologies. Chaudhary and Junjhua (2011) argued that larger farms benefited from economies of scale, as they could distribute fixed costs—such as those related to equipment and infrastructure—across greater production volumes. This reduced the unit cost of production and enhanced overall profitability. In contrast, smallholder farmers often lacked such scale advantages, leading to higher per-unit production costs and weaker financial outcomes.

Manu et al. (2018) observed that large farms typically had greater access to resources, including credit, agricultural inputs, and market opportunities. These farms were also more likely to adopt modern technologies, such as irrigation systems, high-yielding seed varieties, and automated machinery, which contributed to improved productivity and financial performance.

Babu (2020) emphasized that larger farms possessed more opportunities for diversification—whether in crop varieties or livestock—which helped reduce financial risk caused by market volatility or crop failure. This diversification strategy supported income stability and enhanced the overall financial sustainability of farming operations.

2.2.5 Access to Service

According to Davis et al. (2010), agricultural extension services played a crucial role in enhancing farmer productivity by delivering updated technical knowledge, promoting best farming practices, and offering guidance on resource management. Farmers who consistently accessed extension and advisory services were more likely to adopt innovative technologies, improve crop yields, and increase profitability. Conversely, limited or irregular access to these services often resulted in the persistence of outdated and inefficient agricultural practices.

Input supply services—including timely access to quality seeds, fertilizers, pesticides, and irrigation systems—were also essential for improving farm performance. The availability and affordability of these inputs had a direct impact on the productivity of smallholder farmers. Mwangi and Kariuki (2015) found that when farmers obtained high-quality inputs from reliable suppliers, farm output and income levels improved, contributing to greater food security. However, in remote or underserved regions, the scarcity of input suppliers led to delays in farming operations and diminished yields.

Access to markets and supporting infrastructure, such as transportation and storage facilities, further influenced farm profitability. Barrett (2008) noted that farmers often struggled to obtain fair market prices due to long distances to market centers, poor road networks, and weak bargaining power. In the absence of proper storage facilities, many farmers were forced to sell their produce immediately after harvest—typically at lower prices—which negatively affected income. Enhancements in infrastructure and stronger market linkages helped reduce post-harvest losses and improved overall financial returns for farmers.

Additionally, access to financial facilitation services—such as support in loan application processes, coordination of group lending, or the use of digital financial platforms—also contributed to more effective credit utilization. Farmers frequently required assistance in understanding loan procedures, interest obligations, and repayment conditions. Institutions that offered integrated support—combining financial services with advisory, training, and market information—proved to be more successful in promoting rural development and improving the financial well-being of farming communities (Karlan et al., 2016).

2.3 Related Theories of the Study

In this study, four theories are referred as theoretical background of the study. Those theories are credit rationing theory, transaction cost theory, the theory of profit maximization and systems theory.

2.3.1 Credit Rationing Theory

Proposed by Stiglitz and Weiss (1981), the Credit Rationing Theory explores the phenomenon whereby lenders limit the amount of credit available to borrowers, even when they are willing to pay higher interest rates. This limitation arises from concerns over moral hazard (borrowers engaging in riskier projects post-lending) and adverse selection (the risk profile of borrowers not being transparent to lenders) (Stiglitz & Weiss, 1981).

In rural or agricultural contexts, including areas like Thongwa Township, this theory explains why many farmers encounter significant barriers when attempting to access formal credit. Due to information asymmetry—a situation where lenders cannot fully assess the financial status or trustworthiness of borrowers—lenders become more cautious and impose strict conditions such as collateral requirements or lower loan ceilings (Boucher, Guirkinger, & Trivelli, 2009).

For farmers, the implications are profound. Even when credit is available, factors like high-interest rates or collateral demands can deter borrowing. Farmers' inability to secure sufficient funds not only restricts investment in productivity-enhancing activities but also stifles their long-term financial growth (Zeller, 1994). Therefore, this theory underscores the systemic financial exclusion faced by small-scale farmers and the need for innovative credit mechanisms that mitigate risk for lenders while improving accessibility for borrowers (Armendáriz & Morduch, 2010).

2.3.2 Transaction Cost Theory

Transaction Cost Theory, created by Williamson (1975), examines indirect costs of economic trade. These include search, information, negotiation, decision-making, and enforcement expenses (Williamson, 1975).

When applied to credit access, this theory highlights the significant non-monetary barriers faced by farmers. For instance, the administrative fees, travel expenses to reach financial institutions, and the time investment required for completing documentation can collectively increase the perceived burden of accessing formal credit (Hoff & Stiglitz,

1990). For smallholder farmers, these costs can be disproportionately high, often outweighing the benefits of acquiring loans (Feder et al., 1990).

Furthermore, the theory explains why farmers might avoid formal loans altogether in favor of informal lenders, who often have fewer bureaucratic procedures and faster disbursements, albeit at higher interest rates (Aleem, 1990). To address this, reducing transaction costs—through initiatives like mobile banking, simplified documentation, and streamlined processes—is crucial to making formal credit systems more appealing and accessible to rural farmers (Jack & Suri, 2014).

2.3.3 The Theory of Profit Maximization

The Theory of Profit Maximization, as introduced by Marshall (1890), posits that economic agents, including businesses and farms, make decisions aimed at maximizing their profits (Marshall, 1890). This theory is highly relevant in understanding how farmers evaluate the opportunity cost and potential returns associated with credit.

In an agricultural setting, profit maximization involves the strategic allocation of resources such as labor, land, and credit. Farmers are likely to borrow only if they perceive that the potential gains from investment—such as higher crop yields, better-quality inputs, or diversification into high-value crops—outweigh the cost of credit (Ellis, 1993). However, if the terms of the loan, such as high interest rates or short repayment periods, impose excessive costs, farmers may either avoid borrowing or face financial distress post-borrowing (Zeller et al., 1997).

This theory also provides insight into the threshold effect—farmers will refrain from taking on additional credit if the marginal cost of the loan exceeds the expected incremental profit (Sadoulet & de Janvry, 1995). Thus, aligning loan terms with farmers' production cycles and expected cash flows is vital to encourage borrowing and improve financial performance (Giné & Karlan, 2014).

2.3.4 System Theory

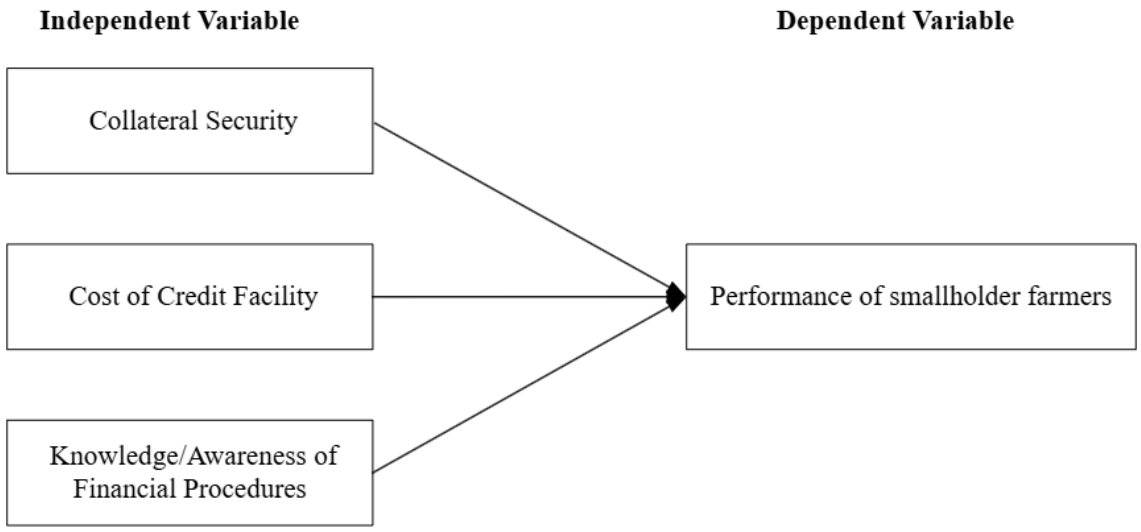
In the context of this study, the agricultural economy can be conceptualized as a system, with credit access serving as a key input. Systems Theory helps illustrate how improving one component of the system—such as credit availability—can transform the entire system, leading to higher productivity, improved livelihoods, and better economic outcomes for farmers (Checkland, 1981).

Moreover, financial literacy is identified as a critical subsystem influencing farmers' ability to make informed borrowing and investment decisions (Lusardi & Mitchell, 2014). Without adequate knowledge, farmers may misuse loans or fail to understand repayment terms, resulting in default or financial stress (Cole et al., 2011). Systems Theory emphasizes the need for holistic strategies that not only address credit access but also improve education, market linkages, and policy interventions (Meadows, 2008). For example, introducing community-based lending models or cooperative guarantees can provide an external support mechanism that enhances the overall system's resilience (Ostrom, 1990).

2.4 Previous Studies

Three prior research are cited to provide theoretical backdrop and conceptual context for this investigation. Researchers examined the Determinants of Credit Access and Performance of Smallholder Farmers in Kumba Municipality, Southwest Region, Cameroon. This study examined how loan availability determinants affect Kumba municipality smallholder farmers' performance. To do so, 272 Kumba smallholder farmers provided data. Figure (2.1) depicts this study's conceptual structure.

Figure (2.1) Determinants of Access to Credit and Performance of Smallholder Farmers in Kumba Municipality, South West Region of Cameroon

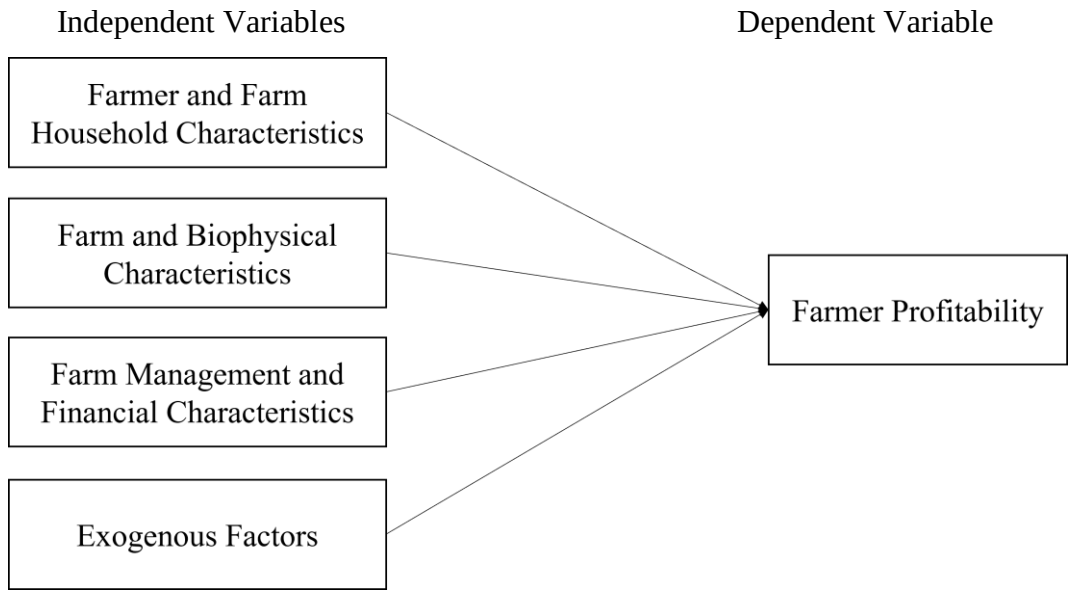


Source: Chenaa, T. A., Maria, A. G., & Teno, M. N. (2018)

The results indicated that collateral security, the cost of lending facilities, and understanding of financial procedures significantly influence the performance of smallholder farmers. The report proposed, among other measures, that the government should offer specialized financial services to farmers and support the effective implementation and creation of agricultural policy. Microfinance institutions ought to deliver financial literacy programs to smallholder farmers and create innovative financial products tailored to the specific requirements of smallholder farmers, notably in Kumba municipality and throughout Cameroon.

Tey, Y. S., & Brindal, M. (2015) conducted a study focusing on the sustainability of agricultural practices with a particular emphasis on economic sustainability, which remains a major concern for farmers. The researchers identified that many farmers exit the agricultural sector due to low profitability. The study reviewed various factors that influence farm profitability and found that management and financial capacity, quality of farm resources, operational practices, and managerial skills play a significant role. The conceptual framework of this study is shown in Figure (2.2).

Figure (2.2) Factors Influencing Farm Profitability



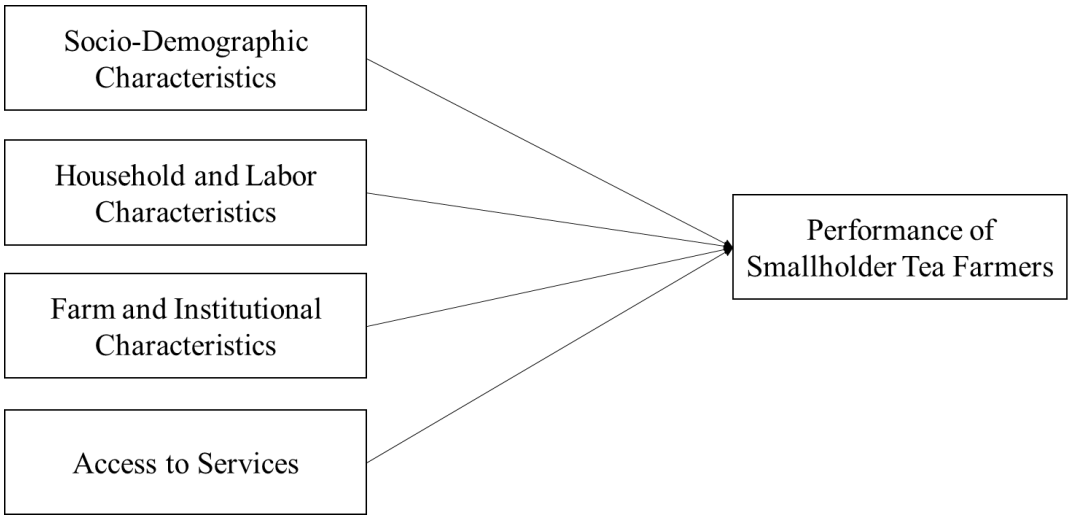
Source: Tey, Y. S., & Brindal, M. (2015)

Their findings highlighted that operational scale, efficiency, and favorable output prices have a consistent positive effect on farm income. The study concluded that sustaining

agricultural and rural business operations is inherently challenging. However, it emphasized that profitability could be improved by achieving economies of scale, enhancing input-output efficiency, and increasing production capacity and product prices. The study suggested that these interrelated factors should be considered in the development of sustainable agricultural policies and technologies.

Tanzanian researchers investigated how smallholder tea producers in Muheza and Njombe areas perform. SPSS evaluated data from 320 smallholder tea producers and 80 key informants who completed questionnaires. The results showed that several socio-economic and institutional factors significantly influenced farmer performance. This included level of education, household labor support, farming experience, age, membership in tea associations, and access to extension and credit services. The conceptual framework of this study is shown in Figure (2.3).

Figure (2.3) Exploring Factors Affecting Performance of Smallholder Tea Farmers in Tanzania



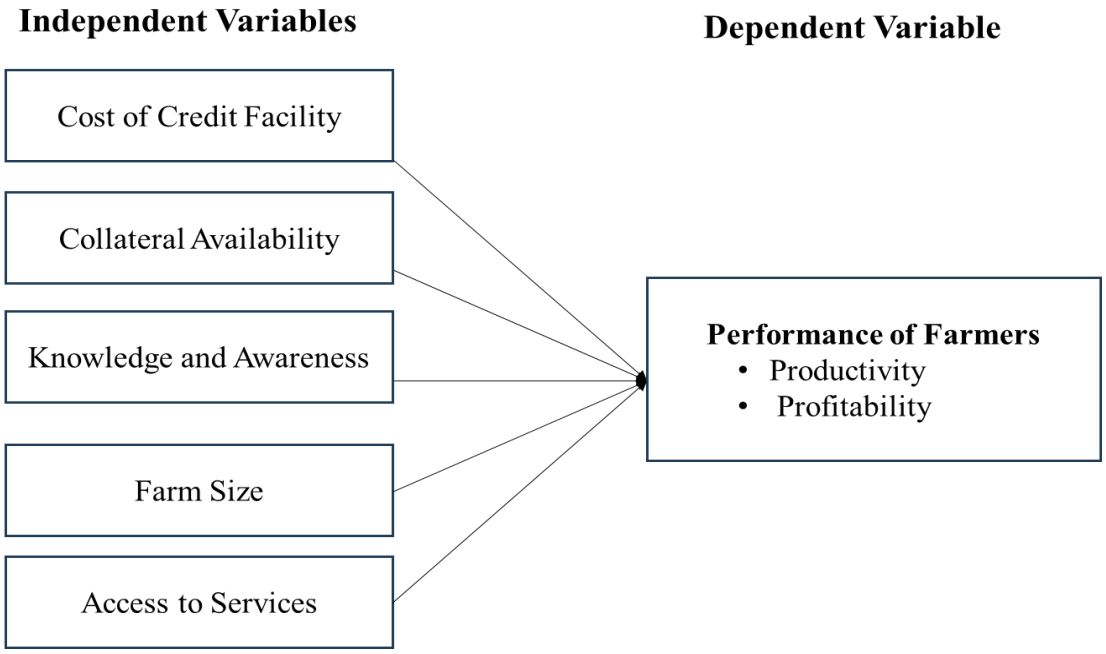
Source: Mhando, D. G., & Nsimbila, P. M. (2021).

The study recommended strategies such as involving the youth in tea farming, enhancing educational and extension services, improving credit access, strengthening farmer associations, developing market infrastructure, and improving road connectivity between farms and market centers. These recommendations were aimed at overcoming barriers and boosting the performance of smallholder tea farmers in Tanzania.

2.5 Conceptual Framework of the Study

Based on theory and prior research, this study built a conceptual framework for influencing variables and farmer performance in Thongwa Township. Figure (2.4) shows the study's conceptual model.

Figure (2.4) Conceptual Framework of the Study



Source: Own Compilation (2025)

This figure illustrates the relationship between influencing factors and Performance of farmers at Thongwa Township. The independent variables include cost of credit facility, collateral availability, knowledge and awareness, farm size and access to services. Dependent Variable is Financial Performance of Farmers which are measured by Productivity and Profitability.

Working Definitions

Cost of Credit Facility: The total expenses, including interest rates and fees, associated with borrowing credit from financial institutions.

Collateral Availability: The presence of tangible assets, such as land or machinery, that farmers can use as security to obtain loans.

Knowledge and Awareness: Farmers' understanding of financial products, loan processes, and the benefits of formal credit.

Farm Size: The total area of land cultivated by a farmer, influencing access to credit and economies of scale.

Access to Services: The comprehensive ability of farmers to physically reach and operationally utilize formal financial services and products.

Financial Performance of Farmers: The productivity and profitability of farming activities, reflecting the effectiveness of credit utilization.

CHAPTER III

BACKGROUND AND FACTORS INFLUENCING PERFORMANCE OF FARMERS AT THONGWA TOWNSHIIP

This chapter explores the relationship between influencing factors and performance of farmer at Thongwa Township, a predominantly agricultural region in the Yangon Region of Myanmar.

3.1 Background Description of Thongwa Township

Thongwa Township, located in the Yangon Region of Myanmar, is recognized as one of the country's key agricultural zones due to its fertile alluvial soil, favorable climatic conditions, and predominance of farming as the main economic activity. The region benefits from its geographical positioning in the lower delta area, where a tropical monsoon climate supports agricultural productivity through distinct wet and dry seasons. The rainy season, from June to September, provides vital water resources for crop cultivation, while the dry season, from October to May, presents challenges such as water scarcity and soil degradation, which can negatively impact yields.

Agriculture is the backbone of Thongwa's economy, with a majority of the rural population engaged in smallholder farming. Rice is the dominant crop, accounting for nearly 60% of the net sown area and contributing approximately 80% to total agricultural output. Other important crops include beans, pulses, vegetables, and a growing variety of cash crops. In recent years, farmers have increasingly diversified their cultivation practices by incorporating horticultural and commercial crops to improve income stability and reduce reliance on monocropping.

Despite its agricultural potential, Thongwa Township faces multiple challenges that hinder sustainable farming and financial performance. Farmers encounter limited access to modern technologies, mechanized equipment, and high-quality agricultural inputs such as improved seeds and fertilizers. The reliance on traditional farming practices and manual labor continues to constrain productivity. Additionally, environmental problems—such as soil erosion, water pollution, seasonal flooding, and climate variability—further threaten crop yields and long-term sustainability.

Access to financial services remains a significant obstacle in the township. Many farmers depend on informal credit sources with high-interest rates and inflexible repayment

terms, as access to formal banking or microfinance institutions is limited. These financial constraints prevent farmers from making necessary investments to improve productivity, such as purchasing machinery or expanding cultivation. Socio-economic conditions are further shaped by factors such as low levels of financial literacy, inadequate access to agricultural training programs, and poor market connectivity. Furthermore, the absence of adequate storage facilities and inefficient supply chains contributes to post-harvest losses and restricts profitability.

While government and non-governmental organizations have introduced agricultural development initiatives in the area, persistent challenges—including land tenure insecurity, climate change impacts, and market price fluctuations—continue to affect the financial stability of smallholder farmers. To foster long-term agricultural development in Thongwa Township, it is essential to strengthen access to affordable credit, enhance farmer education and training, improve infrastructure, and promote sustainable farming practices that can adapt to environmental and market changes.

3.2 Challenges in Credit Access and Performance of Farmer

Access to credit is fundamental for enhancing agricultural productivity and improving the financial performance of farmers. In Thongwa Township, where agriculture is the main livelihood for the majority of the population, credit plays a vital role in enabling farmers to invest in inputs such as high-yielding seeds, fertilizers, pesticides, irrigation equipment, and mechanized tools. These investments contribute to increased yields and higher income, thereby improving the overall financial performance of farming households. However, despite the clear benefits of credit access, farmers in the township face a range of interrelated challenges that hinder their ability to obtain and effectively utilize formal financial services.

One of the primary challenges is the high interest rates associated with formal loans. Financial institutions and microfinance providers often impose rates that are unaffordable for smallholder farmers, making credit an unattractive or even unviable option. As a result, many farmers avoid taking loans, even when they are urgently needed to support farming operations. Additionally, the requirement for collateral significantly limits access to formal credit. Most small-scale farmers do not possess sufficient assets, such as titled land or valuable property, to meet the collateral demands of banks and lending institutions. This exclusion from formal credit markets forces many to rely on informal lenders who often

impose exorbitant interest rates and unfavorable terms, further weakening farmers' financial positions.

Another critical issue is the lack of financial literacy among rural farmers. Many are not well-versed in financial management practices such as budgeting, interest calculation, loan planning, or repayment scheduling. This knowledge gap can result in inefficient use of borrowed funds, delayed repayments, and long-term indebtedness. Without proper understanding of loan agreements and financial obligations, farmers may mismanage credit, leading to reduced profitability rather than financial improvement.

Limited outreach and coverage of formal financial institutions in rural areas like Thongwa also present a barrier. Many villages lack nearby banks or microfinance branches, making access to services time-consuming and costly. As a result, a significant number of farmers remain unbanked or underserved. The reliance on informal credit networks while more accessible is often predatory, reinforcing cycles of debt and vulnerability.

Furthermore, environmental risks such as seasonal flooding, soil degradation, water pollution, and the broader impacts of climate change add another layer of complexity. Even when farmers obtain credit, these unpredictable environmental conditions can significantly affect crop yields and farm income, reducing their ability to repay loans and achieve financial stability. These risks discourage long-term investments in agriculture and may even lead to loan defaults, reducing trust between farmers and lenders.

To improve farmers' financial performance and promote sustainable agriculture in Thongwa Township, it is essential to address these credit-related challenges through integrated solutions. These include offering affordable credit products with flexible terms, expanding the outreach of financial institutions, enhancing financial literacy through farmer education programs, and promoting collateral-free lending schemes tailored to smallholders. Additionally, strengthening climate resilience through sustainable farming practices and agricultural insurance can help mitigate the financial risks associated with environmental shocks. Addressing these challenges holistically will not only enhance credit access but also support long-term agricultural growth and financial inclusion among rural farming communities.

3.2.1 Formal Credit Sources for Farmers especially at Thongwa Township

In Thongwa Township, formal credit sources available to farmers include commercial banks, microfinance institutions (MFIs), and government-led financial initiatives, with the most prominent being the Myanmar Agricultural Development Bank (MADB). The MADB plays the important role in providing seasonal agricultural loans to farmers at subsidized interest rates, enabling investments in high-yield crops, fertilizers, and farm equipment. These loans are typically short-term and aimed at supporting crop production cycles. However, loan disbursement periods are often delayed, and credit supply falls short of actual demand, leaving many smallholder farmers underserved.

Private banks such as AYA Bank, KBZ Bank, and Yoma Bank have also extended agricultural lending services in recent years. These banks provide collateral-based agricultural and SME loans, mainly targeting farmers with formal land ownership and those engaged in commercial-scale farming. Some offer tailored loan packages for specific activities such as irrigation development, agro-processing, and the purchase of machinery. For instance, Yoma Bank collaborates with agri-business platforms to offer credit tied to input supply chains and market access.

Microfinance institutions (MFIs) such as Proximity Finance, Vision Fund Myanmar, and Pact Global Microfinance Fund operate within Thongwa Township and provide small-scale loans with group lending models and relatively flexible terms. These MFIs are crucial for reaching smallholder and landless farmers who lack access to collateral. However, their operational scale and branch coverage remain limited, reducing their outreach and effectiveness in remote areas.

According to JICA (2020), government programs such as subsidies, input grants, and technical training support are more accessible to larger farms due to easier compliance with eligibility requirements and better access to administrative channels. This often places smallholder farmers at a disadvantage, both in terms of credit access and broader financial performance. Furthermore, low levels of financial literacy among farmers in Thongwa Township continue to hamper effective credit utilization and repayment planning, underscoring the need for integrated financial education alongside credit provision.

3.2.2 Informal Credit Sources for Farmers especially at Thongwa Township

In response to the limited accessibility and coverage of formal financial institutions, a significant number of farmers in Thongwa Township rely on non-institutional lenders,

including local moneylenders, traders, and community-based borrowing arrangements. These alternative sources of credit offer immediate and flexible access to funds, often without the need for formal documentation, collateral, or lengthy approval processes. However, the convenience of these channels comes at a cost. Loans from moneylenders and traders typically involve excessively high interest rates and stringent repayment conditions, placing substantial financial pressure on borrowing farmers.

Such dependence on non-regulated credit mechanisms often results in unsustainable debt cycles, limiting farmers' capacity to invest in productivity-enhancing inputs such as quality seeds, fertilizers, and modern farming technologies. In many cases, repayments are tied to the sale of farm produce at prices dictated by the lenders themselves particularly when credit is obtained from traders further eroding farmers' bargaining power and financial autonomy. Despite these drawbacks, the widespread use of non-institutional credit persists due to the absence of accessible formal credit services, especially for smallholder farmers with limited assets, poor financial literacy, or no land documentation. This ongoing reliance highlights the urgent need for expanding inclusive financial services, strengthening the presence of microfinance and banking institutions in rural areas, and improving credit literacy among farming communities to reduce dependence on high-risk borrowing sources.

3.3 Influencing Factors for Performance of Farmers

The performance of farmers in Thongwa Township measured through productivity and profitability is shaped by several interrelated factors. This study focuses on five key variables: cost of credit facility, collateral availability, knowledge and awareness, farm size, and access to services. These variables were carefully selected based on their direct impact on farmers' ability to access resources, apply improved agricultural practices, and generate sustainable income from farming activities.

3.3.1 Cost of Credit Facility for Farmers

Farmers in Thongwa Township encounter multiple financial challenges when accessing formal credit, which significantly influences their borrowing behavior and agricultural productivity. While interest rates on agricultural loans are generally perceived as manageable, many farmers report concern over the total cost burden associated with obtaining credit. Beyond the nominal interest, borrowers often face various additional expenses, including loan processing fees, documentation charges, administrative service fees, late payment penalties, and, in some cases, mandatory insurance premiums or upfront

savings requirements imposed by financial institutions.

Furthermore, transportation costs to travel to distant bank branches or microfinance offices—especially in rural areas—add to the overall financial burden. Farmers may also incur informal facilitation costs to expedite the approval process or navigate bureaucratic hurdles. These hidden or supplementary costs, although not always documented formally, contribute to the perception that formal credit is expensive and difficult to access.

Despite the presence of flexible repayment interest rates offered by some lenders, the cumulative effect of these direct and indirect costs continues to discourage many farmers—particularly smallholders with minimal disposable income—from fully engaging with formal financial systems. The high cost of borrowing undermines farm profitability by reducing available income for reinvestment in improved seeds, fertilizers, irrigation systems, or modern machinery. As a result, productivity gains remain limited, and reliance on outdated farming practices persists.

Additionally, while some institutions have simplified the loan application process, others still impose burdensome documentation requirements or involve lengthy approval procedures that increase both the time and financial cost of credit access. These realities highlight the urgent need for credit providers to reassess and reform lending frameworks, making them more affordable, transparent, and tailored to the economic realities of small-scale farmers. Establishing such supportive financial environments is essential for promoting inclusive and sustainable agricultural development in Thongwa Township.

3.3.2 Collateral Availability for Farmers

In Thongwa Township, collateral availability plays a critical role in determining farmers' access to formal agricultural credit. For many farmers, especially those with adequate assets such as land, farm machinery, or livestock, these resources serve as valuable collateral when applying for loans from banks and microfinance institutions. Formal lenders such as the Myanmar Agricultural Development Bank (MADB) commonly require a valid Form-7 land use certificate registered under the applicant's name, which acts as the primary form of collateral. Farmers with these documented assets are generally able to access higher loan amounts and benefit from lower interest rates due to reduced lending risks.

However, for small-scale farmers, the requirement to provide collateral presents a significant barrier. Many lack formally registered land titles, sufficient property, or movable assets that are accepted by financial institutions. This structural limitation often prevents them from obtaining the financing necessary for purchasing agricultural inputs or investing in modern technology. As a result, the absence of acceptable collateral not only limits loan eligibility but also reduces the amount that can be borrowed, thereby restricting opportunities to expand farming operations and increase productivity.

To mitigate this issue, some financial institutions and development programs have introduced alternative forms of collateral, such as group or joint guarantees. These mechanisms allow a group of farmers to co-guarantee one another's loans, thereby reducing individual collateral requirements. While this approach has enabled some smallholders to access credit, the scale of implementation remains limited in the township. Additionally, although the valuation of collateral by some institutions is considered fair and transparent, inconsistencies in appraisal practices and administrative challenges persist.

Collateral requirements are influence farmers' willingness to apply for loans. When the collateral demanded is perceived as excessive or unfair, many potential borrowers are discouraged from engaging with formal credit systems. This is particularly true for marginalized groups, such as landless farmers and women, who are often excluded due to asset ownership disparities. Without reforms that broaden the definition of acceptable collateral and promote inclusive credit mechanisms, many farmers in Thongwa Township will continue to rely on informal sources of finance, which are often costly and unsustainable. Therefore, developing collateral-flexible lending models and expanding group-based lending schemes is essential for improving credit accessibility and fostering inclusive agricultural development in the region.

3.3.3 Knowledge and Awareness for Farmers

In Thongwa Township, the level of knowledge and awareness among farmers regarding agricultural credit plays a pivotal role in their ability to access and utilize formal financial services effectively. Many farmers have a general understanding of the financial products offered to them, including seasonal crop loans, input financing, and equipment loans. This awareness enables them to identify the most appropriate credit options that suit their agricultural needs and farming cycles. Moreover, familiarity with the loan application

process from financial institutions is relatively common, particularly among farmers who have previously engaged with banks or microfinance providers.

Several farmers have also benefited from training sessions or information campaigns organized by government agencies, local cooperatives, and NGOs. These efforts have helped improve their understanding of how to access credit, complete documentation, and fulfill eligibility criteria. Additionally, awareness of government-sponsored programs and agricultural subsidies is evident in the community. These initiatives, such as interest rate subsidies or credit guarantee schemes, are often recognized by farmers as valuable tools for reducing the financial burden associated with borrowing.

Despite this progress, a significant segment of the farming population still faces challenges due to limited financial literacy. A lack of in-depth knowledge regarding loan terms, repayment conditions, and associated costs continues to hinder access to formal credit. For many, misunderstandings about interest structures, penalty charges, or collateral requirements result in hesitation or mistrust toward financial institutions. To address this, some farmers actively seek financial advice before applying for loans, turning to local experts, extension officers, or peer networks for guidance.

Overall, while a growing number of farmers in Thongwa Township are familiar with the basic terms and conditions of agricultural loans, further efforts are needed to enhance financial education at the grassroots level. Expanding outreach programs and providing simplified, farmer-friendly financial information can empower more individuals to make informed credit decisions. Strengthening knowledge and awareness is essential not only for improving loan access but also for ensuring responsible borrowing and sustainable agricultural development in the township.

3.3.4 Farm Size for Farmers

In Thongwa Township, farm size significantly influences farmers' ability to access formal agricultural credit. Generally, farmers with larger landholdings are more likely to qualify for agricultural loans, as financial institutions often view farm size as an indicator of repayment capacity and long-term viability. These farmers typically have more collateral options, higher yields, and greater income stability, making them more attractive to lenders. As a result, larger farms tend to enjoy better access to credit facilities compared to smaller operations.

For many farmers, the size of their farmland directly affects the likelihood of securing loans. Financial institutions frequently assess farm size as a key criterion during the loan evaluation process, particularly when determining the scale of credit to be extended. Farmers with smaller landholdings, on the other hand, often face difficulties in meeting the minimum requirements for loan approval. These smallholders may be perceived as higher risk borrowers due to limited production capacity and lower cash flow, despite their need for financial assistance to improve farming efficiency.

Some farmers recognize that expanding their farm size could potentially enhance their chances of obtaining credit, as it may align them with institutional lending criteria. However, land expansion is not always feasible due to financial, legal, or environmental constraints. Moreover, while farm size is a commonly used metric in loan assessments, some farmers believe that the productivity of their land should be prioritized over its physical size. High-output, well-managed small farms can demonstrate strong repayment potential if provided with adequate support.

Ultimately, small-scale farmers in Thongwa face greater challenges in accessing credit, which can create a cycle of limited investment and stagnant growth. To foster equitable access to financing, lending institutions should consider adopting more inclusive evaluation criteria that incorporate productivity, management practices, and alternative forms of collateral—rather than relying solely on farm size. Such reforms would help level the playing field and support the financial needs of smallholder farmers, who form the backbone of the township's agricultural economy.

3.3.5 Access to Services for Farmers

In Thongwa Township, access to essential agricultural services plays an important role in enhancing farm productivity and improving the overall livelihood of farmers. Many farmers report that quality farming inputs such as seeds, fertilizers, and pesticides are generally obtainable when needed, although occasional shortages or delays can occur during peak planting seasons. The availability of reliable inputs at the right time directly impacts crop yield and farming efficiency, underscoring the importance of well-functioning supply chains.

Market access is also a critical component of service availability. Farmers indicate that reliable markets exist for selling agricultural produce, allowing them to generate income and sustain farming activities. However, transportation remains a challenge for

some, especially in remote areas. While major roads may be accessible, inadequate rural infrastructure can hinder the timely movement of goods and increase post-harvest losses. Improving transportation and road connectivity would significantly enhance market access and reduce logistical constraints for farmers.

Training programs aimed at improving agricultural knowledge and practices are available to a certain extent. These programs—often provided by government agencies, NGOs, or agricultural extension services—help farmers adopt modern techniques, manage risks, and make informed decisions. Nevertheless, access to such programs is not uniform, with small-scale or geographically isolated farmers sometimes missing out on these valuable learning opportunities.

Service responsiveness is another area of concern. While some agricultural service providers and financial institutions respond promptly to farmers' inquiries and needs, others are criticized for slow response times or inadequate support. Timely and effective assistance—particularly from financial institutions—can help farmers understand credit requirements and navigate the loan application process more confidently. Unfortunately, delays or the unavailability of essential services often lead to missed planting windows, reduced productivity, and financial losses.

Overall, access to agricultural services in Thongwa Township is improving but remains uneven. Strengthening rural infrastructure, expanding outreach for training programs, and improving the responsiveness of service providers are necessary steps to support the township’s farmers. Enhancing these services will not only lead to better farming outcomes but also contribute to sustainable rural development.

3.4 Performance of Farmers

In Thongwa Township, the performance of farmers is closely linked to two essential factors: productivity and profitability, both of which are strongly influenced by access to credit and modern agricultural support.

Productivity in farming is the efficient use of land, labor, and resources to achieve the highest possible output. When farmers have access to credit, they are able to purchase high-quality seeds, effective fertilizers, and improved irrigation systems. These inputs lead to healthier crops and higher yields. Credit also enables farmers to invest in modern machinery and adopt better farming practices, allowing them to plant and harvest on time,

which reduces losses caused by unpredictable weather or pests. Moreover, with sufficient financial support, farmers can diversify their crop production, adopt climate-resilient techniques, and maintain soil health more effectively. In contrast, a lack of credit often forces farmers to depend on outdated, low-efficiency methods that result in poor yields and the underutilization of valuable resources.

Profitability, which represents a farmer's ability to earn income from agricultural activities after covering all production costs, is another critical measure of performance. Access to credit allows farmers to expand their farm operations, reduce per-unit costs, and increase overall income. With adequate financing, farmers can afford better storage and transportation options, helping them avoid distress sales and instead sell their harvest at times when market prices are more favorable. This strategic advantage leads to better returns and financial stability. Furthermore, credit enables farmers to explore value-added opportunities such as crop processing and packaging, which increase product value and attract more buyers. As production rises and market opportunities expand, farmers earn more and strengthen their financial position. Farm income not only covers agricultural expenses but also supports household needs, contributing to the overall well-being of farming families.

By combining improvements in productivity with enhanced profitability, farmers in Thongwa Township are better positioned to achieve sustainable agricultural development. Credit access is central to this progress, as it supports investment in essential resources, mitigates risks, and opens up new economic opportunities. Strengthening these two dimensions will lead to more resilient livelihoods and a more prosperous rural economy.

CHAPTER IV

ANALYSIS ON FACTORS INFLUENCING PERORMANCE OF FARMERS

This chapter represents the analysis the factors influencing performance of farmer at Thongwa Township. This analysis includes study design, variables, analytical methodologies, and multiple linear regressions. Data will be used to evaluate dependability and analyze farmer performance and credit assessment in Thongwa Township.

4.1 Research Design

This study examined the determinants affecting the performance of farmers in Thongwa Township. This study employed a survey research methodology. The quantitative research approach was employed for data analysis. Both primary and secondary data were utilized to ascertain the factors affecting the performance of farmers in Thongwa Township. The core data was collected by a survey of farmers utilizing standardized questionnaires based on a 5-point Likert scale, employing a simple random sample procedure. The research comprised a total of 92 farmers in Pyinmakan Village, Thongwa Township, who obtained financing. The study's sample size comprised 56 farmers, accounting for 60% of the target population. The questionnaire consisted of two sections: the first addressed respondent profiles, while the second examined influencing factors and farmer performance. The secondary data was obtained from the Department of Agriculture, the Department of Land Administration and Statistics, the Myanmar Agriculture Development Bank, the General Administration Department of Thongwa Township, reports, internet resources, and previous thesis papers.

The survey questionnaire employs a five-point Likert scale to quantify the intensity of respondents' opinions, assigning numerical values from strongly disagree to strongly agree (ratings are as follows: strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, and strongly agree = 5). The interpretation of the Likert Scale is presented in Table 4.1.

Table (4.1) Likert Scale Score Interpretation

No	Mean Score between	Interpretation
1	1.00 -1.80	Strongly disagree
2	1.81 – 2.60	Disagree
3	2.61 – 3.40	Neutral/ no opinion
4	3.41 – 4.20	Agree
5	4.21 – 5.00	Strongly agree

Source: Best, (1977)

Table 4.1 shows the average agreement level: 1.00 – 1.80 is very low, 1.81 – 2.60 is low, 2.61 – 3.40 is medium, 3.41 – 4.20 is high, and 4.21 – 5.00 is very high.

A demographic study and reliability test of Thongwa Township farmers' performance determinants would be done using data. We determined the mean, standard deviation, and correlation coefficient using questionnaire data. The acquired data were analyzed using SPSS. Multiple regression analysis was utilized to examine Thongwa Township farmers' performance.

4.2 Demographic Characteristics of Respondents

The analysis begins with determining research participants' characteristics. A profile of 56 Pyinmakan Village, Thongwa Township farmers was created using their background information. Users' gender, marital status, age, education, income, farming experience, and farm size are listed in their profiles. The summary table of demographic features shows absolute values and percentages for each attribute.

Table (4.2) Profile of Respondents

Items	Demographic	No. of Respondents	Percent
Total No. of Respondents		**56**	**100**
Gender	Male	43	77
	Female	13	23
Marital Status	Single	16	29
	Married	40	71
Age (Year)	Under 21	2	4
	Between 21 to 30	5	9
	Between 31 to 40	10	18
	Between 41 to 50	23	41
	Between 51 to 60	9	16
	Above 60	7	12
Education	High School	1	2
	Undergraduate	1	2
	Graduated	29	52
	Postgraduate	25	45
Income (MMK)	Below 300,000	3	5
	300,001 – 500,000	3	5
	500,001 – 700,000	15	27
	700,001 – 900,000	14	25
	900,001 – 1,100,000	15	27
	Above 1,100,000	6	11
Farming Experience (years)	1 to 5	3	5
	6 to 10	11	20
	11 to 15	11	20
	15 to 20	26	46
	Above 20	5	9
Farm Size (Acres)	Under 10	6	11
	10 – 30	21	37
	31 – 50	25	45
	Above 50	4	7

Source: Survey data (2025)

Out of a total of 56 respondents, the majority were male, accounting for 77% of the sample, while females made up 23%. In terms of marital status, a large proportion of respondents were married (71%), with only 29% being single. The age group between 41 and 50 years represented the largest segment, comprising 41% of the participants. This indicates that most of the respondents were in their mid-working age, likely with considerable experience in farming activities.

Regarding education, graduates formed the largest educational group, representing 52% of the total, followed closely by postgraduates at 45%. This suggests a relatively well-educated respondent base compared to general rural populations. In terms of monthly income, the most common income ranges were MMK 500,001–700,000 and MMK 900,001–1,100,000, each accounting for 27% of respondents. The next most common income bracket was MMK 700,001–900,000, covering 25%, indicating a mid-level income distribution among farmers.

When examining farming experience, the majority of respondents (46%) had been farming for 15 to 20 years, indicating a highly experienced farming population. This was followed by 20% of farmers with 6 to 10 years and another 20% with 11 to 15 years of experience. As for farm size, most respondents (45%) operated between 31 and 50 acres, followed by 38% who cultivated 10 to 30 acres. This suggests that medium-scale farming was most prevalent among the participants.

As shown in the Table (4.2) the male respondents are the majority with the response rate of 76.8 percentages while the remaining 23.2 percent are male respondents. Most of the respondents were married, representing 71.4% (40 respondents), whereas 28.6% (16 respondents) were single.

4.3 Reliability Test of the Study

Reliability is the extent to which measurements are devoid of random error, hence producing consistent outcomes (Zikmund 1997). Consequently, the trustworthiness of each dimension must be assessed before its utilization. The research uses Cronbach's Alpha to assess internal consistency. Cronbach's Alpha is a reliability coefficient that measures the degree of positive correlation among items within a collection (Sekaran, 2003). The outcome criteria for Cronbach's Alpha Coefficient are shown in Table 4.3.

Table (4.3) Rule of Thumb on Cronbach's alpha

Alpha Coefficient Range	Strength of Association
< 0.6	Poor
0.6 to < 0.7	Moderate
0.7 to < 0.8	Good
0.8 to < 0.9	Very Good
0.9	Excellent

Source: Sekaran, (2003)

The reliability and internal consistency of the variables were assessed using Cronbach's alpha, as shown by the survey results. The outcome of Cornbrash's alpha coefficient in the survey research is presented in Table 4.4.

Table (4.4) Reliability Test

Sr. No.	Factors	No. of items	Cronbach'sAlpha
1	Cost of Credit Facility	7	.906
2	Collateral Availability	7	.924
3	Knowledge and Awareness	7	.921
4	Farm Size	7	.913
5	Access to Service	7	.917
6	Farmer Performance	7	.943

Source: Survey data (2025)

In this analysis, each 7 items of cost of credit facility, collateral availability, knowledge and awareness, farm size, access to service, and performance of farmers were tested. The highest reliability was observed in the Farmer Performance factor ($\alpha = 0.943$), indicating excellent internal consistency. The above result showed that all Cronbach's Alpha values exceed 0.90, indicating excellent internal consistency across the measurement items. Therefore, the above-mentioned findings showed high internal accuracy, and this sample was trustworthy given its size.

4.4 Descriptive Statistics of influencing factors and Farmer Performance

In this study, each of the influencing factors such as cost of credit facility, collateral availability, knowledge and awareness, farm size, access to service, and farmer performance is measured with seven statements. Each statement is measured on a five-point Likert scale (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree). The mean score is calculated and addressed for each statement.

4.4.1 Farmers Perception on Cost of Credit Facility

Table 4.5 describes cost of credit facility that are measured by 7 statements. The overall mean value and the mean value for each statement are presented.

Table (4.5) Mean Score of Cost of Credit Facility

Sr. No.	Items	Mean	Standard Deviation
1.	The interest rates on loans are affordable for farmers.	3.82	.575
2.	The fees and other charges associated with obtaining credit are reasonable.	4.05	.616
3.	The repayment interest rate for agricultural loans is flexible.	3.96	.631
4.	The overall cost of borrowing discourages farmers from accessing formal credit.	3.36	.724
5.	The cost of credit has a significant impact on farm profitability.	3.86	.699
6.	The cost of credit affects my ability to invest in modern farming techniques and equipment.	4.34	.611
7.	The loan application process is affordable and free from unnecessary administrative costs.	3.80	.616
Overall Mean		**3.89**	

Source : Survey data (2025)

According to the results shown in Table 4.5, the overall mean score of 3.89 falls within the range of 3.41–4.20, which corresponds to the agree level indicating the respondents agree that the cost of credit facilities is a relevant and influential factor in their farming activities. The lowest-rated item, the overall cost of borrowing discourages farmers

from accessing formal credit, with a mean of 3.36, which is within the Neutral/No Opinion range. The highest-rated item, the cost of credit affects my ability to invest in modern farming techniques and equipment, received a mean score of 4.34, which falls in the "Strongly Agree" range.

4.4.2 Farmers Perception on Collateral Availability

The collateral availability factor is accessed using seven items related to the availability, fairness, and impact of collateral requirements in accessing agricultural credit. Means and standard deviations show respondents' collateral availability concerns. Table 4.6 shows the statement and overall mean values.

Table (4.6) Mean Score of Collateral Availability

No.	Factors	Mean	Standard Deviation
1.	Adequate assets such as land, machinery, and other property are available to be used as collateral for loans.	4.00	.632
2.	Financial institutions require collateral that is difficult for small farmers to provide.	4.16	.826
3.	Lack of collateral is a major barrier to accessing agricultural credit.	4.12	.574
4.	Alternative forms of collateral (e.g., group guarantees) are available to farmers.	4.07	.599
5.	Collateral requirements influence my decision to apply for a loan.	3.93	.599
6.	The valuation of collateral by financial institutions is fair and transparent.	4.39	.493
7.	The collateral requirements limit my ability to borrow the amount I need for farming activities.	4.16	.496
	Overall Mean	**4.12**	

Source: Survey data (2025)

According to the Table 4.6 result, the overall mean score for this factor is 4.12, which falls within the Agree range (3.41–4.20). This indicates that, on average, farmers in Thongwa Township agree that collateral-related issues significantly influence their performance of farmers. The lowest-rated item, Collateral requirements influence my decision to apply for a loan (Mean = 3.93), also falls in the Agree range, showing a

consistent perception across respondents. The highest-rated statement was The valuation of collateral by financial institutions is fair and transparent, with a mean score of 4.39, which falls into the Strongly Agree range (4.21–5.00).

4.4.3 Farmers Perception on Knowledge and Awareness

The knowledge and awareness factor analysis uses 7 statements. Table (4.7) shows mean and standard deviation analysis findings.

Table (4.7) Mean Score of Knowledge and Awareness

Sr. No.	Items	Mean	Standard Deviation
1.	Understanding of the various financial products available for farmers is present.	3.95	.553
2.	Awareness of the loan application process from financial institutions exists.	4.38	.558
3.	Training or information on how to access credit has been received.	4.30	.502
4.	Government programs or subsidies that support agricultural credit access are well known.	4.13	.689
5.	Lack of financial knowledge affects the ability to access credit.	4.41	.532
6.	Financial advice is actively sought before applying for agricultural credit.	4.43	.499
7.	Familiarity with the terms and conditions of agricultural loans provided by financial institutions is evident.	4.39	.493
Overall Mean		**4.28**	

Source : Survey data (2025)

The knowledge and awareness factor was assessed through seven statements focusing on farmers' understanding of financial products, loan procedures, and access to information. The overall mean score is 4.28, which falls within the strongly agree range (4.21–5.00). This indicates that farmers in Thongwa Township strongly agreed that they possess a high level of financial knowledge and awareness relevant to performance of farmers. The lowest-rated item, understanding of the various financial products available

for farmers is present (Mean = 3.95), falls within the agree range, confirming that farmers are generally well-informed. The highest-rated item is financial advice is actively sought before applying for agricultural credit (Mean = 4.43), suggesting a proactive attitude among farmers toward informed borrowing.

4.4.4 Farmers Perception on Farm Size

The farm size measured using seven items that explore the perceived relationship between landholding size and performance of famers. The analysis results of means and standard deviation results are shown in following Table (4.8).

Table (4.8) Mean Score of Farm Size

Sr. No.	Items	Mean	Standard Deviation
1.	Farm size is large enough to qualify for agricultural loans.	4.46	.571
2.	Larger farms have better access to credit than smaller farms.	4.12	.574
3.	The size of my farm influences my ability to secure loans from financial institutions.	3.71	.624
4.	Financial institutions consider farm size as a key factor in loan approval.	4.14	.645
5.	Expanding my farm size would improve my chances of accessing credit.	3.79	.563
6.	Small-scale farmers face more challenges in obtaining credit than large-scale farmers.	3.93	.684
7.	The productivity of my farm is more important than its size in securing a loan.	4.04	.738
Overall Mean		**4.03**	

Source : Survey data (2025)

According to the Table 4.8 result, the overall mean score is 4.03, which falls within the agree range (3.41–4.20), indicating that respondents generally agreed that farm size plays an important role in obtaining credit from financial institutions. The lowest-rated item

is the size of my farm influences my ability to secure loans from financial institutions (Mean = 3.71), which remains within the agree range but is notably lower than the other items. The highest-rated item is farm size is large enough to qualify for agricultural loans (Mean = 4.46), which falls into the strongly agree category.

4.4.5 Farmers Perception on Access to Service

The access to service factor is measured using seven items to assess the availability and responsiveness of essential agricultural services and infrastructure. The means and standard deviation results were shown in Table (4.9).

Table (4.9) Mean Score of Access to Service

Sr. No.	Items	Mean	Standard Deviation
1.	Quality farming inputs (seeds, fertilizers, etc.) are easily obtainable when needed.	4.21	.731
2.	Reliable markets are available for selling agricultural produce.	4.27	.556
3.	Transportation and road access to markets are sufficient for farming needs.	4.52	.504
4.	Training programs that improve farming knowledge and practices are accessible.	4.38	.702
5.	Agricultural service providers respond promptly to farmers' needs.	4.04	.713
6.	Financial institutions aid in understanding and applying for credit.	4.52	.504
7.	Delays or unavailability of services negatively affect farming outcomes.	4.46	.602
Overall Mean		**4.34**	

Source : Survey data (2025)

According to the above Table 4.9 result, the overall mean score is 4.34, which falls into the strongly agree range (4.21–5.00), indicating that respondents strongly agreed they have adequate access to necessary farming services and support. The lowest-rated item is agricultural service providers respond promptly to farmers' needs (Mean = 4.04), which

falls into the agree range. The highest-rated items are transportation and road access to markets are sufficient for farming needs (Mean = 4.52) and financial institutions aid in understanding and applying for credit (Mean = 4.52). These results highlight that infrastructure and institutional support are particularly strong, facilitating farmers' ability to sell produce and access credit effectively.

Table (4.10) Overall Mean Score of Influencing Factors of Farmer Performance

No.	Factors	Mean
1.	Cost of Credit Facility	3.89
2.	Collateral Availability	4.12
3.	Knowledge and Awareness	4.28
4.	Farm Size	4.03
5.	Access to Service	4.34

Source: Survey Data (2025)

Table 4.10 summarizes the overall perception of respondents regarding the five main factors influencing of farmer performance in Thongwa Township. Among the five dimensions evaluated, access to service received the highest overall mean score of 4.34, suggesting that farmers feel they have strong support in terms of access to markets, transportation, training programs, and financial institutions, all of which facilitate performance of farmers. This was followed by knowledge and awareness (mean = 4.28) and collateral availability (mean = 4.12), indicating a high level of awareness among farmers about financial products, loan procedures, and the farmers generally acknowledge having adequate assets or alternative mechanisms to meet loan conditions. Farm Size scored a Mean of 4.03, also in the "agree" range. The lowest-rated factor is cost of credit facility (Mean = 3.89), still in the "agree" range. This indicates that while farmers agree that credit costs are manageable, it remains the least favorable aspect of influencing factors among the five dimensions.

4.4.6 Farmer Performance

The Farmer Performance factor evaluates the key aspects that influence the performance of farmers in Thongwa Township as a result of accessing formal credit. Specifically, it examines how formal credit contributes to improvements in agricultural productivity, enhancement of farm income, and the overall socio-economic well-being of

farmers. The analysis is supported by the results of the mean scores and standard deviations, as presented in Table (4.11).

Table (4.11) Mean Score of Farmer Performance

Sr. No.	Items	Mean	Standard Deviation
1.	Farm productivity has shown improvement over the past three years.	4.27	.587
2.	Access to credit contributed to increased crop yields.	4.27	.618
3.	Farm profits experienced growth through the utilization of formal credit.	3.64	.699
4.	Credit access enabled the purchase of improved farming inputs such as quality seeds, fertilizers, and modern machinery.	3.73	.674
5.	Farm income remained stable and adequate to cover both agricultural expenses and household requirements.	3.96	.602
6.	The availability of credit facilitated the adoption of modern farming techniques and advanced technology.	4.39	.679
7.	Overall financial well-being improved as a result of utilizing formal credit services.	4.02	.674
Overall Mean		**4.04**	

Source : Survey data (2025)

Table 4.11 presents the individual mean scores of seven statements related to farmer performance. The overall mean score is 4.04, which falls within the "agree" category (mean between 3.41 and 4.20). The lowest-rated statement, farm profits have increased as a result of using formal credit (Mean = 3.64), still falls within the agree range, though it is comparatively lower than the other items. The highest-rated statement, the use of credit has allowed the adoption of modern farming techniques and technology (Mean = 4.39), falls within the "strongly agree" category (4.21–5.00). This suggests that influencing factors have played a significant role in supporting technological advancement and innovation in farming practices.

4.5 Relationship between Influencing Factors and Farmer Performance

Both correlation and regression studies study the connection between independent and dependent elements. The five degrees of person correlation are 0.80-1.000 (very high), 0.60-0.799 (strong), 0.40-0.599 (moderate), 0.20-0.399 (weak), and 0.000-0.1999. Table (4.12) shows how loan access factor average scores affect farmer performance.

Table (4.12) Correlation between Influencing Factors and Farmer Performance

No.	Factors	Correlation Coefficient	P-value
1.	Cost of Credit Facility	.822**	0.000
2.	Collateral Availability	.789**	0.000
3.	Knowledge and Awareness	.793**	0.000
4.	Farm Size	.874**	0.000
5.	Access to Service	.830**	0.000
** Correction is significant at the 0.01 level (2 tailed)			

Source: Survey data (2025)

Table (4.12) showed all influencing factors have a statistically significant and strong to very strong positive relationship with farmer performance. The strongest correlation is observed between farm size and farmer performance (r = .874). Other variables also show very strong relationships, including access to service (r = .830) and cost of credit facility (r = .822). The remaining two factors demonstrate strong relationships including knowledge and awareness (r = .793) and collateral availability (r = .789). All factors were also significant at 1% level (2 tailed). This can be seen farmer performance and influencing factors are positively correlated.

4.6 Analysis on factors influencing Performance of Farmers

To analyze factors influencing Performance of Farmers at Thongwa Township, the multiple regression analysis is conducted, and the results are shown in Table (4.13).

Table (4.13) Analysis on Factors Influencing Performance of Farmers

Dependent Variable: Farmer Performance	Unstandardized Coefficients		Standardized Coefficients	t	Sig	VIF
	B	SE	Beta			
(Constant)	.034	.244		.138	.891	
Cost of Credit Facility	.322**	.130	.316	2.479	.017	4.951
Collateral Availability	-.007	.129	-.008	-.056	.955	5.459
Knowledge and Awareness	.037	.116	.038	.317	.753	4.487
Farm Size	.438***	.132	.434	3.322	.002	5.222
Access to Service	.202*	.108	.209	1.871	.067	3.802
R^2	.836					
Adjusted R^2	.820					
F statistics	51.135***					
Statistically significant indicate ***at 1%, ** at 5%, * at 10% level respectively						

Source: SPSS Output (2025)

In accordance with Table (4.13), $R^2 = 0.836$ and Adjusted $R^2 = 0.820$ indicate that approximately 82% of the variance in farmer performance is explained by the influencing factors. This shows a very strong explanatory power of the model. Furthermore, the F-statistic was 51.135 ($p < 0.01$), indicating that the overall regression model was statistically significant. Farm Size had the highest standardized beta coefficient ($\beta = 0.434$, $p < 0.01$), indicating it was the strongest predictor of farmer performance. Cost of credit facility also had a significant positive impact ($\beta = 0.316$, $p < 0.05$), implying that affordable and flexible credit terms significantly contribute to improved farming outcomes. Access to service showed a marginally significant effect ($\beta = 0.209$, $p < 0.10$), indicating that better access to farming inputs, training, markets, and institutional support tends to improve farmer performance. Variance Inflation Factor (VIF) values for all predictors ranged between 3.802 and 5.459, which are within acceptable limits (below 10), indicating that multicollinearity was not a serious concern in the model.

CHAPTER V
CONCLUSION

Based on the results of the data analysis, this last chapter is dedicated to make the conclusion on the results of this study. This chapter addresses findings and discussion, suggestion and recommendation and need for further study to undertake potential research in the future.

5.1. Finding and Discussion

The main objective of study was to analyze the influencing factors on performance of farmers at Thongwa Township. In this study, 56 farmers in Pyinmakan Village, Thongwa Township are surveyed to achieve the objective of the study. Regarding the demographic factors of the respondents, farming in the village is predominantly undertaken by men who are with family responsibilities. The majority of the farmers are middle-aged, likely with considerable farming experience, and may be in a position to make informed decisions about their agricultural activities. In terms of educational attainment, the majority of respondents were graduates, and this high level of education among respondents suggests a well-informed farming community that may be more open to adopting financial and technological innovations. The income figures indicate a moderate-income distribution with a significant portion of respondents earning within the mid-range. In terms of farming experience, the majority of the respondents had 15 to 20 years of experience, reflecting a highly experienced farming population. Regarding landholding, the majority of the respondents owned 31 to 50 acres, suggesting that most of the farmers are medium-scale operators, which may affect both their access to credit and adoption of modern farming techniques.

In terms of the cost of credit facility, it was found that the statement the cost of credit affects the ability to invest in modern farming techniques and equipment received the highest mean score. This highlights that credit cost plays a crucial role in influencing farmers' investment decisions related to innovation and mechanization. Conversely, the statement the overall cost of borrowing discourages farmers from accessing formal credit received the lowest mean score, indicating that although credit cost may pose a barrier for some, it is not a major factor deterring overall access to formal credit.

With respect to collateral availability, the statement the valuation of collateral by financial institutions is fair and transparent recorded the highest mean score, suggesting

that farmers generally perceive the collateral valuation process as equitable and trustworthy. On the other hand, the statement collateral requirements influence the decision to apply for a loan received the lowest mean score. This suggests that while many farmers believe they possess adequate assets for collateral, they also recognize the limitations and challenges associated with traditional collateral requirements.

The findings showed that within the knowledge and awareness factor, the lowest-rated item was the understanding of the various financial products available for farmers. This indicates that, although farmers demonstrated engagement and a willingness to improve their financial literacy, a knowledge gap persists regarding the specific credit options accessible to them. Additionally, the item related to awareness of government programs or subsidies that support agricultural credit access was also rated relatively lower.

The study indicated that several positive insights across key factors. Under the farm size factor, most respondents agreed that their farm size was sufficient to qualify for agricultural loans, indicating confidence in meeting formal credit eligibility criteria. In terms of access to services, respondents strongly agreed that transportation and road access to markets were adequate and that financial institutions provided helpful support in understanding and applying for credit. Regarding the farmer performance factor, the highest-rated statement indicated that access to credit had enabled the adoption of modern farming techniques and technology, reflecting a positive impact of formal credit on agricultural innovation and productivity.

The correlation analysis confirms that all dimensions of influencing factors have a positive correlation with farmer performance in Thongwa Township. The strong correlation of farm size and influencing factors with farmer performance underscores the critical roles these factors play in enhancing productivity. The significant correlations of cost of credit, collateral availability, and knowledge and awareness with farmer performance further emphasize that not only the availability of credit but also the terms, security requirements, and farmers' understanding of financial products are essential components in improving farm outcomes.

According to the regression analysis, farm size emerged as the strongest predictor of farmer performance. Larger farm sizes enhance access to loans and promote economies of scale, leading to improved farm performance. The results affirm that the cost of credit and access to services are significant determinants of farmer performance. Affordable credit costs enhance farmers' ability to invest in inputs and technologies, therefore boosting productivity. Moreover, the marginal effect of access to service highlights the importance

of supportive infrastructure and institutional responsiveness in facilitating farm success, warranting further attention. The lack of significant influence from collateral availability and knowledge and awareness contrasts with some prior studies but may reflect specific local conditions, such as farmers' existing asset base or the effectiveness of informal knowledge networks. These findings suggest that policy interventions aimed at reducing credit costs and supporting farm expansion, along with enhancing service access, could substantially improve agricultural productivity in Thongwa Township.

5.2. Suggestions and Recommendations

Based on analysis and findings, the suggestions for the effect of factors influencing on farmer performance in Thongwa Township was discussed in this section. First, to improve farmer performance in Thongwa Township, it needs to focus cost of credit facility concerns. Financial institutions should offer more affordable loan products tailored to the needs of smallholder farmers, including lower interest rates and reduced fees. Flexible repayment terms should be introduced, accommodating seasonal income variability common in agriculture. Transparency in loan costs must be improved to help farmers better understand financial obligations and reduce perceived borrowing risks.

Farm size was the strongest predictor of farmer performance. To address this, policies aimed at supporting farm consolidation or cooperative farming initiatives should be considered, enabling smallholders to pool land and resources to meet credit eligibility criteria. Furthermore, facilitating access to additional farmland through leasing arrangements or land reform programs may provide expansion opportunities. Financial institutions are also encouraged to incorporate alternative loan assessment criteria such as farm productivity and managerial capacity, in order to support small-scale farmers who may not have large landholdings.

Access to agricultural services demonstrated a positive impact on farmer performance. Therefore, efforts should be made to improve rural infrastructure, particularly transportation networks, to facilitate easier access to markets and essential farming inputs. Expanding farmer training and capacity-building programs will enhance knowledge of improved agricultural practices and credit acquisition procedures. Strengthening the role of extension services and financial advisory support will further assist farmers in navigating the credit process effectively.

Collateral availability, and knowledge and awareness were not statistically significant in the regression model, their strong correlations with farmer performance suggest they remain important factors. It is recommended that flexible collateral mechanisms, such as group guarantees or movable asset pledges, be promoted to lower barriers for farmers lacking traditional collateral. Additionally, comprehensive financial literacy initiatives should be implemented to improve farmers' understanding of credit products, loan application procedures, and responsible borrowing. Awareness campaigns should also be intensified to inform farmers about available government subsidies and credit support programs.

In conclusion, promoting sustainable agricultural development requires a comprehensive approach that integrates affordable credit, improved access to essential support services, and strengthened farmer education. Effective collaboration among government bodies, financial institutions, and local organizations is vital in designing credit schemes tailored to the specific needs of farmers. Additionally, institutionalizing regular monitoring and evaluation processes is necessary to ensure the continued effectiveness and adaptability of these credit initiatives over time.

5.3 Needs for Further Research

This study emphasizes on the effect of influencing factors on farmer performance in Thongwa Township in Yangon only. Other regions are excluded in this study. Hence, further studies need to observe other divisions or states. The furthers studies that are based on other influecning factors and investigate the farmer performance with larger sample size can also be more fruitful research if cost and time allows. Moreover, the research is applied by using self-rating likert-scale, open-ended questions should be included in next research. This study does not cover the whole regions in Myanmar. Therefore, expanding the study to include multiple townships or regions in Myanmar would improve the generalizability of findings and identify location-specific barriers and facilitators.

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APPENDIX A

Dear Sir/Madam,

The purpose of this questionnaire is to collect data for the research titled "**Factors influencing Performance of Farmers at Thongwa Township**" as part of my academic research study for the EMBF at YUE. I appreciate your value and time in responding to the questions and assure you of confidentiality and privacy.

Yours Sincerely,

Sandar Myint

Part I

Background Characteristics of Respondents

Instruction: For the following items, please select the option that the best describe you.

1. Gender
   - □ Male
   - □ Female
2. Marital Status
   - □ Single
   - □ Married
3. Age
   - □ under 20 years
   - □ 21 – 30 years
   - □ 31 – 40 years
   - □ 41 – 50 years
   - □ 51 – 60 years
   - □ Above 56 years
4. Level of Education
   - □ High School
   - □ Under Graduate
   - □ Graduate
   - □ Post Graduate

5. Monthly Income (Kyats)

- □ Below 300,000
- □ 300,001 – 500,000
- □ 500,001 – 700,000
- □ 700,001 – 900,000
- □ 900,001 – 1,100,00
- □ Above 1,100,000

6. Farming Experience (years)

……..

7. Farm Size

…….

Part II

Please state the level of your agreement on each statement by providing the most relevant number.

1= Strongly Disagree , 2 = Disagree , 3 = Neutral , 4 = Agree , 5= Strongly Agree

Cost of Credit Facility						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	The interest rates on loans are affordable for farmers.					
2	The fees and other charges associated with obtaining credit are reasonable.					
3	The repayment interest rate for agricultural loans is flexible.					
4	The overall cost of borrowing discourages farmers from accessing formal credit.					
5	The cost of credit has a significant impact on farm profitability.					
6	The cost of credit affects my ability to invest in modern farming techniques and equipment.					
7	The loan application process is affordable and free from unnecessary administrative costs.					

Collateral Availability						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	I have adequate assets (land, machinery, etc.) to use as collateral for loans.					
2	Financial institutions require collateral that is difficult for small farmers to provide.					
3	Lack of collateral is a major barrier to accessing agricultural credit.					
4	Alternative forms of collateral (e.g., group guarantees) are available to farmers.					
5	Collateral requirements influence my decision to apply for a loan.					
6	The valuation of collateral by financial institutions is fair and transparent.					
7	The collateral requirements limit my ability to borrow the amount I need for farming activities.					

Knowledge and Awareness						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	I understand the different financial products available for farmers.					
2	I am aware of the loan application process from financial institutions.					
3	I have received training or information on how to access credit.					
4	I am aware of government programs or subsidies that support agricultural credit access.					
5	Lack of financial knowledge affects my ability to access credit.					
6	I actively seek financial advice before applying for agricultural credit.					
7	I am familiar with the terms and conditions of agricultural loans provided by financial institutions.					

Farm Size						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	My farm size is large enough to qualify for agricultural loans.					
2	Larger farms have better access to credit than smaller farms.					
3	The size of my farm influences my ability to secure loans from financial institutions.					
4	Financial institutions consider farm size as a key factor in loan approval.					
5	Expanding my farm size would improve my chances of accessing credit.					
6	Small-scale farmers face more challenges in obtaining credit than large-scale farmers.					
7	The productivity of my farm is more important than its size in securing a loan.					

Access to Service						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	Quality farming inputs (seeds, fertilizers, etc.) are easily obtainable when needed.					
2	Reliable markets are available for selling agricultural produce.					
3	Transportation and road access to markets are sufficient for farming needs.					
4	Training programs that improve farming knowledge and practices are accessible.					
5	Agricultural service providers respond promptly to farmers' needs.					
6	Financial institutions aid in understanding and applying for credit.					
7	Delays or unavailability of services negatively affect farming outcomes.					

Farmer Performance						
No.	**Items**	**1**	**2**	**3**	**4**	**5**
1	My farm's productivity has improved over the past three years.					
2	Access to credit has helped me increase my farm's yield.					
3	My farm profits have increased as a result of using formal credit.					
4	I can afford better farming inputs (seeds, fertilizers, machinery) due to credit access.					
5	My farm income is stable and sufficient to cover farming expenses and household needs.					
6	The use of credit has allowed me to adopt modern farming techniques and technology.					
7	My overall financial well-being has improved as a result of accessing formal credit.					

…...Thank You for Your Answer…...

APPENDIX B

Frequency Table

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	13	23.2	23.2	23.2
	Female	43	76.8	76.8	100.0
	Total	56	100.0	100.0	

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 20 years	2	3.6	3.6	3.6
	21 - 30 years	5	8.9	8.9	12.5
	31 - 40 years	10	17.9	17.9	30.4
	41 - 50 years	23	41.1	41.1	71.4
	51 - 60 years	9	16.1	16.1	87.5
	above 60 years	7	12.5	12.5	100.0
	Total	56	100.0	100.0	

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	1	1.8	1.8	1.8
	Undergraduate	1	1.8	1.8	3.6
	Bachelor	29	51.8	51.8	55.4
	Postgraduate	25	44.6	44.6	100.0
	Total	56	100.0	100.0	

Marital Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	single	16	28.6	28.6	28.6
	married	40	71.4	71.4	100.0
	Total	56	100.0	100.0	

Income Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 300,000	3	5.4	5.4	5.4
	300,001 - 500,000	3	5.4	5.4	10.7
	500,001 - 700,000	15	26.8	26.8	37.5
	700,001 - 900,000	14	25.0	25.0	62.5
	900,001 - 1,100,000	15	26.8	26.8	89.3
	above 1,100,000	6	10.7	10.7	100.0
	Total	56	100.0	100.0	

Farming Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5 years	3	5.4	5.4	5.4
	6 - 10 years	11	19.6	19.6	25.0
	11 - 15 years	11	19.6	19.6	44.6
	16 - 20 years	26	46.4	46.4	91.1
	above 20 years	5	8.9	8.9	100.0
	Total	56	100.0	100.0	

Farm Size					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	under 10 acres	6	10.7	10.7	10.7
	10 - 30 acres	21	37.5	37.5	48.2
	31 - 50 acres	25	44.6	44.6	92.9
	above 50 acres	4	7.1	7.1	100.0
	Total	56	100.0	100.0	

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CCF1	56	3	5	3.82	.575
CCF2	56	3	5	4.05	.616
CCF3	56	3	5	3.96	.631
CCF4	56	2	5	3.36	.724
CCF5	56	2	5	3.86	.699
CCF6	56	3	5	4.34	.611
CCF7	56	2	5	3.80	.616
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CA1	56	3	5	4.00	.632
CA2	56	2	5	4.16	.826
CA3	56	2	5	4.12	.574
CA4	56	3	5	4.07	.599
CA5	56	3	5	3.93	.599
CA6	56	4	5	4.39	.493
CA7	56	3	5	4.16	.496
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
KA1	56	3	5	3.95	.553
KA2	56	3	5	4.38	.558
KA3	56	3	5	4.30	.502
KA4	56	3	5	4.13	.689
KA5	56	3	5	4.41	.532
KA6	56	4	5	4.43	.499
KA7	56	4	5	4.39	.493
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
FS1	56	3	5	4.46	.571
FS2	56	3	5	4.12	.574
FS3	56	2	5	3.71	.624
FS4	56	3	5	4.14	.645
FS5	56	2	5	3.79	.563
FS6	56	2	5	3.93	.684
FS7	56	3	5	4.04	.738
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
AS1	56	3	5	4.21	.731
AS2	56	3	5	4.27	.556
AS3	56	4	5	4.52	.504
AS4	56	3	5	4.38	.702
AS5	56	3	5	4.04	.713
AS6	56	4	5	4.52	.504
AS7	56	3	5	4.46	.602
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
FP1	56	3	5	4.27	.587
FP2	56	3	5	4.27	.618
FP3	56	3	5	3.64	.699
FP4	56	2	5	3.73	.674
FP5	56	2	5	3.96	.602
FP6	56	3	5	4.39	.679
FP7	56	3	5	4.02	.674
Valid N (listwise)	56				

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CCF	56	3.00	5.00	3.8852	.38566
CA	56	3.43	5.00	4.1199	.37429
KA	56	3.71	5.00	4.2832	.43458
FS	56	3.29	4.57	4.0281	.33962
AS	56	3.43	5.00	4.3418	.47939
FP	56	3.29	4.86	4.0408	.39731
Valid N (listwise)	56				

Correlations						
		CCF	CA	KA	FS	AS
CCF	Pearson Correlation	1	.878**	.713**	.759**	.749**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	56	56	56	56	56
CA	Pearson Correlation	.878**	1	.777**	.772**	.739**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	56	56	56	56	56
KA	Pearson Correlation	.713**	.777**	1	.855**	.789**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	56	56	56	56	56
FS	Pearson Correlation	.759**	.772**	.855**	1	.830**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	56	56	56	56	56
AS	Pearson Correlation	.749**	.739**	.789**	.830**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	56	56	56	56	56
PERFORMANCE	Pearson Correlation	.822**	.789**	.793**	.874**	.830**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	56	56	56	56	56

Correlations		
		PERFORMANCE
CCF	Pearson Correlation	.822**
	Sig. (2-tailed)	.000
	N	56
CA	Pearson Correlation	.789**
	Sig. (2-tailed)	.000
	N	56
KA	Pearson Correlation	.793**
	Sig. (2-tailed)	.000
	N	56
FS	Pearson Correlation	.874**
	Sig. (2-tailed)	.000
	N	56
AS	Pearson Correlation	.830**
	Sig. (2-tailed)	.000
	N	56
PERFORMANCE	Pearson Correlation	1
	Sig. (2-tailed)	
	N	56

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

Regression

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.915[a]	.836	.820	.29121	2.098

a. Predictors: (Constant), AS, CA, KA, CCF, FS
b. Dependent Variable: PERFORMANCE

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.682	5	4.336	51.135	.000[b]
	Residual	4.240	50	.085		
	Total	25.923	55			

a. Dependent Variable: PERFORMANCE
b. Predictors: (Constant), AS, CA, KA, CCF, FS

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.034	.244		.138	.891
	CCF	.322	.130	.316	2.479	.017
	CA	-.007	.129	-.008	-.056	.955
	KA	.037	.116	.038	.317	.753
	FS	.438	.132	.434	3.322	.002
	AS	.202	.108	.209	1.871	.067

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	CCF	.202	4.951
	CA	.183	5.459
	KA	.223	4.487
	FS	.192	5.222
	AS	.263	3.802

a. Dependent Variable: PERFORMANCE

Collinearity Diagnostics[a]							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	CCF	CA	KA
1	1	5.951	1.000	.00	.00	.00	.00
	2	.023	16.235	.90	.00	.01	.03
	3	.012	22.581	.05	.16	.16	.09
	4	.008	28.076	.01	.02	.03	.38
	5	.005	36.297	.01	.04	.05	.25
	6	.003	43.418	.02	.78	.75	.24

Collinearity Diagnostics[a]			
Model	Dimension	Variance Proportions	
		FS	AS
1	1	.00	.00
	2	.01	.02
	3	.05	.07
	4	.00	.65
	5	.86	.24
	6	.08	.02

a. Dependent Variable: PERFORMANCE

Reliability Statistics	
Cronbach's Alpha	N of Items
.906	7

Reliability Statistics	
Cronbach's Alpha	N of Items
.924	7

Reliability Statistics	
Cronbach's Alpha	N of Items
.921	7

Reliability Statistics	
Cronbach's Alpha	N of Items
.913	7

Reliability Statistics	
Cronbach's Alpha	N of Items
.917	7

Reliability Statistics	
Cronbach's Alpha	N of Items
.943	7