EFFECTS OF AGRICULTURAL MICRO-CREDIT ON SOCIOECONOMIC CONDITIONS IN AZAD KASHMIR: A CROSS SECTIONAL ANALYSIS

BY

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NATIONAL UNIVERSITY OF MODERN LANGUAGES, ISLAMABAD

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AUTHOR'S DECLARATION

I, Muhammad Hafeez Khan Son of Muhammad Aslam Khan Registration # 1853-MPhil/Eco/F-19, Discipline Economics**.** I declare that the thesis **Effects of agricultural micro-credit on socioeconomic conditions in Azad Kashmir. A cross sectional Analysis** submitted by me in partial fulfillment of M.Phil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

The present study aims to investigate the effect of agriculture micro-credit on the socioeconomic status of farmers in Azad Kashmir. The study collects primary data from 210 borrowers of agriculture micro credit from Zarai Taraqiati Bank (ZTBL) and 85 non-borrowers who did not receive micro-credit from ZTBL. The study used a structured questionnaire to collect data on various socioeconomic characteristics of the borrowers, including income, savings, educational expenditure, and health expenditure, as well as demographic variables such as age, marital status, education, type of family, house condition, household size, land size, agriculture micro credit duration, and agriculture micro credit amount. The study found that the socioeconomic status of the farmers significantly affected the amount of agriculture micro credit. Factors such as marital status, household status, house condition, income, savings, and health level were found to have a significant effect on the amount of micro credit.

Keywords: Agriculture Micro-credit, Income, Saving, Health expenditure, Education expenditure, ZTBL, Azad Kashmir, Farmers.

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DEDICATION

This thesis is dedicated to my family specially my mother for his love, endless support, and encouragement. Mom you are in my every breath.

Also Dedicated to

My Teachers

CHAPTER 1
INTRODUCTION

1.1 Background

The agriculture sector is an essential part of the global economy, and it provides food and other raw materials to support a wide range of industries. The agriculture sector contributes a relatively small portion to the global economy, it holds significant importance in the lives of numerous individuals. In 2012, out of the world's population of 7.1 billion, approximately 1.3 billion individuals (19 percent) were directly involved in farming, while agriculture, including hunting, fishing, and forestry, accounted for only 2.8 percent of the overall income (World Bank, 2012). In middle- and low-income countries, where many farmers reside, agriculture plays a much larger role in national income and employment. Direct employment, in 2010, approximately 2.6 billion individuals worldwide relied on agriculture as their primary source of sustenance. This included both actively involved workers and their dependents. Furthermore, nearly half of the global population resided in rural areas, with approximately three-quarters of them residing in households dependent on agriculture (FAO, 2013). This sector contributes approximately 4% to the global Gross Domestic Product (GDP). Additionally, in certain least developing countries, it plays a significant role, representing more than 25% of their GDP (World Bank, 2023).

Agriculture plays a vital role in Pakistan's economy, serving as its backbone. Pakistan has a total land area of 796,095 square kilometers. Approximately 22 million square kilometers of this land is cultivated, while 8.3 million square kilometers remain non-cultivated. The agricultural sector in Pakistan contributes 21% to the Gross Domestic Product (GDP) and exhibits an annual growth rate of 2.7%. This sector plays a significant role in employment, providing job opportunities for 44% of the labor force. Moreover, 62% of the rural population relies on agriculture for their livelihood (Azam, et al., 2017). The agricultural sector is an integral part of our lives and our economy, playing a crucial role in Pakistan. It constitutes a significant portion, approximately 23.4%, of the country's economy. The primary objective of the agricultural sector is to ensure food security and maximize production. Additionally, it serves as a source of livelihood and facilitates connectivity within the nation. Rural areas are home to around 70% of Pakistan's population, with approximately 45% of the workforce employed in the agricultural

sector (Usman, (2016). The provincial government of Pakistan prioritizes enhancing agricultural production. Agriculture serves as a vital supplier of raw materials to downstream industries, supporting production processes. Its fundamental role lies in poverty reduction and the creation of employment opportunities, aligning with the nation's aspirations. Ultimately, the aim of our agricultural sector is to transition from self-sufficiency to profitability, promoting diversification. Agriculture Sector contributes to various aspects such as GDP, employment, foreign exchange earnings, raw materials, and food security. Agriculture sector has remained the most crucial sector for Pakistan's economy since its independence in 1947.

The agriculture sector holds significant importance in Gross Domestic Product and employment generation in Pakistan. This sector contributed 18.98% to the country's Gross Domestic Product in 2018. Over past two decades, Pakistan's agricultural growth has witnessed remarkable acceleration, primarily driven by its emerging economy (Lin, 2021). The provisional estimate for the GDP growth rate stands at 3.9%, with agriculture accounting for a 2.8% contribution. The GDP, valued at Rs 47,709 billion in the current market prices, experienced a growth rate of 14.8% during FY2021 compared to the previous year's value of Rs 41,556 billion. In terms of dollars, the GDP reached $299 billion, surpassing the previous year's figure of $263 billion. This growth is attributed to the 2.77% expansion in the agricultural sector. Among the major crops, which contribute 11.69% to the agricultural value and 2.24% to the GDP, there was a notable increase of 1.41% due to enhanced production of fodder, vegetables, and fruits. The overall crops sector, constituting 35.81% of the agricultural value and 6.87% of the GDP, witnessed a growth rate of 2.47%. The livestock sector, responsible for 60.07% of agricultural output and 11.53% of the GDP, achieved a growth rate of 3.06%. The fishing sector, with a 2.01% share in agricultural value addition and 0.39% in the GDP, experienced a growth rate of 0.73% (Pakistan Economic Survey FY 2020-21)

The agricultural sector boosts exports and contributes to stabilizing the country's exchange rate. Besides fulfilling the food and fiber needs of consumers and domestic industries, agriculture plays a vital role in generating foreign exchange earnings and creating a market for industrial goods. Approximately 80% of Pakistan's total exports are dominated by raw and refined cotton products, leather goods, rice, garments, and hosiery products. These industries contribute over 20% to the country's gross domestic product (GDP) and serve as crucial suppliers of raw materials

to agro-based firms and industries (Mahmood, et al., 2018). However, despite these facts, Pakistan's exports have not made a significant effect on the GDP and the growth of the rural sector as they have the potential to do so. The primary reason behind this issue is the tough competition faced by Pakistan's exports in the global market due to their lower quality and higher prices. The government of Pakistan has implemented various measures, such as establishing the Export Promotion Bureau (EPB), Trade Development Authority of Pakistan (TDAP), and becoming an active member of the World Trade Organization (WTO) to promote trade liberalization through tariff reduction and elimination of trade barriers. Unfortunately, these efforts have not yet translated into significant expansion of exports due to various shortcomings, including inadequate pricing policies and ineffective policies implementation.

The agriculture sector contributes raw materials for manufacturing and provides a market for the sale of manufactured products. Furthermore, crop growth ensures food security and allows the economy to focus on the growth of other sectors. Enhancing the agricultural sector is crucial as it provides essential resources to meet the needs of the population. Increased agricultural output and production have been observed to significantly contribute to the overall economic development of Pakistan. Therefore, it is imperative to focus on the development and sustainability of the agriculture sector due to its substantial size and importance in the economy. The agricultural industry in Pakistan is divided into five sub-sectors: livestock, fishery, forestry, and main crops (rice, cotton, wheat, sugarcane, and maize). The nation has two primary crop seasons: Kharif and Rabi, with crops in the former being seeded between April and June and harvested in October, while crops in the latter being sown between October and December and reaped in April or May. Crops that are classified as Kharif crops include rice, sugarcane, cotton, maize, mung, mash, bajra, and jowar, whereas Rabi crops include wheat, gramme, and lentil (masoor). "Rabi" crops include things like tobacco, rapeseed, barley, and mustard (Anwar, et al., 2015). The significant crops (wheat, rice, sugarcane, maize, and cotton) contribute 23.60% to the agriculture sector and 2.04% to the GDP (Pakistan Economic Survey, 2017–18). Many people who live in rural regions depend on subsistence farming, running tiny farms with little access to commercial resources except from their land and family labour. It is important to remember, too, that some farmers are comparatively rich and have higher earnings, particularly in high-income nations where agriculture generally makes up less than 2% of the economy and jobs. This variety

is a result of both regional and country-specific changes in the agricultural sector's internal structure as well as global variances in the economic environment that affect agriculture.

The agricultural sector plays a vital role in meeting the food security of Pakistan's rapidly growing population. This increase falls significantly short in comparison to the fourfold population growth during the same period. On the contrary, the Pakistan Agricultural Research Council claims that wheat production has increased by 647 percent from 1948 to 2006, with a corresponding increase in cultivated area by 210 percent. Nevertheless, the country's annual consumption requirement stands at approximately 21.3 million tons. In Pakistan, crop production dominates the agricultural sector, contributing around 61 percent to the GDP of the sector, while livestock accounts for nearly 35 percent. Fisheries and forestry, on the other hand, make up approximately four percent of the GDP in 2000 (Arif et al., 2007). Fruits and vegetables are the most significant among the minor crops, followed by pulses and oilseeds. Notably, the country has achieved notable successes in the production of wheat, rice, cotton, and poultry products since the 1960s. Although self-sufficiency in grain production is yet to be attained, increased exports of rice and cotton have significantly contributed to higher earnings from the agricultural sector.

Agriculture holds immense significance as it serves as the foundation for our food security and livelihood. It is also an embodiment of our self-determination. However, Pakistan faces challenges due to its high population density, which continues to grow. Consequently, agricultural land is diminishing due to fragmentation and the construction of residential properties. To meet the increasing domestic food demand, the adoption of modern technology has become imperative. Unfortunately, the performance of agriculture in Pakistan has been hindered by various factors. A low rate of modern farming methods, access issues to timely inputs, inadequate infrastructure investment, livestock and pest-related issues, difficulties in marketing agricultural products, and trade restrictions are the main causes of this subpar performance. Similar issues exist in Pakistan's agriculture industry, such as a lack of water and electricity, rising costs for basic inputs like seeds, fertiliser, and pesticides, and easy access to credit. Small farmers, in particular, struggle with stringent conditions and find it difficult to sustain their agricultural activities. They depend on credit to buy seeds, fertiliser, pesticides, machinery, and other essential inputs because of their socioeconomic circumstances. Financial support given to farmers to satisfy their financial demands is referred to as agricultural credit. It is essential in giving farmers the resources they

need to buy the aforementioned things. However, it has faced difficulties such low farmer profitability as a result of expensive input, fertiliser, and pesticide costs. Agriculture is no different from other industries in that credit is the foundation of both. Agriculture in Pakistan has typically been a non-monetary vocation for rural populations. Increasing productivity and encouraging the adoption of new technology are two ways that rural loans might indirectly help reduce poverty, eventually helping farmers. The rural economy's commercialization is aided by the availability of financing facilities. To increase output levels effectively and quickly, agricultural finance is essential. Farmers can either borrow money from different institutions or use their savings to secure agricultural loans. Farmers who live in less developed nations like Pakistan, where financial resources are few, frequently rely on formal and informal lenders like commercial banks and niche lenders like Zarai Taraqiati Bank Limited.

1.2 Credit and Its Types

The concept of microcredit has a long history, dating back to the mid-1800s when Lysander Spooner, an individualist anarchist, advocated for providing numerous small loans to alleviate poverty. However, it was in the 1970s that microcredit gained widespread recognition and organization through the efforts of Dr. Muhammad Yunus, an economist, and Nobel Prize laureate from Bangladesh. Recognizing the potential of aspiring entrepreneurs among the impoverished population, Yunus aimed to address the lack of capital preventing them from starting their businesses. Yunus discovered that traditional credit-lending institutions in Bangladesh were unwilling to provide loans to the poor without collateral. To overcome this challenge, he established the Grameen Bank in 1983. The bank took on risky propositions and offered small loans, typically a few hundred dollars, to individuals to start their small businesses. Yunus believed that access to credit was a fundamental human right and sought to empower the poor by providing loans tailored to their needs and teaching them sound financial principles (Ali, et al., 2010).

Microcredit is defined as the provision of collateral-free credit to the poor through institutionalized mechanisms, often referred to as "collateral." This type of credit is delivered directly to clients at their doorstep when they need it. It primarily targets individuals and groups living below the poverty line who would otherwise be ineligible for loans from formal financial institutions, such as micro-enterprises and small-scale entrepreneurs. Microfinance, on the other

hand, encompasses a broader range of small-scale financial services, including credit, savings, insurance, and money transfers. These services are introduced to facilities the poor, particularly those engaged in farming, fishing, small enterprises, service provision, wage work, and other income-generating activities at the local level in developing countries.

While microcredit focuses specifically on small loans for unsalaried borrowers with limited collateral, microfinance encompasses a wider range of financial products targeting low-income individuals and communities. It may include consumer credit for salaried workers based on automated credit scoring. However, definitions of microcredit and microfinance may vary across countries. In the context of Pakistan, microfinance has often been used interchangeably with microcredit due to the limited development of other financial services in the sector. However, efforts are being made to expand offerings such as savings and insurance by microfinance institutions and banks. Currently, the microfinance debate in Pakistan predominantly revolves around microcredit. The term "microcredit" has gained popularity in recent decades and is sometimes misused or attributed to different forms of credit, including agricultural, rural, cooperative, or consumer credit, as well as credit from savings and loan associations, credit unions, and money lenders. It is important to note that microcredit, as a concept, did not exist before the 1970s and has since become a widely discussed topic in the development field, with various interpretations and understandings. Microfinance was introduced in Pakistan on a conventional basis in the 1960s (Shafique, et al., 2020).

Credit plays a crucial role in all aspects of life, whether it pertains to food, clothing, housing, business, or agriculture. It is a vital resource required for sustaining our daily activities. In the commercialization and modernization of the agricultural sector, and particularly in rural economies, credit assumes a critical role. Easy and affordable access to credit is essential for enhancing agricultural production. Meeting the credit needs of the farming community has always been a key objective for previous governments. While the concept of credit in Pakistan's agriculture sector is not new and predates independence, historically, farmers relied heavily on non-institutional forms of credit. The Agriculturalists Loan Act (ALA) of 1958 played a significant role in providing credit support to farmers for purchasing agricultural inputs such as seeds, fertilizers, livestock, and equipment. This aimed to improve their living conditions and expand cultivated areas while altering cropping patterns. Notably, agricultural credit has had a positive

and noteworthy effect on production in Pakistan. Agriculture Micro Credit plays a vital role in the agricultural sector of Pakistan by addressing the lack of technical knowledge and finances among farmers to carry out necessary farming practices and improve the production.

In Pakistan, all institutional sources of credit offer different types of agricultural credits, as mentioned in studies by (Fayas, et al., 2006; Rehman, et al., 2015). This credit scheme is designed for the purchase of farm inputs such as improved seed varieties, fertilizers, pesticides, and other necessary supplies. The duration of this credit scheme typically does not exceed 18 months. Medium-term credit scheme: This credit scheme is intended for the purchase of cattle, modern implements, and improvements in water courses, among other purposes. The loan period for this medium-term scheme ranges from 1 to 5 years. Long-term credit scheme: The long-term credit scheme is provided for larger investments, including the purchase of tube wells, land reclamation, construction of buildings, and the acquisition of machinery and farm implements. The duration of this scheme spans from 5 to 7 years, allowing borrowers to repay the loan over an extended period. These three types of agricultural credits cater to different farming needs and durations, providing farmers with financial support for various aspects of their agricultural operations (Chandio, 2017). There are two type of agriculture credit which commonly used in Pakistan.

The informal credit market encompasses a range of sources including acquaintances, family members, local shop owners, traders, and intermediaries like commission agents. These sources offer short-term funding and typically impose higher interest rates that are agreed upon mutually. These loans cater to both consumption needs and the acquisition of agricultural inputs. However, a significant obstacle associated with informal lending is their insufficient availability and lack of dependability. They lack proper documentation and regulations, making it difficult for farmers to secure these loans consistently. Furthermore, it is difficult to estimate the percentage of informal credit in the total amount of agricultural credit given since there is a dearth of information on the amount of informal credit dispensed. In comparison to other sources, interest rates on these loans are often higher. However, despite these restrictions, informal lenders continue to play a substantial role in Pakistan's rural areas, as they always did. The informal sector has a competitive advantage over the formal sector in that it can offer services for less money. In contrast to impoverished households, who frequently turn to informal lenders because they lack access to

appropriate official credit, richer people in rural regions have stronger access to legitimate sources of credit.

1.2.1 Formal Credit Sources

Formal credits are obtained through established institutions such as ZTBL, commercial banks, provincial governments' cooperatives, microfinance banks (MFBs), and Islamic banks, specifically for agricultural development. Approximately 50 percent of the farmers' credit requirements, filled through informal sources. These loans are provided to farmers after specific procedures and meeting the relevant terms and conditions. Pakistan's agricultural credit system is supported by a well-established network and budgetary initiatives to support the agriculture sector have led to the assignment of indicative agriculture credit disbursement targets by the State Bank of Pakistan. The commercial banks, agriculture banks, Islamic banks, microfinance banks are providing agriculture financing in Pakistan (Pakistan Economic Survey 2020-21).

The initiative by the State Bank of Pakistan (SBP) to establish annual targets for banks has led to significant growth in the outstanding portfolio of agricultural loans. In comparison to the prior year, the outstanding portfolio at the end of March 2015 grew by 11.2%, from Rs. 28.1 billion to Rs. 312.7 billion. The current year saw commercial banks release Rs. 326.0 billion, a 27.5 percent rise over the Rs. 255.7 billion disbursed the year before. This sum amounted to Rs. 500 billion, or 65.2% of the whole aim. Over the same period, credit disbursement by the five commercial banks also saw a growth of approximately 25.4 percent, increasing from Rs. 133.5 billion to Rs. 167.4 billion. Historical records demonstrate a consistent upward trend in agricultural credit disbursement. Between 1980-81 and 2001-02, the total credit disbursement surged from Rs. 40,424.31 million to Rs. 51,347.82 million, marking a growth of 271.9 percent from 1980-81 to 1990-91 and 243.0 percent from 1990-91 to 2001-2002. This trend continued with disbursements reaching Rs. 21,215.6 million in 1995-96, Rs. 42,562.5 million in 1998-99, and Rs. 51,347.86 million in 2001-02 (Pakistan Economic Survey 2020-21). The provided figures encompass agricultural credit data from 1960-61 to 2012-13, sourced from various institutions including ZTBL, cooperatives, and commercial banks. Institutional credit sources play a vital role in facilitating the growth and development of the agriculture sector. Agriculture credit contributes significantly to poverty alleviation, livestock development, improvement in the socioeconomic status of farmers, and ensuring food security. These financial associations provide essential credit

services that support farmers in their agricultural activities and contribute to the overall advancement of the sector (Chandio et al., 2017). Their contribution has been steadily increasing over time, as depicted in Figure 1.1.

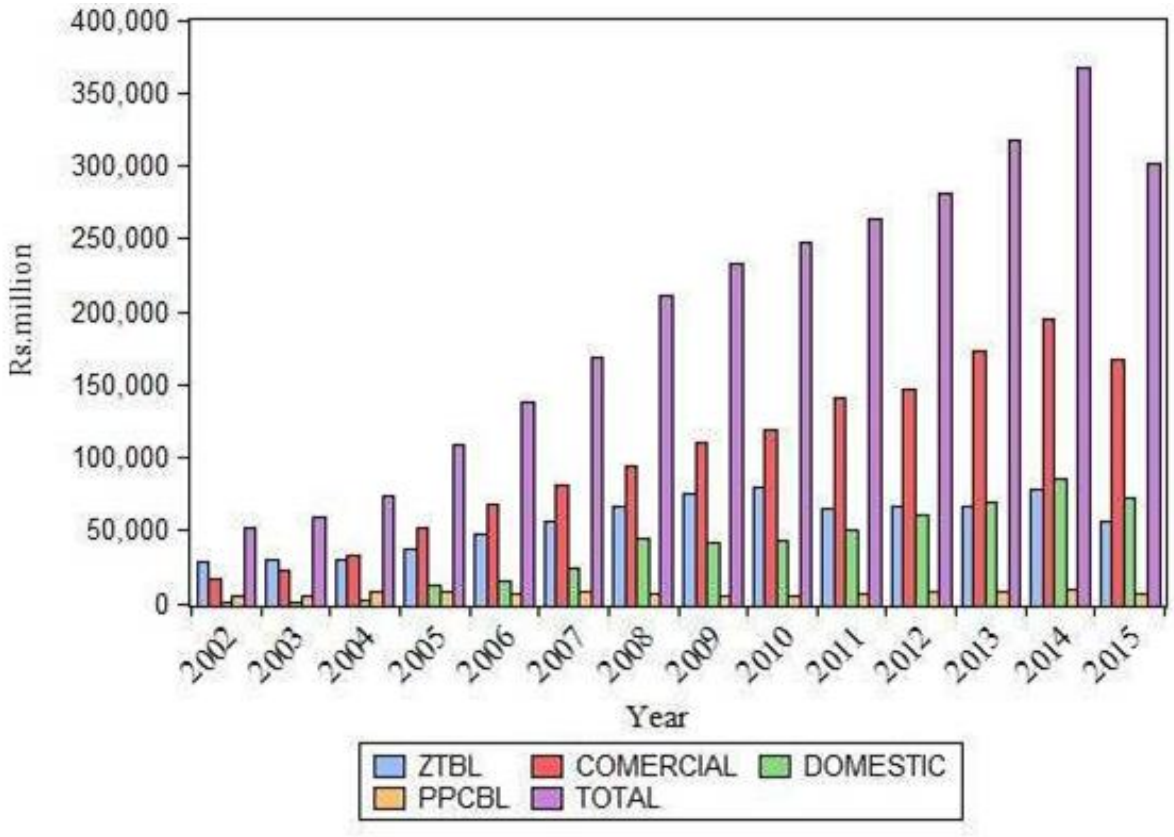

Figure 1.1: Agriculture Credit Supplied by Various Institutions

Source: Chandio et al., (2017)

In every modern business, whether it operates using its own capital or borrowed funds, the need for capital is evident. Farming, too, relies on capital for its operations. Farm credit plays a crucial role in increasing agricultural production and effectively utilizing farm resources. It serves as vital financial support for small farmers, helping them bridge the gap between their income and expenses in the field (Iqbal et al., 2003). Agricultural credit is an essential component of the agricultural sector's growth strategy. It not only provides funds for improved seeds, fertilizers, and modern equipment but also facilitates financing for activities such as harvesting and transporting produce. Recognized as a social necessity for agricultural development in Pakistan, policymakers and bankers should have a clear understanding of the concept of agricultural credit. This form of

credit addresses two significant challenges in Pakistan's rural economy: the persistent low income of small farmers due to low per acre yield and the ongoing losses resulting from unpaid debts. By providing farmers with an independent economic and social identity, agricultural credit plays a vital role (Anka 1992).

The State Bank of Pakistan (SBP) has set a goal of Rs. 1,500 billion for the distribution of agricultural loans in FY2021, as part of the government's initiatives to develop the agricultural sector. The payout amount of Rs. 1,215 billion increased significantly from the prior year by 23.5 percent. There are currently 50 organisations involved in lending money to farmers for agricultural purposes, including 11 microfinance banks, 2 specialised banks (ZTBL & PPCBL), 14 domestic private banks, 5 Islamic banks, 5 large commercial banks, and 13 microfinance institutions/rural support. A lot of progress has been achieved in the distribution of agricultural financing despite the difficulties caused by the epidemic. Financial institutions that lend to agriculture disbursed Rs. 953.7 billion between July and March of FY2021, or 63.6 percent of the yearly objective. By the end of March 2021, there were Rs. 601.8 billion worth of outstanding agricultural loans, up from Rs. 572.1 billion at the same time the year before. This represents an increase of Rs. 29.7 billion. In addition, according to Pakistan Economic Survey 2020-21, 3.5 million borrowers had debts that were still unpaid as of March 2021. In contrast to their yearly indicated aims, farm lending banks and institutions' disbursements are shown in table 1.1 as comparison.

Table 1.1: Disbursements of Agriculture Credit by Different Banks

Banks	Target FY2020	FY 2020 (July-March)		Target FY2021	FY2021 (July-March)		% Change over the Period
		Disbursed	Achieved (%)		Disbursed	Achieved (%)	
Major Commercial Banks (5)	705	515.2	73.1	800	554.2	69.3	7.6
ZTBL	100	52.5	52.5	105	56.5	53.8	7.6
PPCBL	13	6.3	48.8	13	5.2	39.8	-18.4
DPBs (14)	253.6	169.3	66.8	296	192.5	65.0	13.7
Islamic Banks (5)	55	31.0	56.3	63	35.9	57.0	15.9
MFBs (11)	184	115.2	62.6	182	92.8	51.0	-19.4
MFIs/RSPs	39.4	22.7	57.5	41	16.6	40.5	-26.6
Total	1,350	912.2	67.7	1,500	953.7	63.6	4.6

Source: Pakistan Economic Survey 2020-21

The Zari Taraqiati Bank is established by government of Pakistan to facilitate the farmers. Micro credit is a type of financial service provided to low-income individuals who are unable to access traditional banking services. Agriculture microcredit refers to small loans given to farmers, smallholder households, and agribusinesses to help them improve their agricultural practices, invest in equipment, purchase inputs, and expand their businesses. The loans are usually given on a short-term basis, and borrowers are required to pay back the loan within a specified period, often with a low interest rate. The Agricultural microcredit refers to a type of loan that is specifically designed to help small-scale farmers and other individuals engaged in agricultural activities to access the financial resources they need to improve their farming practices, increase production, and generate income. These loans are usually provided by microfinance institutions, and they are typically characterized by small loan amounts, short repayment periods, and low interest rates. The goal of agricultural microcredit is to promote financial inclusion and support sustainable agricultural development by providing access to capital for those who may not be able to obtain loans through traditional banking channels.

The role of Agriculture microcredit in alleviating poverty is widely acknowledged as an effective strategy for providing financial services to individuals who lack access to or are neglected by traditional banks and financial institutions. Impoverished individuals possess the potential to uplift themselves from poverty with their intelligence, innovative ideas, and strong work ethics, however, their main hurdle lies in the lack of resources. Microcredit addresses this issue by offering small loans, enabling people to enhance their income levels**.** individuals living in poverty possess inherent capabilities to escape poverty with dignity and display creative potential to improve their circumstances given the right opportunities and an enabling environment (Ahmad, 2000). Microcredit programs have been implemented in numerous countries around the world, granting people living in poverty access to small amounts of capital. The prevalence of poverty became more apparent during the 1990s, as overall economic growth slowed down. While the slowdown in economic growth contributed to poverty, the anticipated "trickle-down effect" failed to reach the most disadvantaged due to limited institutional accessibility and unjust policies favoring the non-poor, (Waheed, 2001). Pakistan encompasses various dimensions, extending beyond low income to include limited access to essential necessities such as education, healthcare, clean water, and proper sanitation. This deprivation hampers individuals' capabilities, restricts their employment opportunities, fosters social exclusion, and exposes them to external shocks.

Additionally, the perpetuation of the poverty cycle is exacerbated when marginalized groups are excluded from decision-making processes within government structures. Poverty represents a significant challenge for the country, but recent economic activities and government policies have shown some progress in poverty reduction. As of now, 24% of the population in Pakistan lives below the poverty line, which marks an improvement from the 34% recorded in 2000-01. Notably, the poverty rate is significantly higher in rural areas compared to urban regions. For instance, in 2006, the poverty rate was 14.96% nationwide but rose to 28% in rural areas (SBP, 2007). To illustrate the severity of poverty, the extremely poor accounted for 1.1% of the population in 2001, decreasing to 1% in 2005. Similarly, the ultra-poor constituted 10.8% in 2001, declining to 6.5% in 2005, while the poverty rate stood at 22.5% in 2001 and decreased to 16.4% in 2005 (Ali, et al., 2010). Poverty has remained a significant challenge since the dawn of civilization. The poverty rate increased in the economy after the 1990s, and microcredit emerged as one of the most effective tools to combat it. A substantial number of impoverished individuals have experienced improved income levels, benefiting both themselves and the national economy. In recent years, the broader concept of microcredit, known as microfinance, has gained popularity as an intervention for poverty alleviation in developing and least developed countries. Virtually every poverty-stricken nation and development-focused donor agency, whether multilateral, bilateral, or private, has been involved in promoting some form of microfinance program. Various achievements have been attributed to microfinance programs, showcasing a diverse range of benefits. However, it is crucial to recognize that the rapid and sustainable reduction of poverty relies on a combination of policy measures and interventions at both macro and micro levels (Ahmed, 2002).

In the national agenda of the present administration for agricultural economic growth, the cattle industry occupies a special place. Traditionally, small-scale farmers have dominated the livestock sector, relying on it to fulfill their daily nutritional and monetary needs. The livestock sector plays a significant role in reducing poverty and improving the socio-economic conditions of rural communities. Access to credit is essential for farmers to achieve multiple objectives, and banks serve as the primary source of institutional credit for them. Presently, there are 31 commercial, microfinance, and Islamic banks, collectively operating around 3,950 branches designated for agriculture, facilitating farmers across Pakistan. The agriculture lending sector comprises nineteen commercial banks, two specialised financial institutions (ZTBL and PPCBL), seven microfinance institutions, and three Islamic financial institutions. These institutions are all

actively involved in lending money to farmers for agricultural growth, including animal production (Ahmad et al., 2015). The Agricultural Development Bank of Pakistan, formerly known as Zarai Taraqiati Bank Limited (ZTBL), is one of these organizations and has a considerable effect. The development of agriculture and the rural economy is a priority for ZTBL, a well-known banking institution. Its main goals are to boost the agricultural community's ability to generate money by providing financial services and technical knowledge, facilitate institutional lending, and increase farm productivity. One of their initiatives is the Awami Zarai Scheme, which provides loans to livestock raisers. Experienced poultry, dairy, and fishery farmers are eligible to apply for loans under this scheme. To ensure proper utilization of the loans, rigorous monitoring is conducted by mobile credit officers in all cases, and the bank's manager, zonal manager (recovery), and internal auditors also conduct sample checks on loan utilization.

The socioeconomic standing of the underprivileged farmers is improved via agricultural microcredit. According to the State Bank of Pakistan, commercial banks and microfinance institutions reported lending a total of Rs. 1,173,989.50 million to impoverished agriculturalists, tenants, and other farmers. The total number of borrowers in Pakistan was 3,894,075, with 1,512,926 of them being agricultural borrowers in Punjab who received Rs. 495,039.4 million. Additionally, during the 2018–19 fiscal year, 1,410,870 farmers who were debtors received Rs. 160,822.8 million (Shafique, et al., 2020). Small-scale agriculturists face various challenges, including high costs of inputs such as seeds, pesticides, and fertilizers, as well as credit finance. After harvest, these farmers often have minimal profits, forcing them to seek credit finance again for the next crop, which is crucial for their family's sustenance. Poverty is a global challenge that gives rise to numerous other issues. Research suggests that poverty, wealth inequality, and unequal land distribution are closely connected to dissatisfaction, unrest, anxiety, and even violence. Microfinance offers significant benefits, particularly by providing financial services to impoverished individuals and groups, making them economically self-sufficient. It promotes economic expansion by enabling common people to generate a reliable source of income. In the end, this more purchasing power results in steady economic growth.

The role of agricultural credit in ensuring food security in Pakistan is significant. Access to credit enables farmers to invest in essential inputs such as seeds, fertilizers, machinery, and irrigation systems, which are crucial for increasing agricultural production and output. By

providing financial resources, agricultural credit helps farmers adopt modern techniques, improve their farming practices, and enhance their overall efficiency. With adequate agricultural credit, farmers can afford to purchase high-quality inputs and implement better farming methods, leading to increased crop yields. This, in turn, contributes to improved food production and availability within the country. By supporting farmers financially, agricultural credit plays a vital role in meeting the objective of adequate food production set forth in Pakistan's national food policy. Moreover, agricultural credit helps stabilize food prices by encouraging farmers to expand their production capacity. When farmers have access to credit, they can invest in larger-scale cultivation, which can help offset supply shortages and mitigate price fluctuations. A stable supply of food contributes to reducing price volatility and ensuring that affordable food is available to consumers. The Government of Pakistan has implemented various agricultural programs and marketing strategies as part of its national food policy with the aim of attaining food security within the country. However, the effectiveness of these initiatives has been subpar. The NFP encompasses three key objectives: ensuring sufficient food production, maintaining stable food prices, and facilitating consumer access to food (Khan 2000). Unfortunately, in recent years starting from 2006, there has been minimal growth in food production, coupled with frequent fluctuations in food prices. This alarming trend has exacerbated the situation, leading to an increase in the number of food insecure districts from 74 in 2004 to 95 in 2008 (Hussain, et al., (2012), Given the country's large population, which is already grappling with food insecurity, the persistence of price fluctuations and a rising inflation rate pose even greater threats (Sulehri and Ramay, 2009).

1.3 Azad Kashmir (AK) and its Agriculture Sector

Azad Kashmir (AK), commonly known as independent Kashmir, is a region situated on the Pakistani side of the Line of Control between Pakistan and India. While AK is under the administrative control of Pakistan, it maintains a distinct status from being officially considered as part of Pakistan. AK enjoys a certain level of autonomy but relies on financial support from the Pakistani government. The United States Department of State acknowledges AK as separate from the rest of Pakistan and highlights its lack of representation in the national parliament. AK has its own constitution and a democratically elected government. The Azad Kashmir Legislative Assembly comprises of 41 elected members and 8 co-opted members, assuring representation for a variety of groups including women, Ullema-e-Din or Mushaikh, technocrats, professionals, and

Jammu and Kashmir residents living abroad. Since 1975, the Legislative Assembly has chosen the Prime Minister to be Azad Kashmir's head of state. The Interim Constitution Act of 1974 established the President as a constitutional post. This gives a succinct summary of Azad Kashmir's political system (Khan, 2014).

Azad Kashmir (AK) is a region situated in the northern part of Pakistan-administered Kashmir. The geographic coordinates of the valley of Azad Kashmir are approximately 34°22′25 North latitude and 73°28′14 East longitude. Muzaffarabad serves as the capital city of this region. The Kashmir valley in Azad Kashmir covers an area of approximately 13,297 square kilometers. The estimated population of Azad Kashmir is around 4 million individuals. In terms of climate, the average maximum temperature during the summer season in AK ranges from 16 °C to 24 °C. Conversely, the average minimum temperature during the winter season is recorded at -4 °C (Abasi, et al., 2022). The region of Jammu and Kashmir spans an area of 88,471 square miles. Since 1947, approximately 25 percent of this area, totaling 33,958 square miles, has been under the control of Pakistan. This includes 29,814 square miles of Gilgit-Baltistan (GB) and 4,144 square miles of Azad Kashmir (AK). The population of AK is approximately 3.5 million. Additionally, around 1.5 million people from AK reside outside these areas, with a portion living in other parts of the country and a significant number overseas (Shahzad, et al., 2016).

According to the "Census Report of Population 2012," Kashmir has 3.9 million people living there. With 50.18% male and 49.82% female, the population is virtually evenly split between the sexes. 99.9% of the populace practise Islam, making up the majority. Towns, which are commonly found in low-lying or hilly terrain, are home to a large population. Rural and urban regions are split 88:12 in favour of each. A family consists of 6.7 persons on average, according to estimates. Compared to the 1998 census, when the literacy rate was 55%, it is now 64% (Ghulam, 2019).

The agricultural sector employs 8% of the active labor force, with approximately 72% of households owning agricultural land. On average, farms are estimated to be 1.1 acres in size. Bhimber stands out with the highest percentage of agricultural proprietors at 76%, with around 87% engaged in crop cultivation. Market participation is limited, as only 10% of households sell their produce, indicating that 90% are subsistence farmers who grow crops for personal consumption. Unfortunately, only 31% of subsistence farmers can meet their household's

consumption needs. The average income per harvest for commercial farmers is Rs. 81,086, which is considered relatively low. In AJ&K, maize is cultivated by 77.2% of sampled farmers across different crop production categories, while wheat is grown by 59.4% of farmers. Pulses and rice have a smaller cultivation rate of 3.2% (Zahid, 2022). Azad Kashmir experiences predominantly rainy and cold temperatures. Both warm and cold temperatures contribute to precipitation in the region. Muzaffarabad, the capital of Kashmir, and Azad-Patan are the areas with the highest rainfall. Most areas receive over 1400 mm of rainfall, with Muzaffarabad receiving the highest amount at around 1800 mm. Monsoon floods occur frequently in the rivers of Neelum and Jhelum due to heavy summer rains and the melting of severe snow (Bhat, 2013).

The agriculture in AJ&K predominantly relies on rainfall, with maize, wheat, and rice being the primary crops. While most of the region is mountainous, there are cultivable plains in certain valleys such as Jhelum Valley, Neelum Valley, Hajira, and Bagh. Districts like Kotli, Mirpur, and Bhimber consist of vast stretches of plains and valleys where crops like maize, wheat, rice, jawar, and bajra are extensively cultivated. The agricultural practices vary depending on factors like soil condition, climate, rainfall, and availability of irrigation water. Paddy cultivation takes precedence in areas with assured water supply, whereas maize is grown during the summer and wheat during the winter in regions with comparatively limited water supply. Some of the major and minor crops and vegetables cultivated in the region include maize, wheat, rice, jawar, millet, okra, tomato, tinda, spinach, brinjal, karam, bitter gourd, potato, bottle gourd, pepper, pumpkin, turnip, cucumber, radish, coriander, and fresh beans. As for seasonal vegetables, reddish, onion, carrot, garlic, spinach, coriander, cauliflower, mathee, cabbage, mustard, soay, peas, karam, and potato are grown during the Rabi season. Livestock plays a significant role in the overall gross annual income, with an average household earning Rs. 1,600, primarily from milk production, which contributes approximately 68% to the total income. Cattle, buffaloes, sheep, goats, camels, horses, mules, and asses are the common livestock found in AK (Azad Kashmir Statistical Yearbook 2019).

The expansion of modern agriculture has been remarkable, and it owes much of its success to the widespread use of credit. Agricultural credit has been a crucial factor in the modernization of agriculture, as it ensures a steady supply of inputs and improves farm efficiency. It allows farmers to adopt modern technologies and advanced practices, thus enabling agricultural and rural

development. However, the effectiveness of agricultural credit depends on its availability and proper utilization. The Government of Azad Kashmir, has provided the agriculture credit to farmers through formal credit system in rural areas, managed by the Zarai Taraqiati Bank Limited (ZTBL). Similarly, the government, keeping in view of agriculture's sector importance and challenges, implemented numerous policies and programs so that it supports the progress and development of agriculture sector. The policy's aim is to improve output of farm and food security through the provision of loans to small scale farmers. However, this could not fill the gulf of the demand and supply of credits as a result it delivers partially (Hussain and Thapa, 2012).

1.4 The Statement of Problem

Pakistan's economy heavily relies on agriculture, however, its contribution to the GDP has been declining gradually over the years, and it reached 19.2 percent in 2021 as compared to 70 percent in 1947. Despite a growth rate of 2.77 percent in the current year as compared to 2.6 percent in the previous year, the sector is still underperforming. One of the primary reasons for low output is the conservative approach to production and self-reliance, which is limiting the potential of the sector. Unlike Pakistan, many developed countries have adopted advanced technologies to maximize their yield per acre, resulting in higher profits. Due to low profits, farmers are unable to invest in better quality seeds, pesticides, and advanced technologies, which, in turn, lowers their output. This cycle of low output and low profits continues to persist. To break this cycle many farmers, take loans from different sources such as friends, relatives, Non-Banks, and Banks. Among the sources of agriculture banks play an important role in providing credit to the farmers. But their impact on farmers has hardly shifted in the past years. Therefore, this study tries to investigate the impact of agriculture credit on farmer's social & economics status in Azad Kashmir.

1.5 Objectives of the Study

i. To analyze the effect of micro-credit on the socio status of farmers in Azad Kashmir.
ii. To analyze the effect of micro-credit on the economic status of farmers in Azad Kashmir

1.6 Hypothesis of the Study

The study has following hypothesis:

H0: There is no effect of micro credit on Scio status of farmers.

H1: There is positive effect of micro credit on Scio status of farmers.

H0: There is no effect of micro credit on economic status of farmers.

H1: There is a positive effect of micro credit on economic status of farmers.

1.7 Significance of the Study

A significant wide array of researchers, social thinkers, intellectual community and development policy makers think that providing agriculture credit to farmers is an important tool to enhance the living standard of poor farmers. The research findings of the study could help the agricultural banking sector of Pakistan and authorities to develop better policies and strategies in accessibility of credit.

In addition, the study on the effect of agriculture microcredit on socioeconomic conditions in AK can provide valuable insights into the potential benefits and challenges associated with microcredit programs. It can inform policymakers, development organizations, and other stakeholders about the efficacy of such initiatives in promoting inclusive and sustainable agricultural development in the region.

1.8 Structure of the Study

The study is organized into five main chapters. The First chapter introduces the topic, presenting the problem statement, research questions, research hypothesis, research objectives, significance of the study, and limitations. In the second chapter, a thorough examination of previous research studies, theories, and models related to the current study is provided. The third chapter outlines the research methodology, encompassing the research design, data collection methods, sampling techniques, and data analysis procedures. Chapter four presents the findings of the research, including data analysis, results, and discussion. Lastly, chapter five concludes the study by summarizing the key findings and offering recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter of thesis deals with literature to provide the background on agriculture micro-credit and socioeconomic status. In this chapter, most importantly, the agricultural sector role is discussed comprehensively, and the relevant study's findings are provided. Secondly, literature on agriculture credit provides theories and evidence from different countries. Thirdly, here we have discussed the institutions which provide agricultural microcredit to farmers in Pakistan. Lastly, all the above-mentioned discussions are concluded.

2.2 Agriculture Sector of Pakistan

Rosegrant et al., (1993) highlight the role of agriculture sector as agricultural production for Pakistan and India. The study results suggest that partial agriculture output for wheat and rice in Pakistan and India have experienced rapid growth in output per acre because adaptation of modern wheat and rice varieties which started using in 1960s. The findings, however, revealed that output per hectare for wheat and rice rose slowly before the green revolution and increased intensely. The yield growth in Pakistan from 1965 to 1975 was rapid but started declining after that. Besides, India production of agriculture grew also slowly than Pakistan even before green revolution. However, higher growth India achieved after 1975.

Ahmad (2003) examined agricultural output, efficiency, and poverty in Pakistan's irrigated rural regions. The estimations of the study indicated that the input elasticity of output for non-poor is different from that of the poor farmers. The elasticity of the land is much higher for wealthy farmers than for poor farmers. The findings imply that wealthy farmers are investing in land with a better yield. Furthermore, the average cost of technical inefficiency is around 42 percent in output loss and huge differences across farms ranges from 16 percent to 52 percent. Finally, the study concludes that the least efficient farmers are not only operating below and far but also working with low production portion. The study points out that land distribution play's vital role in economics of scale because large farmers have large land hence earned large profit by optimally

utilizing cost of production. Although the study does not directly investigate the effects of agriculture credit on the socioeconomic condition in Azad Kashmir (AK), it provides relevant insights into the dynamics of agricultural production and poverty.

Bhutto et al., (2007) according to research, the agriculture industry in Pakistan contributes significantly to the economy, employing 43.4% of the workforce and making up about 20.9% of the GDP (GOP, 2007). Additionally, it generates around 9% of the nation's export revenues. This industry is an essential source of raw materials for several domestic businesses, including those that produce sugar, ghee, leather, and textiles. In addition, 65.9% of Pakistan's rural residents depend on agriculture for their livelihood in some way (GOP, 2006). Considering the substantial number of people relying on agriculture for their livelihood, any slowdown in its growth could hinder poverty reduction efforts. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Bhutto et al. (2007) provides essential background information. It highlights the significance of the agriculture sector in Pakistan's overall economy, its contribution to employment and GDP, and its importance as a source of livelihood for rural residents.

Usman (2016) research highlights the effect of agriculture growth on poverty reduction is not limited to direct effects alone. There are also significant indirect effects through the interconnections between agriculture and non-farm growth in rural areas. It is important to acknowledge that the agriculture sector is a major component of the economy, with approximately 63% of the population relying on it for their livelihood. This sector contributes around 43% to the labor force and 21% to GDP growth. It serves as the primary source of raw materials for other sectors, facilitating overall economic growth. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Usman (2016) provides important insights. It emphasizes the interconnectedness between agriculture and non-farm growth, suggesting that the benefits of agriculture growth extend beyond the sector itself. Understanding these interconnections can help inform policies and interventions related to agriculture credit in AK.

Ahmad (2001) claimed that agricultural production growth in Pakistan was calculated district by district. The findings indicate that the yield production rose at a rate of 2.6% each year, with total factor production accounting for most of the increase. In addition, there exist wide differences between cropping system and among cropping in total factor production at 3.6% per

annum which is followed by cotton 1.9%, barani 3.2%, mixed 1.1%, and rice 1% zones. Cotton mixed and rice show a negative trend in efficiency. Further, other factors include a high illiteracy rate among the farmers. Besides, most of the farmers belong to the middle class. The data of the study also revealed that sugarcane and rice are high water intensive crops. Also, the sources of instability include vulnerability of crops to insect attack and diseases, high volatility in prices and continuous rising input cost of production. Ahmad (2001) focused on analyzing agricultural production growth in Pakistan, district by district. Although the study does not directly investigate the effects of agriculture credit on the socioeconomic condition in Azad Kashmir, it provides relevant insights into the dynamics of agricultural production and the factors influencing it.

Shafique et al., (2020) highlight the critical role of the agriculture sector in supporting crop production growth, economic development, and rural poverty reduction in developing countries. The success of the agriculture sector is closely linked to rural poverty reduction, as agricultural growth rates significantly effect rural areas. Despite the significant contribution of agriculture to the economy, rural areas in developing countries often lag in terms of development, with rural populations commonly living in poverty. To address this issue, improving the agricultural sector is crucial to increase output, boost the volume of agricultural goods and services, and promote efficiency and development. The International Bank for Reconstruction and Development (IBRD) recognizes the significance of the agriculture sector in reducing poverty in developing countries. Research has shown that the growth rate of agricultural gross domestic production is twice that of non-agricultural GDP growth in terms of poverty reduction, underscoring the need to support smallholders and small agribusinesses to achieve poverty reduction goals. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Shafique et al. (2020) provides a broader perspective on the importance of the agriculture sector in rural development and poverty reduction. It emphasizes the need to support the agricultural sector to improve the socioeconomic conditions of rural populations, aligning with the goal of enhancing the effects of agriculture credit programs in AK.

Aslam (2016) portrayed agriculture production in current scenario through agriculture yields and gabs of five important crops of Pakistan which include cotton, wheat, maize, sugarcane, and rice. Agricultural production is frequently measured in terms of the output's market value, and it may be evaluated depending on the many different types of inputs, such as labour and land. This

study found the following constraints which include irrigation management, agronomic, environmental, technology, socioeconomic and institutional constraints. Prospects for future include enhanced seed production, upscaling of modern technology, improved input availability, agricultural education, training, and research nexus, improved agricultural credit, reclamation of salinized land, and support price policies. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Aslam (2016) provides insights into the constraints and prospects related to agriculture production.

2.3 Agriculture Micro Credit

The concept of micro-credit finance was initially introduced in the 1970s by economists David Bassau and Muhammad Yunus. Their microloans provided financial assistance to the poorest individuals in Bangladesh and Bali, enabling them to start small businesses and generate income for their basic needs such as food, housing, and other necessities. Agriculture micro-credit serves as a critical financial role to sustain and increase in production of agriculture sector. Microcredit programs are designed to be accessible to those who do not have access to traditional banking services, such as small-scale farmers in developing countries. The loans are usually small, ranging from a few hundred to a few thousand dollars, and are often provided without collateral. Agriculture microcredit programs are a critical tool for promoting economic development in rural areas, as they can help to increase agricultural production, create jobs, and reduce poverty. They are also an effective way to empower women and other marginalized groups, who often face significant barriers to accessing credit. Agriculture microcredit is an important means of supporting the growth and development of small-scale agriculture, which is vital to ensuring food security and sustainable economic development in many parts of the world. Credit has a significant role now a days in our lives.

Jamal et al., (2021) investigated that micro credit, also known as microlending, is a financial tool that provides small loans to individuals in impoverished countries, allowing them to start small businesses and become self-sufficient. Professor Muhammad Younus, the founder of the Microfinance Bank Program in Bangladesh and a recipient of the Nobel Prize in Economics, launched the program to assist the poor in becoming independent. Approximately 20% of people worldwide live in extreme poverty, earning less than $1 a day. The majority of people in developing countries rely on agriculture for their livelihood. However, rural poverty persists, and

rural populations are often impoverished. Microfinance can help alleviate poverty among small farmers by providing financial assistance through cooperative commercial banks and agricultural banks. In the past, it was challenging to obtain credit for agricultural purposes, especially for small farmers. Microfinance institutions also offer insurance and pension plans to support society's disadvantaged. By reducing poverty and addressing socioeconomic factors, microcredit can have a positive effect on agricultural development and rural poverty reduction. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Jamal et al. (2021) highlights the potential benefits of microcredit in addressing rural poverty and supporting agricultural development. By facilitating access to credit and offering additional financial services, microfinance can empower small farmers, enhance their agricultural activities, and contribute to improving their socioeconomic conditions.

Mwakaje's (2013) research that microfinance has been used under various names throughout history and has worked in many different cultures. Research in Tanzania evaluated the effect of microfinance on small-scale agricultural production, which is like the conditions in Pakistan. Data was collected through interviews using a closed-ended questionnaire. The study found a significant difference between small-scale farmers who received microfinance and those who did not. Credit users produced an average of 32 bags per acre of maize and sunflower, while non-credit users produced only 18 bags per acre. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Mwakaje (2013) provides evidence of the potential positive impact of microfinance and credit on agricultural production. The findings suggest that providing agriculture credit to small-scale farmers in AK could lead to increased productivity and output. This, in turn, has the potential to improve the socioeconomic condition of farmers by enhancing their income and livelihoods.

Shah et al., (2015) a study carried out in District Mastung, Balochistan, the effect of microcredit programmes on farmers' agricultural development was to be assessed. A structured questionnaire was given to 60 BRSP microloan borrowers from four different tehsils in the district as part of the study's easy random selection approach. The findings revealed that the repayment schedule for microcredit posed difficulties, and an increase in the loan amount was necessary to enhance agricultural production among the farmers for better agricultural development. Despite this challenge, the study demonstrated that microcredit had positive effect on the borrowers' socio-

economic conditions. The study also found that access to loans was limited for needy females. This issue needs to be addressed by providing micro-credit schemes to rural areas of Balochistan. The study highlights the importance of microcredit schemes in promoting agricultural development and improving the living standards of farmers. However, it also underscores the need to address the challenges associated with repayment schedules and limited access to loans, particularly for females in rural areas. In the context of the effects of agriculture credit on the socioeconomic condition in AK, the study by Shah et al. (2015) emphasizes the potential positive impact of microcredit programs on farmers' socio-economic conditions. It highlights the importance of microcredit in promoting agricultural development and improving the living standards of farmers.

Misra (2019) examined the challenges faced by smallholder farmers in Patuakhali, Bangladesh, whose lands are affected by annual river tides. These farmers encounter difficulties in cultivating common varieties of rice and adopting modern crop breeds due to financial limitations. The researcher shed light on how a subsidized agricultural credit system, which includes microfinance, has become a formidable force effecting farmers negatively. Although the physical productivity of small farmers is not directly linked to loan accessibility, financial solvency is essential for them to manage agricultural resources effectively. As a result, their need for financial support remains consistent and uniform. The reliance of these farmers on microfinance institutions to fulfill their credit requirements has significant implications for Bangladesh's neoliberal agricultural structure. The shift from traditional to modern agriculture has brought millions of impoverished villagers into the formal financial market. However, long-term borrowing from microfinance institutions exposes them to market risks, opportunities, and volatility, thereby jeopardizing the foundations of the peasant economy. Despite these challenges, microfinance services have been widely adopted globally as a means to alleviate poverty, and numerous studies have examined the effect of microcredit on agricultural development and the socioeconomic status of small-scale farmers.

Lawin et al., (2018) found a significant influence on the revenue and production of farmers who used modern techniques. Microfinance has the potential to uplift smallholder farmers, there are also risks associated with long-term borrowing and market volatility that must be addressed to ensure sustainable development and the preservation of the peasant economy. Banerjee, et al.,

(2015), conducted a study on rural women in India and found that micro-credit had a significant effect on small farmers. However, the effect was less significant on seasonal growers who have no savings. In addition, Crépon, et al. (2015) investigated the influence of microfinance on small agriculturists in Morocco and found a positive effect on the investments of small agriculturists who used the latest agriculture technologies.

Angelucci et al., (2015) found an insignificant relationship between micro-lending and growers' revenue and income in Mexico. It is worth noting that the effect of microfinance on agriculture development and the socioeconomic status of small farmers may vary depending on several factors such as the socio-economic context, the availability of resources, the borrowers' credit history, the loan amount, and the repayment period. It is crucial to evaluate the effectiveness of microfinance programs in different contexts and design tailored schemes to meet the specific needs of small farmers. Such initiatives can help mitigate poverty and support sustainable agriculture development while ensuring the preservation of the peasant economy.

Saeed (2014) performed research on the role of microcredit and the variables influencing its growth in industrialised and emerging nations. The findings showed that microcredit must reach the designated poverty regions in rural domains to be truly beneficial. This underscores the importance of targeting micro-credit programs to areas with high poverty rates and addressing the specific needs and challenges faced by rural populations. These studies highlight the need for careful design, implementation, and evaluation of micro-credit programs to ensure their effectiveness in poverty alleviation and agriculture development. It is crucial to consider contextual factors and gender dynamics to ensure that micro-credit programs are inclusive, accessible, and responsive to the needs of small farmers, particularly those in rural areas.

Obisesan (2013) the study carried out in Southwest Nigeria highlights the positive effect of micro-credit loans provided by MFIs on the livelihood of needy poor rural farmers. The study suggests that micro-credit finance can contribute significantly to the enhancement of agriculture in rural areas by improving the production and living standards of the participants. Agriculture plays a crucial role in the economic development of countries as it provides employment opportunities for both men and women, especially in rural areas. It is also an important source of

food for the country. Therefore, initiatives that promote and support agriculture, such as micro-credit finance, can have a significant effect on the overall economic development of the state. the study by Obisesan highlights the importance of micro-credit finance in supporting the agriculture sector and improving the livelihood of rural farmers in Nigeria. Choudhry et al. (2017) examined the effects of microcredits on income levels, expenses, and investments among farmers who had borrowed at least three times. Their survey, which included nearly 300 farmers receiving credits from financial institutions and non-governmental organizations, revealed that the microcredit program significantly increased income levels, reduced poverty, and improved the living standards of both rural and urban farmers.

Lokesha et al., (2019) conducted study on the utilization of agricultural credit in India, it was discovered that formal credit plays a crucial role in augmenting net farm incomes and monthly household expenditures per capita for Indian farming households. However, disadvantaged segments of society and small-scale landholders still depend on non-institutional sources that impose higher interest rates to meet their credit needs. The allocation of agricultural credit by banks to farmers is influenced by socio-demographic factors, such as the educational level within the farmers' families, which positively effects the amount of credit they receive. Agricultural credit serves multiple purposes, encompassing productive uses like agriculture, animal husbandry, cottage industry, and business investments, as well as consumptive uses such as domestic expenses, social activities, education, and healthcare. The repayment of agricultural credit is closely tied to the utilization pattern, as borrowers who consistently make payments tend to employ the credit more effectively. Conversely, those who default on payments often misuse the credit. Successful farmers tend to make prudent investments in financial and physical assets, showcasing better resource and input utilization. Research indicates a positive correlation between the productive use of credit and the size of landholding and per capita income among farmers. However, a negative association has been observed between the productive use of credit and the cultivated area of crops by borrowers.

Nouman et al., (2013) study was conducted in Nyamagabe District, Rwanda, with the objective of enhancing the well-being of small-scale farmers through microfinance. The research utilized descriptive statistics and a Probit Model to examine the data and discovered that microfinance services have the potential to elevate the living standards of small-scale farmers in

the region. The findings of the study also indicated the importance of reducing interest rates, fostering positive relationships between farmers and microfinance banks, and promoting financial literacy among farmers to effectively manage and expand their income. This research offers valuable insights into the advantages and challenges associated with microfinance services for small-scale farmers, emphasizing the necessity for suitable financial products, services, and educational programs to empower farmers in optimizing their profits and effectively managing their income.

Hulme et al., (1996) conducted research to identify the effect of credit on poverty alleviation based on counter factual combined approach using sample data form India, Bangladesh, Indonesia. The findings suggested that borrowers became better off with the rise of their income after utilization of credit. Similarly, MkNelly et al. (1996) found that income of borrowers increased. Khandker (1998) identified a positive relationship of credit with increasing living standards. Coleman (1999) found no significant effect of microcredit on social and economic development of households. Khandker (20013) results suggest that microcredit has drastically increased income of lower income families but has no significant effect on high income households.

Mpuga (2004) a research was carried out in Uganda to investigate the determinants affecting the demand for agricultural credit. Various analytical models, including Logit, Probit, and Multinomial Logit, were employed to analyze the data collected. The findings of the study revealed that several factors had a significant influence on the demand for agricultural credit. These factors encompassed age, geographical location, educational attainment, value of household assets, occupation, and housing attributes. Intriguingly, the study observed that the availability of credit sources had a minimal effect on the demand for credit. These findings suggest that targeted efforts to improve education and asset ownership among potential borrowers may be effective in increasing demand for agricultural credit, more so than simply increasing the number of available credit sources.

Awoyinka et al., (2006) research study was undertaken to examine the primary factors influencing the demand for credit among farmers in Nigeria. The findings of this study indicated that several factors played a significant role in influencing this demand. These factors included the

annual income generated from cassava production, the size of the farm, the cost of funds from both formal and informal sources, membership in the state cassava production program, and the presence of collateral. These findings suggest that enhancing access to affordable credit and encouraging participation in agricultural programs implemented by the state could contribute to a higher demand for credit among Nigerian farmers.

Okunade (2007) a research study was conducted to examine the effect of socio-economic characteristics on the accessibility of agricultural credit among small-scale farmers in the Isoya rural development project of Obafemi Awolowo University. The study utilized correlation analysis to explore the relationship between various socio-economic characteristics and the availability of agricultural credit. The findings revealed that factors such as educational attainment, tenancy status, and occupation significantly influenced the farmers' access to credit facilities. These results emphasize the importance of addressing socio-economic factors as part of initiatives focused on improving credit accessibility for small-scale farmers in rural areas.

Akram et al., (2008) a research study was undertaken to investigate the challenges encountered by farmers when accessing credit. The Logit model was employed to analyze the borrowing behavior of farmers and identify the factors influencing credit constraints. The findings revealed that significant barriers faced by farmers in obtaining credit were high interest rates and the requirement for collateral. Moreover, the level of education and transitory income emerged as crucial determinants affecting farmers' borrowing behavior. These results emphasize the importance of implementing policies and interventions aimed at addressing these constraints and enhancing credit accessibility for small-scale farmers.

Hassan (2017) research study was undertaken to assess the effects of microfinance on the socioeconomic status of impoverished individuals in Pakistan. The findings revealed that the effect of microfinance on the socioeconomic conditions of existing borrowers was significantly greater compared to new borrowers. Mehar-ul-Nisa (2016) conducted a study in the Dado district, examining the financial standing of borrowers and the influence of microcredits on the income of farmers. The study sample consisted of 60 farmers, with 20 engaged in sugarcane cultivation, 20 in wheat cultivation, and 20 in rice cultivation. Most of the farmers (84%) used the loans for

business purposes, while a quarter used them for family needs. The study found that sugarcane growers earned the most compared to wheat and rice growers.

Tahir et al., (2016) A research study was conducted to investigate the effects of microfinance on the improvement of living standards and poverty reduction in the Layyah and D.G. Khan districts. The researchers utilized statistical and econometric techniques to evaluate the effect of microfinance and found that the provision of microcredits led to a rise in productive activities, rather than mere consumption, thereby significantly influencing the income and consumption levels of impoverished households. In another study by Iqbal et al. (2015), it was emphasized that a majority of farmers in Sub-Saharan Africa faced challenges in accessing microcredits. These collective findings indicate that microfinance institutions present promising opportunities to assist underprivileged communities in enhancing their quality of life.

Ahmad (2014) research study was conducted to examine the effects of microfinance on the socioeconomic conditions of farmers residing in Bosan and Sher Shah villages of Multan city. The sample included all borrowers associated with Zarai Taraqiati Bank Limited (ZTBL), and data was collected through questionnaires from 120 respondents. The findings revealed that access to microfinance had a positive effect on crop production and contributed to an improvement in living standards. However, the researchers also emphasized the importance of providing microcredit at the appropriate time to maximize profitability. The study provides important insights into the benefits and challenges of microfinance services for small-scale farmers. It highlights the need for appropriate financial products and services, as well as financial literacy programs to enable farmers to effectively manage their income and maximize their profits.

Shafique et al., (2020) Pakistan is one of the under-developed countries where poverty has been a persistent issue for many years. The reduction of poverty requires a well-planned and effective approach towards economic development. The World Bank identified poverty as a complex problem that arises from various factors including limited access to education, inadequate economic resources, insufficient healthcare facilities, inadequate food supplies, lack of empowerment, and poor security. Effective poverty reduction and rural development require clear strategies that prioritize the needs and requirements of farmers. Agriculture is a vital component

of rural development as it plays a significant role in reducing poverty. In Pakistan, large landlords are the primary beneficiaries of government subsidies for agriculture, leading to unequal distribution of agricultural production. Despite three land reforms conducted in 1959, 1972 and 1977, the feudal system still prevails in all provinces of Pakistan, where nearly two percent of landlords own about 45% of the country's land. Therefore, there is a pressing need for new land reforms to ensure equitable distribution of land among landless farmers.

Saeed et al., (2014) a study employed logistic regression analysis to assess the relationship between various factors and farm output. The analysis was based on primary data gathered through a field survey conducted in Tehsil Bahawalpur. The study findings indicated that factors such as household income, household size, farmer's education, and access to agricultural credit (including both long-term and short-term credit) had a positive and significant effect on the yield of agricultural output per acre. Agriculture production and credit to farmers had a favorable association, suggesting that loans allowed the farmers to buy high yield variety seeds, high quality agricultural fertilizers, and pesticides with enough and timely inputs. According to the study, Pakistan's agricultural production could be raised with the prompt disbursement of suitable loans.

Hussain et al., (2016) found positive effect of microcredit on healthcare spending and education of the households who borrowed. This study used data of Pakistan Panel Household Survey of 3 surveys. This this study, propensity score matching was used to examine positive benefits of microcredit on education and healthcare. Besides, matching non-borrowers with borrowers used to test the pre-treatment income and assets. The study found a negative relationship between credit constraints and education attainment. The results of this study were based on credit participation and social status using binary and multiples variables. The findings found a positive relationship between healthcare and provision of credit.

Staten et al., (2002) demonstrated credit effect on level of education. The study was taken samples from 14000 clients during 1996. Clients were asked questions related to credit and education. The results of this research were extracted using the linear regression model. Moreover, the data was tested across the age groups and gender. The results were significant for higher age group and for males. Moreover, this study ran regression for rural and urban regions, the results were significant and positive for urban regions meaning that those who obtained loans in urban areas send more children to schools. While in rural regions, the results are not significant, the

possible explanation is that in rural areas, parents invest loans for agriculture and least spends on education, they rather employ their children in farming.

Rehman (1993) carried out theoretical research to evaluate the effect of microcredit on education. They found that people with low social economic status people take more loans for education of their children and invest more on education rather than investing in some lucrative business. Moreover, the study found, families least take loans for giving education to girls as result they acquire low level of education. Moreover, parents do not take many loans for primary and secondary level of education and take more loans for higher education, for example degree level education. The possible rational is that fees of schools and college are not much higher, so parents afford them, but the cost of higher education is high in universities especially private universities where parents had to pay in lacs.

Winter et al., (2009) conducted research that showed the development and growth of agriculture of any country is directly linked with the provision of credit to farmers. Moreover, credit to farmers should be provided on low interest so that farmers would not have to face problems at the time of returning the loan. That is why many governments, all over the world, establish organizations to facilitate farmers in providing credit (Schumpeter, 1934, Nelson and Winter, 2009). In Pakistan, the government, however, do not contain the capacity to meet the credit needs of farmers. There are two types of credits which are provided to farmers in Pakistan, i.e., institution-based credits and non-institutional credits. Non-institutional credits include market corporates, relatives, town retailers, corporate companies, and commercial operators (Swinnen and Gow, 1999, Petrick, 2005).

Waqar (2002) according to the research findings, the effective utilization of credit resulted in a significant increase in monthly income and savings for all the participants. The study reported an overall 73 percent rise in monthly income among the respondents, accompanied by a positive trend in employment opportunities within the target area. The credit program also demonstrated a favorable effect on the living standards of microcredit beneficiaries. In a similar vein, Muhammad (2003) conducted a study assessing the effectiveness of the microcredit program implemented by AKRSP in District Gilgit. The findings revealed notable improvements in cropping patterns, crop yields, livestock composition, natural resources, and living conditions within the area as a direct outcome of the AKRSP program. The study highlighted that the average monthly income of

recipient households increased from Rs. 8,696 to Rs. 10,085. Similarly, there was a reduction in the cultivation area dedicated to traditional crops like wheat and maize, while the area allocated to cash crops such as vegetables witnessed an increase. The author recommended that in other parts of the region, loan repayment should be linked to the income streams of the recipients.

Mahasha (2019) found that accessing credit can have negative implications for farmers, as they face various challenges. These challenges include gender discrimination, high interest rates, limited access to financial institutions, and the requirement of collateral. Female small-scale farmers, in particular, are often excluded from formal financial institutions compared to their male counterparts, as they are considered less creditworthy (World Bank, 2008). The proximity to credit sources plays a significant role in determining households' participation in formal credit markets. When borrowers and lenders are socially and physically close, it becomes easier for lenders to gather information about the reputation, creditworthiness, loan utilization, indebtedness level, and repayment capacity of the borrowers. This proximity reduces information costs, which are typically lower than those associated with formal finance. Financial institutions mitigate the risk of losing their funds by demanding collateral. Collateral serves to reduce uncertainty for creditors, as they can potentially recover their money, either in full or in part, if borrowers' default on the loan. However, borrowers find it challenging to use their valuable collateral if they intend to default, as doing so would mean forfeiting their collateral.

Sebopetji (2008) highlights the hurdles which cause negative effect of credit. These hurdles adversely affected the output of credit faced by farmers who lack collateral, such as land and other assets, when trying to access credit. In such cases, these farmers often turn to informal lenders who charge higher interest rates, resulting in lower profits for borrowers. The convenience of easy access, variable loan sizes, flexible repayment schedules, personal guarantees, and the short time required to obtain a loan are the reasons why many borrowers opt for informal financial services. Consequently, the issue of limited access to affordable credit remains a major obstacle affecting the production capacity and overall success of small-scale farmers. Despite the difficulties and costs associated with serving this group of farmers, it is crucial to prioritize the extension of credit to them. Lending institutions have opportunities to cater to the needs of these farmers and provide them with the necessary financial support.

Ijioma et al., (2015) investigated that Inadequate access to credit has posed a significant challenge to the development of rural farmers globally, including Nigeria. This inadequacy can be attributed to several factors, one of which is the farmers' limited knowledge regarding credit sources. Addressing the dire need for credit sources to break the cycle of poverty among rural farmers in the Idemili North local government area of Anambra State and uplift their socioeconomic well-being is imperative. However, the closure of rural bank branches has exacerbated the problem of limited credit access for these farmers. Banks often attribute their operational losses in such areas to farmers' inability to meet prevailing interest rates and other credit requirements. Moreover, banks hesitate to lend to farmers due to the inherent risks associated with the agricultural sector and the farmers' inadequate collateral. Additionally, the high administrative costs involved in providing credit to farmers pose a burden for banks. Conversely, farmers themselves are hesitant to approach banks for credit due to lengthy and cumbersome loan procurement procedures, high loan costs, delays in loan disbursement, and the distance from credit sources.

Agricultural credit consists of a range of financial tools that are intended to assist agricultural transactions. These financial instruments, such as loans, notes, bills of exchange, and bankers' acceptances, are specifically customized to address the financial requirements of farmers, which are influenced by the planting, harvesting, and marketing cycles. Farmers utilize short-term and intermediate-term credit to acquire essential resources for farming, including fertilizers, high-quality seeds, livestock breeding, and agricultural machinery. Conversely, long-term credit is utilized for financing real estate in the agricultural sector. Sikander, et al., (2020), found that micro credit can indeed have a positive effect on reducing poverty. They argue that microcredit helps to increase the income and savings of low-income individuals, allowing them to better manage their finances and invest in their businesses or education. This, in turn, can lead to increased economic opportunities and improved socioeconomic conditions of poor people. The agriculture microcredit is a type of financing that provides small loans to farmers, rural entrepreneurs, and agricultural cooperatives to support their business operations and improve their livelihood. The loans are typically used to purchase seeds, fertilizers, equipment, and other inputs needed to grow crops and raise livestock.

2.4 Theory of Vicious Circle of Poverty

The concept of the vicious circle of poverty was introduced by Professor Nurkse, which refers to the cyclical relationship between multiple factors that contribute to the maintenance of poverty and hinder the process of capital formation in a country. This cycle begins with low real income, which leads to inadequate savings, limited investment, and a shortage of capital, resulting in low production and sustaining low levels of development. Low income, limited home market, and investment impede the demand for goods while low income, low savings, limited investment, and capital deficiency affect production on the supply side. Professor Nurkse argued that poverty is self-perpetuating due to these factors, which create a continuous cycle of poverty.

The Vicious Circle of Poverty Theory suggests that poverty is a self-perpetuating cycle, where individuals or communities trapped in poverty lack the resources and opportunities to escape it. This theory identifies various factors that contribute to poverty, such as low income, limited access to education and healthcare, lack of economic opportunities, and inadequate infrastructure. In the context of AK, the implementation of agricultural microcredit interventions can help break this vicious circle by addressing some of the key factors that perpetuate poverty. The findings of the research indicate that access to microcredit has positive effects on various aspects of the socioeconomic condition in AK, such as increased agricultural productivity, enhanced livelihood opportunities, improved access to education and healthcare, and empowerment and entrepreneurship.

The impact of agricultural microcredit interventions in AK aligns with the principles of the Vicious Circle of Poverty Theory by addressing the root causes of poverty and providing the necessary resources and opportunities to break the cycle. By implementing microcredit programs and supporting related initiatives, policy makers can effectively contribute to poverty alleviation, rural development, and socioeconomic improvement in AK. In order to investigate the effectiveness of microcredit in reducing poverty and improving the socioeconomic status of impoverished individuals, this study aims to examine the effect of microcredit on poverty reduction as shown in Figure 2.1.

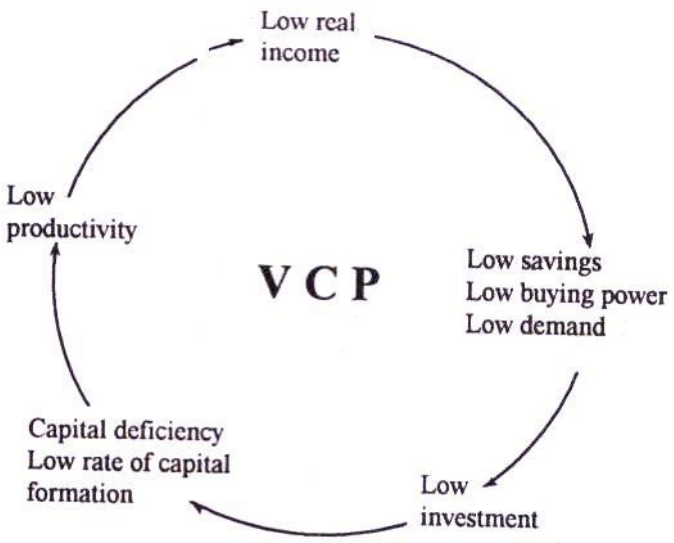

Figure 2.1: Vicious Circle of Poverty

Agricultural microcredit plays a crucial role in breaking the cycle of poverty for farmers. The findings overwhelmingly demonstrate a positive correlation between agricultural microcredit and improvements in farmers' income, savings, education expenditure, and access to healthcare facilities/health expenditure.

2.5 Research Gap

The literature shows a strongly relationship between credit and farmer wellbeing. But the studies conducted have different outcomes. According to the report of World Bank witness that PPAF programs are accomplishing their goals in Pakistan. Day by day there is found an increase in borrowers from 60 thousand to 15 lacs and 90 lacs people helped under microfinance from 111 districts of Pakistan throughout the country. Microfinance plays a vital role in reducing poverty that cannot be ignored. Microfinance has been identified as an anti- poverty device despite many difficulties. Due to lack of productive resources farmers always need capital to invest in their farms but the information regarding the impact of microfinance on production of farm income is limited. It is very important to identify whether the amount of loan of microfinance is utilized for enhancing socioeconomic condition of farmers. This study will fill the gap of that information. The main goal of this study is not only to find out the mechanism of microfinance but also to find out how it helps poor people to improve their living standards.

In Africa and other developing regions, microfinance institutions (MFIs) are regarded as the main source of funding micro enterprises (Anyanwu, 2004). Formal credit and savings institutions for the poor are also available around the globe providing customers who were traditionally neglected by commercial banks a way to obtain financial services through cooperative and development finance institution. Suffice it to say that the unwillingness or inability of the formal financial institutions to provide financial services to the urban and rural poor, coupled with the unsustainability of government sponsored development financial schemes contributed to the growth of private sector-led microfinance in Nigeria. The gap filled by microfinance institution has made become part of the formal financial system of a country and so can access capital market to fund their lending portfolios, allowing them to dramatically increase the number of poor people they can reach. To the best of our knowledge, there have been few empirical studies (Arsyad 2005; Prawiranata 2013). Therefore, this study will bridge the gap in the current study of micro finance literature by using an empirical approach comprising afield survey and a questionnaire.

CHAPTER 3

RESEARCH METHODOLOGY

This study was conducted in the Azad Kashmir (AK), Pakistan, targeting small farmers who cultivated land ranging from one to seven Kanal and received Agriculture micro-credit from ZTBL. To gather primary data, researchers visited every small farmer's doorstep, male respondents, in their villages in Azad Kashmir (AK). The questionnaire was developed and tested on a sample of 210 out of 360 rural farmers, consisting of 85 out of 100 non-borrowers' participants. The questionnaire's reliability and validity were assessed to ensure accurate results. This part covers the nature of study, research design, methodology and data collection, description of dependent and independent variables.

3.1 Theoretical Framework

The conceptual framework explores the effects of agriculture microcredit on socio-economic variables. Specifically, it focuses on two main outcomes: the impact on socio variables, such as health and education expenditure, and the impact on economic variables, such as income and savings. The central concept under investigation is "agriculture microcredit," which refers to loans provided to farmers and individuals engaged in agricultural activities to support their farming ventures. This form of credit is intended to promote agricultural development, production among rural communities and improve the socioeconomics condition of the farmers.

The first set of variables, termed "socio variables," examines the influence of agriculture microcredit on two essential aspects: health and education expenditure. Health expenditure pertains to the expenditure of amount towards healthcare services, medical treatments, and overall well-being improvement. Education expenditure, on the other hand, refers to the expenditure of amount for education of Childrens, including school fees, books, and educational materials.

The second set of variables, known as "economic variables," investigates how agriculture micro-credit affects income and savings. Income represents the monetary earnings generated through agricultural activities and related enterprises, while savings refer to the portion of income that is set aside or invested for future financial security and growth. The conceptual framework assumes that agriculture micro-credit acts as an independent variable, influencing both socio variables and economic variables. It posits that the provision of microcredit in the agriculture

sector may lead to positive changes in health and education expenditure, as farmers could have improved access to finance for educational needs of their Childrens. Furthermore, the framework proposes that agriculture microcredit might also impact economic variables such as income and savings. By providing financial support and opportunities for investment, microcredit could potentially enhance agricultural production, leading to increased income levels. Additionally, the availability of credit might encourage individuals to save or invest their surplus income, fostering economic growth and stability. The conceptual framework show that effect of agriculture micro credit on Scio variables i.e. educational expenditure and health expenditure and Economic variables i.e. income, saving. The socioeconomic condition of the farmers has been improved after getting of loan.

3.2 Conceptual frame work

The research aims to examine the impact of agricultural micro-credit on the socioeconomic conditions in Azad Kashmir. Previous studies have consistently demonstrated the positive influence of micro-credit on enhancing the living standards of farmers. However, the lack of financial resources among farmers often confines them to a vicious cycle of poverty, hindering their ability to improve their production and living conditions. Agricultural micro-credit, by providing financial support to farmers, can help break this cycle and empower them to uplift their livelihoods.

The conceptual framework illustrates that agricultural micro-credit plays a constructive role in elevating the socioeconomic status of farmers, particularly in areas such as education and income level. By offering financial resources, micro-credit enables farmers to invest in their production, adopt better farming practices, and access education and skill development opportunities. This, in turn, leads to an overall improvement in their socioeconomic conditions and helps them break free from the grip of poverty. The conceptual framework shows that agriculture micro-credit paly positive role to increase the Socio status (educational expenditure and health expenditure) and Economics status (income & saving) of farmers. The conceptual framework of the variables is shown in Figure 3.1.

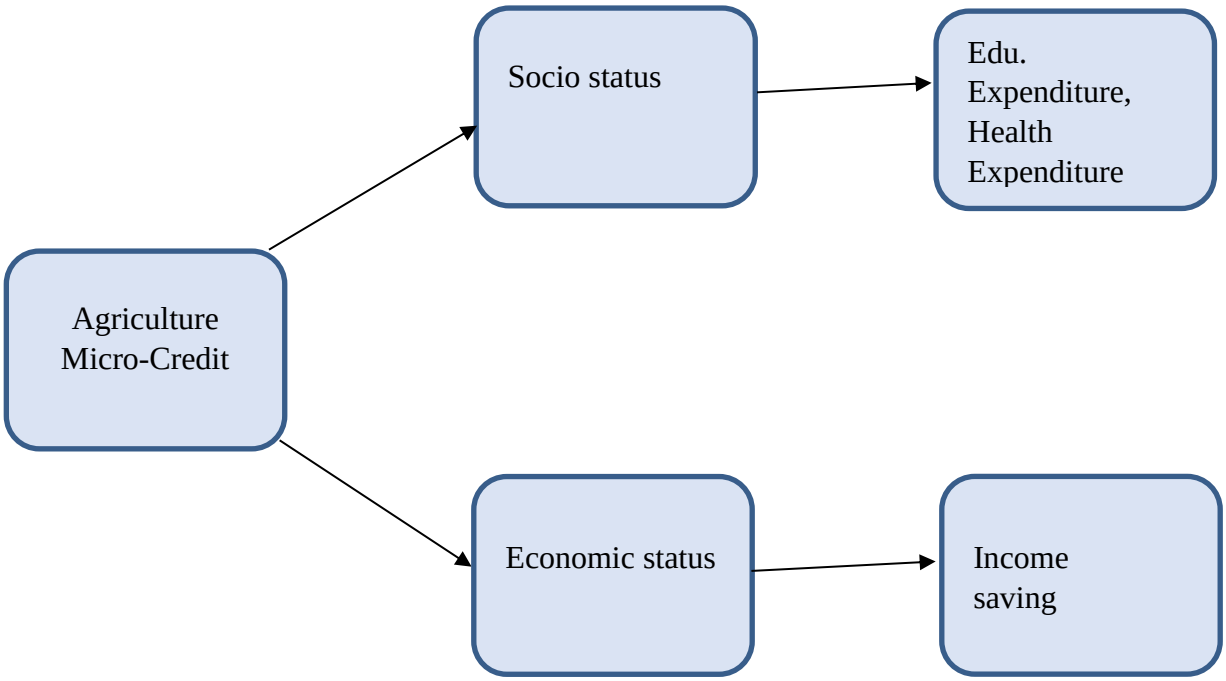

Figure 3.1 Conceptual Framework

3.3 Quantitative Approach

A quantitative approach is a research method that relies on numerical data and statistical analysis to draw conclusions about a research question or hypothesis. This approach involves collecting and analyzing data using a variety of methods, including surveys, experiments, and observations, and then analyzing the data using statistical techniques to identify patterns and relationships. One of the main advantages of the quantitative approach is that it allows researchers to test hypotheses and draw conclusions that are based on empirical evidence. By collecting and analyzing numerical data, researchers can identify patterns and relationships that might not be apparent through qualitative methods alone. Additionally, quantitative methods can provide more precise estimates of the strength of these relationships, allowing researchers to draw more definitive conclusions about the effect of different variables on the outcome of interest. The quantitative approach is a powerful tool for investigating research questions and testing hypotheses. By using a rigorous, systematic approach to data collection and analysis, researchers

can generate insights that are based on empirical evidence and that have practical applications in a variety of fields.

The quantitative approach in research is a methodical and systematic approach that utilizes statistical and mathematical techniques to collect, analyze, and interpret numerical data. This approach aims to measure, quantify, and evaluate phenomena and their relationships using standardized and objective methods. Quantitative research often involves designing and administering surveys, experiments, or observational studies to generate numerical data that can be analyzed using statistical methods. It is commonly used in fields such as economics, psychology, sociology, and medicine, where precise measurements and statistical analysis are necessary to draw reliable conclusions from data. The quantitative approach is often contrasted with the qualitative approach, which focuses on understanding and interpreting non-numerical data through subjective methods such as interviews, observations, and case studies. In this study a quantitative approach is used to estimate the results.

3.4 Population

In the thesis on the "Effect of Agriculture Microcredit on Socioeconomic Conditions in AK," the population of interest typically includes the individuals or groups directly affected by the micro-credit programs and are involved in the agricultural sector in AK (Azad Kashmir). The researcher has collected data from three divisions of AK: Poonch, Muzaffarabad, and Mirpur. They randomly selected districts from each division, which include Muzaffarabad and Hattian Bala from the Muzaffarabad division, Kotli and Bhimber from the Mirpur division, and Bagh and Poonch from the Poonch division.

3.5 Sample Size

The Sample size of the borrowers was 210 out of 360 and I distributed 230 questionnaires to individuals to collect the data but received data from only 210 individuals from borrower's group. The sample size of non-borrowers is 85 out of 100 and I distributed 95 questionnaires to individuals to collect the data but received data from only 85 individuals from non-borrower's group. Then used the Yamane formula (1976) to finalize the quantity of sample size. The Yamane formula is used for the calculation of sample size of data. The purpose is to analyze the effects of

agricultural micro credit on the socioeconomic conditions of the sample population. The needed sample size is 95% confidence level with +_ 5% precision.

$$\mathbf{n = N/1+N(e)^2}$$

=360/(1+(360*0.05*0.05))

n = sample size

N= population size

E= level of precision

n = 189

N = 360

3.6 Data Collection

The questionnaire is adopted in the light of theories and literature so that it can capture the factors that explain the variables of study (Najmi, et al., (2015). For this study, a questionnaire was adopted from a past study that includes demographic information about the sample. The selection of sample group was done through online random number generator "RANDOM.ORG" software of sample random sampling method of probability sampling. I put in the maximum and minimum data range into the software and the software generated the sample size. The survey was conducted in the form of a questionnaire in Azad Kashmir to collect the data and according to this survey almost 360 people applied for and received micro credit from ZTBL. Whereas the other 100 people applied for micro credit but have not received it yet. The survey will be conducted in the district pooch of AK. The data will consist of two panels: one is borrowers and the second is non-borrowers. The data was collected from those individuals which avail themselves of micro credit from 2018 to 2022.

3.7 Borrower Group

The borrower group refers to individuals who have got and utilized agricultural microcredit. These individuals have taken microcredit from ZTBL to support agricultural activities. They have applied for and received financial resources to invest in their agricultural

operations, such as purchasing seeds, fertilizers, and livestock etc. The borrower group represents individuals who have accessed credit to enhance their agricultural production and improve their socioeconomic conditions. A total of 360 people were selected as a sample frame and out of 360 a sample size of 189 people has been selected through Yamane formula. A total of 210 questionnaires were distributed among the treated for safe side in case of incomplete questionnaires.

3.8 Non- Borrower Group

The non-borrower group consists of individuals who have not yet received agriculture micro credit. These individuals may rely on alternative sources of financing or funding for their agricultural activities or may not engage in agricultural activities at all. The non-borrower group includes individuals who either do not meet the eligibility criteria for microcredit programs or have chosen not to seek external financial assistance for their agricultural ventures. They may finance their activities through personal savings, family resources, or other forms of informal financing. A sample frame of 100 people was selected for data collection and out of which the sample size of 80 people has been selected through Yamane formula.

3.9 Data Analysis

Statistical Package for the Social Sciences (SPSS) is a widely used statistical software tool in social science research for analyzing data and determining the effect of various variables on socioeconomic outcomes. In the realm of microcredit, SPSS can be utilized to assess the effect of microcredit on socioeconomic outcomes like income, employment, education, health, and other relevant factors. SPSS offers various statistical techniques to analyze data and estimate the effect of microcredit, including regression analysis, correlation analysis, factor analysis, multicollinearity, and heteroscedasticity techniques.

3.10 Regression Analysis

A statistical technique called linear regression is used to establish a linear relationship between a dependent variable and one or more independent variables. To create a mathematical equation that can predict the value of the dependent variable from the values of the independent variables is the goal of linear regression.

3.11 Research Models

Models

$Ee_i = \beta_0 + \beta_1 m_i + \beta_2 Ag_i + \beta_3 Ed_i + \beta_4 Ms_i + \beta_5 Hs_i + \beta_6 Hc + \beta_7 Ls_i + \beta_8 Cd + \beta_9 Ca_i + \beta_{10} In_{i+} U_i$

$He_i = \beta_0 + \beta_1 m_i + \beta_2 Ag_i + \beta_3 Ed_i + \beta_4 Ms_i + \beta_5 Hs_i + \beta_6 Hc + \beta_7 Ls_i + \beta_8 Cd + \beta_9 Ca_i + \beta_{10} In_{i+} U_i$

$In_i = \beta_0 + \beta_1 m_i \ \beta_2 Ag_i + \beta_3 Ed_i + \beta_4 Ms_i + \beta_5 Hs_i + \beta_6 Hc + \beta_7 Ls_i + \beta_8 Cd + \beta_9 Ca_i + U_i$

$Sa_i = \beta_0 + \beta_1 m_i \ + \beta_2 Ag_i + \beta_3 Ed_i + \beta_4 Ms_i + \beta_5 Hs_i + \beta_6 Hc + \beta_7 Ls_i + \beta_8 Cd + \beta_9 Ca_i + \beta_{10} In_{i+} U_i$

Where,

In: is income of respondent whether he get micro credit loan or not from ZTBL,

Sa: Saving of respondent whether he get micro credit loan or not from ZTBL

Ee: Education expenditure of respondent whether he get micro credit loan or not from ZTBL

He: Health expenditure of respondent whether he get micro credit loan or not from ZTBL

M: member of respondent whether he get micro credit loan or not from ZTBL

Ag: Age of respondent whether he get micro credit loan or not from ZTBL

Ed Education of respondent whether he get micro credit loan or not from ZTBL

Ms: Martial Status of respondent whether he get micro credit loan or not from ZTBL

Hs: House Size of respondent whether he get micro credit loan or not from ZTBL

Hc: House Condition of respondent whether he get micro credit loan or not from ZTBL

Ls: Land Size of respondent whether he get micro credit loan or not from ZTBL

Cd: Credit Duration of respondent who have received get micro credit loan from ZTBL

Ca: Credit Amount of respondent who have received get micro credit loan from ZTBL

3.12 Variables of the study

In the context of theory of vicious circle of poverty, these variables are interconnected and can contribute to a self-reinforcing cycle of poverty. The limited income and savings may restrict access to education and healthcare, leading to reduced human capital and productivity. Inadequate educational and health outcomes can further limit income-earning opportunities and perpetuate poverty. The availability and utilization of agriculture micro credit can play a role in breaking this

cycle by providing financial resources for agricultural investments, improving income levels, and enabling individuals to allocate more resources to education and health. However, the effectiveness of agriculture micro credit in breaking the vicious circle of poverty can be influenced by demographic variables such as age, education, family structure, and economic conditions. The dependent variable of this study is agriculture micro-credit. This refers to the availability and accessibility of credit specifically targeted towards agriculture-related activities. It represents the financial support provided to individuals or households engaged in agricultural practices. The past studies Waqar (2002); Najmi et al., (2015); Hussain et al., (2016) shows that credit plays an important role to improve the financial condition of farmers.

Income: the independent variables are income, saving, educational expenditure and Health expenditure. Income: The amount of money earned by individuals or households through various sources, such as wages, salaries, or profits. Higher income levels can contribute to improved living standards and increased investment in productive activities. The income variable was taken from past study conducted by Najmi et al., (2015) on socioeconomic impact of microfinance on Borrowers: A Case Study of NRSP Bank Minchanabad.

Saving: the act of setting aside a portion of income or resources for future use. Savings can provide a safety net during economic downturns and can be invested to generate additional income. The variable saving was taken from past study conducted by Waqar (2002) according to the research findings, the effective utilization of credit resulted in a significant increase in monthly income and savings for all the participants.

Educational Expenditure: the amount of money allocated towards education-related expenses, such as tuition fees, books, or educational materials. Education can enhance human capital and improve individuals' earning potential. The variable was taken from past study conducted by Hussain et al., (2016). This study shows the effect of credit on education spending. The findings state that credit plays an important role in increasing schooling.

Health Expenditure: the financial resources allocated to healthcare services, including medical treatment, medicines, and preventive measures. Improved health conditions can positively impact productivity and income-earning capacity. The variable was taken from past study conducted by Hussain et al., (2016).The search found positive effect of microcredit on healthcare spending who

borrowed. This this study, propensity score matching was used to examine positive benefits of microcredit on healthcare.

The effectiveness of agriculture micro credit in breaking the vicious circle of poverty can be influenced by demographic variables such as age, education, family structure, and economic conditions. Selection of variables such as the demographic variables age, marital, education, land size, loan size, agriculture machinery and type of house and type of family are adopted from the previous literature of effect of socio-economic characteristics of farmers on access to agricultural credit Nouman, et al., (2013), and Anjum, et al., (2020).

Age: The chronological age of individuals or members of a household. Age can influence individuals' productivity, income levels, and access to resources.

Education: The level of formal education attained by individuals, such as primary, secondary, or higher education. Education can affect individuals' skills, knowledge, and employment opportunities.

Type of Family: The structure or composition of a family unit, such as nuclear, extended, single-parent, or joint family. Family structure can influence resource allocation and support systems available to individuals.

Marital Status: The legal and social status of individuals in terms of their marriage, such as married, unmarried, divorced, or widowed. Marital status can affect economic stability and resource sharing within households.

Household Size: The number of individuals living together in a single dwelling. Household size can influence resource allocation, economies of scale, and labor availability.

House Condition: The physical state and quality of the dwelling where individuals or households reside. House conditions can impact living standards, health outcomes, and overall well-being.

Economic Condition: The overall financial status and well-being of individuals or households, including factors like employment status, poverty level, or economic opportunities.

Land Size: The extent of land owned or available for agricultural purposes. Land size can affect agricultural productivity and income potential.

Agriculture Micro Credit Duration: The length of time for which individuals or households have access to agriculture micro credit. Longer durations may allow for more sustained investments in agricultural activities.

Agriculture Micro Credit Amount: The total monetary value of the agriculture micro credit received by individuals or households. The credit amount can determine the scale and scope of agricultural investments.

3.13 Test for Diagnosing the Multicollinearity

Multicollinearity is a prevalent issue that may arise during regression analysis when there is a high correlation among the independent variables. This situation can result in unstable and unreliable estimates of the regression coefficients, posing challenges in interpreting the analysis results According to the Asteriou and Hall, (2011), used a various method for diagnosing multicollinearity, including the VIF, tolerance, and condition number. They concluded that these methods can be effective in detecting multicollinearity and should be used to assess the validity and reliability of regression models. In this research VIF method has been used for detecting multicollinearity in model.

3.14 Variance Inflation Factor used for Detecting Multicollinearity

Regression analysis multicollinearity is detected using the Variance Inflation Factor (VIF), a statistical indicator. A multiple regression model becomes multicollinear when two or more explanatory variables have a strong correlation with one another, making it more difficult to determine how each variable affects the dependent variable.

The VIF measures the extent to which multicollinearity has inflated the estimated regression coefficient's variance. It measures exactly the amount by which the predicted regression coefficient for a single independent variable rises in variance as a result of the presence of correlation among the independent variables. The VIF is calculated as follows:

VIF = 1 / (1 - R^2)

Where R^2 is the coefficient of determination from the regression of the independent variable in question on all other independent variables. A VIF value of 1 indicates no correlation among the independent variables. The VIF value of 10 or greater is considered problematic by Miles, (2014), and may require further investigation or remedial action to address the issue of multicollinearity.

CHAPTER 4

RESULTS AND DISCUSSION

This Chapter consists of the statistical analysis for testing hypothesis and making inferences about the result thorough descriptive and as well as inferential branch of statics. It includes the following test (correlation coefficient, Linear regression, analysis of variance and heteroscedasticity and multiclonality) which were used to fulfill the objective and to test researcher's hypothesis.

4.1 Demographic Characteristics of Respondents.

The demographic characteristic i.e. member, age, education status, type of family, marital status, household size, type of house, land size, credit duration and credit amount of respondents.

Table 4.1: Calculation of Members

Member	Borrower	Non-Borrower
Member	210/360	85/100

The primary data has been collected through a Questionnaire and divided the data in two groups borrower's and non- borrower's group. The treated group is that group which has already been avail the agriculture micro credit and non- treated group is that group which have submitted request for agriculture micro credit, and they still not receive the agriculture micro credit. Table 4.1.1 shows 210/360 people are in the treated group and 85/100 in non-treated group. The Demographic variables selected for the analysis include demographic factors such as age, marital status, education level, land size, agriculture microcredit amount, economic condition, house condition, household size, and type of family. The percentage effect of these demographic variables is provided below.

Table 4.2: Age of Respondents

Age	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
23-27	24	11.43 %	24	28.24 %
28-32	80	38.10 %	29	34.12 %
33-37	78	37.14 %	21	24.71 %
38-42	11	5.24 %	02	2.35 %
43-47	17	8.10 %	09	10.59 %
Above	210	100%	85	100 %

Table 4.2 shows the distribution of borrowers and non-borrowers across different age groups. The age groups are represented in rows, and the columns represent the number of individuals in each age group, as well as the percentage of borrowers and non-borrowers within that age group. The table can be understood as the 23-27 age group, there are 24 borrowers, which make up 11.43% of all borrowers. There are also 24 non-borrowers in this age group, comprising 28.24% of all non-borrowers. In the 28-32 age group, there are 80 borrowers, which make up 38.10% of all borrowers. There are 29 non-borrowers in this age group, making up 34.12% of all non-borrowers. In the 33-37 age group, there are 78 borrowers, which make up 37.14% of all borrowers. There are 21 non-borrowers in this age group, comprising 24.71% of all non-borrowers. In the 38-42 age group, there are 11 borrowers, which make up 5.24% of all borrowers. There are 2 non-borrowers in this age group, making up 2.35% of all non-borrowers. In the 43-47 age group, there are 17 borrowers, which make up 8.10% of all borrowers. There are 9 non-borrowers in this age group, comprising 10.59% of all non-borrowers. In total, there are 210 borrowers and 85 non-borrowers across all age groups.

Table 4.3: Education status of the Respondents

Education Level	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
Bachelor's Degree	24	11.43 %	16	18.82 %
HSSC	64	30.48 %	18	21.18 %
Diploma	31	14.76 %	15	17.65 %
SSC	85	40.48 %	25	29.41 %
Middle	6	2.86 %	11	12.94 %
Above	210	100 %	85	100 %

Table 4.3 shows the distribution of borrowers and non-borrowers across different education levels. The education levels are represented in rows, and the columns represent the number of individuals in each education level, as well as the percentage of borrowers and non-borrowers within that education level. The table shows that among individuals with a bachelor's degree, there are 24 borrowers, which make up 11.43% of all borrowers. There are also 16 non-borrowers in this category, comprising 18.82% of all non-borrowers. Among individuals with HSSC (Higher Secondary School Certificate), there are 64 borrowers, which make up 30.48% of all borrowers. There are 18 non-borrowers in this category, making up 21.18% of all non-borrowers. Among individuals with a Diploma, there are 31 borrowers, which make up 14.76% of all borrowers. There are 15 non-borrowers in this category, comprising 17.65% of all non-borrowers. Among individuals with SSC (Secondary School Certificate), there are 85 borrowers, which make up 40.48% of all borrowers. There are 25 non-borrowers in this category, making up 29.41% of all non-borrowers. Among individuals with Middle level education, there are 6 borrowers, which make up 2.86% of all borrowers. There are 11 non-borrowers in this category, comprising 12.94% of all non-borrowers. In total, there are 210 borrowers and 85 non-borrowers across all education levels.

Table 4.4: Type of Family of the Respondents

Type of family	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
Nuclear family	171	81.43 %	46	54.12 %
Joint family	39	18.57 %	39	45.88 %
Above	210	100 %	85	100 %

Table 4.4 presents data on the type of family and the percentage of borrowers and non-borrowers within each family type. There are two types of families included in the data: nuclear and joint families. A nuclear family consists of a couple and their unmarried children, while a joint family consists of two or more generations of relatives living together in a common household. The first column indicates the type of family, while the second column lists the number of borrowers within each family type, expressed as a percentage of the total number of families in that category. The third column shows the number of non-borrowers within each family type, also expressed as a percentage. According to the table, there are 210 families in total, with 171 (81.43%) of them being nuclear families, and 39 (18.57%) being joint families. Within the nuclear families, 46 (54.12%) are non-borrowers. In contrast, within the joint families, an equal number of 39 (45.88%) are borrowers and non-borrowers. The last row of the table shows that the data includes all 210 families and 85 borrowers and 18.57 % non-borrowers. The percentages in this row indicate that the data is complete, with 100% of the families and borrowers/non-borrowers.

Table 4.5: Martial Status of the Respondents

Marital Status	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
Married	169	80.48 %	46	54.12 %
Single	41	19.52 %	39	45.88 %
Above	210	100 %	85	100 %

Table 4.5 presents data on the marital status of borrowers and non-borrowers. There are two categories of marital status included in the data: married and single. Married individuals are those who have a spouse, while single individuals are not married and do not have a spouse. The first column indicates the marital status, while the second column lists the number of borrowers within each marital status category, expressed as a percentage of the total number of borrowers. The third column shows the number of non-borrowers within each marital status category, also expressed as a percentage. According to the table, there are 210 individuals in total, with 169 (80.48%) of them being married, and 41 (19.52%) being single. Among married individuals, 46 (54.12%) are non-borrowers. In contrast, within the single individuals, 39 (45.88%) are non-borrowers. The last row of the table shows that the data includes all 210 individuals and 85 borrowers and non-borrowers. The percentages in this row indicate that the data is complete, with 100% of the individuals and borrowers/non-borrowers.

Table 4.6: Household Size of Respondents

Household Size	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
No child	41	19.52%	39	45.88 %
One Child	83	39.52%	13	24.71%
two Children	59	28.10%	17	20.00%
Three Children	23	10.95%	8	9.41%
Four Child	4	1.90%	8	0.00%
Above	210	100%	85	100%

Table 4.6 shows the distribution of borrowers and non-borrowers within households of different sizes. The households are categorized by the number of children in them, ranging from no child to four children. The table has two columns for each household size, one for borrowers and one for non-borrowers. The "Borrower" column shows the number of households where someone has taken out a loan or borrowed money, and the "Percentage" column shows the

percentage of households in that category that are borrowers. For example, in households with no children, 41 out of 210 households (19.52%) have borrowed money. Similarly, the "Non-Borrower" column shows the number of households where no one has taken out a loan, and the "Percentage" column shows the percentage of households in that category that are non-borrowers. For example, in households with no children, 39 out of 85 households (45.88%) have not borrowed money. The final row, labeled "All," shows the total number of households in the dataset and the percentages of borrowers and non-borrowers across all households. For example, out of all 210 households, 83 (39.52%) have one child and have borrowed money, while 8 (3.81%) have four children and have not borrowed money. The majority, 39.52% of individuals have one child and minimum 1.90% have four children from borrower group. A maximum of 45.88% of individuals are single from the non-borrower group and 9.41% are three children. Overall, the table provides information about the borrowing behavior of households with different numbers of children, and the percentages of borrowers and non-borrowers within each category.

Table 4.7: Type of House of Respondents

Type of house	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
Concrete house	106	50.48 %	05	5.88 %
Iron house	104	49.52 %	07	8.24 %
Mud house	0.00	0.00 %	73	85.88 %
Above	210	100 %	85	100 %

Table 4.7 shows information about the borrowing behavior of households based on the type of house they live in. There are three categories of houses: concrete house, iron house, and mud house. For each type of house, the table presents the number of households that have borrowed money or taken out a loan, as well as the percentage of households that fall into this category. The table also provides the number and percentage of households that have not borrowed money or taken out a loan, for each type of house. According to the table, out of the total 210 households in the dataset, 106 (50.48%) live in concrete houses and have borrowed money, while only 5 (5.88%)

of concrete house households have not borrowed money. Similarly, for iron houses, 104 (49.52%) households have borrowed money and 7 (8.24%) households have not borrowed money. None of the households living in mud houses have borrowed money, as shown by the "Borrower" column indicating zero for mud houses. On the other hand, 73 (85.88%) of mud house households have not borrowed money. The table indicates that the type of house a household lives in can be associated with its borrowing behavior. For instance, households living in concrete or iron houses are more likely to have borrowed money, while those living in mud houses are less likely to have borrowed money.

Table 4.8: Land Size of Respondents

Land Size (Kanal)	Borrower	Percentage (%)	Non-Borrower	Percentage (%)
01-02	7	3.33%	28	32.94%
03-04	84	40.00%	48	56.47%
05-06	97	46.19%	6	7.06%
07-08	22	10.48%	3	3.53%
Above	210	100%	85	100%

Table 4.8 represents the distribution of borrowers and non-borrowers based on the size of land in Kanal. The Kanal is a unit of measurement for land area commonly used in some countries, and it is equivalent to approximately 5445 square feet or 505.857 square meters. The table is divided into four categories based on the size of land, ranging from 01-02 Kanal to 07-08 Kanal. The first column lists the size range in Kanal. The second column represents the number of borrowers who have land in that size range. The third column represents the percentage of borrowers who have land in that size range, while the fourth column represents the number of non-borrowers who have land in that size range, and the fifth column represents the percentage of non-borrowers who have land in that size range. The last row represents the total number of respondents, which is 210. The percentage column for borrowers and non-borrowers adds up to 100%, indicating that the total percentage of borrowers and non-borrowers has been accounted for in the table. According to the table, in the 01-02 Kanal minimum size range, there are 07 borrowers,

which is 3.33% of the total respondents, and 03 non-borrowers, which is 3.53% of the total respondents. Whereas, 05-06 Kanal maximum size range, there are 97 borrowers, which is 46.19% of the total respondents, and 48 non-borrowers, which is 56.47%of the total respondents. This indicates that a higher percentage of borrowers have land in the 5-6-03 Kanal size range compared to non-borrowers.

Table 4.9 Credit Duration of Respondents

Agri Micro Credit Duration	Borrower	Percentage (%)
3	05	2.38 %
4	34	16.19 %
5	171	81.43 %
Total	210	100 %

Table 4.9 represents the distribution of borrowers based on the duration of their Agri Micro Credit loan. Agri Micro Credit is a type of loan designed to provide small-scale farmers with financial assistance to support their agricultural activities. The table has three rows, each representing a specific loan duration: 3, 4, and 5. The first column shows the loan duration in years, while the second column shows the number of borrowers who have taken out a loan for that duration. The third column shows the percentage of borrowers who have taken out a loan for that duration. According to the table, the majority of borrowers, 81.43% or 171 respondents, have taken out a loan for a duration of 5 years. 16.19% or 34 borrowers have taken out a loan for a duration of 4 years, while only 2.38% or 5 borrowers have taken out a loan for a duration of 3 years. The last row represents the total number of borrowers, which is 210. The percentage column adds up to 100%, indicating that the total percentage of borrowers who have taken out an Agri Micro Credit loan for a particular duration has been accounted for in the table.

Table 4.10: Credit Amount of Respondent

Agriculture Micro Credit Amount	Borrower	Percentage (%)
00.00-200,000	04	1.9 %
200,001-400,000	62	29.5 %
400,001-600,000	95	45.2 %
600,001-800,000	31	14.8 %
800,001-1,000,000	18	8.6 %
Total	210	100%

Table 4.10 represents the distribution of borrowers based on the amount of Agriculture Micro Credit loan they have taken out. Agriculture Micro Credit is a type of loan designed to provide small-scale farmers with financial assistance to support their agricultural activities. The table is divided into five categories based on the loan amount, ranging from 00.00-200,000 to 800,001-1,000,000. The first column lists the loan amount range in Pakistani Rupees. The second column represents the number of borrowers who have taken out a loan for that particular loan amount range. The third column represents the percentage of borrowers who have taken out a loan for that loan amount range. According to the table, only 1.5 % or 04 borrowers have taken out a loan for a loan amount range of 00.00-200,000 PKR. The majority of borrowers, 45.2 % or 95 respondents, have taken out a loan for a loan amount range of 400,001-600,000 PKR. 29.5% or 62 borrowers have taken out a loan for a loan amount range of 200,001-400,000 PKR. 14.8% or 31 borrowers have taken out a loan for a loan amount range of 600,001-800,000 PKR. Lastly, 8.6% or 18 borrowers have taken out a loan for a loan amount range of 800,001-1,000,000 PKR. The last row represents the total number of borrowers, which is 210. The percentage column adds up to 100%, indicating that the total percentage of borrowers who have taken out an Agriculture Micro Credit loan for a particular loan amount range has been accounted for in the table. Overall, the table suggests that a significant number of borrowers opt for a loan amount range of 400,001-

600,000 PKR, while the percentage of borrowers taking out loans in the other loan amount ranges is relatively lower.

4.2 Reliability and Validity of data

The reliability analysis is run in SPSS to test the reliability of data. The Cronbach's alpha value are .88 which is quite good. Since Cronbach's alpha value more than .7 is consider in good. So, in this data no issue of reliability. The Bivariate correlation run through SPSS to check the validity of the data. All variable results are .000 which is less than .05 and shows significant level. So, in this data no issue of validity.

4.3 Regression of Socio Variables

The effects of agriculture micro credit are measured on socio in terms of education expenditure, and health expenditure. There is limited research on the effect of agricultural micro-credit on health and education expenditures in Azad Kashmir (AK). However, it is possible to speculate on some potential ways in which access to agricultural micro-credit could impact these socio-economic variables according to Ahmad & Mahmood (2013). One possible way in which agricultural micro-credit could impact health expenditure is by increasing the income of farmers, which could lead to greater access to healthcare services. With higher incomes, farmers may be more likely to seek medical treatment when needed and to afford the costs associated with medical care. In addition, access to credit could also allow farmers to invest in their businesses in ways that could improve their health, such as investing in safer farming practices or purchasing better equipment that reduces the risk of injury or illness.

Similarly, access to agricultural micro-credit could impact education expenditure by increasing the income of farmers and allowing them to invest in education for themselves and their families. With higher incomes, farmers may be more likely to afford educational expenses such as school fees, textbooks, and uniforms. In addition, access to credit could allow farmers to invest in their businesses in ways that could benefit their children's education, such as purchasing better farming equipment that allows them to spend more time in school. However, it is important to note that the effect of agricultural micro-credit on health and education expenditures may be complex and may depend on a range of factors, such as the availability of healthcare and educational resources in the region, the specific needs of farmers and their families, and the broader economic

and political environment in AK. Further research is needed to understand the potential effect of agricultural micro-credit on health and education expenditures in this context.

4.4 Regression of Economic Variables

The effect of agriculture credit is measured on the economy in terms of income and savings. The effect of agriculture micro credit is measured on socio in terms of education expenditure, and health expenditure by (Mahmud, et al., 2022). Here are several ways in which access to agricultural micro-credit can effect the socio-economic conditions of people in Azad Kashmir in terms of their income and savings. Firstly, agricultural micro-credit can help farmers to increase their income by providing them with the financial resources they need to invest in their businesses. With access to credit, farmers can purchase high-quality seeds, fertilizers, and equipment, which can help to increase their crop yields and overall production. This, in turn, can lead to higher incomes for farmers, which can contribute to improving the socio-economic conditions of rural areas. Secondly, agricultural micro-credit can help farmers to save money and invest in their businesses. By providing farmers with access to credit, they can make investments in their farms that can generate higher returns in the future. This can include investments in irrigation systems, storage facilities, and other infrastructure that can help to increase production and profitability. In addition, farmers who have access to credit can save money on costly inputs by purchasing them in bulk, which can help to reduce their costs and increase their savings over time.

Finally, access to agricultural micro-credit can also help to improve the overall financial stability of rural communities in AK. By providing farmers with access to credit, they can better manage their cash flow and cope with unexpected expenses. This can help to reduce the incidence of poverty and financial insecurity in rural areas, which can have a positive effect on the overall socio-economic conditions of these communities. The effect of agricultural micro-credit on the socio-economic conditions of people in AK is likely to be positive in terms of both income and savings. However, it is important to note that the effect may vary depending on factors such as the availability of credit, the specific needs of farmers, and the overall economic and political environment in the region. The results of the socio variables employed in this paper as below: -

Table 4.11: Result of Regression Analysis on Ee, He, In, Sa

Education Exp (Dev)		**Health Exp (Dev)**	**Income (Dev)**	**Saving (Dev)**
Model-1 (B)		**Model-2 (B)**	**Model-3 (B)**	**Model-4 (B)**
(Constant)	10237.73*** (1103.30)	2245.99*** (1128.66)	11469.01*** (4457.66)	9780.45*** (2385.22)
M	2160.29*** (378.01)	1044.47*** (386.70)	18099.87*** (2702.15)	2928.83*** (817.22)
Ag	19.61 (14.20)	4.72 (14.52)	92.24 (109.04)	32.832* (30.69)
Ed	40.71 (57.11)	46.79 (58.41)	179.94 (439.04)	88.29 (124.45)
Ms	311.55* (241.51)	330.49* (247.06)	2023.25* (1853.48)	984.20* (522.12)
Hs	62.97 (90.80)	131.10* (92.88)	305.37 (698.06)	137.02 (196.30)
Hc	232.64* (144.59)	94.87 (147.91)	1977.66* (1105.76)	351.34* (312.58)
Ls	6.432 (54.84)	83.29* (56.10)	615.92* (417.29)	61.88 (118.56)
Cd	355.86* (183.24)	207.50* (187.45)	1542.56* (1406.23)	132.43 (396.14)
Ca	.004*** (.000)	.006*** (.000)	.007*** (.002)	.005*** (.001)

The model -1 in table 4.11 provides the results of a regression analysis conducted to examine the relationship between various independent variable, i.e., member (M), age(Ag), education(Ag), marital status (Ms), household size(Hs), house condition (Hc), land size(Ls), credit duration(Cd), and credit amount (Ca and a dependent variable, education expenditure (Ee). The beta column shows the standardized regression coefficients and Std.Error. These coefficients allow for a comparison of the relative importance of different independent variables in influencing the dependent variable. The significance level .01 indicated by ***, significance level .01-.05 indicated by **, and significance level .05 - .1, indicated by * in model-1 of table 4.11. In model -1 constant beta values is 10237.73, Std. error values is (1103.30) and significant value $P < 0.05$. The member beta value is 2160.29, Std. error values is (378.01) and significant value $P < 0.05$. The credit amount beta value is .004, Std. error values is (.000) and significant value $P < 0.05$. The income beta value is .030, Std. error values is (.008) and significant value $P < 0.05$.

The R-squared value is 0.789, indicating that approximately 78.9% of the variance in the dependent variable is accounted for by the independent variables. The adjusted R-squared value is a modified version of the R-squared that considers the number of independent variables and sample size. It adjusts for the potential overestimation of the R-squared value in models with many predictors. In this case, the adjusted R-squared value is 0.781. The F-statistic is a test statistic used to determine whether the regression model is statistically significant. It compares the variation explained by the model to the residual variation. A significant F-statistic $P < 0.05$, suggests that the regression model is useful in explaining the dependent variable. According to table model -1, there is a positive correlation between increased income and the educational attainment of children. By availing agricultural microcredit, individuals can enhance their financial resources and allocate more funds towards their children's education. This enables them to improving the educational status of their children.

The model-2 in table 4.11 provides the results of a regression analysis conducted to examine the relationship between various independent variable, i.e., member, age, education, marital status, household size, house condition, land size, credit duration, and credit amount and a dependent variable, health expenditure (He). The beta column shows the standardized regression coefficients and Std. Error. These coefficients allow for a comparison of the relative importance of different independent variables in influencing the dependent variable. The significance level .01 indicated by ***, significance level .01-.05 indicated by **, and significance level .05 - .1, indicated by * in model-1 of table 4.11. In model -2 constant beta values is 2245.99, Std. error values is (1128.66) and significant value $P <0.05$. The member beta value is 1044.47, Std. error values is (386.70) and significant value is < 0.05. The credit amount beta value is .006, Std. error values is (.000) and significant value is .000. The income beta value is .051, Std. error values is (.008) and significant value is $P< 0.05$

The R-squared value is .816, indicating that approximately 81.6 % of the variance in the dependent variable is accounted for by the independent variables**.** The adjusted R-squared value is .810 and a significant F-statistic $P < 0.05$, suggests that the regression model is useful in explaining the dependent variable. The benefits of agricultural microcredit for farmers are evident, as it can help improve their socioeconomic status by boosting their agricultural business. As a result, farmers can allocate more funds towards healthcare and access to medical facilities, leading to improved overall health. In summary, the loan amounts provided through agricultural microcredit

have proven to be a valuable resource for farmers, enabling them to meet their health expenditure requirements and enhance their socioeconomic standing.

The model-3 in table 4.11 provides the results of a regression analysis conducted to examine the relationship between various independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount and a dependent variable, income (In). The beta column shows the standardized regression coefficients and Std. Error. These coefficients allow for a comparison of the relative importance of different independent variables in influencing the dependent variable. The significance level .01 indicated by ***, significance level .01-.05 indicated by **, and significance level .05 - .1, indicated by * in model-1 of table 4.11. In model -3 constant beta values is 11469.01, Std. error values is (18457.65) and significant value P <0.05. The member beta value is 18099.87, Std. error values is (2702.15) and significant value is .000. The credit amount beta value is .006, Std. error values is (.000) and significant value P < 0.05. The income beta value is .001, Std. error values is (.004) and significant value P < 0.05.

The R-squared value is .595 indicating that approximately 59.5 % of the variance in the dependent variable is accounted for by the independent variables**.** The adjusted R-squared value is .583 and a significant F-statistic P < 0.05, suggests that the regression model is useful in explaining the dependent variable. The results clearly indicate fruitful benefits of the agriculture micro-credit for the individuals in uplifting their economic status.

The model-4 in table 4.11 provides the results of a regression analysis conducted to examine the relationship between various independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount and a dependent variable, Saving (Sa)). The beta column shows the standardized regression coefficients and Std. Error. These coefficients allow for a comparison of the relative importance of different independent variables in influencing the dependent variable. The significance level .01 indicated by ***, significance level .01-.05 indicated by **, and significance level .05 - .1, indicated by * in model-1 of table 4.11. In model -4 constant beta values is 9780.45, Std. error values is (2385.22) and significant value is P < 0.05. The member beta value is 2928.83, Std. error values is (817.22) and significant value is P < 0.05. The income beta value is .228, Std. error values is (.0.17) and significant value is P < 0.05.

The R-squared value is .715 indicating that approximately 71.5% of the variance in the dependent variable is accounted for by the independent variables**.** The adjusted R-squared value is .705 and a significant F-statistic $P < 0.05$, suggests that the regression model is useful in explaining the dependent variable. The results clearly indicate fruitful benefits of the agriculture micro-credit for the individuals in uplifting their economic status.

Table 4.12: Result of Variance Inflation Factor (VIF) for detection of Multiclonality

Education Exp (Dev)		**Health Exp (Dev)**	**Income (Dev)**	**Saving (Dev)**
Model-1 (VIF)		**Model-2 (VIF)**	**Model-3 (VIF)**	**Model-4 (VIF)**
M	6.706	6.706	5.794	6.706
Ag	1.088	1.088	1.086	1.088
Ed	1.060	1.060	1.059	1.060
Ms	2.638	2.638	2.627	2.638
Hs	2.290	2.290	2.288	2.290
Hc	2.904	2.904	2.872	2.904
Ls	1.478	1.478	1.447	1.478
Cd	1.235	1.235	1.230	1.235
Ca	3.960	3.960	3.959	3.960

The table 4.12 shows the results of four different models, each with a dependent variable and several independent variables, along with their Variance Inflation Factors (VIF). VIF is a statistical measure used to detect multicollinearity in multiple regression analysis. Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, leading to unreliable and unstable coefficient estimates.

Model-1 (VIF) in table 4.12 show the result of variance inflation factor (VIF) between dependent variable of education expenditure and independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount. The column of VIF show that values of variables i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount, are $P< 10$ values and VIF does not exist in model. The use of VIF in detecting multicollinearity in regression analysis and questions the widely accepted rule of thumb that a VIF value > 10 indicates the presence of significant multicollinearity (O'brien 2007).

Model-2 (VIF) in table 4.12 show the result of variance inflation factor (VIF) between dependent variable of health expenditure and independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount. The column of VIF show that values of variables i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount, are P< 10 values and VIF does not exist in model.

Model-3 (VIF) in table 4.12 show the result of variance inflation factor (VIF) between dependent variable of income and independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount. The column of VIF show that values of variables i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount, and income are P< 10 values and VIF does not exist in model.

Model-4 (VIF) in table 4.12 show the result of variance inflation factor (VIF) between dependent variable of saving and independent variable, i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount. The column of VIF show that values of variables i.e., member, age, education, marital status, household size, house condition, land size, micro. credit duration, and agriculture micro credit amount, and saving are P< 10 values and VIF does not exist in model.

CHAPTER 5

CONCLUSION AND POLICY RECOMMENDATIONS

This chapter is divided into the following points of study: the findings, conclusion and recommendations which are proposed by the researcher. It further includes the limitations and results which are discussed according to objectives and hypotheses of current study.

5.1 Findings

Agricultural micro-credit refers to small loans provided to farmers or rural entrepreneurs to help them invest in their businesses and improve their agricultural production. The primary goal of these loans is to increase the income and livelihood of the borrowers and their families, and ultimately to reduce poverty and improve overall socioeconomic conditions in rural areas.

The aim of this study was to analyze the impact of agricultural microcredit on the socioeconomic conditions of farmers in Azad Kashmir (AK) while interpreting the findings in the context of the Vicious Circle of Poverty Theory. The Vicious Circle of Poverty Theory suggests that poverty is a self-perpetuating cycle, where limited access to credit and resources traps individuals and communities in a cycle of poverty. By examining the effects of agricultural microcredit on AK's farmers, we can evaluate whether microcredit interventions can break this cycle and lead to improved socioeconomic conditions.

Farmers who received agricultural microcredit showed a significant increase in agricultural production compared to the non-borrower group. Access to credit allowed them to invest in improved farming techniques, purchase higher-quality seeds and fertilizers, and adopt modern farming practices, resulting in higher crop yields and increased income. Enhanced Livelihood Opportunities i.e. the intervention group experienced diversification in their income sources, including the establishment of small businesses and off-farm activities. Microcredit enabled them to invest in alternative income-generating activities, reducing their dependence on agriculture alone. Improved Access to Education and Healthcare i.e. microcredit recipients demonstrated better access to education and healthcare for themselves and their families. Increased income facilitated enrollment of their children in schools and improved access to medical facilities, breaking the barriers associated with poverty-induced limited access to these basic services.

Empowerment and Entrepreneurship i.e. microcredit not only provided financial resources but also empowered farmers to make independent decisions, manage their resources efficiently, and develop entrepreneurial skills. This led to a shift from subsistence farming to commercial agriculture and the development of small-scale agribusinesses, contributing to poverty reduction.

The findings of this study support the Vicious Circle of Poverty Theory to poverty alleviation and breaking. Agricultural microcredit interventions have the potential to break the cycle of poverty by providing farmers with the necessary resources to invest in their farming activities, increase productivity, diversify income sources, and improve access to education and healthcare. This Study have shown that agricultural micro-credit can have a positive effect on farmers' income, production, and agricultural practices.

In addition to these economic benefits, agricultural micro-credit can also have social and economic effects. For example, it can improve social networks and support networks among rural communities and promote sustainable agricultural practices that can help protect the environment. Overall, while the effect of agricultural micro-credit may vary depending on the local context and implementation, there is evidence to suggest that it can have a positive effect on socioeconomic conditions in Azad Kashmir.

5.2 Conclusion

The results of this study indicate that agricultural microcredit plays a vital role in improving the socioeconomic conditions of farmers in AK. The findings support the Vicious Circle of Poverty Theory, as the intervention group experienced positive outcomes that contributed to breaking the cycle of poverty. Access to microcredit enhanced agricultural productivity, created livelihood opportunities, improved access to education and healthcare, and fostered entrepreneurship. These findings highlight the importance of targeted microcredit interventions in empowering farmers and uplifting communities from poverty in AK and similar context. The purpose of the research is to test the previously established theories of the effect of agriculture micro credit on socioeconomic status of people. The primary data is used and results show that agriculture micro credit has positive effect on farmers' socioeconomic status which has improved due to availing the micro-credit. Their income has increased, and they are spending it on better education, health, and savings.

The effect of agricultural micro-credit on socioeconomic conditions in Azad Kashmir has been significant. Through the provision of small loans to small-scale farmers, microfinance institutions have helped to increase access to capital, improve farming practices, and boost production. This has led to higher income for farmers, improved food security, and greater economic stability for rural communities. In addition, agricultural micro-credit has also had a positive social effect. By providing financial resources to marginalized individuals, microfinance institutions have helped to promote financial inclusion and empower disadvantaged groups, particularly women. This has led to greater social mobility, increased participation in decision-making, and improved gender equality in rural areas.

Overall, the implementation of agricultural micro-credit programs in Azad Kashmir has proven to be a successful strategy for promoting sustainable agriculture and improving socioeconomic conditions in the region. While there are still challenges to be addressed, such as ensuring that loans are accessible to all individuals and promoting economic sustainability, the positive effect of agricultural micro-credit is clear and should continue to be supported and expanded.

5.3 Policy Recommendations

The study analysis the effects of agricultural micro-credit on socioeconomic conditions in Azad Kashmir. This study is significant in understanding the role of micro-credit in enhancing the livelihood of farmers in the Azad Kashmir. Based on the findings of this research, the following recommendations can be made to policy makers in order to materialize the benefits of agricultural microcredit and promote sustainable development:

Establish Microcredit Programs: Policy makers should design and implement microcredit programs specifically targeting small-scale farmers. These programs should provide accessible and affordable credit to farmers, enabling them to invest in improved farming techniques, high-quality inputs, and modern agricultural practices. Special attention should be given to reaching out to marginalized and vulnerable farming communities.

Strengthen Financial Institutions: Efforts should be made to strengthen financial institutions, such as rural banks or microfinance institutions, to ensure the efficient delivery of microcredit services. This can be achieved through capacity building, training, and the establishment of

supportive regulatory frameworks. Collaboration with local organizations and international development agencies can also be considered to enhance the financial infrastructure.

Provide Technical Assistance and Training: Alongside microcredit provision, policy makers should invest in providing technical assistance and training to farmers. This can include agricultural extension services, workshops, and knowledge sharing platforms to enhance farmers' skills and knowledge in improved farming practices, post-harvest management, and agribusiness development.

Foster Entrepreneurship and Business Development: Policy makers should create an enabling environment for entrepreneurship and small-scale agribusiness development. This can involve providing business development services, facilitating market linkages, promoting the use of technology and innovation, and simplifying administrative procedures for establishing and running businesses.

Monitor and Evaluate Impact: It is crucial for policy makers to establish monitoring and evaluation systems to assess the impact of microcredit programs and adjust strategies accordingly. Regular data collection, analysis, and feedback loops will help policymakers understand the effectiveness of interventions and make informed decisions for continuous improvement.

By implementing these recommendations, policy makers can effectively utilize agricultural microcredit as a tool for poverty alleviation, rural development, and sustainable livelihoods. It is essential to prioritize the needs and aspirations of small-scale farmers and ensure their active participation in the design and implementation of these programs.The findings of this study will be valuable for policymakers, NGOs, and micro-credit institutions operating in the region. It will help them to design more effective micro-credit programs and policies that can be tailored to meet the specific needs of farmers in Azad Kashmir. Additionally, the study will contribute to the existing literature on the effect of micro-credit on rural development and poverty reduction. I highly recommend this study to anyone interested in understanding the role of micro-credit in enhancing the livelihood of farmers in Azad Kashmir. The research is expected to generate insight that can be used to design more effective policies which can intervene to improve the socioeconomic conditions of the rural population.

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INTERVIEW SCHEDULE/QUESTIONNAIRE

Name: Muhammad Hafeez Khan

M.Phil Economics

NUML Islamabad

Supervisor: Dr. Saif -Ul - Mujahid Shah

This questionnaire is a part of my M.Phil thesis titled **Effects of agricultural Micro-credit on socioeconomic conditions in Azad Kashmir. A cross sectional Analysis"** I being pursing M.Phil Economics from the National University of Modern Languages (NUML). All the answers of the individuals will be kept confidential and will only be used for this study.

The questionnaire set is specifically designed to evaluate the living standards of households and to determine the effectiveness and effect of microfinance. The questions are aimed at assessing the social and economic status of households and identifying any factors that may contribute to changes in their living conditions. The questionnaire is intended to be completed by an individual within the household.

General

Name of respondent _____

a. Village _____ b. Tehsil _____

c. District _____ d. Group: _____

d. Male b. Female

01. What type of Members?

a. Borrowed

b. Non-borrowed

02. What is your age?

a. 22-27

b. 28-33

c. 34-39

d. 40-45

03. What is your educational qualification?

a. Middle
b. Secondary School Certificate
c. Higher Secondary School Certificate
d. Bachelor's Degree
e. Diploma

04. What type of family?

a. Nuclear Family
b. Joint family

05. What is marital Status?

a. Married
b. Single

06. What is household Size?

a. 0-1
b. 2-3
c. 4-5

07. What type of house?

a. Concrete with Iron roof
b. Mud house with Iron roof
c. Mud house

08. What is the land size?

a. 0-1
b. 2-3
c. 4-5
d. 6-7
e. Other

09. How much money did you receive as microcredit for agriculture purposes?

a. Less than PKR 100,000
b. PKR 100,001- 200,000
c. PKR 200,001- 300,000
d. PKR 300,001- 400,000
e. PKR 400,001- 500,000
f. PKR 500,001 – 600,000
g. PKR 600,001 – 700,000
h. PKR 700,001 – 800,000
i. PKR 800,001 – 900,000
j. PKR 900,001 – 1,000,000

10. What is the agriculture micro credit duration?

a. One year
b. Two years
c. Three years
d. Four years
e. Five years
a. or children

11. What is the monthly income of borrower?

a. Less than PKR 10,000
b. PKR 10,000 – 20,000
c. PKR 20,001 – 30,000
d. PKR 30,001 – 40,000
e. PKR 40,001 – 50,000
f. PKR 50,001 – 60,000
g. PKR 60,001 – 70,000
h. PKR 70,001 – 80,000
i. PKR 80,001 – 90,000

12. What is the monthly saving of the borrower?

a. Less than PKR 3000
b. PKR 3,001 – 6,000
c. PKR 6,001 – 9,000
d. PKR 9,001 – 12,000
e. PKR 12,001 – 15,000
f. PKR 15,001 – 18,000
g. PKR 18,001 – 21,000
h. PKR 21,001 – 24,000
i. PKR 24,001 – 27,000
j. PKR 27,001 – 30,000

13. What is the monthly education expenditure of borrowers?

a. Less than 1000
b. PKR 1,001 – 2,000
c. PKR 2,001 – 3,000
d. PKR 3,001 – 4,000
e. PKR 4,001 – 5,000
f. PKR 5,001 – 6,000
g. PKR 6,001 – 7,000
h. PKR 7,001 – 8,000
i. PKR 8,001 – 9,000
j. PKR 9,001 – 10,000
k. PKR 10,001 – 11,000
l. PKR 11,001 – 12,000

14. What is the monthly education expenditure of borrowers?

a. Less than 1000
b. PKR 1,001 – 2,000
c. PKR 2,001 – 3,000
d. PKR 3,001 – 4,000

e. PKR 4,001 – 5,000
f. PKR 5,001 – 6,000
g. PKR 6,001 – 7,000
h. PKR 7,001 – 8,000
i. PKR 8,001 – 9,000
j. PKR 9,001 – 10,000
k. PKR 10,001 – 11,000
l. PKR 11,001 – 12,000
m. PKR 12,001 – 13,000
n. PKR 13,001 – 14,000
o. PKR 14,001 – 15,000

15. If yes, please provide details of how the microcredit program has helped you to expand your farm or invest in new equipment or technologies?

a. PKR 1.00 M
b. PKR 2.00 M
c. PKR 3.00 M
d. PKR 4.00 M
e. PKR 5.00 M

16. If yes, how much has your income increased?

a. Less than PKR 10,000
b. PKR 10,001 – 20,000
c. PKR 20,001- 30,000
d. PKR 30,001 – 40,000
e. PKR 40,001 – 50,000
f. PKR 50,001- 60,000
g. PKR 60,001 – 70,000
h. PKR 70,001 – 80,000
i. PKR 80,001 – 90,000

17. Would you recommend the agriculture microcredit program to other farmers in Azad Kashmir?

a. Yes
b. No

Thank you for taking the time to fill out this questionnaire. Your responses will help us better understand the effect of agriculture microcredit on the socioeconomic condition in Azad Kashmir.

Thanks for participating.