DETERMINANTS OF REPAYMENT OF ZTBL LOAN IN DISTRICT NOWSHERA (KPK), PAKISTAN

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CERTIFICATE

This is to certify that this thesis entitled **"Determinants of Repayment of ZTBL loan in District Nowshera (KPK), Pakistan"** submitted by **Ms. Fatima Bibi** is accepted in its present form by the School of Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Economics.

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ABSTRACT

Credit access and its repayments have been a challenge for both the lender and the borrower, and this has made financial bodies sceptical about giving out loans to entrepreneurs. The study examines the determinants of loan repayment among ZTBL borrowers in the Nowshera district of Khyber Pakhtunkhwa. The study presents empirical information on the farmer's loan payback performance as determined by demographic factors and also provides an explanation of the elements influencing credit repayment behavior. This study also looks into the institutional variables that are considered when loan cases are processed, as well as the farmer's ability to repay. In order to attain this, this study explores data from 115 loan borrowers of ZTBL belonging to the Nowshera district. For data analysis, descriptive statistics, t test and a binary logistic model are used.The findings indicate that financial factors were more important than demographic characteristics of agribusiness businesses in causing loan default. Financial institutions must ensure appropriate changes in financial factors to lower the loan default risk in the agriculture sector.

Keywords: Nowshera district, loan repayment, socio-economic factors, organizational factors, farm characteristics, ZTBL, t-test, Binary Logistic model

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LIST OF ABBREVIATIONS

AM Account Manager

AQS Asan Qarza Scheme

ADB Agriculture Development Bank

FI Financial Institution

GOP Gross Operating Profit

IR Interest Rate

KKS Kissan Khushhal Scheme

LR Loan Repayment

LPM Linear Probability Model

MFIs Micro Finance Institutions

OLS Ordinary Least Square Model

ZTBL Zarai Taraqiati Bank Limited

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

In developing nations, the agricultural sector is regarded as being the most important for creating output and jobs. As a way out of poverty and for boosting the viability and income of small farmers, Pakistan's economy is significantly dependent on the agricultural industry. The agricultural sector in Pakistan, however, is plagued by a number of issues, such as nutrient deficit, uneven rainfall distribution, and climate change. Adopting more advanced technical inputs is seen as a crucial tactic for raising agricultural output and farm income. Farmers' ability to adopt new technologies has been reduced by limited access to financing services, particularly in rain-fed regions. As a result, there have been poor crop yields, as well as economic and welfare problems of agriculturist families. (Ayat ullah et al, 2020) Agricultural loan borrowing and its repayment have become increasingly prevalent globally. The most significant tool for farmers to boost their agricultural output is a loan of farm funds, often known as “agriculture credit”. Oladeebo and Oladeebo (2008) entails the provision of credit to small-scale farmers for the purpose of farming, and the importance of such credit in economic development cannot be overstated. It is a well-known fact that the availability of credit is a key tool for enhancing the poor's well-being directly by smoothing their spending and reducing their reliance on temporary revenue (Abbas 2021). It also helps farmers increase their output volume by supporting improvements in their human and physical resources. Many low-income enterprises in developing nations now receive credit mostly through microfinance institutions. According to Allen et al (2012) and Muhammad et al (2021) the

provision of microcredit services increases the latent capacity of the poor for entrepreneurship, enabling them to become more self-reliant, increasing their ability to create more employment opportunities, and ultimately increasing household income and creating wealth. However, according to a number of authors (Eyo,2018) and (Klapper, 2012), financial institutions prefer to provide credit to micro entrepreneurs in groups in recent years in order to address the problem of low repayment rates and high transaction costs. This is especially true of the financial market in Pakistan and the micro entrepreneurs within the agricultural sector. Because of the unusual funding structure of microfinance institutions, theories about their financial structures, including agency theory, profit-incentives theory, trade-off theory, pecking-order theory, and life-cycle theory, have been developed and tested by academics. According to Farrington and Abrams (2018), Life-Cycle Theory is connected to MFI development where the conversion to private capital occurs. Early MFIs concentrate on a social mission, receiving grants and forgiving loans from donors and social investors as their main funding sources. As MFIs mature, they concentrate on attracting private capital to fund their sources financially sustainable. There appears to be no doubt that in the current years, agro-economists, organizers, policymakers, agricultural business managers, agronomists, and lending institutions have been paying very close attention to Pakistan, where there is a greater need to pay attention to farmers, Saleem et al. (2014). There are certain factors that influence credit availability, including income, sex, farm size, farmer age, years of credit experience, loan size, household size, loan disbursement timeliness, farmer level of education, crop sales, degree of diversification, income transfer, and information quality, Anigbogu et al. (2014). These factors provide a benchmark for lenders to provide a loan to beneficiaries to check their ability to repay the loan. Credit repayment performance similar to Ugbomeh et al. (2008) can be subjective by a variety of features including interest rate, agrarian commodity price volatility, and the borrower's

social contacts and duties. Anigbogu et al.(2014) Many other factors, such as membership in a self-help group (SHG), a grass-roots intended link of people in the rural cash economy, to encounter the trials of economic and business activities, or accommodating societies, It has been described as a consumer and publicly governed business where benefits are distributed based on usage. Governments have used such platforms to boost farmer production while also alleviating poverty and suffering among rural resource-poor farmers. Increased efficiency of production by a provision in productive pursuits, particularly in the agricultural domain, where the proportion of the electorate works, is critical for developing countries to achieve faster growth in the economy (Zubair, 2002). In these conditions, access to credit can assist disadvantaged farmers in making investments and increasing output. According to agricultural household models farm credit is needed not just due to self-financing constraints, but also due to insecurity about the harvested amount and the long delay between sources and production, Saqib et al. (2018). Facilitating access to finance for the rural poor also helps to alleviate poverty in rural areas. Despite these advantages, small-scale farmers are largely excluded from traditional financial sectors. This is mainly due to a deficiency of "financial" assets, significant management expenses, and the notion that farmers and small-scale manufacturers pose substantial risks (Awoke, 2004). As a result, several governments in developing countries launched credit programs with the goal of providing formal credit to rural smallholder farmers in order to boost rural output, particularly among low-paid rural workers, and to assist agricultural families in ensuring food security. The current study addressed the above-mentioned question, which is that, with the emergence of numerous stakeholders' intentions to improve the position of rural resource-poor farmers through credit extension, one of the most serious issues is the repayment of loans by farmers.

1.2 Agricultural credit in Pakistan

To support the expansion of the agricultural and rural economies, official credit institutions have been established in Pakistan's rural areas. Commercial banks and formal institutions both contribute to the provision of agricultural loans in Pakistan's rural areas for the growth of the agricultural industry and to meet the needs of rural households (Rehman and Amber, 2019). Governments in developing nations, like Pakistan, have long-running programmes to support agricultural growth by enacting various laws to make it easier for rural households to access productive resources. In light of these effects, agricultural lending is essential for fostering the development of small farmers. In Pakistan's rural areas, tiny farms are owned by the majority of farmers. The net area per agricultural dependant is rather small, with about 58% of farms with less than 5 acres of land under cultivation. High yield crop types were quickly adopted in the 1960s, which was crucial in promoting agricultural growth and raising farmer income. Due to a shortage of funding and limited access to formal agricultural loans, the use of modern agricultural technologies varied depending on the size of the farm. Policymakers have made numerous attempts over the past few decades to increase the amount of credit available to farmers. Since the country's independence, Taccavi Loans, Cooperative Bank, and Agricultural Development Bank of Pakistan (ADBP) have been the main providers of agricultural loans in Pakistan. After commercial banks entered the rural financial credit market in 1972, the formal flow of agricultural credit to smallholders grew quickly. Under the direction of the State Bank of Pakistan (SBP), all commercial banks have been lending money to smallholder farmers for agricultural purposes. Agricultural formal credit disbursed by all commercial banks was guaranteed by guarantees from the SBP for around 50% of their losses in order to offer incentives and protection to all commercial banks. Another agricultural credit programme known as the "production loan" was approved by

the Pakistani government in the 1980s. Under this programme, all commercial banks were required to provide small-scale farmers with interest-free production loans. These policies for agricultural lending have a minimal supply of credit from official sources (GOP, 2004). Formal agricultural lending grew over time at a rate of about 27.5% annually. However, due to their limited access to finance from formal sources, small-scale farmers in Pakistan's rural areas do not receive their fair share, including their share of the overall agricultural credit disbursed.

1.3 Demand of Agricultural Credit in Pakistan

The agriculture sector in Pakistan has contributed greatly to the country's economic development. The rural population of Pakistan is involved in farming operations in some way, either directly or indirectly. As a result, agriculture is not only critical for Pakistan's economic development, but it is also a main source of revenue for the country's rural people (Abedullah, 2009). Pakistan's agriculture system is beset by problems such as a lack of sanitation, energy, and rising agricultural input prices, to name a few. A large percentage of Pakistan's farm households are struggling to make ends meet and cannot make a living in the farming industry. Crops, fertilizers, pesticides, and other farm implements are commonly purchased with agricultural credit (Iqbal javed,2022).

With the help of numerous non-governmental organizations, the Pakistani government has launched a number of agricultural development credit programs to promote the agriculture sector. These development projects have a significant impact on Pakistan's economy while also on society. According to a study by (Abedullah, 2009), in Pakistan a Scarcity of monetarily services has a pessimistic effect on the growth of agricultural sector. Informal credit markets are especially active in developing countries, such as Pakistan, and provide access to farmers who are unable to receive agricultural financing from institutional businesses because of demographic constraints, Sial et al. (2011). The agronomics output is impacted by the ascendancy of institutional agriculture funding,

Smallholder farmers are finding it challenging to manage assets wisely in their rice yields. The most common way for local farmers in developing nations to meet their credit demand is through easy and predictable access to institutional farming credit, Bashir et al. (2019). Small-scale agriculturists are inadequate to save money and must rely on formal, informal, and financial institutions to obtain funds. The informal financial institutions that do not provide credit on collateral such as fellow agriculturists, village shopkeepers, input suppliers, relatives, and friends, while Cooperates Bank of Punjab, Zarai Taraqiati Bank Limited (ZTBL) and other commercial banks, known as formal financial institutions provide a credit on collateral. ZTBL is lending agriculture credit source in Pakistan. It was established in 1964 as Agriculture Development Bank of Pakistan (ADBP). The head office is located in Islamabad with a network of 213 branches throughout the country. There is only one branche of ZTBL in district Nowshera located in Nowshera main city. ZTBL loan disbursement and loan recovery recorded of the last 5 year (2018-2023) in district Nowshera is provided in table 1. ZTBL generally granted two types of loans; mediam-term loan (development loan) for the procurement of the capacity effective inputs and short term loans (seasonal and production loan) in order to finance variable inputs (Inayat 2017). Before 1972, the essential source of farm credit in Pakistan was the Agricultural Development Bank of Pakistan (ADBP). In 1972, for the development of rural areas and farming, Pakistan's commercial banks expanded their credit assortment. In addition, to help small-scale farmers and improve the agriculture industry, the State Bank of Pakistan (SBP) launched a one-window lending scheme as well as an insurance loan scheme. Agricultural credit reached its greatest point in 2012–2013, with PKR 336,247 million disbursed by various financial institutions, compared to PKR 293,850 million the previous year. The total amount of agricultural credit disbursed in 2020–2021 is PKR 1.36 trillion (GOP, 2021).

Table 1: Five years record of loan disbursement and recovery by ZTBL in district Nowshera

Years	**Disbursement (Rs in million)**	**Recovery (Rs in million)**
2018-2019	1.28	1.15
2019-2020	1.31	1.48
2020-2021	0.221	0.115
2021.2022	1.001	0.994
2022-2023	0.351	0.235

Source: ZTBL district Nowshera.

1.4 Problem Statement

Farm credit has been cited as one of the requirements for farmers to enhance agricultural output during the course of a nation's agricultural growth. It is also crucial for the sustainable development of agriculture in all nations around the world (Abbas 2021). Agricultural financing is crucial for improving Pakistani farmers' livelihood systems, farm revenue, and agricultural output. In order to boost farmers' efficiency in the credit market, effective formal credit availability minimises the impact of private money lenders while simultaneously increasing the usage of current and innovative technologies (Hussain, 2016). Therefore, agricultural financing was crucial for Pakistan's economy in all sectors, not just agriculture (Khan et al., 2018). Considering the vital role that finance plays in the growth and output of agriculture, farmers still only have a limited number of options or acces for farm loans because Pakistan faces a numbers of problems such as

nutrient deficit, uneven rainfall distribution, and climate change. Farmers' ability to adopt new technologies has been reduced by limited access to financing services. As a result, there have been poor crop yields, as well as economic and welfare problems of agriculturist families. (Ayat ullah et al, 2020). Due to insufficient collateral, small farmers can only apply for credit for items that are necessary for production, such as seeds, fertiliser, and pesticides. They are not eligible to apply for loans for tractors, tube wells, or agricultural machinery, which are development loans (Hussain, 2017). Pakistani farmers still urgently require financial assistance for the acquisition of farm inputs, meeting social requirements, and making long-term improvements to lands. Farmers in this scenario depend on loans to cover their daily necessities and production requirements because their savings and revenue have always been extremely low. In addition to improving management effectiveness, agricultural credit also affects the effective use of resources and the continued viability of farming (Abbas,2020). (Awoke, 2004) highlighted that there are several issues with its acquisition and repayment, particularly in small-holder farming. Osakwe et al. (1986) had previously stated that a high default rate has been a recurring issue in most agricultural financing programmes. Poor management practises, loan diversion, and reluctance to repay loans were the main causes of defaults. According to Saleem et al. (2014) have discussed the advantages, drawbacks, accessibility, and contribution of credit to productivity growth. But high creditworthiness requires fast credit payback. Agricultural lending is one of the requirements for firms to boost agriculture production throughout a country's crop production, and it is also essential for the sustainable development of the agricultural sector in any country worldwide. (Zubair, 2002). Agriculture financing has been recognized in Pakistan as an important component in the growth of rural areas, Saqib et al. (2018). Despite the importance of credit in agricultural output and development, farmers still have an inadequate approach to farm loans. Numerous studies have

discussed the advantages, drawbacks, accessibility, and function of credit in increasing productivity. On the other hand, timely payback of loans is required for good credit suitability. At the same time, borrowers' incapacity to repay loans poses a severe threat to credit institutions' long-term viability. Consequently, numerous studies have attempted to investigate the effects of credit payback across a broad range of socioeconomic categories. Therefore, it is essential to conduct a detailed examination of the factors of credit reimbursement, mostly at the level of small-scale agricultural producers, given the socioeconomic and environmental differences between areas. The primary goal of this study, apart from supplementing prior examination and filling acquaintance gaps, is to identify the importance of socioeconomic and organizational elements that influence farmers' loan repayment capacity. In an effort to solve concerns with loan repayment, this study makes an effort to pinpoint the variables that have an impact on loan payback.

1.5 Objectives of the Study

The current study has the following objectives

1. Explore the socio-economic and farm factors that influence farmer loan repayment behavior in District Nowshera, KPK.
2. Explore organizational attributes that effect the farmer's repayment ability.
3. To have a better understanding of the ZTBL's policies and the accompanying constraints that hinder the farmers' ability to repay their loans in District Nowshera.

1.6 Research Questions

The following basic questions are addressed in this research:

i. What are the socioeconomic factors that have an impact on a borrower's loan repayment rates/ behavior?

ii. Does the organization attributes have an effect on repayment ability of borrowers.?

iii. What are the ZTBL policies that hinder the farmer's ability to repay their loan in district Nowshera?

1.7 Hypothesis of the study

The following are the main hypothesis of the study

HO-1: Socioeconomic profiles and farm attributes of the farmers have a significant impact on credit repayment ability.

HO-2: Organizational factors supporting the farmer's operations have a significant impact on credit repayment ability.

1.8 Significance of Study

The role of financial institutions has been considered critical for poverty reduction and job creation, particularly in developing nations such as Pakistan. The availability of good loan payback rates is one of the most important criteria for the profitability and long-term viability of financial institutions. Credit repayment rates are influenced by a variety of sociodemographic variables. To increase the activity of financial institutions in a sustainable way, it is necessary to analyse such aspects and devise appropriate solutions. There has been no empirical research done on Nowshera ZTBL to identify the key causes of high default rates and to plan future strategies. This research aims to provide information to help both lenders and borrowers have a better understanding of the factors that influence loan repayment performance in the Nowshera ZTBL. The fundamental benefit of this research is that it establishes a knowledge base that allows for rational decisions and remedial action. In addition, policymakers, other lending institutions, and stakeholders will benefit from the information.

1.9 Research Gap

Consequently, numerous studies Zubair (2002) , Saqib et al. (2018) and Saleem et al. (2014) have been attempted to investigate effectiveness on credit payback across a broad range of socioeconomic categories. Therefore, it is essential to conduct a detailed examination of the factors of credit reimbursement, mostly at the level of small-scale agricultural producers, given the socioeconomic and environmental differences between areas. Since SBP defines a small-scale farmer as one who owns up to 12 acres of land, the majority of commercial banks were unwilling to give agricultural credit to these farmers. However, according to SBP, agricultural financing is available from all banks, including commercial, Islamic, microfinance, and specialised banks. It is now their duty to provide agricultural credit to the farming community, while ZTBL (Zarai Taraqiati Bank Limited) still provides the majority of agricultural loans to small-scale farmers. Therefore, the goal of this paper is to identify the factors that contribute to small-scale farmers' loan repayment delays. To this end, loan recipients and credit officers from Zarai Taraqiati Bank Limited (ZTBL), formerly known as the Agriculture Development Bank of Pakistan (ADBP), were chosen for the survey. The primary goal of this study, apart from supplementing prior examination and filling acquaintance gaps, is to identify important socio-economic and organizational elements that influence farmers' loan repayment capacity. This study is an attempt to identify the factors that influence loan repayment as one strategy to address loan repayment issues.

1.10 Plan of the Study

The rest of the thesis is organised as follows: Chapter 2 provides a conceptual and empirical literature review regarding the loan repayment factors of borrowers and financial sectors. Data description and methodology are discussed in Chapter 3. Chapter 4 reports the data analysis and discussion section, while Chapter 5 concludes the thesis.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The benefits, downsides, accessibility, and role of credit in boosting productivity have all been covered in various research. Fast credit repayment is necessary for good credit worthiness, nevertheless. We will explore the existing literature both theoretically as well as empirically.

2.2 Theoretical/ Conceptual Framework

According to the literature, agricultural credit is one of the pre-requisites for farmers to increase agricultural output during the course of a country's agricultural growth (Gandhimathi & Research, 2012). Agricultural finance is essential for any country's long-term agricultural prosperity, according to (Olagunju & Adeyemo, 2007). Rural financing has been shown to be a successful strategy for alleviating poverty and supporting development in rural areas. Farmers, in particular, require such an instrument because to the seasonal nature of their work and the tremendous uncertainty they encounter (i.e. credit). By breaking the poverty cycle, agricultural finance increases productivity and raises living standards for small-scale farmers. Agricultural loans are an important component in small-holder agriculture, according to Aladejebi et al. (2018) since they assist small-scale farmers to build and grow their farms, boosting their revenue and ability to repay the loan. Farmers require financing to meet fixed capital needs, such as constructing enough infrastructure to adopt new production strategies, as well as variable expenses resulting in increased demand for agricultural finance. The growing demand for agricultural loans can be fulfilled by a methodical extension of the rural finance sector (Kumar, Singh, & Kumar, 2007).

Through a widespread move away from conventional technology and by encouraging the widespread use of developed and enhanced technology, farmers' access to financial facilities is supported to be an accelerator of agricultural development (Bolarinwa & Fakoya, 2011). According to (Flores, 2004) who supports this claim, "if institutional credit were made available to farmers, it would help them with issues like small farm size, low output, low income, and low social-economic status. Additionally, it can free farmers from the excessive interest that informal creditors, who typically impose high interest rates of between 100 and 300 percent annually, inflict on them. Based on the aforementioned factors and the critical role that credit plays in the growth of agriculture, the government launched a number of legislative initiatives to provide small-scale farmers with financial support through a farm loan programe with low interest rates.

It has been established that a well-managed institutional credit scheme promoted agricultural development while a credit programme that was improperly managed contributed to agricultural stagnation in many emerging countries Alabi et al. (2016). Since these farm credit programmes have been running for a while, it is important to determine how they have affected the program's participants.

There is a dearth of theory in the literature that explains loanable funds at the microeconomic level. Nonetheless, significant ideas about interest rates that can be used include the Keynesian, the classical, the loanable funds, and the modern theories of interest (Jhingan, 2010). Yet the loanable funds notion is important to this investigation. The loanable-funds theory of interest, commonly referred to as the neo-classical theory of interest, was developed by the eminent Swedish economist Knut Wicksell. The loanable funds theory represents an effort to enhance the conventional theory of interest. It acknowledges that money can interfere with the processes of saving and investing, which affects the level of income in unpredictable ways.

As opposed to the traditional economists, it takes a monetary approach to the theory of interest. In actuality, the loanable money theory accounts for both the financial and non-financial sides of the issue. The price that balances supply and demand for loanable funds is the interest rate, according to the theory of loanable funds. As a result, changes in either the supply or demand of loans or credit funds available for lending cause changes in the rate of interest. This suggests that interest is the cost that balances the supply and demand of loanable funds. The "amounts of money given and sought at any time in the money market" are referred to as loanable funds.

By incorporating this theory into our research, we can conclude that loanable funds do not come without a price (interest). The implication is that a credit facility's interest component plays a significant role in determining how quickly the beneficiary will pay it back. The next time they apply, cooperative farmers who are able to cover the interest component of the loan given to them are more likely to be accepted. At the microeconomic level, factors outside interest rates affect credit availability and, in turn, repayment. Socioeconomic and institutional issues are some of these. This study's significant implication is that it will create a theoretical framework to clarify and highlight the critical drivers of farmers' ability to repay loanable funds, particularly cooperative farmers in the rural area.

Yegbemey et al. (2013), Saqib et al. (2018), Afrin et al. (2017), Chandio & Yuansheng (2018), Silong & Gadanakis (2019) and others found formal agricultural credit to be an effective tool for capitalising farm households in order to spend more and introduce new agricultural technology to increase agricultural efficiency. According to several experts from throughout the world, credit improves people's living conditions by raising farm output, which promotes their self-confidence by increasing earnings and well-being (Chandio & Yuansheng, 2018) and Duy et al. (2015) . Previous research on credit demand among smallholder farmers has been limited. Ajagbe et al.

(2012) investigated how 350 Nigerian small-scale enterprises used credit. Using the multinomial logit model, the researchers discovered that the availability of multiple sources of credit had a positive impact on credit demand. According to the paper, improved links would allow banks to benefit from informal agents' outreach and local understanding, allowing them to increase financial savings mobilization and loan distribution while also boosting the financial system's overall efficiency and profitability.

Informational restrictions are the underlying factor that causes inaccuracy in credit markets. According to (Ray, 1998) there are two levels of informational gaps. For starters, there is a lack of clarity about how a loan will be used. Second, there is a scarcity of information about borrowers' repayment decisions, as well as a lack of understanding of the defaulter's subsequent demands and activities. All of the key characteristics of credit markets can be explained as responses to one or both of these informational issues. Furthermore, (Chenery et al., 1988) discussed the emergence of the agency problem in the functioning of the credit market. When creditors, stockholders, and management have conflicting goals, this problem arises. By monitoring borrowers, financial intermediaries may be able to lessen the problem of agency. Financial institutions can help to alleviate the problem of agency by keeping track of borrowers and making good investment decisions.

The two most essential challenges in the operation of the credit market are adverse selection and moral hazard, both of which are caused by inadequate information. According to (Kono & Takahashi, 2010) incomplete information increases the likelihood of default due to adverse selection, moral hazard, and strategic default. These are the theoretical micro-foundations that have fueled the microfinance movement's efforts to alleviate poverty and promote growth by increasing credit access. Such endeavors have received billions of dollars in subsidies and numerous

additional resources Ashraf et al. (2006). Both concerns are exacerbated, according to (Abdallah, 2016) by the difficulty of enforcing contracts in regions with weak judicial systems.

When a lender is unable to easily discern which customers are more dangerous than others, adverse selection develops. As a result, lenders want to charge riskier clients more than safer customers to compensate for the increased risk of default. However, because the lender has no way of knowing who is who, boosting average interest rates for everyone11 frequently drives safer consumers out of the lending market (Akudugu & Accounting, 2013). Those who are willing to repay a high interest rate may be more risky on average; they are willing to borrow at high interest rates since they believe their chances of repaying the loan are slim (Stiglitz & Weiss, 1981).

Systemic risk emerges when banks are unable to assure that their clients are putting out the necessary effort for their investment projects to succeed. When consumers try to steal money from the bank, moral hazard occurs (Akudugu & Accounting, 2013). Because the borrower does not completely internalize the risk of project failure in the absence of security, the lender and borrower do not share the same objectives. Furthermore, the lender cannot fully specify how the borrower should manage the project (Berhanu, 2005).

When people acquire money from a lender, they are required to promise that they would work hard and repay the debt. However, once the loan is disbursed, the borrower may not keep their word and change their behavior. On the other side, the borrower's business failed during the activity, and he/she was deemed a defaulter. In this instance, a lender may not be able to tell if the failure was caused by uncontrollable factors, a lack of effort put into commercial activities, or the borrowers' misuse of the loan.

Better understanding of information asymmetries is crucial for both lenders and policymakers, according to (Karlan & Zinman, 2008). Subsidies, loan guarantees, information cooperation, and

expanded screening procedures, for example, should push policymakers and lenders to consider adverse selection problems. Moral hazard issues, on the other hand, should prompt policymakers and lenders to pursue liability changes as well as expanded dynamic contracting schemes.

Etonihu et al. (2013) performed a linear regression analysis to show the relationship between several socioeconomic factors of farmers and their rate of agricultural finance availability. Smallholders' access to credit in Nigeria is influenced by formal education, distance from formal financial institutions, and types of credit sources, according to the researchers. Dube et al. (2015) studied the factors of smallholder tobacco farmers' access to formal finance using survey data from 77 smallholder tobacco farmers in Zimbabwe's Makoni District. Better access to credit utilization information through extension programs is anticipated to have a significant impact on farmers' attitudes toward credit risk, lessening concerns about structured lending sources, according to the findings of the logit regression model. The studies also looked at how helping farmers to protect both their crops and their loans from crop failure can reduce the risk of traditional credit sources. Survey data from 87 farmers in Pakistan's Mardan district was utilized by (Saqib et al., 2018) to investigate inequalities in access to and utilization of agricultural loans among smallholder farmers. According to the study, farmers with large landholdings had higher loan access and utilization, and years of schooling, agricultural experience, and landholding size were all key drivers of loan accessibility. Small-acreage farmers were found to be the most vulnerable, indicating that loan laws should be changed to protect their interests. On the basis of the above statement

(Fecke & Musshoff, 2016) investigated the factors that influence agricultural loan demand in Germany. Using an ordinary least square (OLS) model, the researchers discovered that interest rates, grace periods, and farmers' perceptions have a significant impact on the agricultural loan

market. The study also discovered that interest rates have a considerable negative impact on loan demand, whereas market demand for loans by smallholder farmers had a significant positive impact. The influence of credit on cereal crop productivity in Togo was studied by (Agbodji & Trade, 2021). According to the data, credit has a significant positive impact on these products. This finding differs depending on the type of credit, but in kind credit has a significant positive impact on maize and sorghum productivity, but not on rice productivity.

2.3 Empirical Framework

According to the findings, a number of factors influence credit repayment. (Oladeebo & Oladeebo, 2008) investigated how socio-economic factors such as the amount of loan repaid, the amount of loan collected and spent on agricultural production, annual net farm income, age, farm size cultivated, farming experience with credit use, and level of education influenced loan among small-scale farmers in the Ogbomoso agricultural zone of Oyo State, Nigeria. The amount of loan obtained by farmers, years of agricultural experience with credit utilization, and degree of education were among the key criteria that positively and significantly influenced loan payback. On the other hand, farmers' age had a negative but significant impact on debt payback. Finally, it was determined that more loans should be issued to young and better-educated farmers, who are more likely than their older counterparts to adopt modern agricultural production innovations, in order to increase agricultural productivity. Using multistage random sampling approaches and a structured questionnaire, data was collected from 100 farmers in 10 villages across two LGAs in the zone, and analyzed using descriptive statistics and Ordinary Least Square multiple regression analysis.

In the Iranian region of Khorasan-Razavi, (Kohansal et al. 2008) researched the factors influencing farmers' repayment performance . The logit model was used to explain the likelihood of timely

loan repayment as a function of any of the observed independent factors. The impact of each variable on the likelihood of the dependent variable was determined using the relevance of the variables and the signs of the coefficients of independent variables. Farmers' experience, income, loan amount received, and collateral value all have a positive impact on receivers' repayment performance, whereas loan interest rate, total application fees, and the number of instalments all have a negative impact. When the elasticity of significant components was compared, the loan interest rate was found to be the most essential component in our model. Crop yield and entire application costs are the next two criteria.

(Olagunju & Adeyemo, 2007) explored factors that influence farmers' loan repayment decisions in Southwestern Nigeria in 2005. Data was collected from 180 respondents using a multistage sampling approach. Tobit regression results identified farming experience, farm location, loan cost, visitation, borrowing frequency, and education as key factors in affecting loan payback. The farm's size and dependency had minimal impact.

Okojie et al. (2010) listed the reasons why some rural women were denied loan by financial institutions, including an inadequate financial resources, bank accounts, and even the procedures and other standards expected by financial organizations. According to Adejobi and Atobatele (2008), one of the most significant barriers to obtaining credit is loan default, which inhibits lenders from providing additional loans because they are unable to recoup even the principal they have handed out. (Guirkinger & Boucher, 2008) further stated that the processes and procedures involved in obtaining a loan for formal financial institutions were extremely complex and unfriendly to farm households, who were largely uneducated and found it very hard to pursue such regulations.

According to Rahji and Fakayode (2009), the difficulty in obtaining a credit facility stems from numerous constraints in the flow of information on the financial market, formal financial institutions' perceptions that agriculture is a high-risk business, and financial institutions' unfriendly credit policies. Nkonya et al.,(2010) also stated that the short loan repayment period and the high interest rates levied made it difficult for small-scale farmers to obtain loans. According to Adegbite (2009), financial institutions are not just hesitant to lend to farmers in Ghana, but also in Nigeria. The banking institutions attributed this to the high operational costs of providing credit to small-scale farmers, as well as their assumed high default rate. According to Kohansal and Mansoori, most farmers also fail to offer the necessary collateral required by these financial institutions to cover their loan and interest if they default (2009).

Using discriminant analysis, Koopahi and Bakhshi (2002) distinguished defaulter farmers from non-defaulters of agricultural bank recipients in Iran. They discovered that the usage of machinery, the duration of the repayment period, and bank supervision of loan use had a large and beneficial impact on the repayment performance of agricultural loans. On the other hand, natural disasters, a greater level of education among loan recipients, and the length of time spent waiting for a loan had a substantial negative impact on the dependent variable.

Chirwa (1997) used a probit model to examine the factors that influence the likelihood of credit repayment among Malawi's smallholders. Borrowers can be classified as defaulters or non-defaulters using the methodology. Step-wise elimination was used to investigate various X-vector specifications. Only five criteria, however, were consistently important drivers of agricultural credit repayment (crop sales, group size, degree of diversification, income transfer, and information quality). The model's explanatory power is reasonable, with the log probability

statistically significant at 1%. In varied specifications, four independent variables such as gender, loan amount, club experience, and household size – were not statistically significant.

Eze and Ibekwe (2007) investigated the factors that influence loan repayment in the Indigenous Financial System in Southeast Nigeria (2005). For the primary data collection, 180 people were chosen at random. Questionnaires and observations were used to obtain data. For the analysis, descriptive statistics and multiple regression approaches were applied. Beneficiaries' age, household size, year of formal education, and occupation all played a role in the system. The amount borrowed and the length of the loan were deemed to be inconsequential.

Adeyemo and Agbonlahor (2007) examine the repayment of microcredit in Southwestern Nigerita. Data was collected from 200 members of microfinance institutions (MFIs) in the study area using a multi-stage stratified random sampling approach. Using linear multiple regression, the factors influencing microcredit repayment were found. We looked at factors that significantly affect repayment, including income, distance from home to bank, amount invested in business, socio-cultural costs, amount borrowed, access to business information, fine for being late to meetings, membership in cooperative society, number of days between loan application and disbursement, and poverty indicator. Poverty was discovered to be a barrier to repayment.

Abafita (2003) investigated the performance of the Oromia credit and saving institution in Kuyu, Ethiopia, in terms of microfinance repayment. Sex, loan amount, and the number of dependents are all found to be negatively connected to loan repayment, according to his findings. Age, on the other hand, was discovered to be positive, whereas age squared was discovered to be negative. Loan payback performance is favorably and significantly connected to income from loan-financed activities, repayment period appropriateness, and loan supervision. Furthermore, loan diversion

has a strong detrimental impact on loan payback rates. The negative symbol indicates that funds have been redirected for non-profit causes.

Saqib et al. (2016) used survey data gathered from 87 farmers in the Mardan area of Pakistan to explore the variations in access to and utilisation of agricultural finance among smallholder farmers. The study found that farmers with large land holdings had greater access to and utilisation of credit, and that years of education, agricultural experience, and the size of the landholding all had a substantial impact on loan accessibility. The findings also indicated that farmers with small acreages were particularly vulnerable, so the lending policy needed to be revised to defend their interests. Fecke et al. (2016) looked into the variables that affect loan demand in German agriculture. The results of the study, which employed an ordinary least square (OLS) regression, revealed that the market for loans in agriculture is significantly influenced by the interest rate, grace periods, and farmers' attitudes. The study also indicated that the demand for loans is significantly influenced by both the interest rate and the market expectations of farmers. Agbodji and Johnson's (2019) study looked at how credit affected the yield of Togo's grain harvests. The findings showed that credit significantly boosts these productivities. Nonetheless, in kind credit has a large beneficial impact on maize and sorghum production, but no significant impact on rice output. This general conclusion differs depending on the type of credit.

Hunt (2017) used a sample of 504 to study the credit rationing technology used by lenders and the repayment practises of borrowers at a rural banking institution. Only 33% of the criteria used at the Guyana Cooperative Agricultural and Industrial Development Bank identified creditworthy borrowers, indicating that the screening technology was ineffective and required repair, according to loan rationing equations and loan repayment equations estimated using the Tobit model using survey data. The findings also showed that the pool of creditworthy borrowers was increased by

tightening loan contract terms by cutting the grace period on loans and rejecting applications with lengthy processing waits. The variable sex was unimportant, and neither female borrowers nor male borrowers were rationed differently or poorer payers than the other (i.e., rich borrowers were negative credit risks due to their subpar payback record). Overall, the study found that only four of the twelve explanatory factors—fishing, males in food crops and animals, credit experience, and sugar cane—improve creditworthiness, whereas other factors, particularly grace periods, delays, and joint borrowers, considerably worsen the default problem. he percentage of borrowers with secondary education, the frequency of loan officials' visits, and the size of the loan were found to be the main causes of borrower loan default in Ade's (2018) study on the determinants of small holder loan repayment performance evidence from Nigerian microfinance system.

In light of the research mentioned above, which were done nationwide as well as worldwide but with the same purpose, specifically the factors affecting the repayment of agricultural loans from various perspectives. The findings stated above make it clear that both formal and informal credit sectors are significant. Agricultural lending is one of the requirements for firms to boost agriculture production throughout a country's crop production, and it is also essential for the sustainable development of the agricultural sector in any country worldwide. (Zubair, 2002). Agriculture financing has been recognized in Pakistan as an important component in the growth of rural areas, Saqib et al. (2018). Despite the importance of credit in agricultural output and development, farmers still have an inadequate approach to farm loans. Numerous studies have discussed the advantages, drawbacks, accessibility, and function of credit in increasing productivity. On the other hand, timely payback of loans is required for good credit suitability. At the same time, borrowers' incapacity to repay loans poses a severe threat to credit institutions' long-term viability. Consequently, numerous studies have attempted to investigate the effects of credit payback across

a broad range of socioeconomic categories. Therefore, it is essential to conduct a detailed examination of the factors of credit reimbursement, mostly at the level of small-scale agricultural producers, given the socioeconomic and environmental differences between areas. The primary goal of this study, apart from supplementing prior examination and filling acquaintance gaps, is to identify the importance of socioeconomic and organizational elements that influence farmers' loan repayment capacity. In an effort to solve concerns with loan repayment, this study makes an effort to pinpoint the variables that have an impact on loan payback.

CHAPTER 3

DATA AND METHODOLOGY

3.1 Methodology

The methodology explained the quantitative and qualitative perspectives. Through the methodology, all the concepts are defined. The methodology contains the research design, area of the study, questionnaire design, sampling method, and sampling techniques. That is how the sample size was calculated and how the data was collected.

3.1.1 Study Area

The study has been carried out in the Nowshera district of KPK, Pakistan. According to the 2017 census, the district Nowshera has a total area of 1,748 square kilometers and a population of 1.519 million people, with 51% men and 49% women. A total of 52,540 hectares of land are used for agriculture. Agriculture seems to be the region's primary source of revenue.

3.1.2 Population of the Study

Agricultural producers who are the recipients of loans from ZTBL in district Nowshera have to be included in the study's population. We were able to get the details of 115 farmers who actually took advantage of the credit facility from the ZTBL.

3.1.3 Sampling Procedure

For data collection, the study selects 115 samples of borrowers of various sizes using a random sampling procedure. In this study, owing to time and resource constraints, the scope of the investigation was limited to the district of Nowshera, KPK.

3.1.4 Data collection

Primary and secondary sources of information have been used to compile quantitative and qualitative data. Quantitative data was collected by a well-structured questionnaire, while qualitative data was collected by an interview with the ZTBL manager and a policy review of the ZTBL Nowshera branch.

3.1.5 Description of Questionnaire

The data has been collected through a well-structured questionnaire consisting of two sections (A and B) (Annexure 1). Respondents' socioeconomic backgrounds were the focus of Section A, while in Section B we have been trying to obtain data about the factors affecting loan reimbursement among the agronomists of district Nowshera, KPK. (Eze & Ibekwe, 2007)

3.1.6 Target Areas

For the study population, ten (10) locations in district Nowshera KPK with ZTBL visitors were chosen. The study's overall population is 115 respondents, with 10 to 11 people chosen from each area that uses ZTBL Bank for credit. (Eze & Ibekwe, 2007)

We took the information from the questionnaire from the regions of Nowshera main city (the capital), Pabbi, Akora Khattak, Taro Jabba, Badrashi, Risalpur, Shaidu, Khairabad, Nizampur, and Jehangira.

3.1.7 Variables of the Study

The dependent variables of the study are employed as the quantity of credit obtained by the farmer, whereas the farmers' age, marital status, schooling, number of dependents, other occupations, size of farm, status of farm, status of tenancy, experience of farming in years, earnings from farming, and revenue from other occupations are the variables employed by the agriculture credit lenders.

scale of operations that is unprofitable, ineffective management and a scarcity of skilled labour Inadequate and erroneous production supplies, insufficient store room and repair inputs, organisational bottlenecks staff that is fraudulent and corrupt, Member patrons with low educational status, low membership strength, and financial difficulties will be treated as exempt.

3.1.8 Statistical Tests and Model

Descriptive statistics such as frequency, mean, standard deviation, and percentages were employed to assess the data utilised to describe the respondent's demographic and administrative attributes. T-tests and logit regression models have been employed to investigate the causes of agriculture loan failure., (Kohansal et al., 2008). The socio-economic features of the clients and institutional elements are considered to influence the repayment of the agriculture loan borrowed by ZTBL borrowers. Yi denotes the borrower's verdict to repay the credit, which is considered to be influenced by a vector of independent variables, including individual socioeconomic traits and institutional influences. As a result, equation one may be worn to express the association between demographic attributes and loan repayment, while equation two expresses the association between loan repayment and administrative features.

$$yi_{LR} = \beta_{\circ} + \beta_1 G_i + \beta_2 age_i + \beta_3 MS_i + \beta_4 ED_i + \beta_5 EX_i + \beta_6 FS_i + \beta_7 farm\ size_i + \beta_8 Y_i + \beta_9 TS_i + \beta_{10} OC_i + \beta_{11} FT_i + \beta_{12} FST_i + \beta_{13} NCO_i + \beta_{14} D_i + \mu_i \ldots\ldots 1$$

Where

G= gender

MS= marital status

ED= education (in years)

EX= farming experience (in years)

FS= family size (in number)

Y= monthly income (in RS)

TS= tenancy status

OC= occupation

FT= farming type

FST= farming status

NCO= number of credit obtained

D= diversification

$$yi_{LR} = \beta_1 USO_i + \beta_2 DM_i + \beta_3 IITSRP_i + \beta_4 ISSI_i + \beta_5 AB_i + \beta_6 CDS_i + \beta_7 PES_i + \beta_8 LMS_i + \beta_9 FP_i + \mu_i \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where

USO = Unprofitable scale of operations

DM = Defective management

IITSRP = Inadequate and ill − time supplies of required production

ISSI = Inadequate storage and service inputs

AB = Administrative bottlenecks

CDS = Corrupt and dishonest staff

PES = Poor educational status of member patron

LMS= Low membership strength

FP= Financial problems

Where *Yi* represents repayment of agriculture loan borrowed by ZTBL borrowers with parameters to be estimated are by β.". *Yi* is determine whether to pay or default loan based on the decision of the borrower/ farmer (whether he wanted to repay his/her debt or otherwise). The survey questionnaire is the only way we can tell if respondents are paying their loans or not. As a result, we create a variable *Y**, which equals 1 if the respondent does not default on his loan. If the respondent fails on his debt. *Yi** equals 0.

*Yi** = 0. If the respondent fails on his debt.

*Yi** = 1 If the respondent pays his debt and thus does not default.

As a result, the dependent variable will have a binary result. There are a variety of approaches for analyzing data with qualitative and quantitative dependent variables and binary outcomes. The t-test, probit, logit and liner probability models which are the examples of binary choice models can employ.

For our study we need to choose from the probit and logit models due to the shortcomings of the ordinary least square (OLS) and linear probability model (LPM). According to Gaur and Gaur (2009), " because the probit and logit models have same statistical characteristics, they can both be used to analyze the binary choice model.," As a result, the logit model was selected for first model and t-test for the second and is described as follows:

$$P_i = \beta_\circ + \beta_1 G_i + \beta_2 age_i + \beta_3 MS_i + \beta_4 ED_i + \beta_5 EX_i + \beta_6 FS_i + \beta_7 farm\ size_i + \beta_8 Y_i + \beta_9 TS_i + \beta_{10} OC_i + \beta_{11} FT_i + \beta_{12} FST_i + \beta_{13} NCO_i + \beta_{14} D_i + \mu_i \dots\dots\dots 3$$

$$P_i = \beta_\circ + \beta_1 USO_i + \beta_2 DM_i + \beta_3 IITSRP_i + \beta_4 ISSI_i + \beta_5 AB_i + \beta_6 CDS_i + \beta_7 PES_i + \beta_8 LMS_i + \beta_9 FP_i + \mu_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 4$$

Where Pi denotes the likelihood that a consumer would repay his debt or not and β denotes parameters that must be estimated.

3.2 Variables Description

This section includes a description of the data. Through the variable description, all the variables are defined. Following that, the section contains the dependent and independent variables.

3.2.1 Explained Variable

Respondents would be classified into two categories based on the results of the survey: those who return their loans and those who do not. Borrowers who return their loans receive a value of 1, and those who do not return their loans receive a value of 0.

3.2.2 Explanatory Variables

This section has a detailed explanation of all the 14 independent variables that affect the loan repayment behavior of the respondents.

3.2.2.1 Gender

The ethnicity of responders who are proprietors or operators of agribusiness firms is recorded as a dummy variable with a value of 1 if the responder is a man and 0 if the responder is a female. Female entrepreneurs who are better at managing their enterprises are expected to repay their debts (Cheriye, 2013).

3.2.2.2 Age (in years)

The age is measured in years and divided into seven categories, namely, the better the standard of knowledge, the better the technical knowledge, abilities, management, and market awareness of the respondents. (Olagunju & Adeyemo, 2007) confirmed the same factor.

3.2.2.3 Income of the farmers (in RS)

Annual revenue or monthly salaries of the agriculture entity after the loan collection has been estimated as the income level of the borrowers. This is being utilised as a proxy for the wealth level of the agribusiness entity. When compared to their peers with lower income levels, it is projected that agricultural organisations with higher revenue levels will pay their loans. (Papias & Ganesan, 2009)

3.2.2.4 Educational qualification (in years)

Educational qualification is measured in numbers of years of schooling; that is, the higher the standard of knowledge, the better the technical knowledge, abilities, management, and market awareness of the respondents. (Enimu et al. 2017)

3.2.2.5 Size of farm (in hectares)

The size of the farm is measured in hectares, that is the more farming land the borrowers have the supplementary they would work greater to repay their loan. (Chirwa & Banking, 1997)

3.2.2.6 Farm Experience (in years)

This is expressed in years and is defined as the number of years' respondents have been in operation. The more years of experience a respondent has, the better equipped they will be to operate the firm, and so we expect it to have a favorable relationship with loan repayment. (Oke & Agbonlahor, 2007)

3.2.2.7 Family size (in number)

The size of the family of borrowers is defined as the number of people who depend on one Kachin. There are conflicting findings on the effect of family size on loan default. One school of thought holds that the larger the dependent, the smaller the likelihood of default, because of their high monthly income. While another holds that if the borrower has a big family, a significant portion of the project's income could be redirected from loan repayment to home expenditure. Farmers' loan repayment performance is projected to suffer as their household size grows. (Olagunju & Adeyemo, 2007)

3.2.2.8 Occupation

The occupation of responders who are proprietors or operators of agribusiness firms is recorded as a dummy variable with a value of 1 if the respondent operates only with farming and 0 if he operates with other sources of income. It is expected that participants who have alternative means of income have a better likelihood of repaying their loans than those who don't. (Dube et al., 2015)

3.2.2.9 Farm status

Farm status is captured as a dummy variable with a value of 1 if the farm is irrigated and 0 if otherwise. It is expected that the respondents with irrigated land have the smaller probability to default and vice versa.

3.2.2.10 Farm type

Farm type is assumed to be a dummy variable with a value of 1 if the respondent has his or her own land and 0 otherwise. It is expected that the respondents with irrigated land will have a smaller probability of default than those with unirrigated land. (Saleem et al., 2014)

3.2.2.11 Timeline for loan disbursement (in year)

The bank provides the loan for one or three years, so the dummy for the loan disbursement is 1 if the timeline is three years and 0 if the timeline for loan disbursement is one year. The expectation is that the longer the timeline for credit disbursement, the lower the respondents' probability of default, and vice versa. (Nawai & Shariff 2010)

3.2.2.12 Diversification

Diversification of the farm of respondents is estimated as a dummy variable having the value of 1 if the respondent diversified their farm and 0 otherwise. The study expected that the more the farm is diversified, the lower the respondent's probability of default, and vice versa.

3.2.2.13 Views of participants on the loan procurement procedure

This includes farm output, supply of input, sales of production, administrative bottlenecks which is taken as interest rate, behavior of staff, amount of loan applied and approved amount of loan, all these variables are estimated in Yes or No form. (Anigbogu et al., 2014)

CHAPTER 4

RESULT AND DISCUSSION

4.1 Presentation of Empirical Result

The section contains two parts. In the first part, a descriptive analysis of socioeconomics and farm characteristics is defined, while the second part contains testing of the hypothesis.

Table 4.1: Descriptive statistics and measurement of socioeconomic factors

Variables	Description	Mean	SD
Gender	1 if the household head is male, 0 otherwise	1.38	1.73
Age	Age of farmers in years	42.60	8.59
Marital Status	Martial status of farmers	6.53	5.78
Education	Education of farmers in years	9.46	3.92
Experience	Farming experience of farmers in years	27.02	9.63
Family Size	Farmers family size in numbers	11.54	6.77
Income	Farmers monthly income in RS	1.78	0.51
Farm size	Active farm size in hectars	11.64	14.54
Farm status	1 if farmer if owner, 0 otherwise	16.10	4.02
Occupation	1 if farmer occupation is farming 0, otherwise	0.859	0.934
Farming status	1 if farm land is irrigated, 0 otherwise	0.831	0.934
Divercification	1 if farm is divercified, 0 otherwise	0.89	0.42

Note: SD stand for standard deviation

Source: Author Computation

Table 4.2 (a): Descriptive Analysis of Gender and Age

Description	Gender		Age (in years)					
	Male	Female	Less than 20	21-30	31-40	41-50	51-60	Above 60
Frequency	110	5	1	3	14	39	35	23
Percentage (%)	95	5	0.8	2.6	12	34	30	20

Note: Author Computation.

In the Table 4.2, a total of 5 female (4.3%) and 110 male (95.7 %) participated in this study. The results in favour of men may be attributed to the nature of the profession and the cultural setting, in which males have money to start their businesses to some degree and inherit most of what is left to them. This contributes to the assumption that because males are considered the family's heads, they must provide for them, resulting in more men participating in small and medium businesses to feed their families and contribute to the economy. This shows that men are actually controlling the farming industry.

The respondents were grouped into six different age categories. Table 4.2 represents the age distribution of the respondents. The age group less than 20 years represents (0.86%; n = 1) of the respondents, 21 to 30 years represent (2.6%; n = 3) of the respondents, 31 to 40 years represents (12.28%; n = 14) of the respondents, 41 to 50 years age group represent (34.21%; n=39) of the participant. The other age brackets were 51-60 years and above 60 years with (30.43%; n=35) and (20.18%; n=23) respectively. The age groups of 41 to 50 and 51 to 60 years are noted as a great percentage of over half of the sample. Our data suggest that agribusinesses have relatively young proprietors who are likely to be aggressive and dedicated to their firms' development. They should be able to pay back the money they borrowed. According to the findings, youth are more active in

small and medium enterprises. As a result, providing the necessary support to facilitate the formation and operation of agribusiness will go a long way toward reducing youth unemployment and poverty in the coming years.

Table 4.2 (b): Descriptive Analysis of Marital status and Education

Description	Marital status				Education (in years)					
	Married	Single	Divorced	Widow/ Widower	Illiteracy	Primary	Middle	Matric	Secondary	Above Secondary
Frequency	88	4	1	22	18	16	31	25	22	31
Percentage (%)	76	34	0.8	18	15	14	26	21	19	26

Note: Author Computation.

Out of 115 respondents 88 are married, 4 are single, 1 is divorced and 22 are widow and widower. The state of one's marriage has a significant impact on payback. It's because the majority of credit-seeking farmers in the research area are married, and the majority of them only work in agriculture. These poor farmers must not only cover their daily expenses for their families in these difficult times when prices for everything are at an all-time high, but they must also enhance the standard of living of their dependents. Agriculture production should be increased to address these challenges. When farmers are able to use modern farm technology, they are able to produce more. As a result, poor farmers must rely on borrowing. Good credit worthiness on the part of the farmer is necessary for taking credit, among other parameters examined by credit supply sources. Reimbursement on time establishes the ability to repay.

In all (15.79%, n=18) respondents had below primary and no formal level of education while (14.04%, n=16) respondents had primary level of education, (26.955, n=31) represent middle level

of education, and (21.93%, n=25) represent metric level of education of the respondents. Secondary level of education is (19.30%, n=21) while (2.63%, n=3) represents above secondary level of education of the participants. According to the above figures, around 75% have less than a secondary education, implying a lack of formal managerial skills required to run and maintain a business in today's world. As a result, while anyone can run an agribusiness with or without schooling, literate individuals have a competitive advantage. The respondents' degree of education is thought to have an impact on their decision-making processes, allowing them to get the most out of their businesses and repay their loans.

Table 4.2 (c): Descriptive Analysis of Experience and Family Size

Descriptive	Experience (in years)					Family size (in numbers)				
	1-5	6-10	11-15	16-20	Above 20	1-3	4-6	7-9	10-12	Above 12
Frequency	9	16	19	10	60	1	23	42	32	17
Percentage (%)	78	13	16	87	52	0.8	20	36	27	14

Note: Author Computation.

Any business owner's competence and understanding of operating that business are said to be influenced by his or her years of experience. It is thought that one's work experience has a favourable impact on one's skills and competency. The participants were grouped into five different business experience categories. As shown in Table 4.2, (7.83%; n = 9) have had business experience ranging from 1–5 years, while (13.91%; n = 16) have had 6–10 years of business experience. The other business experience brackets were 11–15 years (16.52%; n = 19), 16–20

years (8.70%; n = 10), and above 20 years (52.17%; n = 60). The average number of years of experience across respondents was 3.86, or about 4 years, implying that after 4 years of doing the same job time after time, one would have gained sufficient expertise and skills to excel in that business or profession and make a profit. As a result, it is assumed that those with that degree of experience will be able to work to repay their loans.

The respondents were grouped into five different family groups. Table 4.2 represents the family size distribution of the respondents. As shown in Table 1, (0.87%; n=1) have had family sizes ranging from 1-3, (20%, n=23) had family sizes ranging from 4-6, 936.52%; n=42) had family sizes ranging from 7-9, (27.83%; n=32) had family size ranging from 10-12 while family size above 12 members represents (14.78%; n=17) of the participants. It is considered that as the size of a farmer's household grows, so do his or her consumption needs, putting a strain on limited resources. Households with more members have a greater capital requirement. (Farida et al. 2015)

Table 4.2 (d): Descriptive Analysis of Income

Description	Monthly Income (In RS)				
	5000-10,000	11,000-20,000	21,000-30,000	31,000-40,000	Above 40,000
Frequency	13	30	20	12	40
Percentage (%)	11	26	17	10	34

Source: Author Computation

The monthly income received by defendants with 5000-10,000 had (11.30%; n = 13), 11,000-20,000 monthly income had (26.09%; n = 30) of the respondents, 21,000- 30,000 monthly income had (17.39%; n = 20), 31,000-40,000 of monthly income had (10.43%; n = 12) and above 40,000 of monthly income signified (34.78%; n = 40) of the defendants. The average monthly income earned was between 30,000 and 40,000 Pakistani rupees, indicating that the majority of

respondents made enough money each month to be able to take out a loan of more than 1 lakh and be able to repay their loans without difficulty. The ability of a firm to be profitable cannot be jeopardized, as the business's long-term viability is dependent on its ability to meet its operational needs with cash inflows and outflows.

4.2 Description of Farm Characteristics of Agribusiness Entities

Table 4.3 (a): Descriptive Analysis of Farm Size and Status

Description	Farm size (in Hectares)					Farm Status	
	1-2	3-5	6-8	9-11	12 and above	Owner	Tenant
Frequency	8	34	34	18	21	96	19
Percentage (%)	7	29	29	15	18	83	17

source: Author Computation.

Farm size is taken as a continuous variable and measured in hectares. Table 4.3 (a) shows different categories of respondents by farm size. In all, (6.965; n = 8) represents 1-2 hectares of farming land, (29.57%; n = 34) represents 3-5 hectares of farming land, (29.57%; n = 34) represents 6-8 hectares of farming land, (15.65%; n = 18) represents 9-11 hectares of farming land, and (18.26%; n = 21) represents 12 and above 12 hectares of farming land for participants. The data shows that more than half of the respondents have a small piece of farming land, so farm size has a significant effect on agriculture credit. Poor farmers with little land, on the other hand, demand greater credit for utilising new farm inputs to increase production from their limited plots of land. Prompt repayment of a previous loan would create a positive atmosphere among credit providers, allowing them to obtain finance to satisfy their farming needs once more.

The data revealed that 96 respondents were the own farm land, while only 19 were tenants, which shows that farm owners are more interested in credit reimbursement than tenants. It's because there

aren't many renters who take out loans for farming purposes. Owners are much more likely to take out loans, and thus they are more engaged in repaying them.

Table 4.3 (b): Descriptive Analysis of Occupation and Farm Type

Description	Occupation		Farming Status	
	Farming	Farming plus others	Irrigated	Un-Irrigated
Frequency	43	72	111	4
Percentage (%)	37	62	97	3

source: Author Computation.

Table 4.3 (b) shows that out of 115 sampled farmers 111 farmers' watered lands and only 4 farmers have rain-fed lands. Producers with watered farms produce more since there is more water available, and they can also use modern agriculture inputs with this capability. Better output results in higher profits, so they have no trouble repaying their debt.

Table 4.3 (b) reveals that 43 of the 115 respondents work solely in agriculture, whereas 72 work in agriculture and other occupations as well. The results indicate that above half of the sample is engaged in farming and other occupations as well, and because they have more earning sources, they are able to prompt credit repayments. The findings contradict those of Eze et al (2007). Farmers with farming as a profession, he claims, are more interested in repayment since they require more credit than farmers with other jobs. As a result, they must work harder to improve their credit worthiness image.

Table 4.3 (c): Descriptive Analysis of Farming Status Nos of time Credit obtained

Description	Farming Status			Diversification		Nos of time Credit obtained		
	Tractor operator	Bullock operator	Both	Yes	No	1-2	3-5	6 and above 6
Frequency	83	25	7	58	57	57	52	6
Percentage	72.17	21.74	6.09	50.43	49.57	49.57	45.22	5.22

source: Author Computation

Table 4.3 (c) imitates that 83 farmers out of 115 use tractors while 25 use bullocks and 7 use both tractors and bullocks on their land. Using a tractor not only allows owners to complete their work on time, but it also allows them to experiment with new farm inputs. This leads to increased production and, as a result, more profit. The farmer is unconcerned about repaying.

Table 4.3 (c) demonstrates that 57 of the 115 farmers polled took credit for 1–2 times their crop (in years). 52 received credit for 3–5 times, while 6 received credit for 6 and more than 6 times. Out of 115 samples, 58 are diversified their agriculture business while 57 are not diversified their farming. The data indicate that the participants who obtained credit more than 1 and less than 6 times and diversified their business are able to prompt disbursement of credit, because of proper use of credit by these groups.

Table 4.4: Descriptive statistics and measurement of organizational factors affecting the farmers' credit repayment ability.

variables	Measurement	Mean	SD
Unprofitable scale of operations	Dummy (0,1)	3.36	0.741
Defective management and shortage of skilled man power	Dummy (0,1)	3.54	0.864
Inadequate and ill-time supplies of required production	Dummy (0,1)	3.75	0.616
Inadequate storage and service inputs	Dummy (0,1)	3.55	0.866
Administrative bottlenecks	Dummy (0,1)	2.46	0.727
Corrupt and dishonest staff	Dummy (0,1)	3.57	0.712
Poor educational status of member patron	Dummy (0,1)	2.55	0.795
Low membership strength	Dummy (0,1)	3.71	0.566
Financial problems	Dummy (0,1)	3.75	0.521

Source: Author Computation

Note: SD denote standard deviation

Table 4.4 lists all the organizational factors that have an impact on farmers' ability to repay their debts, including inefficient scale of operations, poor management, a lack of skilled labour, insufficient and insufficient storage and service inputs, administrative bottlenecks, dishonest and corrupt employees, low membership strength, and financial issues. Those were all acknowledged as factors affecting the farmers' ability to pay back their debt. Yet, it was determined that the main organisational elements limiting the farmers' ability to service their debt were insufficient and poorly scheduled deliveries of the requisite production, as well as financial issues.

4.2 Test of Hypothesis

Ho1: Socioeconomic profiles and farm attributes of the farmers have a significant influence on the farmers' credit repayment ability.

Table 4.5: Effect of socioeconomics Variables on Credit Repayment using Logit Model

Description	Coefficient s	p-values
G	0.4934282*	0.027
Age	-0.3407463**	0.087
MS	2.906499	0.602
ED	0.0072854*	0.010
EX	-0.0126419*	0.019
Farm Size	0.2584315*	0.029
FS	-0.0455383*	0.032
Y	0.323798*	0.009
Farm Status	-1.038971*	0.024
O	-0.0429184	0.888
FT	0.2420341	0.880
Farming Status	0.6379966**	0.099
NCO	1.605001*	0.003
TLD	-1.852221*	0.005
D	0.7225156	0.264
Constant	-6.469461*	0.081

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Number of obs.=115 LR chi2(15) = 45.02 Prob > chi2=0.0001

Log likelihood= -21.025533 Pseudo R2 = 0.6831

**** p<0.01, ** p<0.05, * p<0.1*

Note: G, MS, ED, EX, FS, Y, O, FT, NCO, TLD, D denoted gender, marital status, education, farm experience, family size, income, occupation, farm type, number of credit obtained, timeline of loan disbursement and diversification respectively.***, ** and * indicate the significance level at 10, 5 and 1 percent respectively.

The logit model was used to investigate the causes of loan default among respondents, with the results of the logit estimate shown in Table 4.4. We observed significant results at the 1% level of significance, and the estimates also indicated that the independent variables were good predictors of the dependent variables. The economic model took into account a total of 14 explanatory factors. At various significance levels, 11 variables such as age, gender, education qualification, farm size, family size, income, farm status, farming status, the number of time credits obtained, and the timeline of loan disbursement were found to have a significant impact on the likelihood of loan payback. Occupation, farm type, and diversification are the three explanatory variables that had no significant effect on the likelihood of default.

The age of the creditors was found to be negative, which suggests that as they get older, their chances of defaulting decrease. The idea is that as borrowers mature, they may become more concerned with economic management and experience a sense of responsibility. At a 10% level of significance, this variable had a significant impact on loan repayment performance.

The positive indication for gender suggests that female borrowers were worse borrowers than male borrowers. This characteristic was substantial at a 5% level, indicating that females are not likely to repay more than males.

Experience has a negative significant effect, meaning that as a borrower's farm experience grows, the likelihood of defaulting lowers. This could be because the borrowers have enough expertise in

the industry to already be aware of the potential hazards they would face and to be able to take corrective action. Furthermore, the business is effective due to the cumulative effect of company experience. As a result, the borrowers' loan repayment performance improves.

Education has a huge impact on loan repayment, so it's no surprise that this study identified it as a component that has a large impact on loan payback and a favourable link with debt payment. This means that the bigger the debt repayment, the more school years the group members have. Borrowers who are literate repay more of their loans than those who are illiterate because they grasp the benefits of timely repayment and do not see a loan as an entitlement. (Enimu et al., 2017)

The respondents' family size has a big impact on loan payback, so it's no surprise that this study discovered it as a factor that significantly affected loan repayment at a 5% level but has a negative link with debt payment. Whenever the size of the household grows, loan payments reduce, resulting in a rise in loan defaults. More people in the house means more pertaining to health care, schooling, and housing. As a result, if the household is large, the head of the house is more likely to divert the loan, resulting in a default. The efficient use of borrowed cash and subsequent payback will be ensured by a small household size and the professional knowledge and managerial experience gained through increased educational levels. (Olagunju & Adeyemo, 2007)

At the 1% level, household income exhibited a positive coefficient and significance, indicating that the greater the family income, the greater the payback rate. This conclusion suggests that a larger household income means more money accessible for the household head, which will most likely be used to repay loans. (Afolabi, 2010)

The farm size coefficient was significant at the 5% level and had a positive relationship with loan payback. Poor farmers with little land, on the other hand, demand greater credit for utilizing new farm inputs to increase production from their limited plots of land. Prompt repayment of a previous loan would create a positive atmosphere among credit providers, allowing them to obtain finance to satisfy their farming needs once more.

Farm status has a substantial impact on loan repayment using the logit test ($p = 0.099$). Tractors allow farmers to not only complete their tasks on time but also to experiment with new farm inputs. This leads to increased output and profit. The farmer has no issues with repayment.

The number of times credit was obtained has a considerable impact on repayment. This is due to the group's proper credit management. (Olagunju & Adeyemo, 2007)

The loan disbursement coefficient was significant at the 1% level and has a negative relationship with loan repayment. This means that the faster a loan is disbursed, the larger the loan payback, which is consistent with a priori expectations. This finding is consistent with the findings of (Nawai et al., 2010), who claimed that a reduced disbursement lag encourages prompt loan utilization, which in turn leads to higher efficiency and productivity.

4.3 Test of Hypothesis Two

Ho2: Organizational factors supporting the farmers' operation have a significant impact on credit repayment ability.

Table 4.6: t-test statistics of organizational factors affecting the farmers' credit repayment

Variables	T	sig	Mean difference	SD error	Lower CI----95%	Upper CI-----95%
USO	53.200	0.000	3.353	0.084	3.30	3.67
DM	41.157	0.000	3.534	0.096	3.52	3.15
IITSRP	67.520	0.000	3.922	0.039	3.37	3.67
ISSI	43.347	0.000	3.566	0.096	3.45	3.42
AB	36.163	0.000	2.372	0.084	2.46	2.35
CDS	51.525	0.000	3.334	0.075	3.52	3.54
PES	34.209	0.000	2.343	0.093	2.14	2.48
LMS	74.612	0.000	3.536	0.076	3.57	3.64
FP	76.732	0.000	3.953	0.075	3.55	3.81

Source: Author Computation

Note: USO, DM, IITSRP, ISSI, AB, CDS, PES, LMS, FP are denoted unprofitable scale of operations, defective management, inadequate and ill-time supplies of required production, inadequate storage and service inputs, administrative bottlenecks, corrupt and dishonest staff, poor educational status of member patron, low membership strength and financial problems respectively. T represent t-test value, SIG represent significance, SD standard error and CI confidence interval at 95%.

The second hypothesis asserts that organisational characteristics play a key role in determining a farmer's ability to repay a loan. The t-test statistic was used to test the hypothesis. The t-test results for the organisational characteristics influencing farmers' ability to repay credit are summarised in Table 7. The test's findings demonstrate that all the contributing factors—an unprofitable scale of operations, poor management, a lack of skilled labour, insufficient and insufficiently timed supplies of the necessary production inputs, insufficient storage and service inputs, and administrative bottlenecks—are present. Corrupt and dishonest employees, patrons with low educational levels, a small number of members, and financial issues are all relevant. At the 0.000 level of significance, all of the t-calculated results were significant. This suggests that organisational issues play a key role in determining the farmers' capacity to repay their debt. (Olagunju & Adeyemo, 2007)

Chapter 5

QUALITATIVE ANALYSIS

Introduction

This chapter contains a qualitative analysis. The qualitative analysis is based on policy rewiev and on interview with ZTBL manager on the reason for credit repayment. We wanted to know about the efficiency of ZTBL staff, the information about decision –making, the process of credit collection, and the issues and challenges they face during the credit collection. We also wanted to know the reason for loan grant and loan repayment gaps between different regions.

5.1 Kissan khushal policy

The bank is working to the true and real requirements of the farming community by providing timely agricultural finance. The Competent Authority has decided to create a new Revolving Scheme to allow farmers have easy access to credit with the facility of one-time paperwork for three years with one-year clean-up, withdrawal of loan amount as per credit conditions and deposit as and when funds become available.

5.2 Objective of the policy

The main goal of this program is to provide enough and interpreting financial benefits to farmers for their agricultural and capital investment credit needs in a more flexible and cost-effective manner, with the ability to withdraw limit and repay loan numerous times.

5.3 Conditions for Enrollment

All qualified new and existing farmers across the country would benefit from the initiative, which would primarily address their operating cash and input needs.

5.4 Credit Limits Sanctioned

- The scheme's maximum per borrower/party limit would be Rs.0.700 million.
- The credit will be granted for three years, but the system will only allow for one year of use, with the expiration date set to coincide with the distribution date. The last working day of the previous month will be the expiration date (e.g. 28th Feb, 31st March, 30th April etc.).

5.5 Mechanism of Disbursement

- The principal amount will be repaid in cash on a yearly basis on the last working day of the previous month (e.g.; 28th Feb, 31st March, 30th April etc.)
- The following frequency will be used to repay the mark-up in cash for various crops and working capital

5.6 Conclusion and Recommendations

1. The Zarai Taraqiati Bank (ZTBL) has created a 'Kissan Khushhal Scheme' (KKS) to help farmers get the most out of their loans with the least amount of mark-up.
2. Farmers will be able to acquire timely financing to match their actual crop input demands, as well as fast credit access with the convenience of one-time paperwork for three years.
3. The KKS offers farmers/borrowers a variety of withdrawal and repayment options, allowing them to withdraw funds as needed and repay loans as funds become available.
4. Furthermore, the strategy offers the considerably more flexible option of repaying the mark-up in half-yearly instalments and the main amount in one year to help lessen borrowing costs.

5.2 Interviews with ZTBL Manager Nowshera Branch

We conducted an interview with the staff of district Nowshera ZTBL bank. The viewpoints of the interview are as follows:

Issues and challenges

The comments from the interwiev on important issues and challenges they face during the loan collection process are:

Bank sets an annual revenue target and the staff are required to collect revenue according to these limits. However, this also result in how the field staff efforts to meet the deadlines. The respondent, stated “the deadlines and pressure tactics force us to use all available measures which may not ideally be adopted”. So, the pressure of deadlines force the field staff to opt for coercive measures.

The respondent also stated that “resistance by the loan payers and non-complains is also a major issue”. People usually don’t want to pay the loan they always try to avoid. The respondent commented on the complexity of data and stated that “they face difficulty during a loan collection process because sometimes data is not interlinked with NADRA”.

The respondent stated that they have a shortage of staff members which is also a major issue because due to the shortage of staff members, they have to spend more time and they also have to do more efforts in a field survey. Dou the shortage of staff, they have the extra burden of work which also affect their efficiency.

The interview remarked that the issue they face during the loan collection process is severity of loan payers they stated that “people are not aware of the loan collection process, they have less information about the loan system and loan policies and sometimes people are less educated they

don’t know about the bank system and due to the lack of awareness among people about loan people show rigidity they don’t want to pay loan.

Reasons behind poor loan collection

Interview illustrate that the main reasons behind the poor loan collectionare: “lack of awareness” “Narrow loan base”, “complex procedures”, “loan payers facilitation is not up to the mark”, “none serious attitude of loan payers”, “ lack of education”, “lack of information given by the loan payers”, “gap between department and the loan payers”, “loan environment also the main reason of poor loan collection and there is no loan culture which motivates people to pay loan”.

Comments on socieo-economic and organizational factor that effect farmers loan repayment ability

Despite the trend toward industrialization in agriculture, it remains the largest sector of the economy, with important implications for people's socioeconomic conditions. Agriculture provides not only food and fiber to people, but it is also a key provider of raw materials and labor to the manufacturing and service sectors. Agriculture finance is a critical component of the agricultural sector's growth strategy. Without a long-term and broad-based agricultural development strategy, no economic growth strategy can be fulfilled. Because of a lack of funds, the bulk of our farm community consists of subsistence farmers who are unable to employ high-quality seeds, enough fertilizers, and upgraded farm implements. One of the key reasons for our agriculture's low per-acre production is a lack of funds.

In Pakistan, farm loan is a social imperative for agricultural development. To meet this social needs of the farmers the financial institutions such as Zarai Taraqiati Bank Limited (ZTBL), Commercial Banks, Cooperatives and Domestic Private Banks provide agriculture credit to the farmers.

The manager of Nowshera ZTBL, sir Iqbal shah view that Zarai Taraqiati Bank Limited is a fantastic Pakistani government institution. This is a good job opportunity. It provides excellent service to both employees and customers. It's a financial institution that lends money to farmers so they may buy fertilizer, pesticides, crops, and farming equipment.

The manager said that there are a lot of factors that affect loan repayment including both internal and external factors. Internal factors include farmer's socioeconomic factors while external factors include organizational factors. According to the manager, among socioeconomic factors, what affect loan repayment more are education, experience, farm size, income, family size and timeline of loan replacement but organizational factors such as staff behavior, interest rates and different organizational policies affect loan repayment more than socioeconomic factors.

Recommendation for the improvement in repayment of agriculture credit

The interview viewpoints on measure that should be taken by the government to improve loan performance at a regional level are as follow:

- The onlion loan payment system should be improved and normalized
- Polies must be clear
- The language of documentation must be simple
- Government should lanuach awareness programmes to motivate people to pay loan
- Provision of staff member
- Traning should be provide to staff to improve their skills
- Government should works on trust development
- Better allocation of loan
- High need for good working condition

- We should provide vehicles for field survey
- Loan payers should respect the department and the department must also do the same
- The Bank system should be more friendl
- Trust of the general public on Bank must be built
- Incentive should be provide for better performance

Chapter 6

Conclusion and Recommendation

6.1 Conclusion

Poverty is currently among the one of the most important issue in many developing countries. Poverty is extreme in some countries, leaving millions of people without the basic necessities of life. There are many poor individuals in Pakistan, both in rural and urban areas. It is essential that financial services are accessible in allowing the majority of low-income people to start their own businesses. The fundamental cause of financial institutions' poor performance in many developing nations is the high rate of credit non-repayment. The district Nowshera finance institution's default rate is gradually increasing. The goal of this study was to determine the factors that influence loan repayment performance at the district finance institution in Nowshera. This study included a total of 115 customers. Descriptive statistics maximum likelyhood and logistic regression were used to determine the socioeconomic variables of the clients. Factors such as such as age, gender, education qualification, farm size, family size, income, farm status, farming status, no.s of time credit obtained, time line of loan disbursement, inefficient size of operations, inadequate management and a lack of skilled labour, inadequate and improperly timed production supply, inadequate inputs for storage and services, bureaucratic bottlenecks, Staff who are dishonest and corrupt and Financial problems were included in the econometric model.

It has been observed that defaulter groups had a higher proportion of children than non-defaulter groups. More than half of the respondents' homes and businesses were within walking distance of the loan office. The majority of the respondents were literate, with varying levels of schooling.

Further, more than half of the respondents were married, and the proportion of married respondents in the non-defaulters group was higher than in the borrowers group.

At the same time, the average number of years of experience across respondents was 3.86 round about 4 years, implying that after 4 years about doing the same job time after time, one would have gained sufficient expertise and skills to excel in that business or profession and make a profit. Consequently, it is assumed that those with that degree of experience will be able to work to return their loans.

While examining the income level it has been seen that the average monthly income earned was between 30,000 and 40,000 Pakistani rupees, indicating that the majority of respondents made enough money each month to be able to take out a loan of more than 1 lacs and be able to repay their loans without difficulty. Result shows that more than half of the respondents have small piece of farming land so farm size has a significant effect on agriculture credit More than half of the borrowers used their loan to expand their current firm. The majority of borrowers put the full amount into the prospective business.

Most of the clients have watered land's, producers with watered farms produce more since there is more water available, and they can also use modern agriculture inputs with this capability. More than half of the respondents used tractor for irrigation, to use a tractor not only allows owners to complete his work on time, but it also allows him to experiment with new farm inputs.

The data indicates that the participants who obtained credit more than 1 and less than 6 times and are diversified their business are able to prompt disbursement of credit, because of proper use of credit by these groups.

The key problems in the loan repayment process were identified by respondents include insufficient loan amount, a lack of grace period, and a lack of loan recovery follow-up. In line with this, the institution faces numerous internal and external issues, including financial difficulties, high employee turnover, insufficient working space, competitiveness, and improper third-party influence in loan approval decisions.

6.2 Recommendation

On the basis of the entire analysis we suggest that the borrower age is a key factor in loan repayment performance. The senior borrowers have accepted responsibility for the debt repayment. It is not recommended that young age groups be excluded; however, the institution should pay distinctive consideration to those defaulters through ongoing monitoring and supervision.

Borrowers that deposit their funds in the bank have a high repayment rate. As a result, the institution could use various incentives to encourage consumers to save, such as boosting the interest rate on savings and focusing more on marketing their services.

The borrowers' loan repayment rate is improved by their business expertise. The overall impact of a debtor's experience has a favorable impact on business development as well as loan payback. As a result, the organization concentrates on group member screening in this regard.

The loan size is another aspect that is linked to the business type. One crucial component in making a firm successful is the availability of suitable loan size. Thus, before disbursing a loan, it is suggested that the loan size be compared to the client's proposed project, and that the organization’s rules and regulations be revised in light of the country's present economic situation.

Since constant follow-up and monitoring are critical for loan repayment, loan officers do not provide enough oversight. This is due to the fact that the institution's clientele is growing. As a result, it is suggested that the number of clients and loan officers be equal. The organization has not provided clients with training in recent years. As a result, the institution should collaborate with various organizations to further its efforts in this area. Loan officers should also provide the appropriate orientation to clients. A huge number of debtors are capable but reluctant to repay their loans. As a result, the institution should identify those unwilling clients and pursue legal action against them, or tell the community and influential people about them.

The institution should pay attention to the borrowers' repayment concerns and take corrective action. The major thing that can be done to solve the institution's internal and external challenges is to increase its financial capacity and expand its offerings. Taking into account the proposal that Nowshera ZTBL institutions should work to raise borrowers' loan payback rates.

On the bases of qualitative analysis we suggest that loan repayment has improved over time and the main reasons are farmer’s education, income and experience. Along with the betterment of farming type, staff behavior and bank policies have also changed. Among these policies, the best ones include Khushhal Kissan scheme. The good part about this policy is lower interest rate and relaxation of time for loan repayment. In these policies only 3% interest rate is collected and the time period for loan repayment is 3 to 5 years**.** Due to lower interest rate farmer invests money in his business which in turn generates revenue which leads him to return the loan easily and in lesser time.

Agriculture credits are of great importance. To improve that, along with farmer’s education, bank’s terms and conditions should also be followed**.** The bank should give more time for mark-up with lower interest rate. Proper investigations should be made before providing the loan as sometimes

people who are either not deserving or they do not use it for agriculture purpose get the loan. This not only deprives agriculture system of development but also makes loan repayment difficult.

6.3 Limitation of the study

The limitation of the study is written below:

Dou to the time and resources constraints the data sample of the study was selected only 115 respondents and collect data through a telephonic survey.

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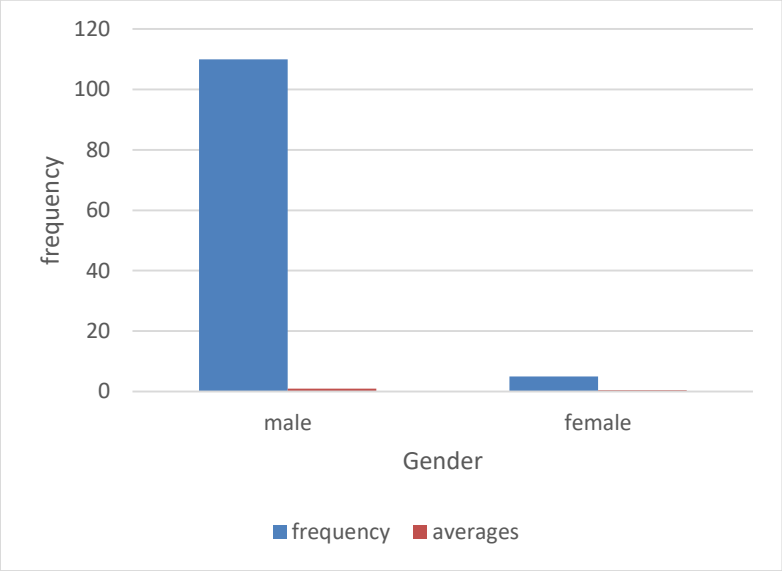
Appendix (1)

Graphic Representation Of Socio-Economic Demographic Of Respondent

Figure 4.1: Borrowers gender



Source: field survey March,2022

Figure 4.2: Borrowers Age (in years)

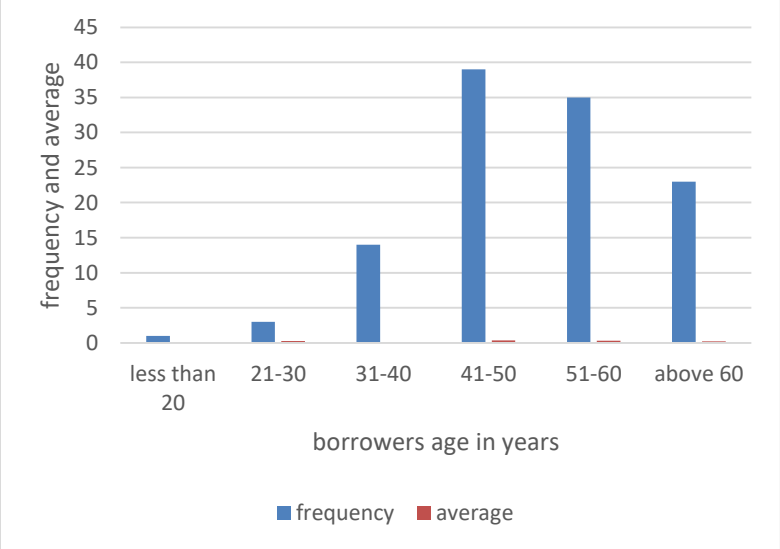
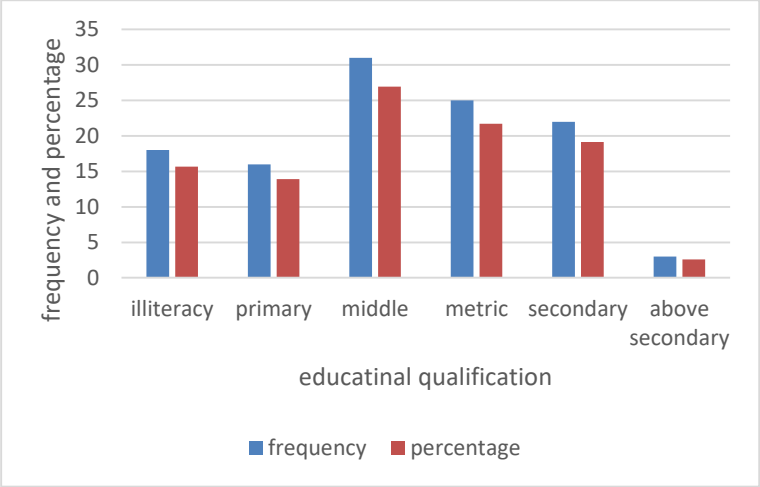
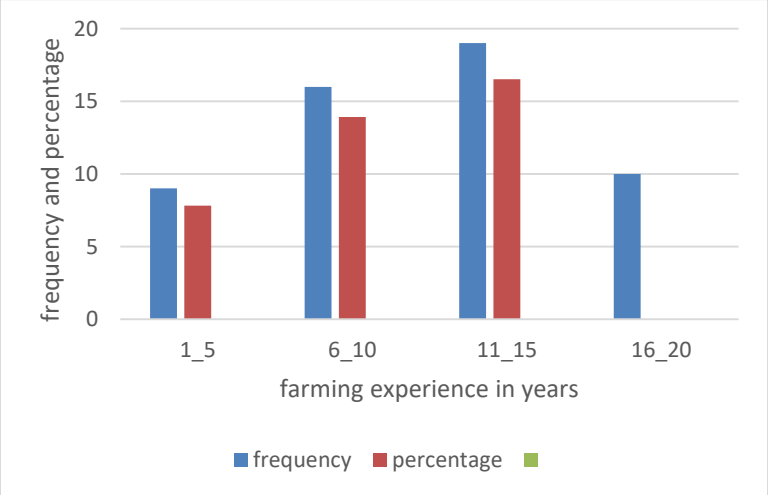


Figure 4.3: Educational Qualification (in years)



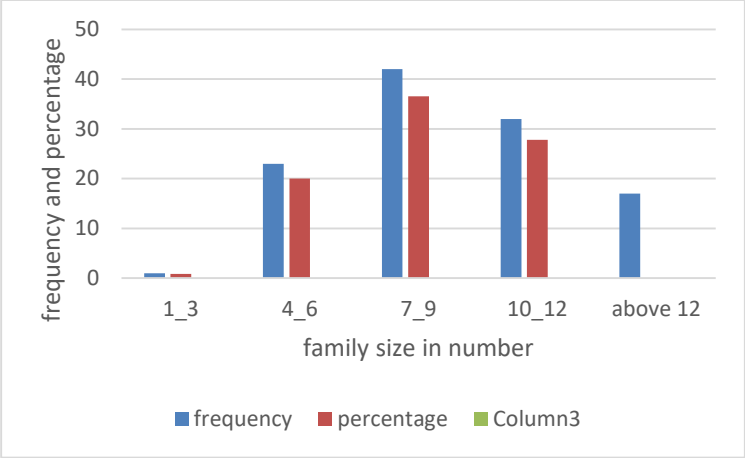
Source: field survey March,2022

Figure 4.4: Farming Experience (in years)



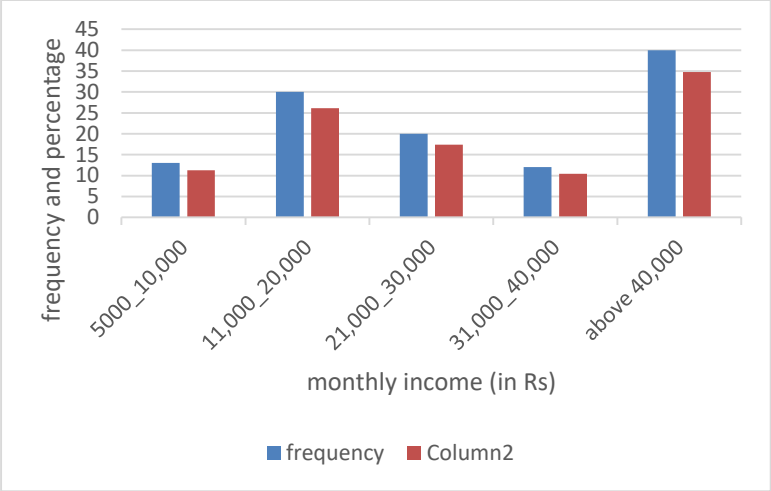
Source: field survey March,2022

Figure 4.5: Family Size (in numbers)



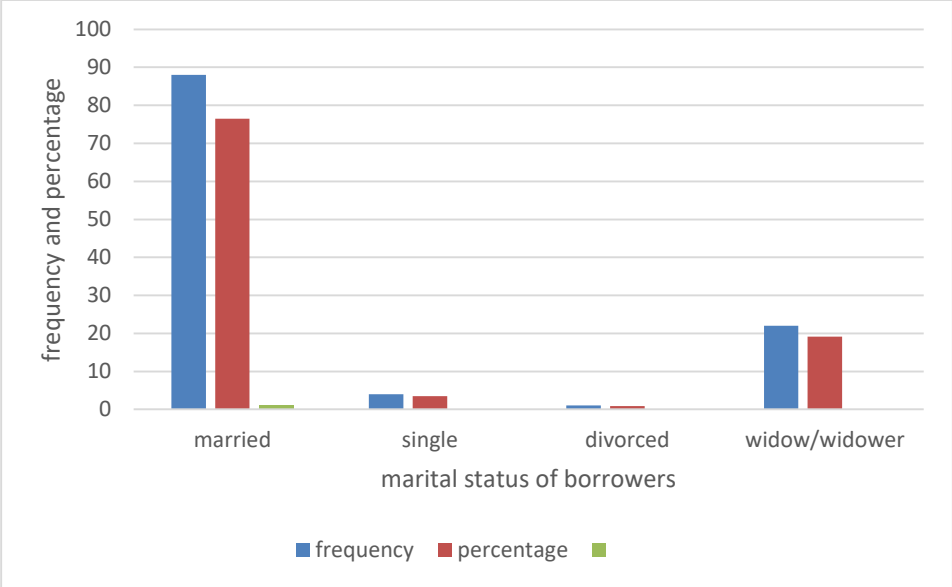
Source: field survey March,2022

Figure 4.6: Monthly Income (in RS)



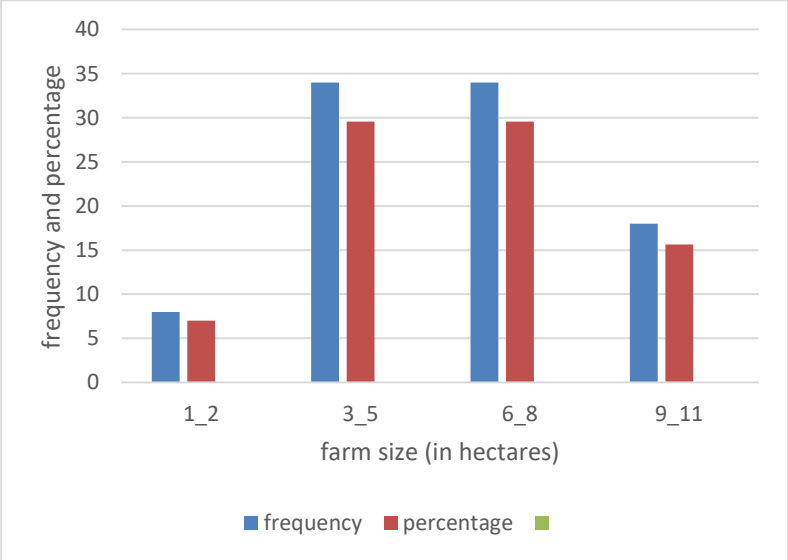
Source: field survey March,2022

Figure 4.7: Marital Status



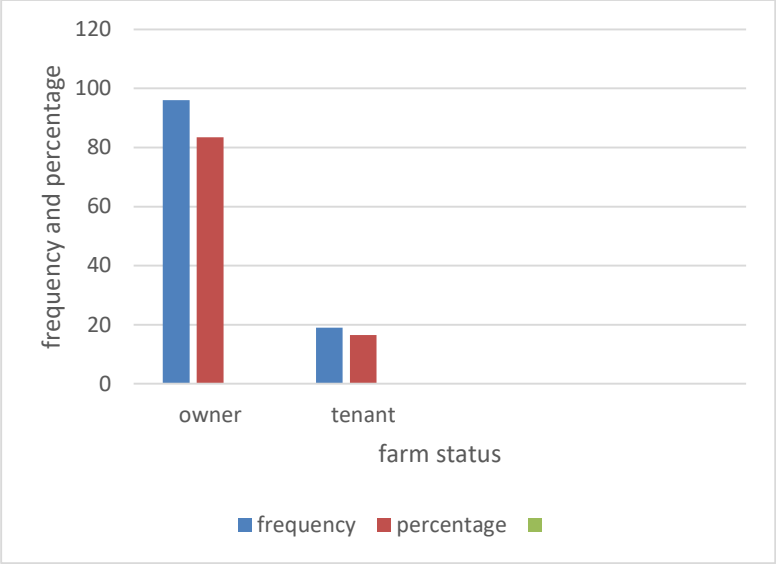
Source: field survey March,2022

Figure 4.8: Farm Size (in hectares)



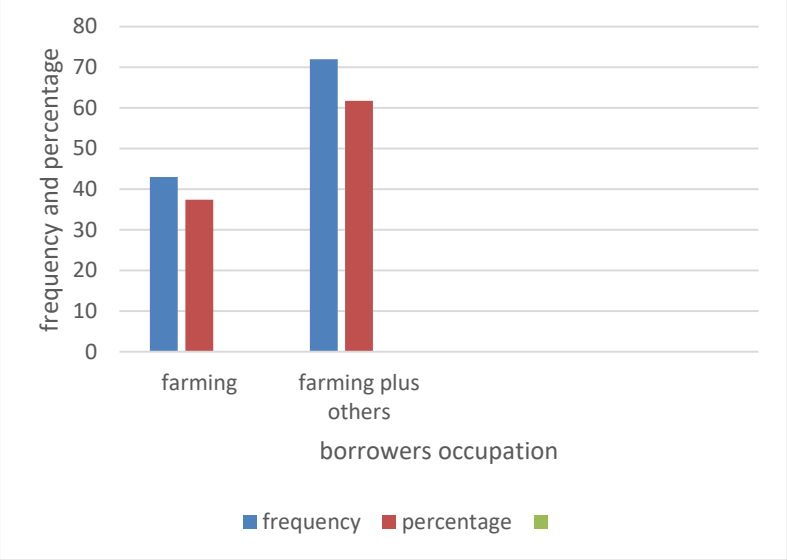
Source: field survey March,2022

Figure 4.9: Farm Status



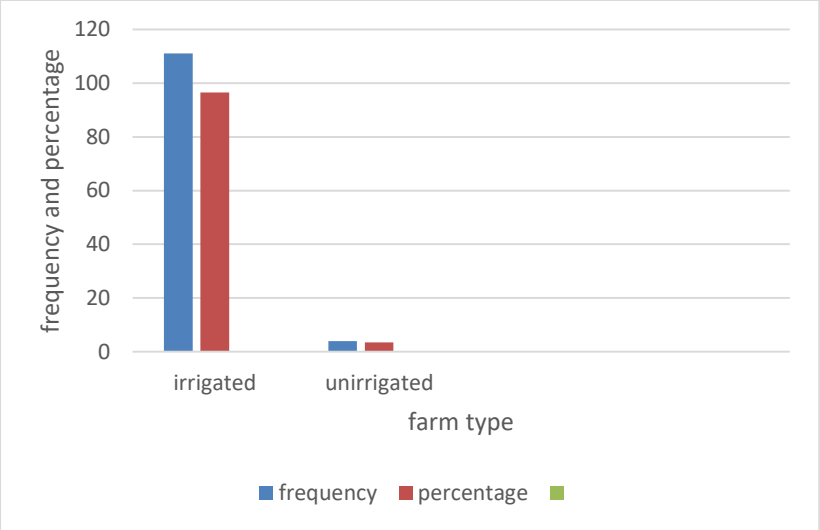
Source: field survey March,2022

Figure 4.10: Occupation



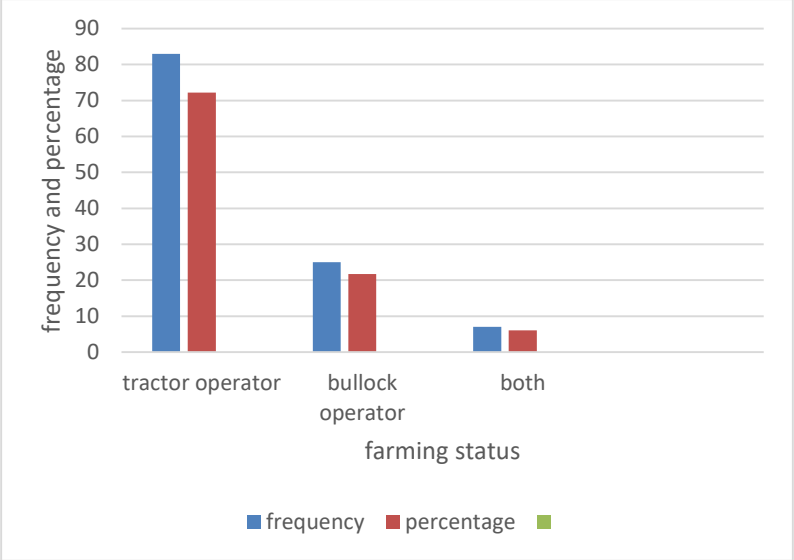
Source: field survey March,2022

Figure 4.11: Farm Type



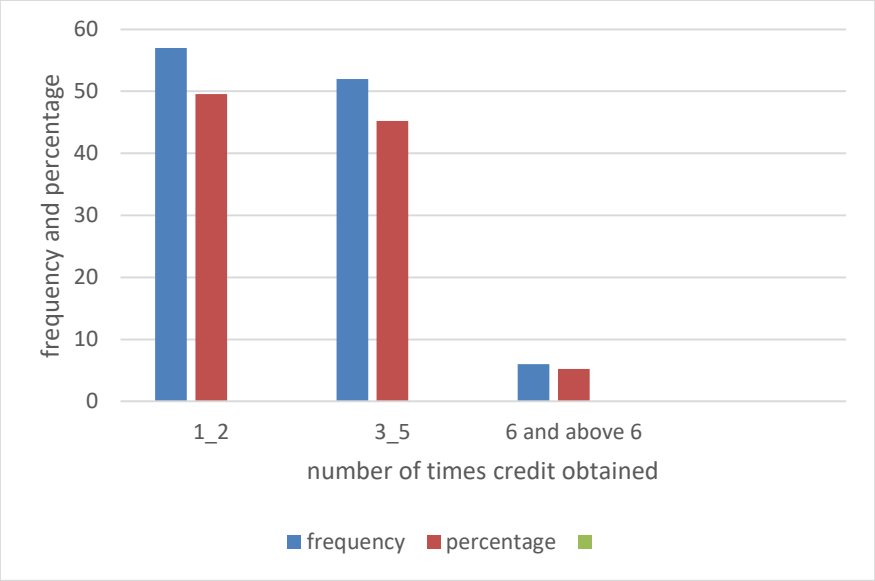
Source: field survey March,2022

Figure 4.12: Farming Status



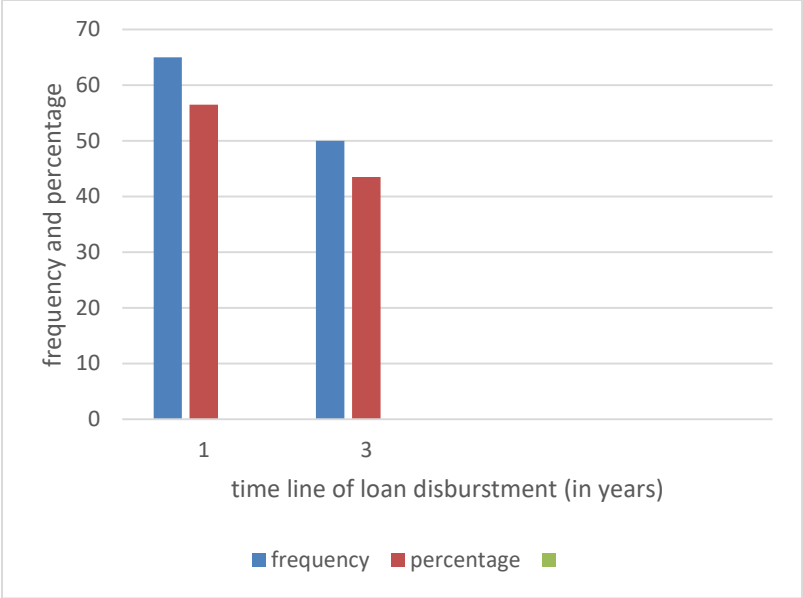
Source: field survey March,2022

Figure 4,13: Number of Time Credit Obtained



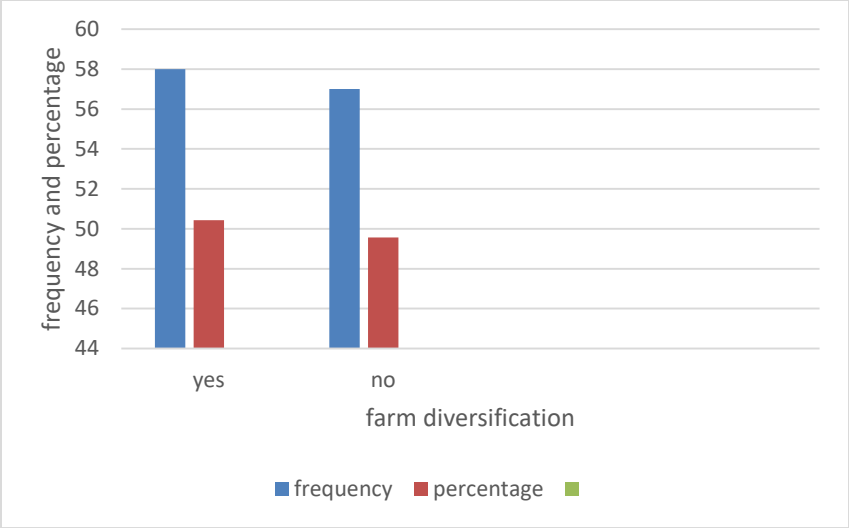
Source: field survey March,2022

Figure 4.14: Time Line of Loan Disbursement (in years)



Source: field survey March,2022

Figure 4.15: Farm Diversification



Source: field survey March,2022

Appendix (2)

Questionnaire

DETERMINANTS OF LOAN REPAYMENT

OF ZTBL LOAN BORROWERS IN DISTRICT NOWSHERA(KPK), PAKISTAN

Note: This questionnaire is to be filled by the Borrowers and Bank only. Any alteration must be signed by the Borrowers and Bank. From question 1 to 22 will be filled by Borrowers and the rest will be filled by Bank.

1) Name _____
2) Village Name _____
3) Gender: Male Female
4) Age (Years): less than 20 21 - 30 31 - 40 41 - 50 51 – 60 above 60
5) Marital status: Married Single Divorced Widow/widower
6) Educational Qualification (in years): illiteracy Primary middle metric Secondary above secondary
7) Experience (in years): 1 - 5 6 - 10 11 - 15 15 – 20 above 20
8) Farm size (in hectares): 1 - 2 3 - 5 6 - 8 9 – 15 above 15
9) Family size (in numbers): 1 - 3 4 – 6 7 - 9 10-12 above 12
10) Income of farmers (Monthly): 5000 – 10,000 11,000 – 20,000 21,000 – 30,000 31,000 – 40,000 above 40,000
11) Tenancy Status: Owner Tenant
12) Occupation: Farming Farming plus others
13) Farm Type: Irrigated Un-irrigated
14) Farming status: Tractor Operated Bullock operated
15) Family size (in number) 1-5 6-10 11-above

16) Nos of times credit attained (In years): 1-2 3-5 6 and above

17) Unprofitable scale operations: yes. No

18) Defective management and shortage of skilled man power: yes No

19) Inadequate and ill-time supplies of required production: yes No

20) Inadequate storage and service inputs: yes. No

21) Administrative bottlenecks: yes. No

22) Corrupt and dishonest staff: Yes No

23) Amount of loan applied (in Rs): 10,000 – 30,000 31,000 – 50,000 51,000 – 70,000 above 70,000

24) Amount of loan repaid (in Rs) : less than 10,000 10,000 – 30,000 31,000 – 50,000 51,000 – 70,000 above 70,000